FOI#14742

Information:

First Name: Kristine
Last Name: Nemeth
Company: ARCADIS
Mailing Address 1: 655 Third Avenue
Mailing Address 2:
City: New York
State: NY
Zip Code: 10017
Email Address: kristine.nemeth@arcadis-us.com
Phone: 860-503-1513
Required copies of the records: Yes

List of specific record(s):
Request for electronic copies of the documents submitted and the evaluation sheets for the following call-in contracts: PATH - Planning, Project Management Related Call-In Services 2014 Contracts PPAT14002 PPAT14003 PPAT 14004 PPAT 14001 AND Project Management Call-In 2011-2014 PCOO11006, PCOO1107, PCOO11008, PCOO11009, PCOO11010, PCOO11011, PCOO11012.

THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY
PUBLIC RECORD ACCESS FORM

PRA 14742

Action by (print / type name):

William Shalewitz , Freedom of Information Administrator

Signature: Date:

08/12/2016

On behalf of the Secretary of the Port Authority, as Records Access Officer and Custodian of Government Records of the Port Authority.

☑ The requested records are being made available.

☐ Any responsive records that may exist are currently in storage or archived, and a diligent search is being conducted. The Port Authority will respond by:

☐ A diligent search has been conducted, and no records responsive to your request have been located.

☐ The requested records that have been located are not being made available, as they are exempt from disclosure for the following specific reasons:

☐ Some requested records that have been located are being made available. The remainder are exempt from disclosure for the following specific reasons:

☐ The request does not reasonably describe or identify specific records; therefore, the Port Authority is unable to search for and locate responsive records. Please consider submitting a new request that describes or identifies the specific records requested with particularity and detail.

☑ Other:

Material responsive to your request can be found on the Port Authority's website at http://corpinfo.panynj.gov/documents/14742-C/. Paper copies of the available records are available upon request.
Exemptions applied for personal privacy.

This form is promulgated by the Port Authority pursuant to the Port Authority Public Records Access Policy and is intended to be construed consistent with the New York Freedom of Information Law and the New Jersey Open Public Records Act. It is intended to facilitate requests for Port Authority public records and does not constitute legal advice.

Office of the Professions

Verification Searches

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License Information *

10/20/2010

Name : CANGIANO ANDREW
Address : LANDING NJ
Profession : PROFESSIONAL ENGINEERING
License [redacted]
Date of Licensure : 05/05/09
Additional Qualification :
Status : REGISTERED
Registered through last day of : 04/12

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THE STATE OF NEW JERSEY
DEPARTMENT OF LAW & PUBLIC SAFETY
DIVISION OF CONSUMER AFFAIRS

License Information

Return to Search Results

Name: Andrew Cangiano

Address: LANDING,NJ

Profession/License Type: Engineers & Land Surveyors,Professional Engineer

License No: [redacted]

License Status: Active

Issue Date: 8/6/2001

Expiration Date: 4/30/2012

For more information contact the New Jersey State Board of Professional Engineers and Land Surveyors (973)504-6460

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License Information

Return to Search Results

Name: Andrew Cangiano

Address: Landing,NJ

Profession/License Type: Professional Planners,Professional Planner

License No: [redacted]

License Status: Active

Issue Date: 10/10/2007

Expiration Date: 5/31/2012

For more information contact the New Jersey State Board of Professional Planners (973)504-6465

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License Information

Return to Search Results

Name: HAROLD WAYNE VALENTINE

Address: STANHOPE,NJ

Profession/License Type: Engineers & Land Surveyors,Professional Engineer

License No: [redacted]

License Status: Active

Issue Date: 4/1/1997

Expiration Date: 4/30/2012

For more information contact the New Jersey State Board of Professional Engineers and Land Surveyors (973)504-6460

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License Information

Return to Search Results

Name: John Hasselmann

Address: Sparta,NJ

Profession/License Type: Engineers & Land Surveyors,Professional Engineer

License No: [redacted]

License Status: Active

Issue Date: 6/27/2006

Expiration Date: 4/30/2012

For more information contact the New Jersey State Board of Professional Engineers and Land Surveyors (973)504-6460

Office of the Professions

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License Information *

10/20/2010

Name : LAW RICHARD WARREN
Address : RIDGEWOOD NJ
Profession : PROFESSIONAL ENGINEERING
License No [redacted]
Date of Licensure : 05/21/92
Additional Qualification :
Status : REGISTERED
Registered through last day of : 06/11

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License Information

Return to Search Results

Name: RICHARD W LAW

Address: Ridgewood,NJ

Profession/License Type: Engineers & Land Surveyors,Professional Engineer

License No: [redacted]

License Status: Active

Issue Date: 4/25/1991

Expiration Date: 4/30/2012

For more information contact the New Jersey State Board of Professional Engineers and Land Surveyors (973)504-6460

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License Information

Return to Search Results

Name: RICHARD J BARRINGTON

Address: New Providence,NJ

Profession/License Type: Engineers & Land Surveyors,Professional Engineer

License No: [redacted]

License Status: Active

Issue Date: 9/4/2001

Expiration Date: 4/30/2012

For more information contact the New Jersey State Board of Professional Engineers and Land Surveyors (973)504-6460

Office of the Professions

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License Information *

10/20/2010

Name : SOLIMAN MICHAEL M
Address : MILLINGTON NJ
Profession : PROFESSIONAL ENGINEERING
License No [redacted]
Date of Licensure : 08/08/97
Additional Qualification :
Status : REGISTERED
Registered through last day of : 09/11

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License Information

Return to Search Results

Name: Michael M Soliman

Address: Millington,NJ

Profession/License Type: Engineers & Land Surveyors,Professional Engineer

License No: [redacted]

License Status: Active

Issue Date: 8/4/2004

Expiration Date: 4/30/2012

For more information contact the New Jersey State Board of Professional Engineers and Land Surveyors (973)504-6460

Office of the Professions

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License Information *

10/20/2010

Name : THIEL ROBERT J
Address : WHIPPANY NJ
Profession : PROFESSIONAL ENGINEERING
License No: [redacted]
Date of Licensure : 10/06/04
Additional Qualification :
Status : REGISTERED
Registered through last day of : 11/12

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License Information *

10/20/2010

Name : CRAWFORD COSEMA E
Address : BERKELEY HEIGHTS NJ
Profession : PROFESSIONAL ENGINEERING
License No: [redacted]
Date of Licensure : 03/12/84
Additional Qualification :
Status : REGISTERED
Registered through last day of : 12/12

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THE STATE OF NEW JERSEY
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License Information

Return to Search Results

Name: JAMES J MURRAY

Address: Montville,NJ

Profession/License Type: Engineers & Land Surveyors,Professional Engineer

License No: [redacted]

License Status: Active

Issue Date: 7/1/1983

Expiration Date: 4/30/2012

For more information contact the New Jersey State Board of Professional Engineers and Land Surveyors (973)504-6460

Office of the Professions

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License Information *

10/20/2010

Name : MCCARTHY FREDRICK H
Address : WALL NJ
Profession : PROFESSIONAL ENGINEERING
License No [redacted]
Date of Licensure : 04/27/01
Additional Qualification :
Status : REGISTERED
Registered through last day of : 10/12

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License Information

Return to Search Results

Name: Albert John Racciatti

Address: Leonia,NJ

Profession/License Type: Professional Planners,Professional Planner

License No: [redacted]

License Status: Active

Issue Date: 5/24/2002

Expiration Date: 5/31/2012

For more information contact the New Jersey State Board of Professional Planners (973)504-6465

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License Information

Return to Search Results

Name: Nicolaas Veraart

Address: Manhasset,NY

Profession/License Type: Professional Planners,Professional Planner

License No:

License Status: Pending

Issue Date:

Expiration Date:

For more information contact the New Jersey State Board of Professional Planners (973)504-6465

Specific Relevant Experience of the Firm

Specific Relevant Experience of the Firm

Introduction

Our Team is well positioned to provide the referenced services based on our experience working on other "Call In" Service contracts with PANYNJ. Our Team members have served the PANYNJ on various "Call In" contracts since the early 1990's, including several Project Management Services "Call In" contracts. We most recently served PANYNJ on the Project Management "Call In" during 2006-2010. Under this contract, we provided Project Management staff at Newark Airport and performed critical studies for PANYNJ, such as the Project Management Office Assessment in 2009.

LBA, P.C., authorized to perform engineering and design services in the state of New York and New Jersey, provides planning, environmental, engineering, construction and program management services to clients in the New York City metropolitan area and works in cooperation with The Louis Berger Group, Inc. (collectively comprising the **LBA, P.C. Team**). With support from The Louis Berger Group, Inc.'s offices in New York City and Morristown, New Jersey, the LBA, P.C. Team is a leading service provider in the greater New York City metropolitan area, including numerous New York City, NY State and NJ State agencies. Working with The Louis Berger Group, Inc., LBA, P.C. has access to the entire Berger family of professional engineers, as well as technical and support staff.

For some of the Authority's most visible and complex programs, the LBA, P.C. Team and our partners have been entrusted as a preferred provider of Program/Project Management Services. LBA, P.C. Team members have served as Program Manager on several high profile projects. Since the 9/11 attacks, LBA, P.C. Team member, The Louis Berger Group, Inc., has served as the PANYNJ's Program Manager for **Phase I of the World Trade Center Reconstruction,** where PATH service was restored to Lower Manhattan and for **Phase II of the World Trade Center Reconstruction** for the design and construction of the Memorial, Transit Hall and WTC Towers 1 through 4. Our Team members have also served for nearly 20 years as Program Manager for the **Newark Liberty Airport Redevelopment.** Our Team Members are also presently a part of a Joint Venture Partnership for **Program Management Services on the PATH Capital Budget Program**.

We have been providing highly trained and experienced Program and Project Management personnel to the PANYNJ in all the Line Departments. At Newark Airport, we have provided personnel for the planning work at Terminal A and the Terminal B redevelopment. Under our PATH PM contract, we are working with PATH to identify Project Managers for the Capital Program. We presently have personnel working with Tunnels, Bridges and Terminals at the One Madison Ave on the George Washington Bridge Bus Station Redevelopment. Under our Construction Management "Call In" contract, we are providing personnel on the Brooklyn Piers, Stewart Airport and CPM scheduling assistance from the Tech Center for all the TBT programs, including the George Washington Bridge programs.

Enhancing the LBA, P.C. Team will be our subconsultants, Stellar Services (MBE) and Team Support Services (WBE). Both firms have long standing relations with the LBA, P.C. Team and have served as trusted subs for our Program Management teams at the World Trade Center and

Newark Airport.

Program Management Services for the George Washington Bridge Bus Station, Port Authority of NY & NJ

LBA, P.C. Team member, The Louis Berger Group, Inc. is providing Program Management services to the Port Authority of New York and New Jersey for the redevelopment of the George Washington Bridge Bus Station located on 178th St in upper Manhattan, directly on the George Washington Bridge approach. The Station, designed by Pietro Nervi, was originally constructed in the 1950's, it now serves 20,000 daily commuters as a connection point for trips from NJ to Manhattan. In a Public-Private partnership, the PANYNJ has contracted with a Retail Developer to modernize the Bus Station and introduce a retail shopping complex to the serve the Washington Heights community.

GWB Bus Station – Broadway View Facing West

GWB Bus Station – Aerial View Facing East

The developer is responsible for design and construction of the new bus pavilion and concourse for 30 buses to a specified Design Criteria. This relationship is similar to a CM/GMP agreement. Once a Guaranteed Maximum Price is agreed upon, the developer takes all the risk to deliver.

The team is providing Project Management services, document control and reporting services through TBT as part of the PANYNJ Program Management team.

Assessment of the Project Management Office and the Project Manager's Role Port Authority of NY & NJ

As a Task under the Project Management Service "On Call" contract, LBA, P.C. Team member The Louis Berger Group, Inc. was contracted by the Port Authority of New York and New Jersey (PANYNJ) to review the existing configuration of their Project Management Office (PMO) and its sufficiency to support the delivery of projects within scope, schedule and budget. The PANYNJ sought to identify whether the scope of their PMO services were consistent

Project Scope:

- Review of existing configuration of the PMO
- Conduct interviews with PA executives and staff
- Analyze PMO's current and proposed staffing
- Develop an objective criteria for evaluating proposed structure/staffing/services of the PMO
- Evaluate the present Project Management structure within the Port Authority

Results:

- Documented the history of Project Management at PA
- Identified areas for improvement in current PMO
- Compared Port Authority project management with other agencies of similar size and mission
- Provided recommendations for making the PMO more effective within the Agency

with industry best practices per Project Management Institute and whereupon improvements would be necessary to improve their current practices.

The team gathered data on the current practices of the PMO and documented the evolution of its structure within the PANYNJ. The different methods employed by the PANYNJ were analyzed and benchmarked against current industry standards to identify areas of potential improvement within the current system.

The team carried out a total of 33 interviews with 46 PANYNJ executives and staff. Participants were asked their knowledge on a variety of topics including:

- The evolution of the PM function in the PANYNJ
- The overall role of the Project Manager in the PANYNJ
- The consistency of the role for Project Managers
- The clarity of a career path for PMs within the PMO
- The role of the Engineering Department
- The understanding of the PM's role
- The perceptions of the PMO

From the results of these interviews and comparisons carried out from interviews with individuals in other agencies the team indicated the weaknesses of the current PMO and recommended areas of improvement to the PANYNJ to achieve their goal of industry best practices.

World Trade Center Reconstruction, Port Authority of NY & NJ

LBA, P.C. Team member, The Louis Berger Group, Inc. is presently serving as **Program Manager for the World Trade Center Reconstruction** and has served in this role since immediately after the 9/11 terrorist attack. A major early success for the Program Management team was the restoration of PATH service to Lower Manhattan within a year after the attacks. The team is now managing the complex reconstruction program consisting of the Transit Hub, World Trade Center One, 9/11 Memorial and the Vehicle Security Center, totaling $16 billion construction value.

World Trade Center Reconstruction
Port Authority of NY & NJ

Program Management Services

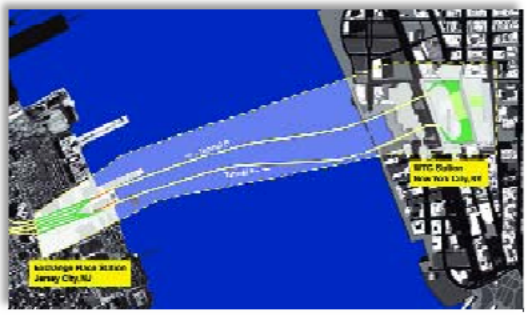
- $16B Construction
- PATH Transit System Restoration
- 50+ Construction Contracts
- Integrated Master CPM Schedule
- Cost Control
- Progress Status Reporting

Project Background:

The Port Authority Trans-Hudson (PATH) Commuter Rail System was a key component of the transportation infrastructure of the New York Metropolitan Area, and particularly important to the economy of Lower Manhattan. It carried thousands of commuters between New Jersey and New York. One of its two terminus points in New York City (Lower Manhattan) was eliminated by the events of September 11, 2001.

In an effort to re-establish this service, the Authority embarked on an extremely "fast track" program to: (1) construct a Temporary PATH Station at the site of the former World Trade Center; (2) restore the two miles of tunnels beneath the Hudson River connecting this terminal with New Jersey; and (3) improve the first station in New Jersey, Exchange Place Station, to operate as an interim terminal and handle the size trains needed to provide the level of service required by this key rail artery. These three projects represented the first phase of the overall program for redevelopment of the World Trade Center site and restoration of transit services.

The team was contracted to provide Program Management Support to both the Authority's Office of Priority Capital Programs and the Engineering Department. In addition to overall program and project level cost, schedule and scope control, the team's responsibilities included program definition, management of in-house staff, review of consultant staff design and reports, coordination of a PEER review by national rail experts, validation review of the signal technology with heavy rail signal experts, system integration, implementation of engineering technologies for information management and team communication / collaboration.



Rehabilitation of Tunnels E and F: The tunnels, connecting New Jersey to Lower Manhattan, ran under the Hudson River from Exchange Place Station to the site of the Temporary World Trade Center Station. Because of flooding following the September 11, 2001 terrorist attacks on the World Trade Center, the project required the demolition and removal of the entire infrastructure, track work and systems within the tunnels and restoration of all cables and wires, tracks, lighting, drainage, fire protection, and signal and communication systems. Nearly 20 miles of cables (including high voltage, traction power, communications and signal) and over four miles of track were replaced.

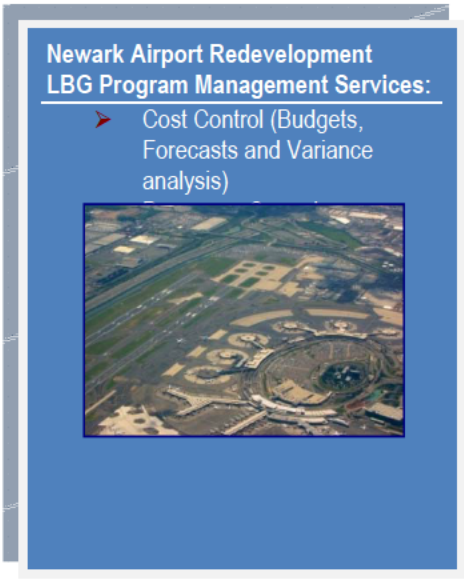
Exchange Place Station Improvements: Exchange Place Station was the last station in New Jersey before the PATH tunnels cross the Hudson River into lower Manhattan. Because it was not configured as a last-stop terminal station, service was lost to this station when the World Trade Center was destroyed. Loss of service to Exchange Place Station had adversely affected the large commercial and residential complex on what is called the "Gold Coast" of New Jersey. The project scope included construction of several cross-tunnels to connect the existing five tunnels and allow installation of track crossovers to connect the tracks serving Exchange Place Station and the replacement of an existing signal relay room in the way of the proposed connecting tracks. The Program called for the early opening of the Exchange Place Station as a terminal facility so the Authority could provide a more effective and balanced operating system and enhanced patron services. In addition to the new tunnel

crossovers, the Exchange Place Station platforms were lengthened to accommodate 10-car trains, increasing commuter capacity from its earlier 8-car train design. Additionally, the Station was completely refurbished, including vertical circulation, lighting, wayfaring signage, floors and finishes, and utilities and systems.

Temporary WTC PATH Station: A new temporary station at the World Trade Center site was opened for service on November 23, 2003. The station was constructed at the same location as the damaged facility to expedite alignment and configuration design and mitigate the need for additional property acquisition. The design and construction of a temporary WTC PATH Station, including a track and platform configuration similar to the former World Trade Center station, was planned to ensure restoration of PATH service to Manhattan within 24 months. The Station has a mezzanine (with fare control area) above the platforms, with stair and elevator access connecting the two levels. From the mezzanine, passengers follow the previous circulation route, to escalators/elevators/stairs which provide access up to street level under a new canopied plaza on the west side of Church Street. Though an "open-to-air" design with minimal exterior walls, the temporary station features semi-opaque fabric enclosures to provide protection from both inclement weather and the anticipated construction at the surrounding site.

Newark Liberty International Airport (EWR) Redevelopment Program
Port Authority of NY & NJ

For nearly 20 years, starting in 1990, the team has provided **Program Management services for the Newark Liberty Airport Redevelopment Program** (EG245A). During this time the team managed planning, design and construction phases of three separate expansion and improvement programs which included the Monorail, Parking Garages, International Terminal, Administration Building, Taxiway Expansions, and Access Roadway and Bridge Improvements.



Project Background:

During the past decade, passenger growth at Newark International Airport has risen by more than 35% to 34 million. In response, the Authority has begun an ambitious redevelopment program to provide more parking, easier access to and around the airport, and better terminal facilities. The program is being accomplished in conjunction with the Continental Airlines Global Gateway Project at Terminal C, the extension of the Monorail to NJ Transit and Amtrak rail lines, improvements to all terminals, and a new control tower being constructed by the FAA. Most projects, including the parking garages, the Terminal C expansion, the Monorail extension, and many other terminal improvements, were completed during 2001, and the balance of work was phased through 2004.

Parking: The Program provides thousands of additional, conveniently located, parking spaces at two locations: A 6-level structure, adjacent to Monorail Station E, which is accessible directly from I-78. It features easy access to all airline terminals via the Monorail, as well as an expanded valet

parking service. A 4-level structure in front of Terminal C has direct pedestrian access to Terminal C.

Roadways and Frontages: The airport entrance was expanded, as were roadways leading to the Monorail stations and rental car facilities. A new multi-lane, grade level roadway, passing directly in front of all terminals, provides direct access to hourly and daily parking, and to the new parking garage at Terminal C. Commercial vehicles also use this roadway for pick-up and drop-off, and have three special lanes at Terminal C. Private vehicles reach the new at-grade five-lane arrivals level at Terminal C via a new ramp. Passengers for departing flights are able to use both the second and third levels; passengers on arriving flights claim baggage on the ground level, which is served by a new 5-lane road for private cars. The second level departures roadway was expanded to four lanes. To alleviate the traffic back-ups common during peak travel hours, cars are separated from buses and other commercial traffic. The roadways and bridges connecting the airport entrance with NJ Turnpike Interchange 13A, Routes 1&9, and I-78 were also improved. Phase 1 of the project included the addition of a new ramp and bridge at the airport entrance, the widening of Brewster Road near the entrance, and the construction of new roadways south of the airport. During Phase 2, a new fly-over was built on North Avenue, and a new ramp was constructed at Interchange 13A of the New Jersey Turnpike. Phase 3 included new ramps at the McClellan Street Interchange with Routes 1&9.

Terminal Facilities: Terminal C was expanded to include a new concourse and immigration facility. Continental Airlines added a 12 wide-body gate concourse, a new baggage handling system, a 20,000- square-foot Presidents Club and a Customs and Immigration area.

Airside Facilities: The site of the former control tower and administrative complex, as well as adjoining roadway and parking areas, were converted to airside operations. This provides needed space for aircraft parking and additional taxiways, and improves aircraft traffic flow. A new tower was erected at Terminal C to improve ramp utilization and manage the servicing of aircraft. This facility alleviates taxiway congestion and makes better use of all Terminal C gates. A new administration/airport rescue and fire-fighting facility houses the central nerve center for the airport. All operations, from roadway traffic conditions, to the Monorail and passenger terminal activities, are monitored from this facility, which also houses the airport's police force. The structure is a composite of a new building, joined to the original central passenger terminal at the airport (an historic building).

Stellar Services (MBE)

Contact: Anna Hu, Stellar Services, (212) 432-2848

Stellar Services is a Port Authority of New York and New Jersey certified S/MBE Information Technology consulting firm with extensive experience in the transit industry, including multiple assignments working with LBA, P.C. Team member, The Louis Berger Group, Inc.. Their track record proves that they have the ability to finish every project to the satisfaction of their clients. They are proud to claim more than 16 years of experience providing a comprehensive range of innovative and effective IT consulting, procurement and professional services for government agencies at the federal, state and local levels. Since their beginning, they have achieved success on all of their projects, to date, and distinguished themselves in project management, software development, engineering and construction planning and management, document management system consulting and systems integration, hardware/software procurement, asset management, logistical support, and quality control process. Stellar has been growing steadily and currently possesses an annual revenue of $12.8 million and has one-hundred highly educated and experienced IT professionals, whose broad range of specialties make developing elegant and effective solutions for their clients possible.

Stellar Services is a Capability Maturity Model® Integration certified firm. They have formed several strategic partnerships with industry leaders such as Open Text Corporation and Primavera Technology Premier Partnership and the Microsoft Gold Partnership. Working together with their clients as project partners, they offer them unsurpassed services and go beyond their requirements by delivering solutions of the highest caliber.

They bring an arsenal of sophisticated technology to the field and work one-on-one with their clients to make sure that their solutions fit their client's unique needs and that their clients can fully manage their implementations after they leave. Their goal is to balance the cutting-edge with the practical, while always delivering value. They have provided premiere consulting and advisory services to transportation and aviation clients such as the Port Authority of New York and New Jersey, New York City Metropolitan Transportation Authority, New Jersey Transit, Metropolitan Washington Airports Authority, Department of Aviation City of Atlanta, to name a few.

Their company's core is its team of highly educated and experienced IT professionals, whose broad range of specialties make developing elegant and effective solutions for our varied client base possible. Over 85% of their employees possess advanced Master or Post-Baccalaureate degrees as well as solid experience in IT consulting. Their dedicated competent team of professionals is comprised of project managers, system and network engineers, programmers, content management specialists, business process analysts and subject matter specialists fully equipped with superior technical and interpersonal skills.

Team Support Services (WBE)

Contact: Beth Bovino, (908) 256-2902

Team Support Services, Inc. (TSS) has worked with major corporations in both New York and New Jersey for over ten years. As a certified Woman-owned and Disadvantaged Business Enterprise, TSS has supported the EWR Redevelopment Program, the AirTrain Newark Program and the Downtown Restoration Program (Phases I and II) providing cost management and administrative services. Other clients relying on TSS for administrative, clerical, or technical support include nationally known financial management institutions, and major airports in New York, New Jersey and Atlanta. TSS has also provided technical (database application development and implementation) services for engineering and construction corporations.

TSS staff members have decades of service work-years at major facilities performing office administration and reception; database application development; data processing; records management system support; document coding, scanning, distribution and filing; management report design and product; software training, budgeting and cost control.

Management Approach

Management Approach

A core business of the Louis Berger & Assoc., P.C. Team (LBA, P.C. Team) is Project Management for all sizes and types of facility and transportation projects. As experienced Program and Project Managers, we have successfully served the Port Authority of New York & New Jersey (PANYNJ) on several projects, including all phases of the World Trade Center Reconstruction and Newark Liberty International Airport Redevelopment.

PRINCIPLES: ***The LBA, P.C. Team has a standardized, proven approach to Program Management Services that protects our clients' interests and achieves overall project success.***

An integral part of the LBA, P.C. Team's Program/Project Management service is the delivery and implementation of reliable, state-of-the-art Project Controls to monitor risk, quality, cost and schedule. To sustain quality and ability to respond to our client's needs for Project Management, the LBA, P.C. Team maintains a qualified in-house staff of Project Managers and Project Control Specialists. The LBA, P.C. Team's expert services include Cost Estimating, Cost Control, Planning, Scheduling, Document Control and Project Management Services.

The Project Management and Owner's Representation services provided by the LBA, P.C. Team include pre-planning, programming, design management, design review, procurement support, construction management, commissioning and post-construction support. The LBA, P.C. Team establishes all necessary liaisons, coordination and support with project-related agencies and representatives at the federal, state, regional and local levels as appropriate for each specific assignment.

Within the LBA, P.C. Team, Project Management is a discipline taught and nurtured. We select promising candidates from our engineering staff that show interest, leadership, communication and organizational skills necessary to master the role of the Project Manager. In training our Project Management candidates, we follow the Project Management Institute (PMI) principles for Project Management. This discipline includes learning the tools to manage schedule and budgetary performance. Our Project Managers are all technical experts with good managerial skills. These managerial skills are acquired through PMI course and in-house training in cost and schedule control that includes advanced training with the systems (P6, Cost Manager, etc.) used to monitor cost and schedule. We also conduct regular management reviews to ensure that our projects are performing to our clients' expectations.

An essential part of our PM training includes effective communications, internally with management and staff and externally with clients and other stakeholders. Our communication procedures include meetings and written communications such as regular project status reports, meeting minutes, public presentations and financial reports. As an example of our approach to this type work, LBA, P.C. Team members presently prepare all the weekly, monthly and quarterly reports for the highly complex World Trade Center Site Reconstruction.

We are intimately familiar with all Port Authority facilities, having performed Program and Project Management services for every Line Department in the Port District. Our Project Management services have consisted of various types and sizes of programs and projects ranging in value from approximately $50,000 to over $100 million for, but not limited to, the following Authority line businesses with our representative projects:

A. Aviation (***Newark Airport PM Services for Terminal B and the Airtrain***)
B. Tunnels, Bridges and Terminals (***Goethal's Bridge, GWB Bus Station***)
C. Port Commerce (***Brooklyn Piers***)
D. PATH (***PM for Capital Plan***)
E. World Trade Center (***Downtown Redevelopment Program Phase I and II***)

The following Management Approach is based on our guiding principles for our Program Management services:

- **Experienced and Qualified Leadership** – The LBA, P.C. Team always assigns leaders who understand the PANYNJ and its expectations for internal and external communications on projects. Additionally we serve as advisors to PANYNJ Directors and Staff for the managerial and procedural issues. The LBA, P.C. Team personnel work in concert with PA Management to achieve project success.

- **Robust Project Controls** – The LBA, P.C. Team immediately implements Project Controls systems compatible with the PANYNJ's SAP accounting system and incorporates, as appropriate, a cost model, progress reports and an Integrated Master CPM Schedule. Developed for use on the WTC Reconstruction and Newark Airport projects by the LBA, P.C. Team Cost Engineers and CPM Schedulers, our proven systems and procedures will be applied to the projects in all Line Departments.

- **Timely and Informative Project Reports** – Regular communications and reporting are part of our Program Management services. We prepare weekly progress and monthly financial reports that identify project issues that impact scope, cost and schedule. They also inform stakeholders of evolving successes and provide PANYNJ an important Public relations tool. At the WTC project data, pictures and statements are ready for PA's Public Affairs Division, before requested.

- **Web Based Document Management and Sharing** – The LBA, P.C. Team develops Web Portals for centralized access to all program related software and data. Secure controlled procedures are set up so documents can be checked-in and checked-out. All project communications, including RFI's, Shop Drawings and correspondence are tracked in Contract Manager and posted on the Web Portal. With regular updates, this portal provides a window into the project issues and status.

- **Quality Control** – At the earliest opportunity, we will develop Project Specific Quality Assurance Plans for use on the programs or projects to which our PMs are assigned.

- **Safety Monitoring** – Critical to the success of the project is its safety record. Our PMs are trained to monitor or all critical project operations and the impact on construction safety as well as reviewing the impacts on all types of the facilities.

Using these guiding Program Management principles, the following narratives outline our specific approach to each Task identified in the RFP.

TASK A. PROJECT INITIATION SERVICES

The LBA, P.C. Team members are well-known as providers of planning and environmental services for transportation projects. We have prepared several Major Investment Studies, Environmental Assessments, Environmental Impact Statements and Permitting Applications. These studies are holistic analyses of proposed projects that include evaluations of both the design and construction phases of the jobs. This experience is critical to project planning, as permits and regulations drive the sequence and project logistics of any transportation project. Our project management personnel bring this experience to bear on projects, including those projects on which we served as Environmental Consultants (e.g., the Goethal's Bridge, Stewart Airport, the PATH extension to Newark Liberty Airport, the Fulton Street Transit Center and the No. 7 Line Extension). Our Planners and Engineers who developed these EIS documents are available to serve as Project Managers, if needed, for this "On Call" Services assignment.

Our Project Initiation services include: Initial planning; feasibility studies; economic studies; site studies; environmental studies; site investigations; site surveys; preparation of budget and cost estimates; preparation of preliminary schedules; cost modeling and analysis; and cost control management.

The LBA, P.C. Team also provides Project Management analysis and oversight services that are not related to a specific project. We perform studies and analyses of staffing needs and project performance to help our clients achieve maximum efficiency from their own Program/Project Managers. These services include:

- Developing, updating and reviewing of PANYNJ handbooks, guides, manuals and/or policies.
- Providing special consultant or special inspection services, such as assessments of hazardous materials, or reviewing historically significant matters in existing buildings, etc.
- Performing special studies and/or updates to prior studies.
- Performing other specialized services such as updates to master or environmental plans, interior space planning, existing site surveys, site models, etc.
- Providing tenant relocation and moving services at facilities other than those associated with a specific project.
- Providing photographic records beyond the normal scope of presentation and inspection services required.
- Providing expertise as required in unusual situations from specialty disciplines, such as expert testimony for hearings.

- Providing certification services of trade societies, institutes, organizations.
- Providing scheduling and/or estimating services.
- Performing market research studies.
- Provide functional support/expertise in areas such as sustainability, fire safety, physical security, geotechnical stability, seismic safety, historic preservation, moisture control, accessibility, building automation, materials evaluation.

Initiating projects requires an understanding of design and construction risks to ensure schedules and costs are realistic and reliable..

This is where the LBA, P.C. Team comes in. Our project planners have served in responsible positions within several NYC-based design and construction companies; therefore, we understand the most effective manner to organize and execute design/construction work in the NYC metropolitan area.

TASK B. PROJECT IMPLEMENTATION SERVICES

As part of the project implementation, the Project Managers will work with the Engineering and Facilities groups to monitor design compliance with the PANYNJ expectations and project "Design Criteria".

Along with technical understanding of design and construction required for the assignments, our Project Managers bring with an in-depth understanding of CPM Scheduling and familiarity with the construction means and methods. As indicated in the PANYNJ's Scope of Work document, Project Managers will, in summary, be required to support the following services:

- Scope analysis, coordination and development of Work Breakdown Structures to align with project budgets.
- Conduct regular meetings, including bi-weekly progress meetings, design review meetings, etc.
- Prepare regular reports, including but not limited to Monthly Status Reports, financial status reports, minutes of meetings.
- Prepare presentations for executive management, including Board presentations.
- Prepare communications for third party stakeholders.
- Review monthly status reports, monitor issue resolution meetings and actions.
- Monitor change orders and claims for impact to project budget and schedule.
- Assist with FTA meetings and reports, including monthly/quarterly progress reports.
- Monitor construction budgets and schedule to evaluate performance.

During the execution of the work, our Project Managers will perform design management; technical reviews; code compliance reviews; constructability reviews; conducting/participating in Value Engineering workshops; analysis of Value Engineering proposals; preparation of cost estimates (including independent check estimates); cost analysis; cost control/monitoring; energy studies; utility studies; site investigations; site surveys; hazardous material surveys/analysis; scheduling (including preparation of schedules and schedule reviews); design problem resolution; review of

design scope changes (including analysis of schedule impact); scheduling/conducting/ documenting design-related meetings; participation in Time of Performance meetings to establish construction durations; participation in all "Partnering" activities during design (workshops, meetings, etc.); and performing market studies (material availability, contractor interest, etc.).

During the bid stages, if required, our PMs will assist the Contracting Officer in contract procurement; answering bid/RFP questions; attending/participating in site visits; attending/ participating in pre-bid conferences; preparing and issuing solicitation amendments; and performing cost/bid/proposal analysis.

Within our diversified engineering practice, the LBA, P.C. Team includes several constructability experts who have experience in infrastructure and building projects. These professionals work within our organization checking our designs to ensure that they can be built and helping develop work plans that can be set up in Critical Path Method schedules. Design documents generally identify what to build, not how to build it. We are able to provide thought to construction means and methods during Project Implementation and help incorporate the latest technology or techniques into project plans.

Our planning engineers utilize Work Breakdown Structures that are compatible with CPM scheduling procedures. This approach permits our engineers to use the tasks as blocks within the scheduling software and analyze various sequences to find an optimum scheme.

This discipline also requires an understanding of construction equipment access and staging requirements to evaluate the predecessor and successor activities. In the construction business, there are many ways to "skin a cat", but finding the one that gets the job done the most efficiently and with the least impact requires the type of knowledge that the LBA, P.C. Team's Planners can bring.

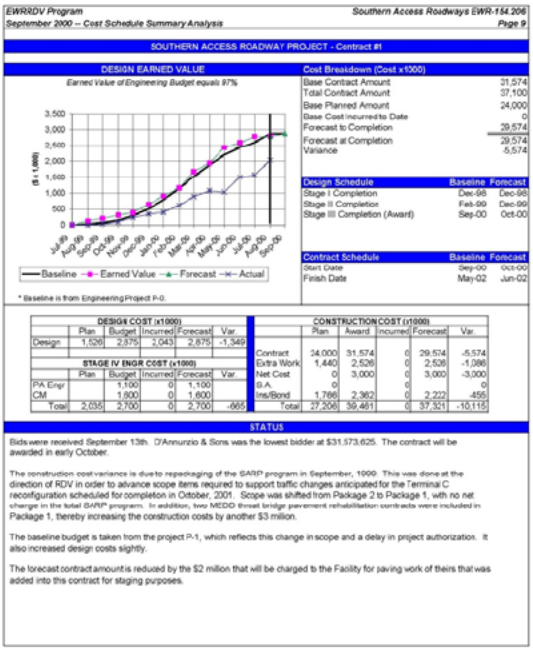
During the Construction Stage of Projects, the LBA, P.C. Team is capable of establishing temporary field offices; setting up job files, working folders, and record keeping systems; maintaining organized construction files; scheduling and conducting preconstruction meetings; handling/ preparing project correspondence to respond to the parties involved with each project, confirm verbal discussions/directives, document actions taken and decisions made, etc.; preparing and maintaining daily dairies for project activities noting events affecting construction progress (weather, manpower, site equipment, work performed, etc.); monitoring the submittal review process including maintenance of submittal logs; review and monitoring of project schedules for construction progress with emphasis on milestone completion dates, phasing requirements, work flow, material deliveries, test dates, etc.; assisting in problem resolution and handling of disputed issues (including development of Government position, drafting final decision letter, etc.); maintaining marked up sets of project plans and specifications for future as-built drawings; performing routine inspections of construction as work proceeds, taking action to identify work that does not conform to the contract requirements, and notifying the contractors when work requires correction; compiling, through site inspections, lists of defects and omissions related to the work performed and providing these lists to the contractor for correction; review of construction contractor payment requests (including preparation of necessary forms for payment processing by

PANYNJ); monitoring project financial data and budgetary cost accounting (maintain spread sheets indicating project fund allowances, obligations, payments, balances, planned expenditures, etc.); administration of construction contract change orders (issuing proposal requests, preparing cost estimates, reviewing cost proposals, assisting GSA in negotiations, preparing change order packages for processing); scheduling, conducting, and documenting regular progress meetings with all interested parties to review project status, discuss problems and resolve issues; scheduling, conducting and documenting (prepare minutes, etc. for distribution) construction related project meetings; monitoring construction contractor compliance with established safety standards (note and report unsafe working conditions, failures to adhere to safety plan required by construction contract); monitoring construction contractor's compliance with contract labor standards (including performing site labor interviews, collecting, reviewing and maintaining weekly payrolls for all project contractors and subcontractors, reporting potential wage violations to PANYNJ personnel); coordination of construction activities with Building Managers and occupying agency personnel; monitoring the design and construction clarification process and, when appropriate, reminding the A/E and other parties involved of the need for timely actions; participation in all "Partnering" activities during construction (workshops, meetings, etc.); preparing special reports and regular project status reports; providing for progress and/or final photographs of project work; perform site surveys using a registered surveyor (establish building lines, elevations, approaches, utility locations, etc.); provide drafting services with CADD support (as-built drawings, survey layouts, utility plans); provide assistance in obtaining permits; perform hazardous material assessments and monitoring of hazardous material abatement work; and provide cost estimating assistance.

TASK C. PROJECT MONITORING AND REPORTING SERVICES

The LBA, P.C. Team offers a robust capability to prepare various reports to maintain cost and schedule performance as well as providing status reports for management.

We will develop tools for reporting that are similar to our ongoing work for the PANYNJ at WTC and EWR, we will take the information gleaned from the initial discussions and create mock-up report templates to review with management. The LBA, P.C. Team understands the types of reports that PANYNJ desires in order to keep track of the real estate projects.


EWRRDV Program — Southern Access Roadways EWR-154.206
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SOUTHERN ACCESS ROADWAY PROJECT - Contract #1

DESIGN EARNED VALUE

Earned Value of Engineering Budget equals 97%

($ x 1,000)

Baseline — Earned Value — Forecast — Actual

* Baseline is from Engineering Project P-0.

Cost Breakdown (Cost x1000)

Base Contract Amount	31,574
Total Contract Amount	37,100
Base Planned Amount	24,000
Base Cost Incurred to Date	0
Forecast to Completion	29,574
Forecast at Completion	29,574
Variance	-5,574

Design Schedule	Baseline	Forecast
Stage I Completion	Dec-98	Dec-98
Stage II Completion	Feb-99	Dec-99
Stage III Completion (Award)	Sep-00	Oct-00

Contract Schedule	Baseline	Forecast
Start Date	Sep-00	Oct-00
Finish Date	May-02	Jun-02

DESIGN COST (x1000)

	Plan	Budget	Incurred	Forecast	Var.
Design	1,526	2,875	2,043	2,875	-1,349

STAGE IV ENGR COST (x1000)

	Plan	Budget	Incurred	Forecast	Var.
PA Engr		1,100	0	1,100	
CM		1,900	0	1,600	
Total	2,035	2,700	0	2,700	-665

CONSTRUCTION COST (x1000)

	Plan	Award	Incurred	Forecast	Var.
Contract	24,000	31,574	0	29,574	-5,574
Extra Work	1,440	2,526	0	2,526	-1,086
Net Cost	0	3,000	0	3,000	-3,000
G.A.	0		0		0
Ins/Bond	1,766	2,362	0	2,222	456
Total	27,206	39,461	0	37,321	-10,115

STATUS

Bids were received September 13th. D'Annunzio & Sons was the lowest bidder at $31,573,625. The contract will be awarded in early October.

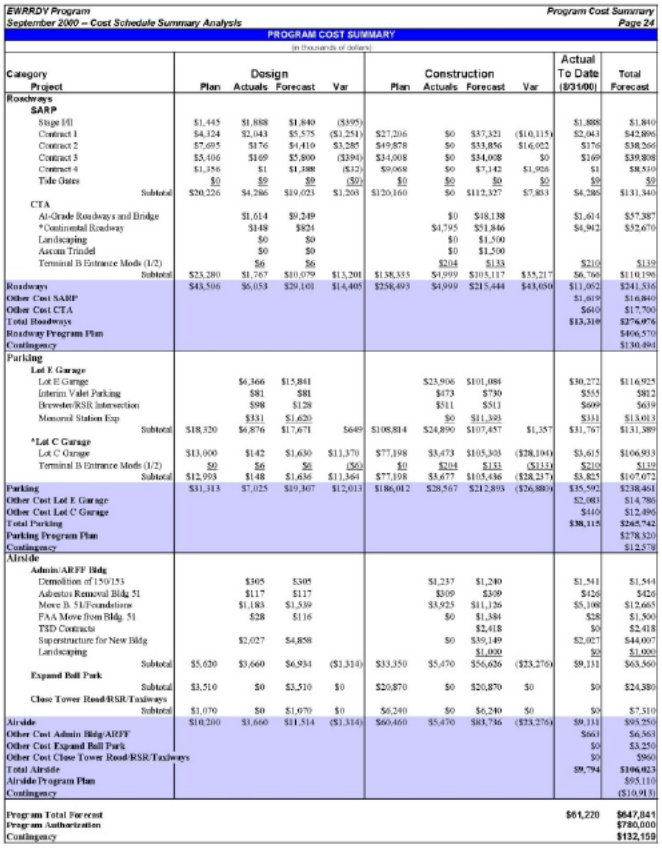
The construction cost variance is due to repackaging of the SARP program in September, 1999. This was done at the direction of RDV in order to advance scope items required to support traffic changes anticipated for the Terminal C reconfiguration scheduled for completion in October, 2001. Scope was shifted from Package 2 to Package 1, with no net change in the total SARP program. In addition, two MEDD thrust bridge pavement rehabilitation contracts were included in Package 1, thereby increasing the construction costs by another $3 million.

The baseline budget is taken from the project P-1, which reflects this change in scope and a delay in project authorization. It also increased design costs slightly.

The forecast contract amount is reduced by the $2 million that will be charged to the Facility for paving work of theirs that was added into this contract for staging purposes.

For the EWR Redevelopment project, the LBA, P.C. Team developed the report shown in Example 1. This was part of a monthly progress report on a group of roadway, garage, and building projects. Over the life of these projects, there were environmental, permitting and general coordination issues that were identified and addressed. Earned value was used during both the design and construction stages. Status information and issues were collected and discussed with Project Managers. If appropriate, the LBA, P.C. Team can develop a similar type of report for Real Estate. An Executive Summary or Exception Report can also be prepared that will highlight those projects in danger of not meeting funding requirements.

Another type of report that can be developed is a one-page summary of all projects, similar to Example 2. This particular report developed by the LBA, P.C. Team tracked only cost information, but one could be created that addresses schedule status, subregional FHWA reporting status, or other project information.



EWRRDV Program — *Program Cost Summary*
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PROGRAM COST SUMMARY

(in thousands of dollars)

Category / Project	Design Plan	Design Actuals	Design Forecast	Design Var	Construction Plan	Construction Actuals	Construction Forecast	Construction Var	Actual To Date (6/31/00)	Total Forecast
Roadways										
SARP										
Stage I/II	$1,445	$1,888	$1,840	($395)					$1,888	$1,840
Contract 1	$4,324	$2,043	$5,575	($1,251)	$27,206	$0	$37,321	($10,115)	$2,043	$42,896
Contract 2	$7,695	$176	$4,410	$3,285	$49,878	$0	$33,856	$16,022	$176	$38,266
Contract 3	$5,406	$169	$5,800	($394)	$34,008	$0	$34,008	$0	$169	$39,808
Contract 4	$1,356	$1	$1,388	($32)	$9,068	$0	$7,142	$1,926	$1	$8,530
Tide Gates	$0	$9	$9	($9)	$0	$0	$0	$0	$9	$9
Subtotal	$20,226	$4,286	$19,023	$1,205	$120,160	$0	$112,327	$7,833	$4,286	$131,340
CTA										
At-Grade Roadways and Bridge		$1,614	$9,249			$0	$48,138		$1,614	$57,387
*Continental Roadway		$148	$824			$1,795	$51,846		$4,942	$52,670
Landscaping		$0	$0			$0	$1,500			
Ascom Trindel		$0	$0			$0	$1,500			
Terminal B Entrance Mods (1/2)		$6	$6			$204	$133		$210	$139
Subtotal	$23,280	$1,767	$10,079	$13,201	$138,335	$4,999	$105,117	$35,217	$6,766	$110,196
Roadways	$43,506	$6,053	$29,101	$14,405	$258,493	$4,999	$215,444	$43,050	$11,052	$241,536
Other Cost SARP									$1,619	$16,840
Other Cost CTA									$640	$17,700
Total Roadways									**$13,310**	**$276,076**
Roadway Program Plan										$406,570
Contingency										$130,494
Parking										
Lot E Garage										
Lot E Garage		$6,366	$15,841			$23,906	$101,084		$30,272	$116,925
Interim Valet Parking		$81	$81			$473	$730		$555	$812
Brewster/RSR Intersection		$98	$128			$511	$511		$609	$639
Monorail Station Exp		$331	$1,620			$0	$11,393		$331	$13,013
Subtotal	$18,320	$6,876	$17,671	$649	$108,814	$24,890	$107,457	$1,357	$31,767	$131,389
*Lot C Garage										
Lot C Garage	$13,000	$142	$1,630	$11,370	$77,198	$3,473	$105,303	($28,104)	$3,615	$106,933
Terminal B Entrance Mods (1/2)	$0	$6	$6	($6)	$0	$204	$133	($133)	$210	$139
Subtotal	$12,993	$148	$1,636	$11,364	$77,198	$3,677	$105,436	($28,237)	$3,825	$107,072
Parking	$31,313	$7,025	$19,307	$12,013	$186,012	$28,567	$212,893	($26,880)	$35,592	$238,461
Other Cost Lot E Garage									$2,003	$14,786
Other Cost Lot C Garage									$446	$12,496
Total Parking									**$38,115**	**$265,742**
Parking Program Plan										$278,820
Contingency										$12,578
Airside										
Admin/AIFF Bldg										
Demolition of 150/153		$305	$305			$1,237	$1,240		$1,541	$1,544
Asbestos Removal Bldg 51		$117	$117			$309	$309		$426	$426
Move B. 51/Foundations		$1,183	$1,539			$3,925	$11,126		$5,108	$12,665
FAA Move from Bldg. 51		$28	$116			$0	$1,384		$28	$1,500
TSD Contracts							$2,418		$0	$2,418
Superstructure for New Bldg		$2,027	$4,858			$0	$39,149		$2,027	$44,007
Landscaping							$1,000		$0	$1,000
Subtotal	$5,020	$3,660	$6,934	($1,314)	$33,350	$5,470	$56,626	($23,276)	$9,131	$63,560
Expand Ball Park										
Subtotal	$3,510	$0	$3,510	$0	$20,870	$0	$20,870	$0	$0	$24,380
Close Tower Road/RSR/Taxiways										
Subtotal	$1,070	$0	$1,070	$0	$6,240	$0	$6,240	$0	$0	$7,310
Airside	$10,200	$3,660	$11,514	($1,314)	$60,460	$5,470	$83,736	($23,276)	$9,131	$95,250
Other Cost Admin Bldg/AIFF									$663	$6,563
Other Cost Expand Ball Park									$0	$3,250
Other Cost Close Tower Road/RSR/Taxiways									$0	$960
Total Airside									**$9,794**	**$106,023**
Airside Program Plan										$95,110
Contingency										($10,913)
Program Total Forecast									**$61,220**	**$647,841**
Program Authorization										**$780,000**
Contingency										**$132,159**

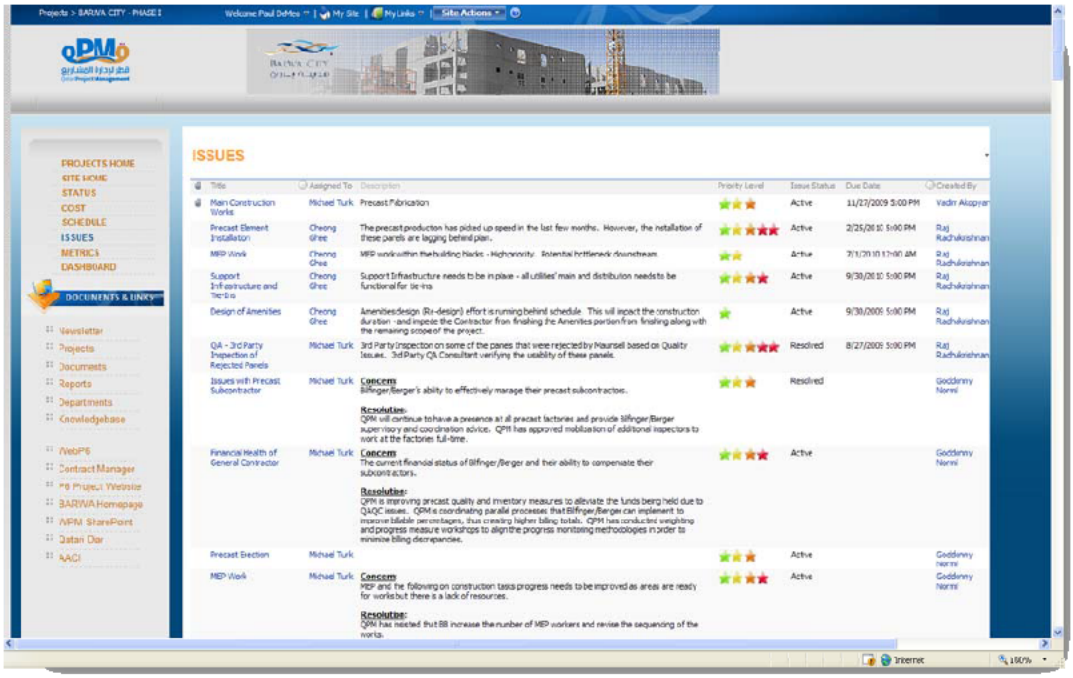
* Estimated - Costs TBD

'Other' costs are comprised of RDV, General and Administrative, and Financial Expense Charges.

Following the development of status reports, the LBA, P.C. Team can also create a baseline master schedule comprised of all relevant projects, similar to the one in Example 3.

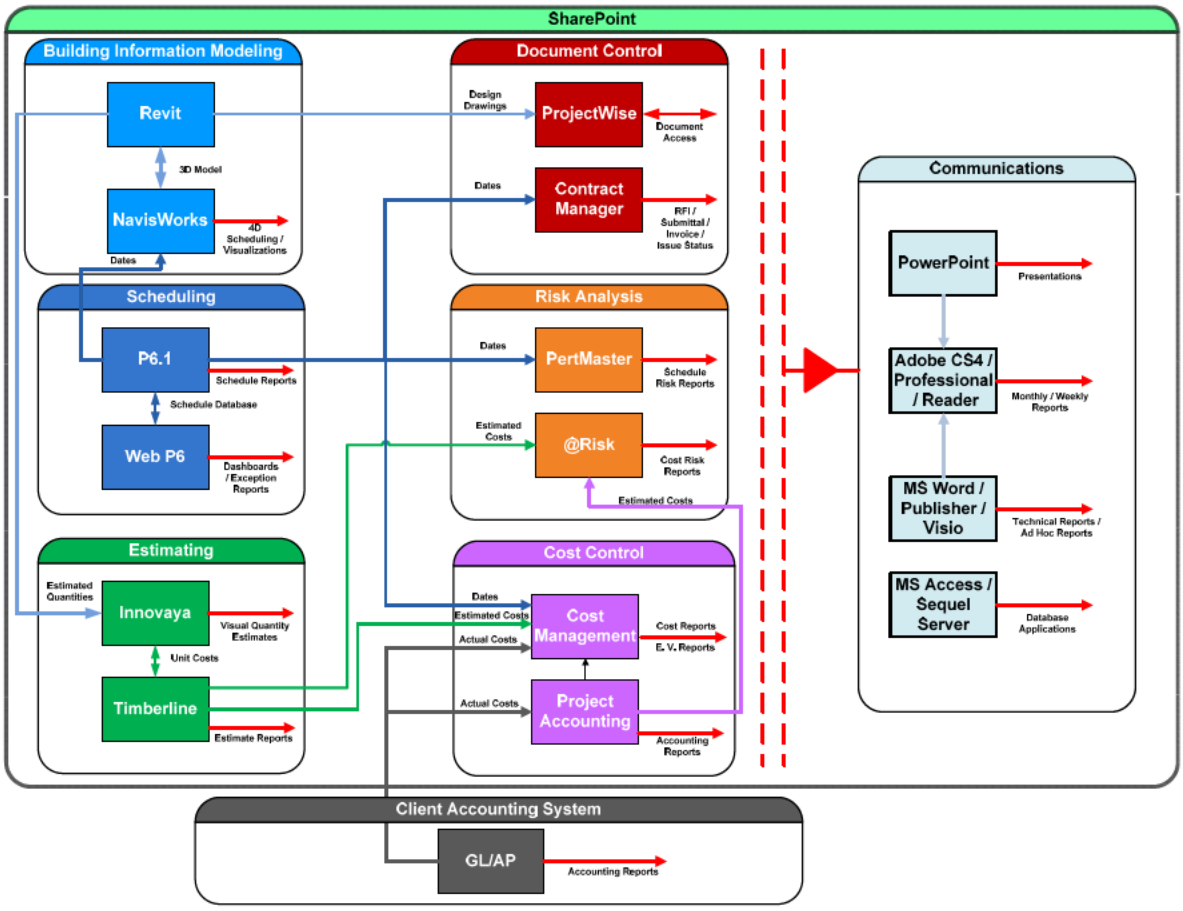
Key milestones for each project will be represented. At some point, with the agreement of management, this baseline will be finalized and all future schedule updates will be compared to it. In this way, projects that are falling behind schedule will be easily identified.

If detailed "issue" tracking is necessary, the LBA, P.C. Team has tools to create a database for this purpose, or we can utilize SharePoint, which the LBA, P.C. Team has been introducing on our Program Management assignments. The following images are shots from our Middle East projects where Microsoft SharePoint has been introduced as the platform for file sharing. Example 4 shows how SharePoint can be used for issue tracking. The owner of the issue is clearly shown, as well as the priority and due dates. This can be customized to meet PANYNJ's needs.

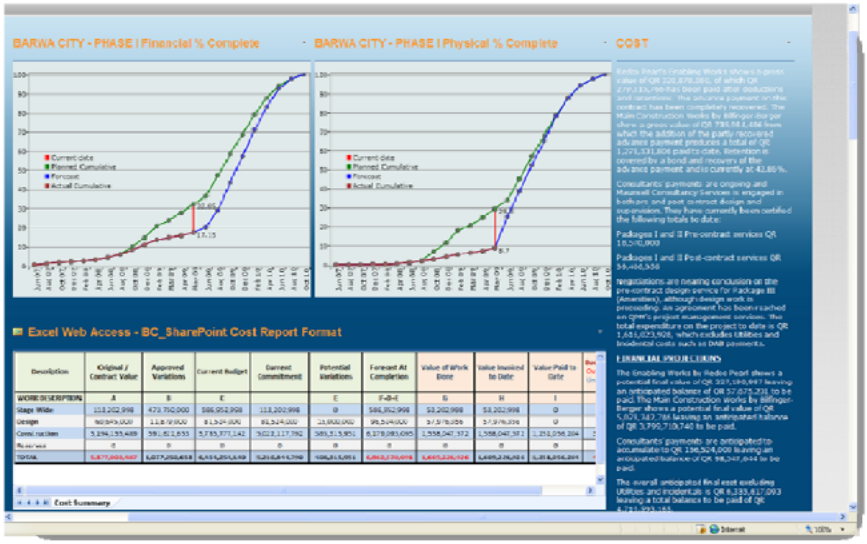


Activity Description	Orig Dur	Rem Dur	%	Early Start	Early Finish
Parking					
+ Parking Structure at Lot E					
	659	530	11	15MAR00A	16OCT02
Monorail Station E Expansion					
< M/Sta E> Stage VI Constr Monorail Sta E Expansion	367	367	0	02DEC00	03DEC01
Modifications to Lot A & B					
< A&> Stage IV Construction	113	0	100	12APR00A	21JUL00A
Roadway & Frontages					
Terminal Frontages/Roadways					
C TA Roadway Bridge & At Grade Sta IV Subst Compl	350	350	0	17OCT00	01OCT01
C TA Roadway Bridge & At Grade St IV Landscaping	553	553	0	05JUN01	13DEC02
C TA Roadway Bridge & At Grade Sta IV Final Compl	275	275	0	02OCT01	30OCT02
+ Southerly Access Roadway					
	1,013	1,013	0	30SEP00	14SEP04
PA Building 10 Relocation					
+ Demo of Buildings 150 &153					
	150	0	100	03JAN00A	31MAY00A
Building 51 Asbestos Removal					
< Bldg51 > Stage IV Construction, Asbestos Removal	37	0	100	05DEC99A	24MAR00A
Move Building 51/Building 1 Foundations					
< Bldg51 > Stage IV Construction, Bldg. Relocation	278	103	63	01MAR00A	26DEC00
< Bldg1 Fdns> Stage IV - Foundations Construction	165	76	54	01MAY00A	29NOV00
< Bldg51 > West Wing Available for Relocation	0	0	0		16OCT00
New Administration/ARFF Building					
< Bldg1 Superstr> Stage IV - New Building	301	265	12	25JUL00A	01OCT01
< Bldg1 Superstr> Stage IV - Complete Rehabilitation	279	279	0	27DEC00	01OCT01
< Bldg10 > Install/Relocate Key TSD Systems	30	30	0	20AUG01*	01OCT01
< Bldg10 > Relocate Tenants	11	11	0	17SEP01*	01OCT01
+ New FAA Air Traffic Control Tower (by FAA)					
	1,298	1,000	24	22NOV99A	11JUN03
Airfield Modifications					
+ Adams Ditch Closure (by CO)					
	269	197	35	05JUL00A	30MAR01
Taxiway Crossings (by CO)					
< AD Cross> Construction Stage IV, Taxiway Crossings	162	162	0	31MAR01	26SEP01
+ RSR/ Peddie Ditch Intersection (by CO)					
	42	42	0	02JAN01	01MAR01
+ Taxiway "RL" (by FA)					
	128	128	0	02APR01	26SEP01
+ New RSR/Close Tower Road (by CO)					
	210	210	0	05MAR01	30SEP01
Demo Bldg 10 & Underpass at Taxiway "U"					
Sta IV Demo Bldg 10 & Underpass at "U"	277	277	0	02OCT01	05JUL02
RON Aircraft Parking					
Stage IV RON Parking Area (by FA)	338	338	0	03DEC02	31OCT03
Continental Terminal C					
+ Beg Room					
	679	197	71	03NOV98A	30MAR01
Terminal C CTA Roadways					
Construct HOV / LOV Roadways	160	41	77	10MAR00A	25OCT00
Demo Existing Elevated Road	33	33	0	25OCT00	12DEC00
Construct New Elevated Bypass Road	202	202	0	13DEC00	26SEP01
Parking Structure at Terminal C					
< Lot C > Parking Structure - Construction	450	413	10	01AUG00A	01NOV01
< Lot C > Parking Structure, Partial Opening	0	0	0		02APR01*
Terminal C-3					
Early Site Package	150	0	100	19APR99A	29DEC99A
777 Hold Room	366	0	100	09AUG99A	06APR00A

Example 5 shows how SharePoint pulls information from a myriad of systems into one central location. A system like this could be helpful to the PANYNJ. The next two examples illustrate how some of the outside data looks from the SharePoint screen.



PROJECTS HOME
SITE HOME
STATUS
COST
SCHEDULE
ISSUES
METRICS
DASHBOARD
DOCUMENTS & LINKS
Newsletter
Projects
Documents
Reports
Departments
Knowledgebase
WebP6
Contract Manager
P6 Project Website
BARWA Homepage
WPM SharePoint
Qatari Diar
AACI
Panorama Viewer
VIDEO GALLERY
IMAGE GALLERY
OVERVIEW


BARWA CITY - PHASE I Financial % Complete
BARWA CITY - PHASE I Physical % Complete
COST
Excel Web Access - BC_SharePoint Cost Report Format

TASK D. PROGRAM LEVEL MANAGEMENT SERVICES

We are accustomed to providing Program Management services to the PANYNJ. Our Program Management experience includes the Newark Airport Redevelopment, where for the past 20 years, we have helped the PANYNJ initiate and implement the Monorail project and the air and land side improvements and the Terminal C Parking Garage. We were also the Program manager for Phase I and II of the Downtown Redevelopment Program (World Trade Center Reconstruction). We assisted with the planning and programming of the Temporary Transit Station phase and the ongoing Transit Hall, WTC Towers 1 through 4 and the Memorial/Museum.

For the World Trade Center Reconstruction Program, our Program Management services include providing multi-discipline professional and technical staff to support executive and Federal Transit Administration documentation and reporting; technical support to advance design and construction, management of multi-discipline professional and technical staff to support; Project Controls, including program and project level scheduling, scheduling integration, resource allocation analysis and status and progress monitoring; Project Cost Analysis, Cost Estimating, Financial Monitoring, Budgeting, invoice reviews, earned value analysis and cost control; document control and associated tracking systems for all WTC Redevelopment Projects, Quality Assurance, Management Support Services, WTC Program-wide Communications & Graphical Visualization Support, WTC Program-wide Risk Assessment Support, Claims Management Support and Assistance.

We are presently serving as the Program Manager for the Redevelopment of the George Washington Bridge Bus Station, a public/private partnership with a New York City based real estate developer.

TASK E. PROGRAM MANAGEMENT SERVICES

In our ongoing program management services for the PANYNJ, our team performs several activities to assist with managing the programs. Our team is multi-disciplined and set up to provide comprehensive services as needed for the complex programs that the PANYNJ undertakes. A representative sample of these activities includes:

- Project Planning & Scoping
- Project Management Information System Management, including Web Based Systems
- Permitting
- Contract Administration
- Budget Analysis
- CPM Scheduling
- Document Control
- Project Accounting
- Risk Assessment
- Design Management
- Reporting – Project and executive level reports.
- Construction Management Services
- Procurement (Bid/Award) Services

Claims Services. The LBA, P.C. Team provides Claims Services when and as required by the PANYNJ for specific projects. Claims Services apply to providing technical support (not legal assistance) in handling disputed matters once a contractor has made written demand for payment or other relief under the contract and submitted it to the Contracting Officer for decision in accordance with the Contractual Disputes clauses. The LBA, P.C. Team reviews disputes and claims from the A-E and/or construction contractor(s) and renders all assistance including the following:

- Furnishing reports with supporting information necessary to resolve disputes or defend against the claims.
- Preparation and assembly of appeal files.
- Participation in meetings or negotiations with claimants.
- Appearance in legal proceedings.
- Preparation of cost estimates for use in claims negotiations.
- Preparation of risk assessments/analyses relative to claim exposures.
- Preparation of findings of fact and any other documentation required by the PANYNJ

Post Construction Services. At or near substantial completion of project construction, the LBA, P.C. Team provides services such as:

- Performing Post Occupancy Evaluations (POE's)
- Assisting PANYNJ in the formulation of lessons learned
- Providing occupancy planning including development of move schedules, cost estimates, inventory lists, etc.
- Providing move coordination, relocation assistance, and/or furniture coordination
- Providing telecommunication and computer coordination

Salary Rates

Hourly Rates - Names, Titles and Rates for Technical Personnel

The LBA, P.C. Team's proposed technical personnel for this Project Management "On Call" Services Agreement are listed in the following Salary Rate Schedule. The staff includes the personnel shown in our Project Organization Chart and other staff who may become available for assignment during the duration of the contract.

SALARY MULTIPLIER FOR PROJECT STAFF

The proposed multiplier for the Home Office staff working on this project is **2.67**. The following is a derivation of the salary multiplier based on the most recent consolidated, independently audited office overhead rate for Louis Berger & Assoc., P.C. and The Louis Berger Group (Domestic), Inc.:

DERIVATION OF OFFICE SALARY MULTIPLIER

Base Salary	1.00
Overhead Rate (Audited)	1.4379
Total	2.4379
Profit at 10%	0.24
Total	**2.67**

The proposed multiplier for personnel working in the PANYNJ offices (i.e., the "field") for this project is **2.36**. The following is a derivation of the field overhead salary multiplier based on the most recent consolidated, independently audited field overhead rate for Louis Berger & Assoc., P.C. and Louis Berger Group (Domestic), Inc.:

DERIVATION OF FIELD SALARY MULTIPLIER

Base Salary	1.00
Overhead Rate (Audited)	1.1468
Total	2.1468
Profit at 10%	0.21
Total	**2.36**

STATEMENT OF PREMIUM PAY

As required by the Port Authority's RFP to provide a company policy for compensation for premium pay (i.e., holidays, shift differentials, regular days, weekends and night work or union required payments), the LBA, P.C. Team is as follows:

"The LBA, P.C. Team's overtime policy is to pay overtime in compliance with FLSA regulations. Non-exempt employees are paid premium pay (time and a half) for all hours worked in excess of 40 in an FLSA workweek (Sunday through Saturday).

Although not required by the FLSA, when Exempt employees work in excess of 40 hours in an FLSA workweek, they are paid for the additional hours at their usual hourly rate.

Employees who work on a company Holiday may receive Holiday pay in addition to work pay, at their usual rate. No premium pay applies.

Employees who work at night or on weekends generally receive pay for hours worked at their usual rate without any premium. However, in some circumstances, they may receive premium pay if the client or employment contract includes premium pay because of special conditions."

HOURLY SALARY RATES TABLE

The hourly rates table for our proposed technical personnel, including key personnel indicated on our project organization chart, is provided below.

Project Management Services as Requested on an "On Call" Basis For 2011 through 2014			
Salary Rate Schedule Louis Berger & Assoc., P.C. Team			
Name	**Title**	**Company**	**Hourly Rate**
D. James Stamatis, P.E.	Principal (President)	LBA, P.C.	150.00*
Charles "Chuck" King, P.E.	Project Manager	LBG	110.58
Louis Hannigan	Quality Assurance Manager	LBG	50.75
Project Controls			
Paul DeMeo	PM Information Systems Specialist	LBG	103.37
Raj Radhakrishnan	Project Controls Manager	LBG	71.80
Ian Baldwin	Sr. Scheduler	LBG	74.97
James Murphy	Sr. Scheduler	LBG	88.05
Raghuram Kandula	Scheduler	LBG	33.92
Snigdha Nandivada	Scheduler	LBG	39.23
Swadeep C. Rachoor	Scheduler	LBG	28.85
Jody Williams	Scheduler/Risk Assessment	LBG	36.78
Roni Kitchell	Cost Control Engineer	LBG	51.13
Joi Koenig	Cost Control Engineer	LBG	46.50
Ayotunde B. Fapohunda	Cost Control Engineer	LBG	34.66
Orville Randolph	Project Accountant	LBG	33.50
Claudine O. Anderson-Gethers	Project Accountant	LBG	35.00
Bryan Parola	Communications Director	LBG	52.01
Vadim Akopyan	SharePoint Technician	LBG	40.87
Jerry Drey Reaves	Document Control Manager	LBG	40.14
Ivan V. Roca	Document Control Technician	LBG	27.65
Diego Andrade	Document Control Technician	LBG	23.50
Ava Blake	Document Control Technician	LBG	26.31
Trayce Spencer	Document Control Technician	LBG	20.31
Blanche R. Harvey	Document Control Technician	LBG	24.52

Program/Project Managers			
Gerard Salernitano	Project Manager - Aviation	LBG	65.31
Andrew Cangiano	Project Manager - Aviation	LBG	62.22
John C. Hasselmann, P.E.	Project Manager – Civil & Facilities	LBG	64.38
H. Wayne Valentine, P.E.	Project Manager – Civil & Facilities	LBG	63.14
Richard Law, PE	Project Manager – Civil & Facilities	LBG	63.65
James J. Murray, P.E.	Program/Project Manager – Civil & Rail	LBG	73.51
Richard Barrington, P.E.	Project Manager - Civil & Facilities	LBG	63.70
Michael Soliman, P.E.	Program/Project Manager - Rail	LBG	79.32
Vinay Mudholkar	Program/Project Manager - Rail	LBG	64.42
Robert J. Thiel, P.E.	Program/Project Manager - Rail	LBG	63.46
Kenneth W. Favaro	Project Manager - Ports	LBG	51.50
Michael Donovan, P.E.	Program Manager	LBG	103.37
Jason Brown	Program Manager	LBG	84.59
Joe Cadillac	Program Manager	LBG	101.64
Technical Specialists			
Steven Baldwin	Aviation Planning & Operations	LBG	94.95
Cosema (Connie) Crawford, P.E.	Transit Program Advisor	LBG	108.17
James J. Murray, P.E.	Program/Project Manager – FTA	LBG	73.51
Fredrick McCarthy, P.E.	Engineering Manager - Security	LBG	81.73
Al Racciatti	Economist	LBG	66.35
Niek Veraart, ASLA, AICP	Sr. Planner	LBG	69.58
Jim Bach, AICP	Principal Planner	LBG	198.58

Name	Title	Company	Actual Hourly Rate
Technical Resources			
Daniel D. Ramage, Jr.	BIM	LBG	$59.42
Wayne A. Sullivan	BIM	LBG	$39.37
Adam Faust Bailey	Graphics	LBG	$20.69
Brian P. Murphy, CIH, CSP	Safety Manager	LBG	$56.73
Ryan C. Cleary	Office/Project Engineer	LBG	$37.60
Craig Napolitano	E/A – Hazardous Material Mgr.	LBG	$57.94
Gene Makavoz	E/A – Hazardous Material	LBG	$41.89
Joseph L. Sbarra, CIH	CM – Air Quality	LBG	$56.65
Yuri Snihur	Electrical Engineer	LBG	$48.53
Luis Correia, P.E.	Electrical Engineer	LBG	$68.09
Elena Burg	Electrical Engineer	LBG	$53.23
Ion Ilie	Electrical Engineer	LBG	$39.62
Joseph Masucci, P.E.	Mechanical Engineer	LBG	$68.09
Jay Juluru, P.E., C.E.M.	Mechanical Engineer	LBG	$52.00
Kenneth H. Weber	Mechanical Engineer	LBG	$41.60
Tu Nguyen, P.E.	Mechanical Engineer	LBG	$43.08
John McGhee, EIT	Mechanical Engineer	LBG	$30.21
Deborah Van Steen	Architectural Historian	LBG	$30.87
Michael T. Malloy, RLA	Landscape Architect	LBG	$33.17
Christian T. Chan, EIT	Civil Engineer	LBG	$49.42
Joshua Lanning	Civil Engineer	LBG	$34.38
Angelica S. Wilson	Civil Engineer	LBG	$28.37
Naveen L. Gumadelli, P.E.	Civil Engineer	LBG	$43.27
Urie Ridgeway	Engineer	LBG	$40.87
Jose Hernandez, P.E., S.E.	Engineer	LBG	$55.05
Chrissa D. Roessner, P.E.	Engineer	LBG	$43.75
Eduardo (Ed) Szmurlo, P.E.	Engineer	LBG	$44.47
Hong Y. Sun, P.E.	Engineer	LBG	$66.35
John Tan, P.E.	Structural Engineer	LBG	$73.56
Christopher L. Erickson, EIT	Structural Engineer	LBG	$34.38
Rodolpho Gils, P.E.	Structural Engineer	LBG	$67.79

STELLAR

57 West 38th Street, 11th Floor
New York, NY 10018
Tel# 212 432 2848
Fax# 212 432 2846

Rates Schedule/Multiplier

Staff Name	Technical Role	Hourly Salary	Multiplier
Yumin Ding	Cost Control Specialist	$ 35.22	2.4
Hao Jiang	Cost Control Specialist	$ 25.69	2.4
Bova Lee	Document Management Specialist / Cost Control Specialist	$ 26.74	2.4
Onna Kung	Document Management Specialist / Cost Control Specialist	$ 26.74	2.4
Ke Tang	Senior Developer / Reporting Specialist	$ 49.45	2.4
Rozaliya Kiperman	Schedule Control Manager / Contract Manager / Reporting / Trainer	$ 49.32	2.4

Team Support Services, Inc.

1 Charleston Ct.
Basking Ridge, NJ 07920

WBE / DBE Certified

"Team Support Services Premium Time Company Policy is such that all hours (regular and premium) are billed at the hourly pay rate times the multiplier of 2.0. The premium hours are also billed at an additional ½ of the hourly pay rate with no multiplier."

NAME	TITLE	RATE
Elizabeth Bovino	Cost Analyst	$55.81/hr
Dawn Hedgespeth	Contract Manager/Records Management Specialist	$32.19/hr
Margarita Morera	Reports, Presentations & Communications	$31.25/hr
Sheketa Daniels	Senior Executive Administrative Assistant	$31.25/hr

M/WBE Participation

M/WBE Participation

The Authority has set a goal of 12 percent participation by qualified and certified MBEs and 5 percent to qualified and certified WBEs for this technical service project. Louis Berger & Assoc., P.C. (LBA, P.C.) has a long history of meeting or exceeding M/WBE goals for contract participation by Minority- and Women-owned Business Enterprises. This contract will not be an exception. The subconsultants selected to assist us on this assignment were chosen for their abilities in their specialized areas.

Firm	Role	Type	PANYNJ Certificate #	Estimated Contract %
Stellar Services	Systems Implementation	MBE	PA-20128	12%
Team Support Services, Inc.	Administrative Support	WBE	PA-21285	5%

THE PORT AUTHORITY OF NY & NJ

Anthony R. Coscia
Chairman

Kenneth J. Ringler, Jr.
Executive Director

Certified

by

Small Business Programs

4 U Services, Inc. d/b/a Stellar Services

Certificate PA-20128

This certificate acknowledges that the above named firm is certified as a **Minority-owned Business Enterprise.** This company has met the criteria for ownership and control as established by the Port Authority Policy for Revised Minority, Woman and Small Business Enterprise (M/W/SBE) Programs, dated June 10, 1993.

This certification will remain in effect for five years from the date of notice and may be extended only upon submission by you, and acceptance by the Port Authority of a recertification application attesting that the ownership and control of the business, on which this certificate is granted, has not changed. This office must be notified within 30 days of any material changes in the business which affect ownership and control. Failure to do so may result in the revocation of this certification and/or imposition of other sanctions.

Lash Green
General Manager
Certified: August 4, 2006

Rosemary Jenkins-Varela
Manager, Certification
Scheduled Re-evaluation: August 3, 2011

Form: 6/10/93

THE PORT AUTHORITY OF NY & NJ

Anthony R. Coscia
Chairman

Christopher O. Ward
Executive Director

Certified

by

Office of Business & Job Opportunity

Team Support Services, Incorporated

Certificate PA-21285

This certificate acknowledges that the above named firm is recertified as a **Woman-owned Business Enterprise.** This company has met the criteria for ownership and control as established by the Port Authority Policy for Revised Minority, Woman and Small Business Enterprise (M/W/SBE) Programs, dated June 10, 1993.

This certification will remain in effect for five years from the date of notice and may be extended only upon submission by you, and acceptance by the Port Authority of a recertification application attesting that the ownership and control of the business, on which this certificate is granted, has not changed. This office must be notified within 30 days of any material changes in the business which affect ownership and control. Failure to do so may result in the revocation of this certification and/or imposition of other sanctions.

Lash Green
Director
Certified: September 4, 2008

Rosemary Jenkins-Varela
Manager, Certification
Scheduled Re-evaluation: September 4, 2013

Form: 6/10/93 RAL

Listing of Firm's Affiliates

LISTING OF AFFILIATES

Louis Berger & Assoc., P.C. (a PA Co.),
320 Eagleview Blvd., Suite 250
Exton, PA 19341
EIN#: [redacted]

Berger Group West, P.C.
412 Mt. Kemble Avenue
Morristown, NJ 07962
EIN#: [redacted]

Conflict of Interest Statement

Louis Berger & Assoc PC
One Seaport Plaza, 199 Water Street, 23rd Floor, New York, New York 10038
Tel (212) 612-7900 Fax (212) 363-4341 www.louisberger.com

October 20, 2010

The Port Authority of New York and New Jersey
One Madison Avenue
Seventh Floor
New York, NY 10010
Attention: RFP Custodian

RE: Request For Proposals For Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014 (RFP #22388)

Dear Sir/Madam:

To the best of our knowledge, Louis Berger & Assoc., P.C. (LBA, P.C.) does not have any Conflicts of Interest or potential Conflicts of Interest which might arise should LBA, P.C. be awarded this Agreement.

Sincerely,
LOUIS BERGER & ASSOC., P.C.

Thomas Lewis, P.E., JD
Director/Secretary

STELLAR

Stellar Services
57 West 38th Street, 11th Floor
New York, NY 10018
Tel# 212 432 2848
Fax# 212 432 2846

The Port Authority of New York and New Jersey
One Madison Avenue, 7th Floor
New York, NY 10010

THE Louis Berger Group, INC
199 Water Street, 23rd Floor
New York, New York 10038

RE: REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

Dear Sir or Madam,

Stellar Services or any of its employee, agent or subcontractor, does not have any conflict of interest as defined in the P.A. Agreement for this solicitation.

Sincerely,

Liang Chen
President

Team Support Services, Inc.

1 Charleston Ct.
Basking Ridge, NJ 07920

WBE / DBE Certified

FROM: Elizabeth Bovino, President, Team Support Services, Inc.

TO: Charles "Chuck" King, P.E., Project Manager

Re: Performance of Expert Professional Project Management Services, as Requested, on a "Call-In" Basis During 2011, 2012, 2013 and 2014 (RFP#22388) for the Port Authority of New York & New Jersey

Gentlemen:

I, Elizabeth Bovino, certify that Team Support Services has no Conflicts of Interest with the Port Authority of New York and New Jersey and/or Louis Berger & Assoc., P.C.

Sincerely,

Elizabeth Bovino
President

Exceptions to Standard Agreement

Louis Berger & Assoc PC
One Seaport Plaza, 199 Water Street, 23rd Floor, New York, New York 10038
Tel (212) 612-7900 Fax (212) 363-4341 www.louisberger.com

October 20, 2010

The Port Authority of New York and New Jersey
One Madison Avenue
Seventh Floor
New York, NY 10010
Attention: RFP Custodian

RE: Request For Proposals For Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014 (RFP #22388)

Dear Sir/Madam:

Louis Berger & Assoc., P.C. (LBA, P.C.) agrees with the standard agreement and its terms and conditions without any exceptions with the following notice:

> **24. CERTIFICATION OF NO INVESTIGATION (CRIMINAL OR CIVIL ANTI-TRUST), INDICTMENT, CONVICTION, DEBARMENT, SUSPENSION, DISQUALIFICATION AND DISCLOSURE OF OTHER INFORMATION**
>
> **By proposing on this Agreement, each Consultant and each person signing on behalf of any Consultant certifies, and in the case of a joint proposal each party thereto certifies as to its own organization, that the Consultant and each parent and/or affiliate of the Consultant has not:**
>
> **...**
>
> **G. been, and is not currently, the subject of a criminal investigation by any federal, state or local prosecuting or investigative agency and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency.**

Louis Berger & Assoc., P.C. is not the subject of any investigation. However, in the interest of full disclosure, LBA, P.C. shares office space and resources with The Louis Berger Group, Inc. (LBG), which is under investigation by the US Attorney's Office for the District of New Jersey for alleged overbilling relating to its contracts with the United States Agency for International Development ("USAID"). Neither LBG nor any of its current directors, officers, or employees have been charged with any crime. A search warrant was executed at the New Jersey office of the company in August, 2007. Additionally, LBG has been required to produce documents relating to contracts for international work in Iraq and Afghanistan for USAID and the Department of Defense. On August 23, 2010, Derish Wolff, the then Chairman of the holding company of LBG, Berger Group Holdings, Inc. resigned as an officer, director and employee of the holding company and its subsidiaries and affiliates.

Although LBG is a potential target of the investigation, it is currently in settlement negotiations with the USAO for the District of New Jersey and other agencies that are involved in the investigation.

Sincerely,
LOUIS BERGER & ASSOC., P.C.

Thomas Lewis, P.E., JD
Director/Secretary

October 21, 2010

The Port Authority of New York and New Jersey
One Madison Avenue, 7th Floor
New York, New York 10010

Attn: RFP Custodian

Re: RFP Number 22388: Request for Proposal for Performance of Expert Professional Project Management Services on an "As-Needed" Basis During 2011, 2012, 2013, 2014

Dear Mr. Volonakis:

The facilities The Port Authority of New York and New Jersey operates, throughout the bi-state New York and New Jersey area, are absolutely critical to the well being of this region as businesses. For decades the Authority has provided the highest quality, most efficient transportation and port commerce facilities in the world. The ports, bridges, tunnels, airports, terminals and rail facilities the Authority operates are vital pillars for commerce in the region. We understand how important it is that they be maintained, protected and expanded. Therefore, URS would be proud to work closely with the Authority, as an extension of your staff, to provide the project management services that will be needed to ensure their optimum operation well into the 21st Century.

We believe URS is particularly well qualified to assist you, as we have been working collaboratively with the Port Authority for decades providing environmental, planning, design, security, inspection, program and construction management services for your facilities.

During this time we have worked at virtually every Port Authority facility, on billions of dollars of maintenance, renovation, expansion and new construction projects for every Line Department. We, therefore, know your mission, your people, your culture, and your methods of operation. Perhaps most importantly, we know how to work as an efficient member of your team.

As you review our proposal you will find we have identified a large cadre of key staff who have worked with the Authority and who collectively have experience on virtually every type of Port Authority Line Department project. In responding to your RFP we strived to identify individuals who would be immediately available and be able to meet any requirement you may have.

URS is committed to meet or exceed the Authority's MBE/WBE participation goals. To attain this goal we have teamed with the Maitra Associates (MBE) and LPE Enterprises (WBE). Both firms already have extensive experience working with both URS and the Authority.

URS Corporation – New York
One Penn Plaza, Suite 610
New York, NY 10119-3904
Tel: 212.736.4444
Fax: 212.629.4249
www.urscorp.com

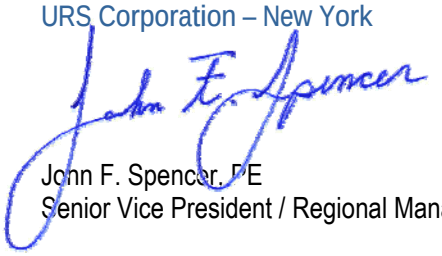
To make certain we efficiently supply personnel who will provide you satisfactory service, we have assigned David Beckett, a URS Vice President, to oversee the execution of our work. Dave has worked on numerous Port Authority projects and currently is effectively filling a very similar role overseeing our work on the Authority's 2007 - 2010 "As-Needed" Project Management Program.

In summary, we believe we have the staff, the plan, and certainly the desire to meet your needs, and we would be proud to be a part of your team.

We look forward to continuing our long history of working successfully with you.

Very truly yours,

URS Corporation – New York



John F. Spencer, PE
Senior Vice President / Regional Manager

ATTACHMENT B

PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014

AGREEMENT ON TERMS OF DISCUSSION

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority's Freedom of Information Policy and Procedure adopted by the Port Authority's Board of Commissioners on November 20, 2008, which may be found on the Port Authority website at: *http://www.panynj.gov/corporate-information/pdf/Freedom-of-Information-Policy-and-Procedure.pdf*, not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

URS Corporation - New York
(Company)

John T. Spencer
(Signature)

Senior Vice President
(Title)

October 21, 2010
(Date)

ORIGINAL AND PHOTOCOPIES OF THIS PAGE ONLY.
DO NOT RETYPE.

ATTACHMENT C

COMPANY PROFILE

REQUEST FOR PROPOSALS FOR THE PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

1. **Company Name (print or type):**

   URS Corporation – New York

2. **Business Address (to receive mail for this RFP):**

   One Penn Plaza, Suite 610

   New York, NY 10119-0698

3. **Business Telephone Number:** (212) 736-4444

4. **Business Fax Number:** (212) 629-4249

5. **Firm website:** www.urscorp.com

6. **Federal Employer Identification Number (EIN):** [redacted]

7. **Date (MM/DD/YYYY) Firm was Established:** 08/29/1934

8. **Name, Address and EIN of Affiliates or Subsidiaries:**

   See attached list

9. **`Officer or Principal of Firm and Title:**

   John F. Spencer, PE, Senior Vice President

10. **Name, telephone number, and email address of contact for questions:**

    Jay M. Gewirtzman, PE, Vice President

    (212) 330-1986

    jay_gewirtzman@urscorp.com

11. **Is your firm certified by the Authority as a Minority-owned, Woman-owned, or Small Business Enterprise (M/W/SBE)?** ☐ Yes ☑ No

    If yes, please attach **Port Authority** certification as part of this profile.

    If your firm is an M/WBE not currently certified by the Authority, see the Authority's website – http://www.panynj.gov/business-opportunities/supplier-diversity.html to receive information and apply for certification.

SECTION C. QUALIFICATIONS & EXPERIENCE OF STAFF

JOHN SPENCER, PE

Executive Management

Years of Experience
40 Years

Education
MBA, Fairleigh Dickinson University, 1979
BCE, Manhattan College, 1970

Registration/Certification
Professional Engineer:
New York, 1975
New Jersey, 1975

Chronology
2005-Present: URS Corporation
2003-2005: NJSCA
1970-2003: The Port Authority of NY & NJ

URS

Mr. Spencer has 40 years of engineering experience, which includes engineering design and construction programs in the New York/New Jersey Metro area, 33 years with the Port Authority. Prior to joining URS, he held senior positions with the Port Authority of New York & New Jersey (PANY&NJ) and the New Jersey School Construction Corporation (NJSCC), where he was responsible for the management and implementation of capital design and construction programs valued at $10-15 billion. Mr. Spencer is also familiar with the New York design and construction communities and is adept at forging the partnerships necessary to make a project successful.

RELEVANT PROJECTS:

World Trade Center Transportation Hub Project and Other World Trade Center Site Projects, New York, NY - $2,200,000,000: Principal-in-Charge for the WTC Transportation Hub Project. URS, as part of a joint venture, is providing construction management services to the PANY&NJ for the World Trade Center Transportation Hub and other WTC site projects. The Hub is being built to replace the temporary PATH station that was constructed after the previous PATH station under the World Trade Center was destroyed on September 11, 2001. The PATH station is the major transportation hub that transports New Jersey commuters to lower Manhattan and visa versa.

Other World Trade Center projects include:

- Common Infrastructure Projects (vehicular security center, new streets and open spaces, and CH&RP)
- WTC Memorial, Memorial Museum, Performing Arts Center
- Freedom Tower, Tower 2, 3 & 4, and retail development

Construction management tasks include QA/QC, inspection services, preconstruction phase services, support services, technical services, site safety monitoring, scheduling, cost management, document control, cost estimating, site construction, logistics, project closeout, environmental reporting and coordination with NYCDOT/NYSDOT, New York City Transit, Lower Manhattan Construction Command Center, NYC Department of Environmental Protection, Con Edison, FTA, and local businesses and communities.

New Jersey School Construction Corporation, Trenton, NJ: As Chief Executive Officer, he was responsible for this $8.6 billion program to construct much needed quality schools throughout New Jersey. The program is the

largest public construction program ever undertaken by New Jersey and one of the largest programs of its type in the nation. In 2004, the NJSCC:

- Initiated 47 design awards for 55 schools (renovation/new construction), worth approximately $835 million.
- Awarded 104 construction contracts valued at $930 million.
- Acquired 205 sites for 15 school projects worth $100 million.

Port Authority of New York & New Jersey, Newark, NJ: Deputy Chief Engineer - Directed the engineering/architectural design, project and construction management, quality assurance and general operations of the Engineering Department, which included a staff of approximately 700 engineers, architects, technical, and support employees and an equivalent staff of architectural, engineering and technical consultants and job shoppers. Engineering provided the professional services to deliver the Authority's 2002-2006 $9 billion five-year Capital Program. In 2002, engineering awarded $1.2 billion in new construction contracts and placed $1.1 billion of construction in place. Major programs included:

- John F. Kennedy Airtrain
- Newark Liberty International Airport Monorail
- John F. Kennedy Redevelopment Program - A $3 billion redevelopment program including extensive roadway and terminal improvements.
- Newark Liberty International Airport - A $2 billion redevelopment program including Terminal B expansion, entrance and central terminal area roadway improvements and off airport access modifications.
- World Trade Center PATH Restoration including Exchange Place.

DAVID BECKETT, PE, LEED AP

Project Executive

Years of Experience
30 Years

Education
MS/1988/Civil Engineering/ Brooklyn Polytechnic

BS/1980/Environmental Engineering/Syracuse University

Registration/Certification
Professional Engineer: New York, 1988

Chronology
4/1988 - present - URS
9/1982 - 3/1988 - Nassau County DPW
8/1981 - 8/1982 - Beltran Associates

URS

Mr. Beckett has 30 years of experience in program, project and construction management for both public and private clients, and in all phases of the project delivery process. This experience has included the management of cost, schedule, and quality on a wide variety of project types. He is currently the Deputy Manager of the New York Construction Management Group.

RELEVANT PROJECTS:

Deputy Manager URS Construction Management Group, New York, NY: Deputy Manager directly supports the operations of a 400-person construction management group with a portfolio valued at more than $8 billion. In addition, serves as the Project Executive on a number of significant projects for the Port authority, such as: Redevelopment of JFK Airport; PATH On-Call; Construction Management On-Call; and Project Management On-Call.

John F. Kennedy International Airport Redevelopment Program, Jamaica, NY - $9,500,000,000: As Project Manager, approved contract change orders and designer and construction manager budgets; chaired weekly status meetings with the designer and construction manager; provided direction to the contractor for issues that were not resolved by the construction manager; and reported project status to senior management. As Control Engineer, managed the cost and schedule of the $234 million People-mover system, a major component of the redevelopment program. Prepared and updated project schedules, monitored project budgets and prepared project status reports.

Confidential Financial Services Client, New York, NY - $155,000,000: As Project Manager he was responsible for all aspects of the design and construction of this 22-story, 525,000 sq. ft. interior renovation project. This project included the complete rebuilding of the base building infrastructure including: HVAC, electrical, telecommunications, plumbing, complete interior fit-out, and an addition of a new cafeteria and Wellness Facility.

Doral Inn, New York, NY) - $120,000,000: Project Manager for Starwood Lodgings $120 million renovation of a 75 year old hotel located in midtown Manhattan. Project included the renovation of 663 guest rooms, the addition of 59 rooms, a world class restaurant, ballroom and business center, while under continuous occupancy. URS services included project management, bid review, scheduling, budgeting, estimating, and change order management.

Underground Storage Tank Program, New York, NY - $20,000,000: Project Manager responsible for the design and construction of upgrades on this project, to bring New York City Department of Design and Construction's underground storage tanks and related piping systems at 25 sites into compliance with regulatory requirements. Previously performed the same role for URS's first contract, which involved 70 tanks at 26 sites.

New York City School Construction Authority Capital Improvement Program, New York, NY - $7,500,000,000: Manager of Project Assessments for URS's Independent Program Review team. Reviewed cost, schedule, quality, and management performance of several of the program's 150 major projects.

Department of Public Works, Nassau County, NY - $500,000,000: Resident Engineer/Project Engineer/Claims Engineer for a large municipality under a federal consent order to complete capital improvements to wastewater treatment facility. As Resident Engineer, managed the construction of a $22 million expansion to the Bay Park Wastewater Treatment Plant. As Project Engineer, oversaw design consultants' preparation of contract documents. As Claims Engineer, handled approximately $6 million in construction claims.

Manufacturing Firm: As Project Engineer, coordinated the fabrication, installation and startup of industrial electrostatic precipitation equipment for a manufacturer of industrial air pollution control equipment.

JOSEPH DIXON, PE

Project Manager

Years of Experience
22 Years

Education
BS/1975 Marine Engineering/Transportation (dual major) U.S. Merchant Marine Academy

Registration/Certification
New York/Professional Engineer - Mechanical Engieering/1998 [redacted]

Chronology
April 1988 - Present: URS Corporation Project Engineer, Controls Engineer, Controls Manager, Project Manager, Program Manager

January 1977 - March 1988: Ocean Ships, Inc. - Third Officer/Mate, Second Officer, Chief Officer, Captain

July 1975 - October 1976: Naval Ship Engineering Center - Engineer In Training

URS

Mr. Dixon has 22 years of diverse experience in project management, contract administration, scheduling, cost control, value engineering, claims support and personnel management and operations. He has used his management and engineering skills on a wide variety of projects. From 1997 until this year, Mr. Dixon served as Program Manager on the multi-billion John F. Kennedy International Airport Redevelopment Program in New York. The multifaceted program has increaseed JFK air travel capacity from 30 to 50+ million passengers annually while the airport remained fully operational. Prior to his two decades in the construction industry, he gained worldwide experience in ship operations and multicultural exposure as a ship captain..

PROJECT EXPERIENCE

Port Authority of NY&NJ, John F. Kennedy International Airport Redevelopment Program, Queens, NY: Program Manager responsible for managing a staff, coordination and project management on a wide range of airport projects. Long term assignment on the Program through various stages of development in positions of increasing responsibility. Responsibilities include:

Project Management - Provide project management to the Port Authority Aviation Department for oversight of design and oversight of construction management activities;
Schedule Management - Coordinate and monitor schedules on multiple projects for both design and construction;
Cost Management - Establish budgets, develop capital plans; monitor spending on macro and micro levels; and provide trend and variance analyses;
Financial Analysis - Participated in feasibility studies and risk analysis to determine viability of various capital investments;
Private Development - Promote private development opportunities. Contributed to development of request for qualifications and request for proposal documents, selection criteria, negotiation, contract development and administration.

Other Elements of the Program include:
Terminal 4 - International Arrivals Building - $1.4 billion - A new three-level terminal building totaling 1.5 million square feet. The building was constructed in phases to maintain on-going operations consisting of five million international passengers annually;
Terminals 5 & 6 - $875 million - Phased redevelopment to provide roads, utilities, parking, and a new terminal while preserving the landmark TWA Flight Center designed by Eero Saarinen;
Planning for the redevelopment of Terminal 6;

Airport Roadway and Infrastructure - $550 million - A total of 32 lane miles of approach and frontage roads coordinated with a comprehensive upgrade of the Central Terminal Areas utility system;
Air Traffic Control Tower - $60 million - The 321 foot structure features state-of-the-art communications, radar display and windshear alert systems;
Cogeneration Plant Privatization- $250 million - Conversion of the heating and refrigeration plant into a new 90MW cogeneration facility providing heating and cooling to JFKs terminals and power to the regional grid;
Parking Facilities - $280 million - Four multi-level parking garages, one single-level deck and surface parking totaling over 7,000 spaces.

Other Terminal Improvements:
Terminal One - A new 650,000 square foot passenger terminal constructed by Terminal One Group Associates;
American Airlines Terminals - A completely new terminal estimated at $1.8 billion was completed by American in phases through 2007;
British Air Terminal: Two phased airline renovations and an expansion of their terminal.

Port Authority of NY&NJ, John F. Kennedy International Airport / International Arrivals Building, Queens, NY - $1,400,000,000: Assistant Project Manager for the redevelopment of the International Arrivals Building for multiple stages of the project, from conceptual design through start of construction.

Port Authority of NY&NJ, John F. Kennedy International Airport / Air Traffic Control Tower, Queens, NY - $60,000,000: Project Manager responsible for the completion of construction, Facility and FAA acceptance, fit-out and transition of operations to the new facility.

Port Authority of NY&NJ, John F. Kennedy International Airport / Schedules and Budgets, Queens, NY: Controls Engineer responsible for developing project schedules and budgets; monitored and tracked expenditures; and prepared variance analyses. Promoted to Manager of Controls responsible for providing cost and scheduling services for the program. Developed budgets, prepared capital plan input, tracked and analyzed cost trends. Prepared and integrated schedules and monitored progress.

NYC Department of Design & Construction, Rikers Island Correctional Facility, Queens, NY - $82,000,000: Project Engineer for the court-ordered expansion project for low- and medium-security jail space. Scheduled day-to-day contractor work, expedited shop drawing reviews and modular construction, and resolved mechanical conflicts. Handled change orders, payment requests, documentation and contract administration; monitored contract compliance; and coordinated security to controlled access areas.

K. JOSEPH JBEILI

Project Manager

Years of Experience
21 Years

Education

MSCE Civil Engineering/1990/ Construction Management/ Northeastern University,Boston MA

BSCE Civil Engineering/1988/ Civil Engineering/Northeastern University, Boston MA

Chronology

10/02-Present: URS Corporation, Project Manager

10/92-10/02: Port Authority of New York & New Jersey, Project Manger

9/90 10/92: FGA, P.C., NY, Project Manager

12/89-9/90:Sciaba Construction, Boston, MA, Project Engineer

7/87-12/89: Morse Diesel, Boston, MA, Field Engineer

7/86-6/87: HNTB, Boston, MA, Assistant Engineer

URS

Mr. Jbeili has more than 21 years of experience in managing public and private projects thru all stages including feasibility studies, planning, design development, and construction management..

PROJECT EXPERIENCE

PANY&NJ - George Washington Bridge On-Call Contract, New York and New Jersey - $20,000,000: Project Manager overseeing design and construction activities for George Washington Bridge. Work consist of replacing bridge rope of the main span, roadway steel joint replacement, upgrade to the traffic signs (Electronic and static signs), roadways pavements, and various site work. Responsible of overseeing the design and construction.

PANY&NJ - Lincoln/Bus Terminal Ramps On-Call Contract, New York, NY - $120,000,000: Project Manager overseeing the design and construction activities for the replacement of the concrete deck for the bus ramps including the embedded snow melting system in the ramps, renovating the Bus Terminal facade and structural seismic upgrades to the Bus Terminal building and Bus Ramps. Responsible of overseeing the design and construction.

PANY&NJ - #7 Subway Line Design Criteria On-Call Contract, New York, NY - $2,000,000,000: Project Manager overseeing design and construction activities for the No. 7 subway tunnel from Times Square to 25th St (under 11th Ave). The proposed tunnel will run under the Bus Terminal and under the Lincoln Tunnel. Responsible of reviewing design documents, coordinating the design criteria and assessing the construction staging.

PANY&NJ - Access to the Region Core (ARC) On-Call Contract, New York, NY - $5,000,000,000: Project Manager overseeing design and construction activities for Access to the Region Core (ARC)project. Planning design consisted of Drafting the Environmental Impact Study (DEIS) of the proposed extension of a new passenger rail tunnel from New Jersey to Penn Station in New York City. Responsible of reviewing and coordinating the various Engineering design criteria documents for the EIS, coordinating the design criteria with PANY&NJ / NJ Transit and their designers, Parsons Brinckerhoff.

PANY&NJ - Jacob Javits Center Expansion On-Call Contract, New York, NY - $1,500,000,000: Project Manager. Preliminary designs consisted of expanding the Jacob Javits Center north and abut close to the Lincoln Tunnel ventilation buildings. Responsible of reviewing preliminary design plans, coordinating the design criteria and assessing the construction staging (including easements rights, real estate acquisitions) with PANY&NJ and Javits Centre designers, HOK.

PANY&NJ - Hoboken Waterfront Development On-Call Contract, Hoboken, NJ - $570,000,000: Senior Project Manager for construction project of a mixed-use residential (350 units) and commercial development (over 1Million sqft) on 50 acres of prime waterfront. Oversaw the engineering and construction on behalf of the landowner, the PANY&NJ. Interacted with the developers, SJP and The Applied Company and with their contractors (Bovis, Skanska) and the designers (HOK, Tomasetti Eng, Mueser Rutledge).

PANY&NJ - Queens West Waterfront Project On-Call Contract, Long Island City, NY - $2,800,000,000: Senior Project Manager. Planning project located along the East River on 74 acres of prime waterfront directly across from Midtown Manhattan made up of 19 parcels planned for residential and commercial development. Oversaw the engineering planning on behalf of the landowner, the PANY&NJ. Interacted with the other stakeholders, Empire State Development and NYCEDC and the developers.

PANY&NJ - Port Authority Bus Terminal, New York, NY - $350,000,000: Project Manager overseeing design and construction activities for the Port Authority Bus Terminal project. Planning project to build a 35-story building over the Port Authority Bus Terminal. Coordinated the design criteria and preliminary design. Interacted with the Developer Vornado and their designers (SOM, YES, KPF) and the contractors (Tishman, Turner).

PANY&NJ - Holland Tunnel / Lincoln Tunnel/Bus Terminal, New York and New Jersey - $120,000,000: Project Manager overseeing design and construction activities. Work consisted of upgrade to the existing facility infrastructure, implementation of the KROLL security recommendations, buildings rehabilitation and tunnels rehabilitations. Responsible of overseeing the design and construction of multiple transportation projects.

Newark Liberty International Airport, Roadways Phase 1A, Newark, NJ - $60,000,000: Project Manager. Work consisted of widening roadways and bridges entering Newark Airport. Upgrade to the parking facilities and existing internal roadways. Responsible of overseeing the design and construction.

PANY&NJ - World Trade Center Recovery & Restoration, New York, NY - $350,000,000: Project Control Engineer. Work consisted of gathering and analyzing schedule, budget and technical data to support the restoration effort after the bombing at the sublevels. Responsible for assisting Design and Construction Executives at the command center at ground zero.

PANY&NJ - PATH and Tunnels and Bridges Division, New York and New Jersey - $200,000,000: Project Control Engineer for the Port Authority of NY & NJ. Work consisted of gathering and analyzing schedule, budget and resources data to support the senior management in running the PATH and Tunnels Bridges Capital programs.

TERRENCE DUNN

Project Manager

Years of Experience
27 Years

Education
Bachelor of Architecture/1983/University of Notre Dame; College of Engineering; School of Architecture

Chronology
08/09 - Present: URS Corporation, Assistant Director

11/04 08/09: Tishman Speyer, Director

09/99 11/04: Bovis Lend Lease, LMB, Inc., Construction Project Manager

02/97 09/99: Skidmore, Owings & Merrill, Project Manager/Associate

03/90 02/97: Swanke Hayden Connell Architects, Project Manager/Associate

03/86 03/90: Edward Durrell Stone Associates, Designer

08/83 11/85: U.S.Peace Corps, Yemen Arab Republic

URS

Mr.. Dunn has over ten years experience in on-site project management as both an Owners Representative and Construction Manager and over twenty years of construction-related work experience on a variety of commercial real estate transactions ranging in scale and complexity in the U.S., Europe, Latin America and the Mideast. Previous experiences as an Owners Representative for a major international development firm; Project Manager for a large international architectural firm and as a Construction Manager for a major New York based construction management firm provides a strong baseline in the management of all aspects of the development of new projects from site identification through final tenant build-out..

PROJECT EXPERIENCE

World Trade Center Redevelopment/ New York, New York- Port Authority of NY&NJ - $11,000,000,000: Assistant Director; Planning Design & Construction for the World Trade Center Site working for the Port Authority of NY & NJ. Ongoing Work includes review and operational overview of all projects under the direct management of the Port Authority of New York & New Jersey (PA) inclusive of 1 World Trade Center; the HUB; the PA/Westfield JV Retail Mall; and the Vehicle Security Center (VSC.) Responsible for the negotiation of all awarded Construction Agreements held by the Department and for the Planning, Design & Construction at the World Trade Center Redevelopment inclusive of all coordination with PA affected departments (i.e. World Trade Center Construction; Procurement; Legal; Engineering; TSD, OEM , Risk); with affected Stakeholders (i.e. Silverstein Properties, Brookfield Properties, Metropolitan Transportation Authority (MTA) and with affected City, State and Federal Agencies.

Yankee Stadium, Bronx, NY - $1,500,000,000: Project Manager for this project for the New York Yankees. Work consisted of the design, construction and fit-out for the new Yankee Stadium, seating approximately 53,000 fans, on four levels stretching from foul pole to foul pole, with nearly 30,000 seats in the first two levels and approximately 60 luxury suites. Responsible for Phase 1 and Phase 2 Environmental Surveys; the coordination of the Yankee consultant, legal teams, and multiple affected NYC and NYS Agencies. Responsible for the ULURP (Uniform Land Use Review Process) and the FEIS (Final Environmental Impact Statement) processes. Responsible for the development of the security program from initial threat assessments and comparable benchmarked institutions to the development of Standard Operating Procedures (SOPs.) Responsible for the management of all Architectural trades (approximately $250m dollars) during bid & award; including review of scopes, bidders, all requisitions and day to day management of field conditions through project close-out.

Site 26; Goldman Sachs Corporate Headquarters, New York, NY - $2,400,000,000: Design Project Manager on this project for Goldman Sachs. Work consisted of the design management of Pei Cobb Freed & Partners, Adamson & Associates and ShoP Architects for the core & shell for Goldman Sachs new corporate headquarters located opposite the proposed One World Trade on West Street in lower Manhattan. Responsible for the day to day management of the design team from preliminary presentations through completion of Construction Documents.

Fulton Street Transit Center, New York, NY - $750,000,000: Design Project Manager on this project for the Metropolitan Transportation Authority (MTA). Work consisted of the design management of Grimshaw Architects, Arup Consulting Engineers and James Carpenter design Associates for the design of the new transit center facility at the southeast corner of Fulton Street and Broadway. Responsibilities included Budgeting, Estimating, Value Engineering, Logistics Planning, Design Management, Project Scheduling and Construction Engineering Services.

PS1, The Contemporary Art Museum, Long Island City, NY - $17,000,000: Construction Manager on this project for the New York City Department of Cultural Affairs New York City Department of Design & Construction and the Museum of Modern Art. Work consisted of the structural reinforcement and/or replacement of roof trusses and parapets; window replacement and exterior facade stabilization/replacement for a culture center housed in what had been Long Island City's First Ward elementary school. Responsibilities included client and sub-consultant coordination and management and construction management services which included value engineering services, estimating, logistics planning (to maintain the continued operation of the Museum during construction), bidding, purchase of subcontracts, negotiation of change orders and closeout of all subcontracts.

Hudson River Park, New York, NY - $330,000,000: Program Manager on this project for the Hudson River Park Trust. Work consisted of the Project Management of a multi-phase design and construction program of both land-side and water side projects adjacent the Hudson River from Battery Park City in the south to Pier 96 to the north. Responsible for the management of multiple-design teams; Services included Design Coordination Services, Project Scheduling Services, Construction Engineering Services, Survey and Mapping Services, Geotechnical and Soils Investigation Services, Project Record Management Services, Environmental and Historical Resource Analysis Services, Landscape Architecture / Architectural / Engineering Services, Community Outreach and Participation Services, Agency Coordination Services, and Facilities/ Operations Planning Services.

JOSEPH SOAVE, PE

Project Manager

Years of Experience
33 Years

Education
MBA / 1984 / Management / Manhattan College, Riverdale, New York

ME / 1980 / Civil Engineering / Manhattan College, Riverdale, New York

BE / 1976 / Civil Engineering / The City College of New York, New York

Registration/Certification
NY / Professional Engineer, No. [redacted]

NJ / Professional Engineer, No. [redacted]

CT / Professional Engineer, No. [redacted]

Chronology
1995 - Present : URS/OBrien Kreitzberg, Project Manager-Program Manager

1985 - 1995 : Frederic R. Harris, Inc., Associate Vice President/Project Manager/Manager, Civil Engineering

1981 - 1984 : Parsons, Brinckherhoff, Quade & Douglas, Inc., Senior Engineer

1979 - 1981 : Richard Browne Associates (presently RBA Group), Senior Engineer

1977 - 1979 : Vollmer Associates, Junior Engineer

URS

Mr. Soave has more than 30 years of experience in the management, planning, design and construction of large projects, including over 20 years experience on multi-billion dollar Port Authority aviation projects. Program Management experience includes planning a new $4 billion air terminal program at LGA; a $1 billion dollar air terminal expansion program at EWR as well as implementation of a three-year $175 million airfield improvement program at JFK. Program Management responsibilities have included the development of project scopes, management of budgets and schedules; allocation of resources; earned value review; change order review; quality control; client liaison; and staff hiring and supervision. He also has experience as Project Manager of $550 million roadways/utilities improvements at JFK and $60 million roadways/utilities improvements at EWR.. He has also served as Manager of Civil Engineering with full responsibility for the management of a staff of designers. Mr. Soave is currently providing Program Management services for the $4 billion LaGuardia Airport Central Terminal Building Modernization Program..

PROJECT EXPERIENCE

JFK International Airport Redevelopment Program, Jamaica, NY - $2,000,000,000: As Client Project Manager, directed the development and implementation of $550 million in roadway and utility improvements while fully coordinating with airport operations and other components of the program, including new terminals and a people-mover system. Provides for the phased implementation of the roads and utilities; develops updates and maintains planning parameters for roads, parking lots and terminal frontages. Assesses earned value of active design efforts and compares to baseline schedules and budgets; reviews and evaluates cost proposals submitted by the design entities; reviews, evaluates and modifies the baseline budget and schedule. Recommends corrective action to senior client staff; coordinates design issues with the airport operator and tenants; reviews and evaluates the technical content of construction documents; monitors the performance of all components of each contract (designer, construction manager and contractor); evaluates earned value versus baseline schedules and budgets; participates in the development of recovery plans for schedule slippages; reviews all construction change orders; advises senior client staff; and coordinates construction issues with airport operator and tenants

LaGuardia Airport Modernization Program, Port Authority of NY & NJ, Flushing, NY - $4,000,000,000: Program Manager/Project Manager for URS (as part of a joint venture) providing planning, engineering and program management for the $4 billion program to modernize facilities at LaGuardia Airport. Provides on-site program management services and has full budget and schedule responsibility. The main focus of the project is expansion and

improvement of the Central Terminal Building (CTB) and its concourses to increase the types of aircraft that can be accommodated and to provide greater flexibility in adapting to programmatic changes of the airlines served by the facility. Modifications also are planned for the head house to meet increased passenger volumes as well as security needs for screening passengers and baggage. Landside improvements are planned for the roadways and frontages to accommodate increased vehicular volumes. URS is also studying the operational and financial feasibility of a facility that will screen all deliveries to the airport. The services include analyzing existing plans for redevelopment of the CTB and associated facilities, providing updated cost estimates and schedules for potential improvements, providing cost/benefit analyses, preparing a business and financing plan for the program, and assisting in the effort to obtain future authorizations to proceed with design and construction.

Terminal C Roadways, Continental Global Gateway Program - Newark Intl Airport, Newark, NJ - $1,000,000,000: As Program Manager, oversees the closeout of this multi-faceted terminal program. Responsibilities include: cost and schedule control; document control and general office administration.
As Client Project Manager, has full responsibility for the development and implementation of $60 million in roadway and utility improvements while fully coordinating with airport operations and interfacing with the terminal and parking garage projects. Works closely with Continental Airlines and the airport operator (Port Authority of New York and New Jersey) to solve numerous logistical and construction phasing problems arising from confined site conditions. The roadway construction site is located between an active terminal being expanded towards the roadway and the construction of a parking garage with two pedestrian bridge towers within the roadway site. Establishes scope, budgets and schedules for multiple construction contracts; and monitors the budget and schedule for all phases of design and construction. Evaluates all activities and initiates corrective action for technical, schedule and budget issues associated with the designer, construction manager and the contractor.

Engineering Firm, New York, NY: As Project Manager, responsibility encompassed budgeting, staffing, scheduling, technical requirements and client relations. Successfully increased project size through the sale of additional services. As Department Manager, directed a professional/technical staff in technical and administrative areas including project staffing and quality control; increased the timely completion of projects; recruited, hired and supervised the professional staff; and participated in overall strategic planning.

WILLIAM APRICENO, PE

Project Manager

Years of Experience
28 Years

Education
MBA/1988/Finance/Manhattan College
MEME/1982/Mechanical Engineering/Manhattan College
BEME/1981/Mechanical Engineering/Manhattan College

Registration/Certification
NY/Professional Engineer/1990
New York City Site Safety Manager, NY 2003

Chronology
1996 - Present: URS Corporation
1986 - 1996: John McCarthy, Inc. Consulting Engineers. Consulting Engineer.
1985 -1986: Peterson & Company. Cost and Schedule Engineer
1982 -1985: Westinghouse Electric Corp., Design Engineer

URS

Mr. Apriceno has 28 years of experience in the engineering, project management and construction field. His background includes project and construction management; resolving complex construction, engineering and financial issues; assisting clients in contract administration, review of plans and specifications; preparation of design changes and modifications; critical path method (CPM) scheduling and analysis; estimating and preparation / review of construction claims..

PROJECT EXPERIENCE

LaGuardia Airport Central Terminal Building Modernization Program - PANYNJ, Queens, NY - $5,000,000,000: Assistant to the Program Manager for Central Terminal Building modernization planning effort to replace the Central Terminal Building at LaGuardia Airport. Analyzed four alternative concepts of a new 38 gate terminal, 6,500 space parking garage, new Central Heating and Refrigeration Plant, reconfigured airport roadways, utilities, taxiways and apron. Evaluated the four alternative concepts for their ability to accommodate forecasted passenger volumes, current/future generation aircraft and provide modern terminal amenities and functions with efficient/flexible operations. Provided support for the client project authorization process and agency coordination.

LaGuardia Airport Project - PANYNJ, Queens, NY - $80,000,000: Served as Project Manager for LaGuardia Airport Projects for the Port Authority of New York and New Jersey's Capital and Operations Programs. Responsibilities included organizing and managing the design team, developing project schedule, establishing and monitoring project budget, awarding contracts, and providing construction management of the work and claims avoidance.

New York City Department of Citywide Administrative Services, New York NY - $23,000,000: Served as Project Manager for the exterior rehabilitation of a landmark quality building in a busy downtown area. Responsibilities include project management, contract preparation, pre-qualification of subcontractors, bid and award of work, construction management of work, quality assurance/quality control and claims resolution.

New York City Department of Design and Constructions Schools Task Force, New York, NY - $180,000,000: Served as Project Manager for the New York City Department of Design and Constructions Schools Task Force $180 million exterior repair and renovation program for various elementary and middle schools throughout New York City. Responsibilities included pre-construction review of design documents, contract preparation, pre-qualification of subcontractors, bid and award of work, construction management of work and quality assurance/quality control.

New York City School Construction Authority Capital Improvement Program, New York, NY (01/1996 - 03/1997) - $7,500,000,000: Served as Senior Project Engineer for the New York City School Construction Authority's $7.5 billion Capital Improvement Program for the renovation, modernization and new construction of New York City's public schools. Responsibilities include the resolution of construction claims, construction audits, cost and schedule reviews of ongoing projects.

John McCarthy, Inc., Consulting Firm, Hoboken, NJ: Served as Engineering Consultant, performed resolution of complex engineering and construction claims. Assisted clients in contract administration and construction management on difficult projects. Tasks included review of plans and specifications, assistance in preparation of design changes and modifications, tracking of project progress, schedule analysis and financial analysis of construction activities

Peterson & Company, Inc., New York, NY: Served as Cost and Schedule Engineer, performed resolution of complex engineering claims. Assisted clients in contract administration and claim preparation on troubled projects. Tasks included review of plans and specifications, and assistance in preparation of design changes.

Westinghouse Electric Corporation, Bridgeport, CT (06/1982 - 11/1985): Served as Design Engineer, provided design, analysis, and testing of switchgear and electro-mechanical devices. Responsible for project development, including marketing interface, national electric code and other regulatory agency review, cost investigation and evaluation, tooling and equipment approval, assembly implementation and quality assurance test preparation. Related tasks included exposure to CAD/CAM and shop floor experience.

MOIN AHMED, PE

Project Manager

Years of Experience
29 Years

Education
BS / 1974/ Mech. Engineering / NED Engineering College
MS /1981 / Mech. Engineering / University of Washington

Registration/Certification
Washington/Professional Engineer-Mech Engineering/1982

Chronology
1992-present: URS Corporation, New York, Senior Project Manager
1989 - 1992: Tishman Construction, New York, Mechanical PM
1982-1989: Holaday Parks, Inc. - Seattle, Assistant Engineer Manager

URS

Mr. Ahmed has over 28 years of experience in the construction and program management field relating to airports, K-12, higher education, hotels, hospitals, correctional facilities, office buildings, industrial complexes, United States Postal facilities, and investment banks. Currently he is the Port Authority Project Liaison for the construction of he $1.2 billion American Airlines Terminal and the Terminal 5 parking garage at John F. Kennedy International Airport. He was responsible for the $200 million renovation of 277 Park Avenue, a 50 story JP Morgan Chase Bank building, where he was the Owner's Representative and managed the construction work for the Real Estate and Business Development Department of the Bank.

PROJECT EXPERIENCE

John F. Kennedy International Airport, American Airlines Terminal and Terminal 5 Parking Garage, Jamaica, NY - $1,200,000,000: Project Liaison managing construction of the new American Airlines Terminal and the $65 million, 1500 space parking garage at Terminal 5 (JetBlue) for the Port Authority of NY & NJ at JFK Airport. Responsibilities include coordination with American Airlines/JetBlue and the various PA departments, managing day-to-day construction issues, ensuring compliance of all PA and JFK standards, resolution of lease and contract issues, schedule compliance, closeouts and Occupancy Certifications.

New York City Housing Authority - Ocean Bay Apartment Complex, Far Rockaway, NY - $60,000,000: Project Manager responsible for managing exterior renovation of 14 buildings in the Ocean Bay Apartment Complex in Far Rockaway, Queens. Exterior work included roofing, parapets, windows and asbestos removal. Infrastructure work included upgrades for electric and telephone systems.

New York City School Construction Authority - IS2R, PS2Q, Law & Gov. High School, PS68X, IS131Q and PAL High School, New York, NY: On-Call Design Contract. Program Manager for numerous schools. As Program Manager worked with SCA and URS personnel to streamline client relations, paper flow and accountability issues. Implemented steps within URS design department to improve quality of final product to client. Eliminated schedule slips and met all deadlines. Conducted ongoing negotiations on behalf of URS on past disputed issues and payments. Recovered unbilled and pending moneys owed to URS. Participated in design review meetings and performed final and substantial completion walk-throughs with the SCA and contractors. Successfully managed several design projects to 100% completion. Coordinated closeouts and processing of final payments. Other responsibilities

included preparing estimates, proposals and schedules for additional services, and changes to contract.

New Jersey School Construction Corporation, Jersey City, NJ - $42,000,000: Assigned as Project Manager on an emergency basis to the Freshman Academy project, to revive a stalled project with a non-performing contractor. Responsibilities included approval of contractor and consultant payments and change orders, coordination between SCC, contractor and consultant, managing day-to-day construction, reporting to client on progress and quality control issues, and generating weekly and monthly reports for client.

JP Morgan Chase Bank, Midtown Campus, New York, NY - $200,000,000: As Project Manager, acted as liaison between the bank's Real Estate and Business Development Department and the Contractor. Responsible for monitoring progress, field conditions and schedules. Approved change orders and requisitions. Maintained and monitored project costs. Actively interfaced with contractor, consultants and the various Department staff on issues relating to labor, delivery of furniture and MEP equipment, site conditions, changes and claims, and mass migration of Department onto completed floors.

NYC Department of Design & Construction Reconstruction of Webster Ave. Vehicle Maintenance Facility for DOT, Bronx, NY - $22,000,000: Project Manager for this maintenance facility project. Responsibilities included design review, estimating, managing of project schedule, quality control, coordination between contractors, consultants and DDC, punch list and final closeout.

Columbia University Program Management, New York, NY - $40,000,000: As Project Manager, had full responsible for overseeing Campus-wide construction of several Capital & Infrastructure projects from pre-construction to end user occupancy. The key projects included:

* 11-story Engineering school renovation of the 40 year old HVAC system.
* Laboratory exhaust and electrical upgrades to 90 year old, 9-story Chandler Chemistry Labs, including upgrades to main electric switch gear, replacement of 96 fume hood exhaust fans, improvements to heating & cooling systems and improved laboratory lighting.
* Campus chilled water loop upgrade, including addition of an 18" diameter underground CHW pipe loop to connect the N and E campuses. 500-feet of the loop was run thru bedrock under Amsterdam Avenue.
* Addition of a 2,000 ton steam chiller in the Uris Hall MER, including upgrades to steam and CHW piping and pumps.
* Campus condenser water upgrade, included addition of a new 36" diameter CW loop, four 1200 ton cooling towers, CW pumps and electrical upgrades.

MARK OSPALA

Project Manager

Years of Experience
34 Years

Education
BS/1976/Construction Engineering/Polytechnic of Central London, London, England
Diploma in Real Estate and Investment Analysis/1985/New York University/New York, NY

Chronology
Sep-08-Present: URS Corp
Nov-06-Sep-08: Department of Environmental Protection
2003-2006: Property Pride, LLC
2002-2003: Jeffrey Brown Associates
1996-2002: Lehrer McGovern Bovis, Inc
1993-1996: Hanscomb Associates, Inc
1991-1993: CRSS
1986-1991: York Hunter, Inc
1983-1986: Lehrer McGovern, Inc
1979-1983: Negav Airbase Constructors (NAC) and Facilities And Support Team (FAST)
1976-1979: Wates Construction, Ltd

URS

Mr. Ospala has over 33 years of U.S. and international construction and program management experience. Managed the lifecycle of many projects from conceptual stage through design, construction and closeout. Program management assignments on large scale programs. Projects included commercial, residential, institutional and mixed-use buildings as well as transportation and water/waste water facilities. Experienced in both the private and public sectors. Skilled in directing the design, construction and program management processes to ensure completion on time, within budget and to the satisfaction of ownership. Possesses strong leadership, management and communication skills. Develops excellent rapport with individuals of all levels. Entrepreneurial thinker and proactive manager, able to develop creative solutions to challenging problems.

PROJECT EXPERIENCE

PANYNJ - World Trade Center Project: Cost Engineer on specific projects as well as setting up the overall cost sharing procedure and its implementation. Consulting to the PANYNJ project management and executive staff.

Ben Gurion International Airport, Tel Aviv, Israel: Managed large team of engineering firms for the design of the $600 million passenger terminal at Ben Gurion Int'l Airport. Areas of responsibility were the roads, bridges, multi-level approach roadway, parking structures/revenue system, sewer pump station and utility infrastructure. Also managed the preparation of the construction schedule for the entire project for all landside and airside facilities (4000 activities).

Port Authority of New York and New Jersey, Capital Redevelopment Program, $970 million: Senior Project Manager/Program Manager assigned to develop and implement management controls, cost controls, scheduling and progress reporting systems for the World Trade Department. Prepared and monitored the scheduling/cost tracking of all work associated with the recovery of the World Trade Center and Vista Hotel from the February 1993 bomb blast, including preparation of supporting documentation for the insurance claims. Construction consulting as owner's representative on means, methods and project controls for various projects such as the Windows on the World and Observation Deck Redevelopments, Vista Hotel, tenant spaces, asbestos abatement and sprinkler programs.

NYC Department of Environmental Protection, Queens, NY - $23,000,000,000: Director, Capital Program Management Bureau of Engineering, Design and Construction immediately established the Program Management division to provide support for the $23 billion, ten year, Capital

Program. Appointed staff to create/manage a new centralized permitting group and estimating unit. Provide project controls for cost, schedule and issues management. Developing a PMIS (Program Management Information System) to monitor and report on the entire Capital Program. Accurately evaluate areas of innovation for improved project delivery.

Property Pride, LIC (Royce Group), Fort Lee, NJ: Principal Construction consulting/real estate investment company. Regularly consulted on large and medium size construction and alteration projects in NYC, Connecticut and Puerto Rico. Successfully developed and renovated several projects in NJ and PA. Made several real estate acquisitions and sales.

Tiffany and Company, Customer Fulfillment Center, Hanover, NJ - $70,000,000: Project Executive/Senior Project Manager for a complex $70 million, 275,000 SF Customer Fulfillment Center on a 38-acre partial landfill site. The building has a distribution area, 30,000 SF of offices, cafeteria, training rooms, specialty facility areas and shops, etc. Included extensive site work, storm management and landscaping as well as a $20 million material handling system from Austria.

American Museum of Natural History, New York, NY - $10,000,000: Project Manager for the installation of an 8,500 SF mezzanine between the existing forth and fifth floors of the original 100-year-old building. Involved intricate installation of new structural steel columns through the occupied public galleries and offices. Concurrently managed the construction of interior spaces for Government Relations, Visitors Services and Ornithology Departments.

Manhattan Psychiatric Center, New York, NY - $105,000,000: General Superintendent responsible for full site operations for the $105 million rehabilitation during patient occupation. Work included the addition of 17-story structural steel building, 800,000 SF of tenant work, chilled water main line and restoration of the Energy Center.

ALAN DIETZ

Project Manager

Years of Experience
35 Years

Education
BA/1971/Architecture/
University of Washington

Chronology
1971 - 1973 - Alderman & MacNinsh Architects

1973-1974 - Philip Lanes & Assoc. Architects

1974 - 1981 - Dietz Design Group

1981- 1984 - Hoffritz for Cutlery - Retail Construction Owners Rep

1984 - 1986 - Michael Lynn Assoc. Architect/Interior Designers

1986 - 1990 -Atmore Construction - Retail Construction - Millwork (New York area)

1990 - Present - URS Corp.

URS

Mr. Dietz is a Senior Project Manager with over 30 year of extensive experience, in project management, master and logistic planning, construction administration, field observation, constructability and value engineering, hazardous material remediation, project direction and design of institutional, commercial and residential facilities. Skilled Manager of large-scale complex construction projects.

PROJECT EXPERIENCE

Redevelopment of the WTC Trade Center Site: Responsible for coordination of the site logistic and integration for the Port Authority of New York and New Jersey of the key element of the construction for the seven billion redevelopment effort at the WTC site. Primary responsibility was project integration and logistic for the new Calatrava PATH Station and HUB, Freedom Tower, East West Corridor, realignment of the West Side Highway(9A), New Memorial to the victims of 9/11, redevelopment of towers two through five.

Deconstruction of 130 Liberty Street for the Lower Manhattan Development Corp., New York, NY - $110,000,000: Sr. Project Manager for 130 Liberty Street Demolition. Worked closely with Lower Manhattan Development Corporation to develop a strategy to deconstructed 130 Liberty Street physically damaged and became highly contaminated by dust when the South World Trade Center Tower collapsed on 9-11-01. Assisted in the preparation of bidding documents for the scaffolding and deconstruction of the building. Managed a six man team responsible for supervision and oversight of Regional/Safeway Environmental the Scaffolding Contractor and Bovis Lend Lease the Deconstruction Construction Contractor. Played a key role in attaining building department permits for the scaffolding and deconstruction of the building. Prepared and monitored detailed schedules for both the scaffolding and deconstruction of the building. Acting as the owners representative our team was responsible for monitoring and supervisions of all aspect of the work on a daily basis from field work activities, safety and environmental management.

Terminal E - Logan International Airport, Boston, MA - $200,000,000: Director of Construction Planning & Logistics for 200 million expansion and renovation of Terminal E. Worked closely with Logan Modernization International Gateway to develop the strategy for the completion of renovation of Terminal E from previous General Contractor/CM to a new CM at risk. Worked closely with the Architect to assess and assist in the assemblage of the multi-discipline conditions surveys and as-built drawing for the Terminal. Directed construction activities in order to secure the project by completing critical building envelope mechanical and electrical work. Directed the

development and preparation of logistic and phasing documents to be turned over to a future CM at risk.

NJEDA School Construction Program, Jersey City, NJ - $1,000,000,000: Construction Executive for the first phase of Jersey City's Schools, ten year, $1 billion Rehabilitation Program. Provided initial preparation of bid documents, logistic, constructability review, value engineering, cost estimating, hazardous material remediation planning and oversight and operational planning with joint venture partner Turner Construction in establishing the project teams for the Health and Safety phase of the work.

Newark Liberty International Airport Construction Management Services, Newark, NJ - $940,000,000: Provided critical in-depth analysis, assisted in planning, detailed schedules, constructability and value engineering review for the Aviation Engineering Department for the Central Terminal Projects (CTA) for the New Lot C Garage, Central Toll Plaza and Terminal C Roadway. Participated in the planning efforts for the $350 million Renovation and Expansion of Terminal B and $500 million to $1 billion Renovation and Expansion for Terminal A. Provided schematic scheme analysis and evaluation, constructability reviews, cost, planning and schedule analysis for both projects. Served as the Assistant Resident Engineer for Construction Management Division at Newark International Airport providing scheduling, logistic and construction oversight for CTA Projects to include the monitoring and removal of hazardous materials. Projects under my direct management were the following:

- $110 million Parking Facility at Terminal C.
- $765 million Expansion to Continental Airlines, Terminal C.
- $30 million Replacement and Expansion of the CTA Roadways at Newark Airport.
- $35 million new FAA Tower.

P.S 217, Brooklyn, NY: Senior Project Manager for the construction management of this school for the New York City School Construction Authority. Renovation and 36,000 sf. Addition to a five story 80,000 sf. 1926 exiting historic school while in operation. Public School 217 was a 42-month renovation and expansion that included the removal of all of the asbestos containing floor tile, insulation and windows in the building and modernization of the 1926, 900-student historic building. The project was especially challenging when enrollment went from 900 to 1,200 students during the course of construction. Because operations at the school could not be curtailed, responsibilities included meeting with principal, UFT representative, parents association and school district personnel to plan and coordinate the phasing process. Analyzed the plans and made several recommendations, such as consolidation of HVAC equipment into space in the new building, which enabled renovations to proceed smoothly and to meet the construction schedules.

JACOB ROSENKRANZ

Project Manager

Years of Experience
42 Years

Education
Juris Doctor (JD)/1973/New York Law School
BSCE/1968/Civil Engineering/Polytechnic Institute of Brooklyn

Chronology
2006 - Present: URS Corporation
2004 - 2005: Aviation Consultant
2001 - 2004: Washington Group International, Inc.,
1968 -2 000: Port Authority of NY&NJ

URS

Mr. Rosenkranz has 41 years of experience in the engineering and construction fields. His background includes managing the planning, design and delivery of numerous projects with complex engineering, construction and financial issues; contract administration, project management and construction management; preparation and review of construction claims; assisting in the preparation of design changes and modifications; and financial analysis of construction activities and entire projects.

PROJECT EXPERIENCE

John F. Kennedy International Airport, Queens, NY - $179,000,000: Project Manager for this New Large Aircraft (NLA) Program at JFKIA for the Port Authority of New York and New Jersey's Project Management Department. Program includes the relocation of a primary taxiway, rehabilitation of an additional taxiway, and the replacement of several taxiway bridge decks. Responsibilities include managing the project schedule, monitoring the project budget, managing contract changes and claims avoidance.

Essex County Airport Essex County Improvement Authority (ECIA), Fairfield, NJ: Aviation Consultant for the ECIA responsible for developing and managing the airports capital program; advised management on operations matters; and administered the airports State and Federal grant programs.

Hudson-Bergen Light Rail Transit System, New Jersey: Contract Manager - Managed contract related design-build and O&M issues. Included preparing and settling contract claims and change orders with the client (New Jersey Transit) and subcontractors; negotiating and composing rights of entry and easements with owners of properties adjacent to the rail right-of-way to permit access for construction and management of the light rail system; creating and monitoring agreements with developers and property owners constructing projects adjacent to the right-of-way to assure integrity of the light rail system; advising staff regarding property matters; managing the insurance claims process; negotiating leases for project office space and parking areas.

Newark International Airport - Port Authority of New York and New Jersey, Newark, NJ: Program Manager - Successfully managed the planning, design and delivery of numerous projects with aggressive deadlines and conflicting priorities. Included directing the development of project scope, budget and schedule. Required management of diverse professional resources and resolution of issues resulting from the conflict between operational needs and budgetary or constructability constraints. Project examples include:

- **New Maintenance Facility**. A $25 million project to create a series of structures to house staff and equipment. Was first major design-build project in Port Authority.
- **Runway Rehabilitations**. Three separate projects totalling more than $150 million requiring innovative extended runway closures.
- **Central Terminal Area Roadway Rehabilitation.** A $25 million project to reconstruct roadways and terminal frontages while maintaining access to all terminals and parking.

Managed the review, permitting and oversight of tenant construction at International Airport and Teterboro Airport. Projects included:

- **Rehabilitation of Terminal A by Tenant Airlines** - A $30 million project to upgrade building systems, architectural treatments and passenger amenities. Required close oversight and cooperation between terminal tenants.
- **Terminals A, B and C Concessions Programs** - Projects to upgrade all concessions in the three main terminals. Supervised by consulting firms, but required close control to assure that schedules were met, budgets not exceeded and design criteria adhered to.
- The staged development of a **new major tenant complex at Teterboro Airport.** Required inordinate oversight to assure that private sector goals were met.

Traffic Engineering Division, Engineering Department Port Authority of New York and New Jersey: Designed and managed the implementation of traffic control systems at all Port Authority facilities. Responsibilities included:

- Wayfinding and regulatory signing and pavement markings for the first Newark International Airport Redevelopment Program.
- Traffic staging during construction of the World Trade Center. Required close cooperation with numerous New York City agencies.
- Wayfinding and regulatory signing for the World Trade Center Complex.
- The design of a contemporary "trailblazer" signing system for Port Authority facilities.

THOMAS PULVIRENTI

Project Manager

Years of Experience
30 Years

Education

BA, Architecture, University of Catania, Italy

BS, Building Technologies

Pratt Institute, Brooklyn, N.Y., Courses on Methods, Construction and Techniques

ESI International School of Business and Public Management, Project Management Applications

Chronology

Maitra Associates, PC, 2007-Present

McKeon Grano Assoc., 1997-2006

Paul W. Reilly Architects, 1991-1997

McKeon Grano Assoc., 1978-1991

Mr. Pulvirenti has 30 years of experience in architecture, project management, and construction management of public and private facilities. His experience includes multiple discipline work for new construction and renovation of school, transportation, industrial, institutional, retail, office, and entertainment facilities. Mr. Pulvirenti has hands-on responsibility for cost, schedule, and quality of projects through various delivery systems, including lump sum, unit cost, and time and material. He is familiar with New York Building Codes and applicable computer software such as MS Word, Excel spreadsheets, and Primavera Expedition.

PROJECT EXPERIENCE

The Port Authority of New York & New Jersey, Newark Liberty International Airport - Project Manager. Managed multi-discipline projects from inception to completion, including tenant fit-out, retail, kiosks, restaurants, control tower, and security installation in terminal connectors for passenger screening. Inspected installation of high resolution CCTV security cameras. Developed and updated project plans, including scheduling and budgeting. Monitored and reported progress by frequent site visits and progress meeting. Implemented appropriate recovery actions when project plans were deviated.

The Port Authority of New York & New Jersey, WTC Disaster Forensic Recovery, Fresh Kills, Staten Island, New York - Site Representative. Established relations with the numerous Agencies such as FEMA, USACE (United States Army Corps of Engineers), Contractors and unions. Assigned tasks to contractors with the proper equipment and the proper sub-contractor. Kept precise records following the hours of work force and equipment. Monitored maintenance of the site equipment to control and limit wasteful downtime. Managed efficient Safety Operation by coordinating with Environmental and Geosciences specialty contractors monitoring air quality, safety, traffic and engineering support.

The Port Authority of New York & New Jersey, World Trade Department, Construction of Tenant Facilities - Project Manager. Identified sequence of projects to meet budget targets. Performed overall management of construction related activities. Analyzed drawings submissions before being reviewed by the Code Compliance Office, and other Base Building Departments. Established Client-Architect-Contractor relations. Responsible for all renovation for Morgan Stanley facilities in Tower No. 2 including office relocations, reconfiguration, special architectural features, installation of HVAC, lighting, power, wiring, and panels.

New York City School Construction Authority, PS 861, Staten Island – Construction Manager/Project Officer. Served as Project Officer for new four story new school building for the City of New York School Construction Authority. It is located in the Borough of Staten Island, will provide facilities for students in grades P-K through grade 8. The building has Administrative offices, Auditorium, Cafeteria/Kitchen and Library located on the first floor and all classrooms located on floors 1-4 totaling 109.000 square feet costing $ 52,000,000.00. Responsibilities include: Staging, Correspondence, Field Instructions, Project Progress Meetings, Schedule and Phasing, Permit Requirements, Insurance/Subcontractors Approvals, Safety, Product Substitution, Shop drawings, RFI Quality Control, Change Order Procedures, Dispute Resolution Process, Payments Requisitions and Performance Evaluation.

New York City School Construction Authority, Midwood High School Annex, Brooklyn – Project Officer. Served as Project Officer for this $43 million, 3-story, 24,000 SF building addition. The scope of work includes a 2-story connecting pedestrian bridge over Bedford Avenue. The facility consists of classrooms, science lab, and library. Managed multi discipline trades including civil, mechanical, electrical, plumbing, masonry, and curtain wall. Monitored cost, schedule, and quality on a weekly basis. Issued comprehensive status and progress reports.

US Army Corps of Engineers, Ft. Monmouth, New Jersey - Construction Manager. Managed multi-discipline construction trades from inception to completion for Building 603 at Ft. Monmouth, NJ. Building 603 consisted of a prefabricated secure metal building warehouse (109'L x 101'W x 30'H) for the R&D organization. The office portion is 101' x 26'-6". The building's offices are heated and cooled using geothermal well while the warehouse uses two IR gas heaters.

NBC STUDIOS, New York City - Senior Construction Manager. Managed and directed various projects in New York City and Brooklyn with budgets ranging from $100,000 to $10 million. Notable projects include Studio 1 in Rockefeller Center and Bill Cosby Show Studio in Brooklyn. Oversaw installation by all trades and special materials of construction, including sound proofing materials, lighting, power, HVAC, and architectural features. Prepared project progress reports including budget, earned value, accomplishments, and issues.

The Port Authority of New York & New Jersey, World Trade Department – Project Manager. Managed multi-disciplines projects from inception to completion for Port Authority offices, conference rooms, and various work areas in Tower No. 1.

NELSON PARADA, PE

Project Manager

Years of Experience
29 Years

Education
New Jersey Institute of Technology, Newark, New Jersey , Bachelor of Science in Civil Engineering & Construction Technology. 2000

Central American Institute of Technology, El Salvador, Central America.

Advanced Associate of Science in Civil Engineering and Construction Technology, 1981

Registrations/Certifications
New Jersey State Board of Professional Engineers and Land Surveyors

Professional Engineering Certification Awarded in Jan. 2010, P.E. Lic. # [redacted]

Chronology
Hirani Engineering & Land Surveying, PC. 2000 – 2010

Somerset County Engineering Department, 1999 – 2000

Medina Consultants, P.C.,1997 – 1999

Metsky & Zuckerman, 1996 - 1997

Certified Engineering and Land Surveying, Inc., 1990 - 1996

Shimel and Sor, Consulting Engineers, 1989 - 1990

PROJECT EXPERIENCE

Newark Int'l Airport, PANYNJ. Site Utility Program Coordinator

- Performed coordination of field and office activities in connection with the Utility Mapping Program and the Utility Damage Prevention Plan of EWR.
- Directed by-weekly utility coordination meetings and submitted weekly One Call Ticket status reports to over 150 PANYNJ representatives.
- Directed kick-off meetings, and performed inspection of field procedures in connection with underground utility exploration and One Call utility mark outs.
- Developed a field procedure manual called "EWR One Call Damage Prevention Plan Additional Requirements"

Newark Int'l Airport, PANYNJ. Utility Program Coordinator / CADD Assistant

- Reviewed final reports and CADD submittals of SUE and Surveying consultants engaged in the utility mapping program of EWR.
- Managed and maintained the Underground Utility Mapping and the One Call Ticket databases.
- Developed a manual called "PANYNJ Data Collection and Data Depiction Standards Additional Requirements"

Somerset County Roadway & Highway Reconstruction. Project Designer

- Performed design and preparation of reconstruction plans of municipal and capital roadway and highway reconstruction projects.
- Prepared and analyzed topographic maps, and digital terrain models to provide, an economical and safe reconstruction plan conforming to the design criteria of Somerset County Engineering Department.
- Performed Quantity Take-offs, and prepared Engineer's Estimates.

CAD Technician/Engineer in training, Medina Consultants, P.C.

- Prepared Cad drawings of Land Development and Highway design projects.
- Assisted Project Engineers in the design and storm drainage systems, site grading, and geometric design of roadways.

Junior Engineer, Metsky & Zuckerman

- Involved in the application of site engineering to the design and preparation of construction plans of Multi-Fuel/Car Wash facilities. Prepared grading plans, layout of storm water drainage systems and parking lot layouts.

Civil Engineering Technician, Certified Engineering and Land Surveying, Inc.

- Performed Survey Layouts and Coordinate Geometry calculations of Highway/Roadway, Bridge and Building construction.
- Conducted inspection of grading, and survey layout of highway, bridge, and building construction projects.
- Supervised Construction Survey Layouts performed by Local Union, and Staff surveyors.
- Reviewed and revised plans and designs of Land Development and Roadway Reconstruction projects.
- Attended Planning board meetings and coordinated with owners and township engineers to facilitate the approval process.
-

Construction Inspector, Shimel and Sor, Consulting Engineers

- Performed inspection of Reinforced Concrete construction, Foundations, Piles, Grading, and Soils.
- Prepared test reports and daily activity reports.
- Performed material sampling, field and lab testing of Geotechnical, Concrete, and other construction materials.

TABLE OF KEY PERSONNEL EXPERIENCE

NAME	PROJECT	COST
Joseph Dixon, PE	JFK International Airport Redevelopment Program:	See below
	Terminal 4 – International Arrivals Building	$1.4 billion
	Terminals 5 & 6 – Phased Redevelopment	$875 million
	Airport Roadway and Infrastructure	$550 million
	Air Traffic Control Tower	$60 million
	Cogeneration Plant Privatization	$250 million
	Parking Facilities	$280 million
	Oversight & coordination of private airline terminal construction and renovation	N/A
K. Joseph Jbeili	Port Authority Bus Terminal/#7 Line Connection	$2 billion
	Port Authority Lincoln Tunnel/Bus Terminal Ramps	$120 million
	PANYNJ George Washington Bridge On-Call Contract	$20 million
	PANYNJ Access to Region Core On-Call Contract	$5 million
	PANYNJ Javits Center Expansion On-Call Contract	$1.5 billion
	PANYNJ Hoboken Waterfront Development On-Call	$570 million
	PANYNJ Queens West Waterfront Project On-Call	$2.8 billion
Terrence Dunn	World Trade Center Redevelopment	$11 billion
	Site 26 Goldman Sachs Corporate HQ	$2.5 billion
	Fulton Street Transit Center	$750 million
Moin Ahmed, PE	JFK International Airport, American Airlines Terminal & Terminal 6 Parking Garage	$1.2 billion
	NYC Housing Authority, Ocean Bay Complex	$60 million
Mark Ospala	PANYNJ World Trade Center Project	$11 billion
	PANYNJ Capital Redevelopment Program	$970 million
Alan Dietz	PANYNJ WTC Redevelopment	$11 billion
	Terminal #, Logan International Airport, Boston, MA	$200 million
	Newark Liberty International Airport Construction Management Services	$940 million
Jacob Rosenkranz	JFK International Airport, Large Aircraft Program	$179 million
	PANYNJ Newark International Airport Program Manager for multiple projects	$230 million+
Joseph Soave, PE	JFK International Airport Redevelopment Plan	$2 billion
	LaGuardia Airport Modernization Program	$4 billion
	Terminal C Roadways, Continental Global Gateway Program, Newark International Airport	$1 billion
William Apriceno, PE	LaGuardia Airport Central Terminal Building Modernization Program	$5 billion
	LaGuardia Airport Projects	$80 million
	NYC Dept of Citywide Administrative Services	$23 million
	NYC DDC Schools Task Force	$180 million

Thomas Pulvirenti	PANYNJ Newark Liberty International Airport	N/A
	PANYNJ WTC Disaster Forensic Recovery, Fresh Kills, Staten Island	N/A
	PANYNJ WTC Construction of Tenant Facilities	N/A
Nelson Parada, PE	PANYNJ Newark International Airport, Site Utility coordinator	N/A
	PANYNJ Newark International Airport Utility Program Coordinator	N/A

SECTION D: FIRM EXPERIENCE

URS maintains a large Project Management staff that posses the experience required for the successful delivery of the Port Authority's capital project portfolio. These seasoned managers are part of a pool of over 2500 professionals located in the Port District and are available on an On-call basis.

The experience of our Project Managers is continually refined in performing our current portfolio of capital projects which has a construction value of over $7 billion. The nature of these projects, which include Port Authority work, is similar. The projects that URS undertakes in New York are primarily infrastructure and public facilities, including: rail systems, roads and bridges, airports, water and waste water, marine facilities and public buildings. Our clients include all of the major agencies that operate in the New York City area.

To demonstrate the experience of the firm, we have provided the most relevant projects that we have - projects where we are currently providing the Port Authority with Project Management services. For each project we have provided a description of the assignment, start and end dates, total cost of the assignment, and a contact. The projects provided are as follows:

- Project Management On-Call 2007 – 2010
- LaGuardia Airport Central Terminal Building Modernization Program — Program Management
- John F. Kennedy International Airport Redevelopment Program
- World Trade Center Transportation Hub and Site Redevelopment
- Goethals Bridge

Port Authority Project Management On-Call

Services
Project Management Services

Client
Port Authority of New York & New Jersey

#7 Line @ PA Bus Terminal
Mr. Paul Crist, Program Director of Tunnels, Bridges & Terminals
(973) 792-4724
jcrist@panynj.gov

WTC Real Estate Group
Mr. Richard Gladstone
rgladsto@panynj.gov

Project Value
NA

Status
Ongoing

Under the current Project Management Call-In contract, URS manages projects for the various Port Authority Line Departments; Aviation, World Trade, Ports and TBT (Tunnels, Bridges and Terminals) from inception (Stage I) through construction (Stage IV) for the Project Management Office (PMO). Provided below are the two task assignments that we are currently performing.

NYCT #7 Line at Port Authority Bus Terminal

New York, NY

URS was designated by the Tunnels, Bridges & Terminals Department to represent them in managing the interface with MTA and Hudson Yard Development Corporation (HYDC) on the #7 subway extension project. This assignment started in 2003. Within PANYNJ, URS managed the review of the EIS and of the preliminary design drawings. URS' services were continued to manage the review of the final design document in 2005. In 2007, URS managed the real estate transaction process of the multiple Easement agreements with Hudson Yards and MTA. Following award of the contract in 2008, URS represented the Agency in coordinating the construction work at the Bus Terminal and managed the review of the shop drawings that affected the Port Authority assets, the Bus Terminal and Lincoln Tunnels. This included review of the construction means and methods affecting the Bus terminal sublevel. Working hand in hand with MTA and their Contractor, S3II, we coordinated the construction progress to minimize impact to the PA facility operation at the sublevel (aka Greyhound level). The cut and cover excavation was accelerated from 24-36 months to 9 months. Seven (7) Greyhound bus gates were closed and the lower level traffic flow was reconfigured to allow a dedicated space for the contractor to excavate 24/7 the needed receiving tunnel chamber underneath. With supervision from the FDNY, a 150 ft x 50 ft area was blasted and drilled to a depth of 40ft. Temporary precast concrete deck followed so the bus operation resumed normally afterward.

We have continued on as liaison with HYDC and the MTA, representing the PANYNJ during the cutting of the two tunnels (with Tunnel Boring Machines) under the Terminal during July-August 2010.
Key to our success has been the creation of a productive relationship with the HYDC executive staff and MTA Program Managers and Construction Manager's staff.

WTC Real Estate Group

New York, NY

URS, acting as Assistant Director of Planning, Design & Construction for World Trade Center Redevelopment (WTCRD); World Trade Center Construction is responsible for the design and construction of the assets under Port Authority of NY & NJ control: (Central Chiller Plant, HUB, Vehicle Security Center (VSC); Vehicle Roadway Network (VRN), Tower 1 (now being managed by Durst), WTC Retail (in a Joint Venture - currently in negotiation – with The Westfield Group); and WTCStreets (i.e. Liberty Park, i.e. the Wedge of Light Park.) Once the Assets are constructed, WTCRD will take ownership and operate the facility. WTCRD is also responsible for negotiations with SPI, Durst, tenant leases and the completion of any and all operating agreements with adjacent stakeholders and affected public agencies and public utilities (i.e. SPI, NS11Mem, MTA, Brookfield, ECS, etc.)

Our responsibilities include:

- Ongoing support for SPI MDA negotiations:
- Ongoing support for Durst in Tower 1 assessments of operational efficiencies;
- Ongoing support in Tower 1 Lease negotiations;
- Ongoing support in NS11Mem operating agreements;
- Ongoing support for WTC Retail in contract negotiations with the CM for Retail;
- Ongoing support in the development of the RFP for the site wide property manager;
- Ongoing conversations with PA Procurement and PA Legal in the development of alternate strategies to minimize operational expenditures upon completion:
- Ongoing support of WTCRD Operations to ensure that the facilities operate efficiently when constructed which entails:
    - Review of all building systems (both architectural and MEP) that have cost impact on ongoing operations and associated recommendations for modifications which includes the preparation of and internal coordination with all affected PA Departments of all necessary Board Items to finance the same;
    - Review of material shop drawings and manufacturers' data to ensure that submittals are equivalent to contract specifications and any and all suggested substitutions don't unduly impact operational cost;
    - Development of strategies for operational hand-off to accommodate the phased opening.
    - Development of scopes of work and RFP's for site tel/data systems;
    - Development of scopes of work for the renegotiation of the TNAS Wireless contract for Boingo Wireless Services at the Trade Center;

LaGuardia Airport Central Terminal Building Modernization Program — Program Management

Queens, NY

Services
Project Management Services

Client
Port Authority of New York & New Jersey

Mr. Warren Kroeppel, General Manager
(718) 533-3402
wkroeppe@panynj.gov

Project Value
$4-5 billion

Status
Ongoing

On schedule and within budget

URS is providing program management services to the Port Authority of New York and New Jersey (PANYNJ for an extensive program to modernize facilities at LaGuardia Airport in New York City. LaGuardia Airport is one of the New York area's three primary commercial airports, serving passengers through its 72 aircraft gates on the 680 acres site bordering on Flushing and Bowery Bays in northern Queens.

The main focus of the project is the $4 - $5 billion program to replace the 45 year-old Central Terminal Building (CTB) and its concourses to increase the types of aircraft that can be accommodated and to provide greater flexibility in adapting to programmatic changes of the airlines served by the facility.

URS is also studying the operational and financial feasibility of a facility that will screen all deliveries to the airport to conform to TSA requirements. URS has extensive aviation experience in the New York metropolitan area having worked on projects at the other two major airports in the area - Newark Liberty International Airport and John F. Kennedy International Airport.

URS provides services on an "as-needed" basis, including analyzing previous plans for redevelopment of the CTB; developing new conceptual plans for the CTB; providing updated cost estimates and schedules for potential improvements; preparing a business and financing plan for the program, and assisting in the effort to obtain authorizations to proceed with design and construction.

Additional Information

As part of the LaGuardia Airport Central Building Modernization Program, URS analyzed the curbside operations of the Central Terminal Building frontage roadways for two proposed airside future concept reconfigurations. The goal of the study was to determine if the existing terminal curbside frontage along both the departures and arrivals levels could accommodate future vehicular traffic demand associated with an increase in annual air passengers.

To evaluate the terminal curbside operations, URS utilized Curb_Plan; an analytical tool developed by URS to analyze airport frontages (used previously by the PANYNJ at JFK). As part of this study, forecasted air passengers, existing passenger survey data and existing vehicular traffic counts were utilized to develop the vehicular traffic demand for future analysis. Existing conditions models for both the peak period arrivals and departures roadways were calibrated to determine the appropriate Curb_Plan settings. The calibrated Curb_Plan models then served as a basis to estimate the minimum curbside frontage requirements for future preferred alternatives.

John F. Kennedy International Airport Redevelopment Program

Services
Program Management Services

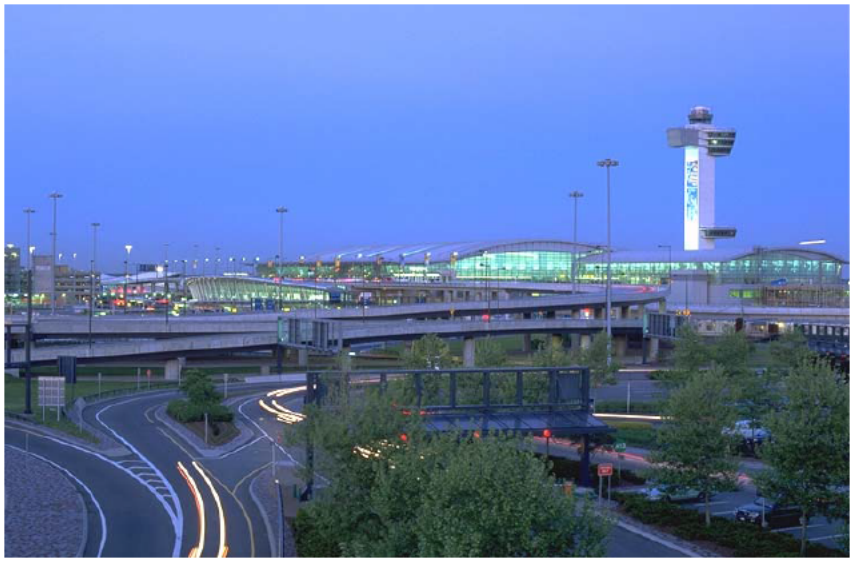
Client
Port Authority of New York & New Jersey

Mr. James Steven
PA Program Director
(718) 244-4502
jsteven@panynj.gov

Project Value
$9.4billion

Status
1998-2010

On schedule and within budget



For over 20 years, URS served as Program Manager for the Port Authority of New York & New Jersey (Port Authority) for the large and complex Redevelopment Program at John F. Kennedy International Airport (JFK). The goal of this multi-phased Redevelopment Program was to balance and integrate the capacity of the landside access system with that of the existing airside system to improve passenger service levels. The program reinforced JFK's position as the nation's premier international gateway and contributed to the long-term economic growth and vitality of the region. In 2009 alone, the airport handled 46 million passengers.

The landside access plan and infrastructure upgrade anticipates serving the 50+ million annual air passengers projected to pass through JFK by 2015. The improvements included roadways and utilities, terminal buildings, parking facilities and a new AirTrain Light Rail System interface that optimize the movement of passengers, cargo, tenants and employees while on-going airport operations were maintained.

The program consisted of these major elements:

- A new Air Traffic Control Tower
- Terminal Improvements, encompassing new terminal construction and complete redevelopment
- Interfaces between Terminal complexes and the AirTrain Light Rail System (providing multiple access points to the regional mass transit system)
- New Parking Facilities
- Reconfiguration of Airport Roadways and Terminal Frontages
- Upgrade and Modernization of the Airport Utility Infrastructure
- A 90-Megawatt Cogeneration Plant
- Private Investment Projects

URS responsibilities included program management; developing and implementing a cost management system; monitoring program and project schedules; controlling cost, including estimating; developing budgets; developing and implementing program policies and procedures; developing and maintaining a records management system; project management; financial management; developing public/private partnership and privatization procedures and support; and public information for the program.

The JFK Redevelopment Program included the accomplishment of major improvements to the Central Terminal Area (CTA) of the airport. The roadways for access and internal distribution to the terminal complexes have been reconfigured for greater capacity and efficiency. The utilities that serve the CTA, including the terminals, have been upgraded with capacity added to accommodate growth. In addition, 5 of the 8 terminals have been completely redeveloped and expanded to handle forecast traffic, and the others received interim improvements. Terminal developments included frontage roadways (mostly grade separated), terminal buildings, significant retail components and airside ramp areas, and aviation fuel distribution systems. Five parking garages have been constructed to meet growing demand. A new air traffic control tower was constructed and provides an excellent vantage point for operations. A light-rail people mover system (AirTrain JFK) was completed and provides convenient service for passengers connecting among terminals within the CTA, long-term economy parking facilities, and connections to two regional mass transit nodes outside of the airport campus. Additional work has covered aeronautical areas including taxiways and related infrastructure.

PROGRAM ELEMENT DETAILS

Air Traffic Control Tower: The new Air Traffic Control Tower (ATCT) is located on what was formerly an aircraft ramp area behind Terminal 4. The tower complements the Federal Aviation Administration's (FAA) plan to modernize the nation's air traffic control system. The tower is equipped with state-of-the-art communications, radar display and wind shear alert systems and a computerized flight data system. All of the air traffic control equipment was supplied and installed by the FAA.

The tower has a 34' x 34' shaft constructed of white architectural and structural concrete, with wall thickness ranging from 10 to 20 inches. Totaling 1,620 yards, the cast-in-place concrete soars 291-feet and supports the FAA cab and an Airport Surface Detection Equipment (ASDE) radar unit rising an additional 30 feet. The new ASDE radar system is particularly important in assisting with control of aircraft on the ground during periods of limited visibility and low ceilings.

The tower's three-story base building contains FAA administrative offices and is connected via a pedestrian bridge to Terminal 4. Tenant operations directly related to ramp control at Terminal 4 are also located in the tower. The ramp control station is situated 113 feet above grade, and the FAA occupies the cab and additional upper levels.

Terminals 5 & 6: The Port Authority authorized planning for the redevelopment of Terminal 5 & 6 complex in September 2000. Following conceptual design, an airline tenant was engaged and a long-term lease was signed in 2005. URS provided Program Management to the Terminal 5 & 6 redevelopments, which included the environmental assessment, historical preservation, conceptual design, and coordination with the tenant (JetBlue Airlines). Due to the historical significance of the TWA Flight Center, URS coordinated with PA, FAA, NY State Historic Preservation Office, and the Advisory Council on Historic Preservation to mitigate impacts of the redevelopment on the landmark facility. Peripheral portions of the original facility were demolished to make space for a new 625,000-s.f. facility, which includes 26 gates to accommodate up to 250 flights per day and 20 million passengers annually.

New Terminal 5 Building

- 640,000–s.f. including 50,000-s.f. for concession space, Jet Blue operations, arrivals and departures functions on separate, dedicated pre-security levels; common single level arrival/departure public concourse post security; baggage conveying system incorporating in-line EDS security scanning and a 3-level security inspection protocol, baggage processing and make-up/stripping below airside public concourse; baggage claim devices, sized to suit arrivals schedule; ticketing via conventional attended desks and electronic kiosks

Terminal 5 Related Roadways/Site Improvements

- Terminal access roadways, which includes 5-lane, grade separated arrivals and departures curbs in front of the terminal building, passenger canopies at arrivals and departures sidewalks, and a loading dock accessible from landside roadways
- Airport apron and ramp layout, which includes taxiways and aircraft movement clearances based on FAA standards, 26 loading gates, on-apron aircraft remote parking, hydrant fueling capability at all aircraft loading gates
- A parking garage, which includes 1,500 spaces in a multi-story parking structure, associated access and egress roadways, and recirculation roadway connection
- Pedestrian connector from the Terminal to AirTrain and the Parking Garage with automated moving walkways

Terminal 4/International Arrivals Terminal (IAT): URS provided Project Management support through the conceptual study and preliminary design stages. These were subjected to value management (VP & VE) exercises to validate the project. Authorizations were obtained to advance the project, which resulted in direction to investigate the potential for a public/private partnership for redevelopment of the facility.

Through a competitive process, a private developer was selected to redevelop Terminal 4. The plan introduced a new three-level facility for ticketing, baggage handling and Federal Inspection Service (FIS) facilities, with a consolidated retail core and new concourses. The project plan resulted in the construction of a 1.5 million s.f. facility.

Among the many benefits of the plan are: dramatically improved landside passenger service through the provision of separate levels for departing and arriving passengers; consolidated ticketing and baggage operations; correction of space shortages in the former terminal for FIS, meeter/greeter and baggage handling areas; provision of 16 contact gates in new flight wings; attractive retail space for passengers; addition of domestic and commuter accommodations within Terminal 4 for enhanced flexibility; and incorporation of the AirTrain Light Rail System directly in the terminal, with easy access for arriving and departing passengers.

Separate arrivals and departures roadways serve the new three-level main terminal building. It was constructed immediately north of the existing Terminal 4, allowing construction to occur while maintaining operation of the former terminal and roadways. The new two-level roadway system fits between the new terminal and the existing parking garage. The project included full depth replacement of major portions of the airside ramp and associated utilities.

Financial Planning: URS performed an in-depth financial feasibility analysis to evaluate the viability of a major capital investment for a new Terminal 4. The results enabled the project to go forward, and URS assisted the Port Authority throughout the entire process of private developer selection and negotiation.

The financial planning entailed the development of a comprehensive financial/risk model to determine if the project would be at the very least self-sustaining under various market-driven scenarios. A computer-generated model was developed to test the financial pro forma by establishing ranges for key variables. The major variables included:

1) International Enplanements: NY Region; JFK Market Share: IAT Share
2) Domestic Enplanements

3) Revenue per Enplanement: International and Domestic
4) Capital Investment
5) Operating and Maintenance Expense
6) Concession Revenue
7) Other Revenue: i.e. Handling
8) Project Schedule
9) Inflation Index
10) Coupon Rate on Special Project Bonds
11) Present Value Analysis Discount Rate
12) Investment Rate on Fund Balances

The model was developed to permit ranging of variables and simulating a range of outcomes. The output included a financial pro forma, bond sizing module, cash flow projections, Net Present Value analysis, and debt service coverage ratios. The model incorporated the revenues, expenses, debt service, reserve funds and various revenue and income sharing arrangements.

Results/Lease Agreement: The model was further employed during negotiations of the financial terms of a long-term lease agreement for development and future operations of the site. As financial proposals were put forth, the model was used as an analytic tool to determine the associated financial impacts. With the benefit of understanding the probable range of financial impacts from what-if scenarios, counter proposals were developed and presented. The model also allowed for the impact on project economics of variable factors such as project cost, revenue and expense items and interest rates to be evaluated.

Roadways and Utilities: URS has provided project management, design management coordination with operations and utility work and oversight of construction for the $500 million Roadways and the $150+ million Utilities project. A new roadway system was constructed in the airport's CTA. The new configuration divides the roadway network into terminal complexes, eliminating the need to drive through multiple terminal frontages to arrive at a particular terminal. The new configuration allows motorists to make direct connections to individual terminals and parking lots from the Van Wyck and JFK Expressways, the two main entrances into the airport. The roadway project also upgraded and expanded the JFK Expressway, increasing the use of the improved Nassau Expressway/Belt Parkway interchange and alleviating congestion on the Van Wyck.

The widths and capacities of the arrivals and departures level roadways have been expanded as needed at the terminals. This moves local terminal traffic more efficiently and reduces traffic congestion. Crosswalks between the parking lots and terminals are protected from the elements by canopies; bus stops and other outdoor waiting areas are enclosed; and parking lot entrances, exits and toll plazas realigned.

A total of 32 land miles – 24 land miles of access roads and 8 miles of terminal frontages – have been built or reconfigured under the program to accommodate a designed capacity of 45-50 million annual air passengers (MAAP).

Much of the airport's utilities infrastructure was nearing the end of its useful life. Therefore, to continue providing reliable service, new utility installations (water, electrical, storm, sanitary and communications systems) became a key element of the JFK Redevelopment Program. The new installations accommodate the many improvements at JFK and avoided placing a burden on existing facilities used by the neighboring community. Wherever possible, utility improvements were integrated with the roadway packages to minimize disruption to the airport and inconvenience to travelers.

Signage: Signage plays a significant part in the overall passenger experience of the airport. The roadway reconfiguration project included both temporary and permanent signs including variable message signs. In addition, a comprehensive signage standard for the airport and terminals now provides a uniform and user friendly appearance that makes the passenger experience less stressful.

AirTrain/Rail Access: The automated AirTrain Light Rail System that links the individual passenger terminals, providing a fast and convenient means of traveling between terminals and other stations on the system was completed in 2003. This was a separate program for which URS provided design reviews and utility coordination services to ensure that airport operations were not adversely affected by any required utility construction or service shutdowns for tie-ins. Passenger travel time between terminals has been cut dramatically, and congestion on the airport roadways has been reduced. The system consists of a loop around the central terminal area, extending to the car rental facilities, employee and long-term parking lots, the Howard Beach Station and off-airport to a transportation center at Jamaica.

Howard Beach and Jamaica Stations connect the JFK AirTrain with the existing regional mass transportation system, providing JFK's passengers and employees with direct access to the Long Island Rail Road and the city subway system. The cost of the AirTrain construction was funded through the Passenger Facility Charge, a fee collected from departing air passengers.

Parking Garages: A total of five parking garages have been completed to replace at grade parking displaced by development and to accommodate growing passenger traffic in the Central Terminal Area (CTA). The garage in Area 2 with 1,400 spaces was opened in 1990 and another 1,400-space garage in Area 1 opened in 1998.

A parking deck with 750 spaces in Area 4 was completed in 2000 as part of the roadway contract related to the British Airways terminal expansion.

A 1,900-space garage in Area 3 opened in November 2006. Construction was coordinated with the new Terminal 8 work.

A garage was also constructed in conjunction with the Terminal 5 and 6 project. This garage has 1,500 spaces and was completed in late 2008. Future parking facilities may be built as terminal development and passenger growth requires.

Private Investment: Terminal 1: Air France, Japan Airlines, Korean Air and Lufthansa joined forces to construct the first new terminal at JFK in more than twenty years. Construction of the 11-gate, two-level terminal is complete and the terminal was opened in 1998.

American Airlines: American Airlines began construction on a new $1.2 billion, 36-gate terminal, 1.5 million s.f. terminal in late 1999. Construction of the new terminal was completed in phases. The main terminal was opened in 2005 and the balance was completed and placed in service in 2007. Demolition of the old terminal and restoration of the site was completed in 2009.

Delta's Terminals 2 and 3: The major goal of their $150 million terminal renovation program several years ago was to realign passenger processing and security functions in each building. Elements included: redesigned first and business class lounges, new ticket counters, new lighting and interior finishes. Delta

also replaced all jet bridges, modernized its baggage facilities, and modified the existing ramp space to allow for additional aircraft parking.

Japan Air Lines/Building 14 Development: The project provided the most advanced cargo facility at JFK with 260,000 square feet of cargo space; rehabilitation and construction of Port Authority Administrative offices and construction of a new General Aviation Terminal.

Cogeneration: The CTA redevelopment included the construction of a $250M cogeneration plant, at which both electric power and thermal energy are generated using natural gas-fired turbines. Additionally, medium temperature hot water and chilled water (thermal energy) is distributed to the terminals in the CTA via direct buried pipe. Overall, the plant has a capacity of 90 megawatts of electric power. URS provided analysis and support for the privatization effort of the plant, including technical and business input and project management support.

URS' ROLE/INNOVATIONS

Document Control: Used as an important Program tool, the document control system is designed to capture all program documentation for legal, fiscal, administrative and historical purposes. This system provides a method of document storage and retrieval for program coordination and management. ***The success of the document control system at JFK led URS to develop similar systems for managing projects at major airports in Boston, San Francisco and Fort Lauderdale.***

MIS Solutions: URS, through its program controls group, established a state-of-the-art computerized document archiving system that was utilized by the Port Authority and the various project team members. In addition to establishing and administering a Local Area Network, URS developed and implemented an innovative computerized executive level Management report system: Aviation Project Management System, a Microsoft Windows-based program geared specifically for project management reporting. This proprietary information-management software operated on a local area network that links more than 200 workstations. The retrieval of data was simplified by the ability of project team members to obtain cost, schedule and project information.

In addition, the interrelationship of data was developed through graphical displays, such as bar charts of budgeted-versus-actual costs. The system accessed a comprehensive range of information, from the status of a design contract to the costs expended on a multimillion-dollar construction contract. Users could access self-contained modules including: Schedule Management, Budget and Cost Management, and Project Reference Materials.

Complementing these performance measurement systems was the utilization of a CADD system which enabled personnel to graphically display the construction phasing and planning efforts that were necessary to meld the construction of new facilities into the existing airport while minimizing the impact on ongoing operations and passenger flow.

Utility Management System (UMS): A Utility Management System based on a Geographical Information System, AutoCAD and a relational database has been developed to facilitate ongoing design and construction activities and provide a comprehensive record of utility systems. Data collected from various sources is assessed and analyzed. Anomalies or information deficiencies are identified and researched. Upon verification, which may entail field surveys, data is confirmed, reviewed for accuracy and completeness, and then incorporated into the UMS. This system has documented previously overlooked or

abandoned utilities and airport managers have also found it to be very useful in the operation and maintenance of the various utility systems, including avoiding damage during construction.

Construction Contract Audits: On-site construction contract audits were performed to confirm that the contractors were in compliance with the management plans that established the scope, cost, schedule, and quality goals for the program.

Public Information: URS prepared public information bulletins in conjunction with Port Authority staff to inform primary users (e.g. taxis, buses, tenants, etc.) of upcoming changes that affect landside operations. Presentations are prepared for diverse audiences, ranging from domestic and foreign airport authorities, to airlines, professional and civic organizations.

Working in Occupied Facilities and 24/7 Operations: Virtually all of the construction described above, involved either the reconstruction or replacement of utilities, roadways or buildings that were, in most cases, operating at or near capacity. This was accomplished with extensive planning to provide swing areas and temporary facilities to minimize the disruption to airport operations.

Hazmat Abatement: JFK's terminal buildings were constructed in the 1950's and 60's and therefore required complete asbestos abatement of fire proofing, insulation of mechanical equipment and piping, building partitions and roofing materials.

Complex MEP Program: Work in the CH&RP included the staged removal and replacement of all chillers and boilers in addition to the installation of cogeneration equipment. Since it was not feasible to construct a new facility, all of this work had to be accomplished while the
plant was kept in continuous operation.

Management of Multiple Design and Construction Teams: The numerous individual projects comprising this program were achieved with the combination of Port Authority in-house engineering, Redevelopment Team design consultants, design and construction groups engaged by airlines and DBOM agreements negotiated by the Redevelopment Program.

Security of Operations: As the largest international airport in the US, the FAA included JFK in the select group of airports required to comply with the highest standards for security. This meant that security associated with airport construction had to be distinguished among three categories; public areas, aeronautical operations and federal control zones. Extensive planning and coordination was required as construction regularly spanned across security zone boundaries.

The creation of the Transportation Security Administration (TSA) introduced a variety of enhanced security requirements on the airport facility. Numerous projects were undertaken with URS management to facilitate implementation. Work ranged from passenger screening equipment to in-line baggage screening. Overall airport operations were also examined with respect to set-back space requirements during heightened security levels.

Commendations/Awards

2007 ASCE Quality of Life Award for Radiant De-Icing Facility
2002 Project of the Year – Terminal 4 from Construction Management Association of America
2001 Grand Conceptor Award for Terminal 4 from American Council of Engineering Companies
2001 New Construction Award (Public/Government Category) JFK Terminal 4 from Buildings Magazine
1996 CRSI Design Award for Air Traffic Control Tower
1991 Concrete Industry Board Award for Air Traffic Control Tower

World Trade Center Transportation Hub and Site Redevelopment

Services
Construction Management

Client
Port Authority of New York & New Jersey

Mr. William Foley
PANYNJ Engineering & Construction
(718) 244-4757
wfoley@panynj.gov

Project Value
$2.5 billion: Transportation Hub
$15 billion: Other site development projects

Status
Ongoing. Expected completion: 2014

On schedule and within budget

Until September 11, 2001, the World Trade Center (WTC) site in Lower Manhattan was comprised of 7 buildings within a 16-acre area. Below these buildings was the Mall with 427,000 s.f. of retail space and concourses that connected commuters from the New Jersey Port Authority Trans-Hudson (PATH) train system to the New York City subway system. URS, as part of a joint **venture, is providing construction management and construction coordination services to the Port Authority** of New York and New Jersey (PANYNJ) to rebuild the World Trade Center (WTC) site and surrounding streetscape in lower Manhattan. The program is one of the largest public/private urban infrastructure developments in the US and includes more than $10 billion in capital investment in the 16-acre site over a ten-year period:

- **WTC Transportation Hub/New PATH Terminal –** A $3 Billion Transportation Hub equivalent in size to Grand Central Station comprising a new PATH subway station serving approximately 100,000 daily commuters with additional underground concourse connections to 13 NYC MTA subway lines, the Hudson River ferry, and the World Financial Center . The Hub will include 500,000 square feet of retail facilities. The Federal Transit Administration (FTA) provides funding and oversight of procurement and administration of the program.
- **National September 11 Memorial and Museum**: The 8-acre memorial site, at grade and seven stories underground includes the Memorial plaza and cascading waterfalls within the voids of the

original Twin Tower footprints, as well as a state of the art museum with artifacts, interactive exhibitions and a resource center.

- **Four Commercial Office Towers** totaling approximately 10 Million square feet of commercial and retail space. The towers include the 1 WTC (formerly called the Freedom Tower) which will be the tallest building in the US when completed.
- **Vehicle Security Center:** An underground structure for screening all buses, trucks and cars entering the WTC complex. The Center will connect to underground roadway ramps serving all office towers and facilities within the site. The Center provides state of the art safety and security for all vehicle access to the site.
- **Site Infrastructure**: Approximately $1 Billion for construction of a new central chiller plant, temporary and permanent power supply and distribution to support the site developments along with new and reconfigured streets, roads and utilities to improve the infrastructure and surface transportation for pedestrians and vehicles throughout lower Manhattan.

Coordination of Site Logistics:

URS is responsible for coordinating all site and construction logistics for this mammoth undertaking involving a myriad of challenges to allow construction to proceed on budget and schedule. Presently, more than 1300 construction trade workers access the site daily, along with more than 400 truck deliveries. At peak in 2011, there will be more than 3000 tradespersons and 500-600 daily truck deliveries. Among the unique logistical challenges are:

- Staging and sequencing of interconnected, interdependent construction elements above and below grade on a constricted site with little on-site staging or laydown areas
- Constructing below and above several active subway lines carrying hundreds of thousands of daily commuters that cannot be disrupted, requiring complex, intricate scheduling of all underpinning and structural work.
- Providing unprecedented security and screening for the workers and deliveries entering and exiting the site due to the sensitive nature of the work being undertaken.
- Coordination with several significant and concurrent infrastructure construction efforts adjacent to the site including the rebuilding of the west side access road adjacent to the site by NYSDOT

URS is employing the latest technology and sophisticated management methods to coordinate these logistics including:

- Developing and maintaining site logistics plans using 4-D Cad models. This allows us to coordinate work zones, crane placements and operations, laydown areas, shared access and delivery routes on a daily basis among numerous contractors on the congested site.
- Using resource-loaded CPM schedules to forecast manpower requirements by trade and shift, and forecast truck deliveries for all key materials and equipment
- Development and use of advanced traffic modeling and simulation software to model truck access and egress with minimal impacts to surrounding local traffic operations
- Using sophisticated dispatching software to prioritize and schedule all truck deliveries in fifteen minute intervals at the shared construction gates. This helps avoid conflicts among contractors and subcontractors and minimize truck queuing outside the gates. This supports "just in time" deliveries and minimizes the need for staging space on site.
- Chairing daily and weekly site coordination meetings among contractors to compare weekly look ahead schedules and avoid potential conflicts and delays
- Creation of a site logistics operations center with full access to site security video cameras and scheduling software to manage the dynamic construction operations 24 hours per day.

- Using the 4-D models and the traffic simulations and animations to hold regular briefings with the community and other Lower Manhattan stakeholders to agree upon mitigation strategies to support the around-the-clock construction

Independent Schedule Management – As a result of the complex site logistics, construction activities must be scheduled by shift each day to allow coordination with stakeholders and avoid interferences or conflicts among contractors. For example, URS maintains a daily CPM detail of all construction activities affecting the PATH subway operations. This allows coordination with subway operations and avoids potential contractor conflicts.

Construction Contractor Schedule Review – URS reviews and analyzes the CPM schedules developed by each contractor for consistency with the program master schedule milestones reported to all stakeholders. URS also incorporates the contractor detailed schedules into the logistics models described above to allow coordination of all site operations. The detailed schedules are reviewed jointly at weekly contractor coordination meetings.

Estimating Services: The URS team provides a full range of cost estimating services including preconstruction cost estimates to validate compliance with program budgets and suggest value engineering savings alternatives. URS estimators also provide independent estimates for all construction change order proposals to support the negotiations with the contractors.

Quality Assurance Services – URS provides teams of construction inspectors for all disciplines that oversee the quality of all installed construction and document all controlled inspections. This is required for the ultimate acceptance of the facilities by the PANYNJ and receipt of certificates of occupancy. URS also provides quality assurance inspections for work performed by the private developers (tenants) to verify compliance with PANYNJ standards. All inspectors have the required licenses and certifications consistent with the current NYC building code requirements.

Construction Safety Oversight –URS safety specialists provide review and comments to each site contractor's safety plan. URS also provides daily safety audits of contractor compliance. URS developed a web-based safety performance database that is used by each subcontractor on the site and generates real-time comprehensive safety metrics and all required OSHA submittals.

Security Measures – URS is assisting the Port Authority in maintaining site security, including requiring all workers to undergo background investigation and wear badges. Automated screening is now being tested at the site gates including iris scan technology to speed the flow of worker access while maintaining strict security. All delivery trucks are screened at the gate or at off-site staging areas.

Cost Management – URS provides cost control and cost engineering services for the Port Authority including forecasting for all future commitments and potential scope changes. These detailed cost reports are provided for internal use and for regular quarterly reviews with the Federal Transit Administration. A key component of this cost management is a detailed cost allocation mechanism for each bid item and change to justify cost allocations among federal, state and private funding sources. These cost allocations are managed through a special database tool developed by URS for this purpose.

Document Control – URS maintains electronic document management industry standard software for all program documentation including design documents and submittals. Special rules for confidential documentation are strictly enforced, given the sensitive nature of the site and the improvements planned.

Goethals Bridge Modernization Program

Services
Program Management Consultant

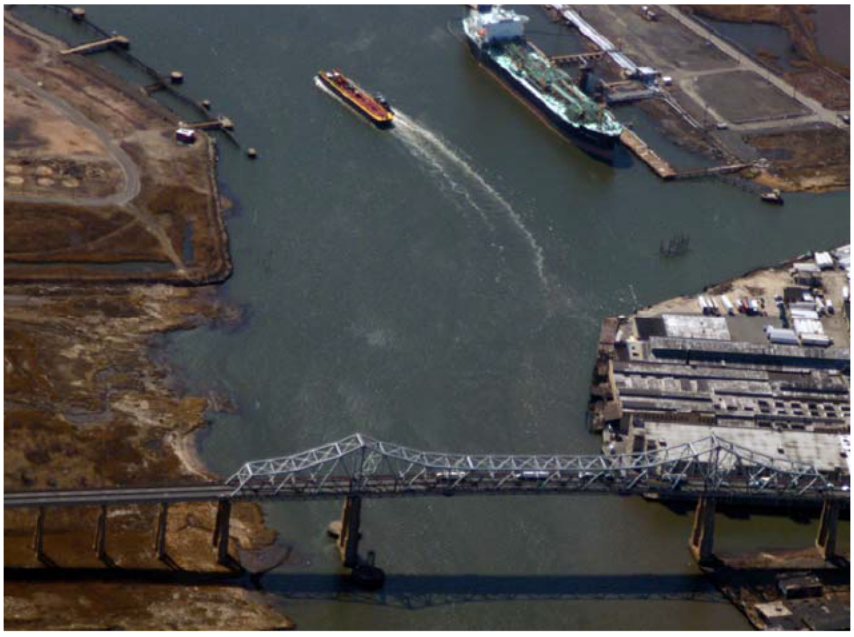
Client
Port Authority of New York & New Jersey

Mr. James Blackmore
PANYNJ Engineering & Construction
(973) 792-4774
jblackmo@panynj.gov

Project Value
$47 million (Project Planning)

Status
Ongoing. Expected completion: 2014

On schedule and within budget



URS is the Program Manager for this project to replace the 79-year-old Goethals Bridge. To provide efficient and safe passage to meet the current and anticipated future transportation system needs of this significant link in the regional transportation network, the Port Authority of New York and New Jersey (PA) will invest almost $1 billion in the planning, design and construction of the Goethals Bridge Modernization Program (GBMP).

In the current Environmental Impact Statement (EIS) phase, URS is assisting the PA with expert project management support services and as an extension of technical staff services. As the project moves into the next stages, URS services will include developing and maintaining a program level master schedule that integrates all program activities, program implementation, coordination and technical support and program administration and controls. Preparation of regular program reports, document control and records management, program budget and cost and schedule management are additional services covered under this contract. Additionally, URS has contracted to provide technical services on an as- needed basis for contract packaging strategy, value engineering, constructability reviews, public outreach support and property acquisition assistance.

Project Challenges:

- *Environment Impact Study* – bi-state and multi-agency coordination with public input. Two bridge concepts for review are based on data and comments received from the above entities that incorporate economic and population growth data into the transportation model.
- *Design* – due to bridge proximity to Newark Liberty International Airport, height consideration with respect to airport operations were coordinated with the various local and federal agencies involved in the operation of these facilities.
- *Planning/Construction* - maintain access for up to 80,000 vehicles daily while work on the demolition of existing bridge and construction of new bridge is performed.

Innovations:

- *Program Schedule* - Creation of an Integrated Program Schedule in Primavera that merges preliminary design, program management and environmental impact activities into one master schedule that can identify the impact on the overall program from changes in any of the program's activities.
- *Cost System* - Creation of a global spreadsheet that captures cost data from different sources to accurately track program costs and predict future cash flows for budgeting. This automated cost system collects and calculates monthly expenses from numerous client and consultant groups (from sources such as SAP and INCAPS), then consolidates the data into a monthly Program Performance Report.
- *Document Control* – Use of LiveLink for the Program's document control management system and graphics archives. LiveLink training is provided to other participating consultants, agencies and client staff. As the design effort further develops, the URS team will provide technical support for constructability review, value engineering, sustainable design initiatives, construction cost reviews and contract delivery methods.
- Creation of an Issues Management System that allows URS to track issues and corresponding resolutions to concerns raised at committee and public meetings.
- Creation of a Deliverable Tracking Log to monitor and track deliverables throughout the submission and *review process.*

SECTION E. MANAGEMENT APPROACH

The Port Authority Project Management Department requested URS to provide Project Management and Related Support Services for Aviation, Tunnels Bridges and Terminals, Port Commerce, PATH, World Trade Center, Economic Development and Security on an "as needed" basis for various projects and/or programs. These services can be performed at the Authority's offices or remotely from URS's offices at One Penn Plaza in New York, NY. These locations are convenient to the Authority's offices at 2 Gateway Center in Newark, NJ and many of the Authority's Facilities.

URS professional staff will be assigned on an as-needed basis and will be responsible for programs and/or multiple projects. The number of professional staff will be a function of the number of programs and the size and complexity of the projects. It is understood that each assigned individual will manage a program or projects in accordance with the Port Authority Project Management Department Policies and Procedures. The URS Project Executive, David Beckett, PE, will serve as the point of contact for the Authority and will supervise the activities of the URS Project Managers. As the point-of-contact, Mr. Beckett will also attend meetings in the Authority's offices related to the administration and coordination of the projects in response to requests from the Port Authority Project Management Department Engineers of Projects and Program Directors.

Mr. Beckett will conduct regular coordination meetings with the URS Project Managers to review the status of the program and/or each project. The meetings will be conducted as a group, as well as on an individual basis. Additional meetings will be conducted on an as-needed basis. URS Project Managers will report on scope, schedule, budget, progress, concerns and suggested corrective actions. The Project Managers will report this information to the Engineers of Project and Program Directors on a monthly basis, or more often if needed. Urgent issues will be addressed immediately. Mr. Beckett will also be responsible for the administrative aspects of the effort to ensure compliance with the Authority's requirements.

Mr. Beckett will meet with the URS staff providing support services on a regular basis to ensure that these services meet the needs of the program or projects to which they are assigned. Any issues will be addressed promptly.

TASK A – PROJECT INITIATION SERVICES

The URS Project Managers will establish the Project Management Plans and Project Teams consistent with the Port Authority Project Management Department Policy and Procedures for their assigned projects. URS will assist the Authority in the preparation of Requests for Qualifications (RFQs) and Requests for Proposals (RFPs) for the retention of expert professional design services. The URS Project Manager will develop the project scope, schedule and budget for each stage of each project. The URS Project Manager will conduct presentations and prepare required documentation to obtain approval for the project plan.

TASK B – PROJECT IMPLEMENTATION SERVICES

The URS Project Manager will coordinate the implementation of the management plans and the work performed by the project members, conduct kick-off and regularly scheduled progress meetings with the project team, maintain minutes of all meetings, coordinate the preparation of Stage I reports including construction cost estimates and review Stage I reports with the respective Facility Staff as required. The URS Project Manager will review studies and preliminary designs to the conformance with the approved scope and

budget, coordinate the preliminary and final contract documents, including the involvement of the Facility personnel for staging restrictions/requirements based upon operational and maintenance constraints. The URS Project Managers will collect the necessary documentation and correspondence to maintain a complete project file, and verify final design documents conform to the approved scope.

The URS Project Managers will review and recommend the procurement options for each project, coordinate the bidding of each project, including the preparation of Addenda, if any, evaluate bids and prepare the necessary award authorization documents and briefing materials for the executive staff.

The URS Project Managers will attend the construction kick-off meeting, coordinate and monitor the shop drawing review process, respond to the Contractor's Request for Information (RFIs), coordinate the preparation of Post Award Contract Changes (PACCs), coordinate facility force account work as required and coordinate the preparation of Record Drawings at the conclusion of the project.

TASK C – PROJECT MONITORING AND REPORTING SERVICES

The URS Project Managers will monitor and report during each stage of each project the actual performance of the project team members by comparison to the approved management plan, and when necessary, recommend corrective action. The URS Project Manager/Cost Engineer/Scheduler will review and update the actual and forecasted project costs and schedules on a monthly basis using the Present & Planned Workload and Monthly Progress Report Summary.

The URS Project Manager/Cost Engineer will review and evaluate consultant invoices for earned value and recommend payment, evaluate the impact of changes on the approved scope, schedule and budget, prepare the necessary documentation, obtain approval of any changes and brief the executive staff on the status of each project.

TASK D – PROGRAM LEVEL MANAGEMENT SERVICES

URS will provide to the Authority Program Level Management Services on an as needed basis for selected programs. Those services consist of, but are not limited to, defining/refining the scope of work, developing and maintaining a program level Master Schedule to integrate all program activities, program implementation, resource requirements, coordination, technical support, program administration and controls which include preparing regular program reports, document controls and record management, program budget and cost management.

The integrated Primavera schedule would include staffing requirements and identify any impact on the program due to changes in any of the stages in the program. An automated cost system would be utilized where the monthly expenses from the various program groups would be automatically collected from such sources as SAP and CAPTRAK and consolidated into the monthly Program Performance Report.

URS would evaluate and recommend appropriate M/WBE subcontractor goals for the program consistent with the type of work to be performed.

TASK E – PROGRAM MANAGEMENT SERVICES

URS will provide the necessary ancillary program management support services for the program, including biddibility and constructability reviews, preparation of technical presentations and responses to public or agency inquiries, use Expedition to track shop drawing submittals, request for information and contract changes, establish project controls, including Primavera schedule and update regularly and maintain documentation for and preparation of Record Drawings.

URS will maintain and update, on an as-needed basis, the Authority's Program Management Manual and provide Project Management training and/or workshops for the Program staff.

SECTION F. HOURLY RATES

Name	Title	Hourly Rate
John Spencer, PE	Executive Management	$136.20*
David Beckett, PE	Project Executive	$95.80*
Joseph Dixon, PE	Project Manager	$82.04
K. Joseph Jbelli	Project Manager	$60.20
Terrence Dunn	Project Manager	$84.16
Joseph Soave, PE	Project Manager	$82.88
William Apriceno, PE	Project Manager	$66.04
Moin Ahamed, PE	Project Manager	$63.36
Mark Ospala	Project Manager	$93.48
Alan Dietz	Project Manager	$71.00
Jacob Rosenkranz	Project Manager	$50.40
Thomas Pulvirenti	Project Manager	$51.40
Nelson Parada, PE	Project Manager	$45.50

**Represents billing rate with no multiplier*

All rates effective through the end of 2010

URS POLICY ON COMPENSATION FOR PREMIUM PAY

For employees classified as Non-Exempt (basically, all hourly employees)

For hours greater than 40 in one week during the employee's regularly scheduled shift, compensation will be at the rate of 1.5 times regular pay

For required work on holidays, if hours for the week exceed 40, compensation will be at the rate of 1.5 times regular pay

For employees classified as Exempt (basically salaried employees)

For hours greater than 40 in one week, compensation will be at 1.0 times regular pay

For required work on holidays, compensation will be at 1.0 times regular pay

A certain number of Exempt employees are not eligible for additional compensation under any circumstances.

MULTIPLIER

The proposed multiplier to be used, times the actual salaries paid by URS as referenced in the first line of Subparagraph 8A of the contract is provided below. The factors that comprise the multiplier include direct technical labor, burden and fringes, overhead and profit are summarized below.

HOME OFFICE

- **Direct Labor** - 100%.
- **Burden and Fringe Benefits** – 43.61% (vacation, holiday, sick, workmen's compensation medical and life insurance, employee welfare, FICA and unemployment insurance).
- **Overhead** – 74.53% (indirect labor; supplies; administrative, financial and legal costs; rent, leases and repairs; utilities, travel and relocation; taxes; insurance and permits; postage and freight; general and administrative assessment; depreciation and amortization; and internal services).
- **Profit** – 7.73% of direct labor, burden, fringe and overhead.
- **Composite Labor Multiplier** – 2.35

FIELD OFFICE

- **Direct Labor** - 100%.
- **Burden and Fringe Benefits** – 43.61% (vacation, holiday, sick, workmen's compensation medical and life insurance, employee welfare, FICA and unemployment insurance).
- **Overhead** – 54.68% (indirect labor; supplies; administrative, financial and legal costs; rent, leases and repairs; utilities, travel and relocation; taxes; insurance and permits; postage and freight; general and administrative assessment; depreciation and amortization; and internal services).
- **Profit** – 8.43% of direct labor, burden, fringe and overhead.
- **Composite Labor Multiplier** – 2.15

STATEMENT OF DIRECT LABOR, FRINGE BENEFITS & OVERHEAD

Year End January 1, 2010

Statement of Direct Labor, Fringe Benefits & Overhead

Year End January 1, 2010

	Home Office		Field Office	
Direct Labor	489,377,130		125,882,022	
Fringe Benefits				
Vacation	44,878,927		11,544,164	
Sick	14,513,190		3,733,214	
Holiday	23,320,862		5,998,804	
Workers Compensation Insurance	1,141,817		293,708	
Medical and Life Insurance	55,047,805		14,159,896	
Employee Welfare and Development	15,164,212		3,900,676	
Employers Taxes	54,631,965		14,052,929	
Unemployment and Disability Insurance	4,701,745		1,209,426	
Total Fringe Benefits	**213,400,523**	**43.61%**	**54,892,817**	**43.61%**
General Overhead				
Indirect Labor	164,520,849		42,319,544	
Premium Overtime	2,354,833		605,731	
Operating and Reproduction Supplies	8,024,072		519,264	

Administrative, Financial and Legal	19,428,078		4,997,467	
Facilities Costs	59,251,772		3,834,376	
Other Rents and/Leases	7,417,319		479,999	
Repairs and Maintenance	8,476,961		548,572	
Repairs and Maintenance - Field Office	--		79,129	
Telephone and Utilities	9,792,972		633,735	
Travel, Entertainment and Relocation	12,278,858		794,605	
Advertising and Business Taxes	4,591,519		1,181,072	
Professional Activities	2,170,100		558,213	
Insurance and Permits	15,274,991		3,929,172	
Postage, Freight and Other Expenses	2,468,277		159,730	
Corporate G&A Assessment	20,245,929		5,207,842	
Depreciation and Amortization	22,480,722		1,454,801	
Internal Services	1,937,834		498,467	
Bad Debts	--		--	
Gains/Losses; Bank charges and Other	(250,905)		(64,540)	
Interest expense	--		--	
State and Local Taxes	4,251,003		1,093,482	
Total General Overhead	**364,715,184**	**74.53%**	**68,830,661**	**54.68%**
Total Burden, Fringe and Overhead Costs	**578,115,707**	**118.14%**	**123,723,478**	**98.29%**

SUBCONSULTANTS

Maitra Associates, P.C

Home Office	2.35
Field Office	2.15

LPE Enterprises, Ltd

Home Office	2.35
Field Office	2.15

SECTION G. M/WBE PARTICIPATION

URS is committed to achieving the Authority's MBE and WBE goals of 12% and 5% respectively. URS plans to utilize the resources of M/WBE firms that we have worked with successfully in the past. A number of the program management support tasks would be performed by or with the assistance of one or more of our M/WBE subconsultant firms. These tasks include biddability and constructability reviews, preparation of technical presentations, responding to inquiries from outside entities, document control and other project control functions.

URS Corporation – New York intends on using **Maitra Associates** and **LPE Enterprises.** Both firms are certified by Authority as MBE/WBE-qualified business entities. The names, titles, hourly rates, resumes and relevant experience have been included in the prior sections of this proposal.

Maitra Associates, Maitra Associates, P.C., a certified MBE founded in 1982, is a multi-discipline engineering and construction management/construction inspection firm with offices in New York City and New Jersey. With licensed engineers, planners, surveyors, designers, technicians and construction inspection personnel, Maitra is able to present an outstanding portfolio of successfully completed or on-going contracts involving infrastructure and transportation projects. A representative list of our many clients includes the Port Authority of New York and New Jersey, Triborough Bridge and Tunnel Authority, Delaware River Port Authority, New York City Transit Authority, Long Island Rail Road, New Jersey Transit, New York City and New York State Departments of Transportation, the New Jersey Department of Transportation, and Metro North Railroad..

LPE Enterprises, Ltd., a New York based WBE/DBE program management & construction management support services firm, identifies and serves the needs of construction management and engineering companies for skilled and experienced project-based personnel. The firm's staff members, all of whom are actively engaged on projects in the New York and New Jersey and South Florida areas, are full-time employees of LPE.

SECTION H. FIRM'S AFFILIATES

URS Corporation – New York is 100% owned by URS Corporation (a Nevada corporation). The companies listed below, also owned by the Nevada company, are **affiliates** of URS Corporation—New York.

Forerunner Corporation (a Colorado corporation)
(FEIN [redacted] – owned from 10-23-09 to present

Geotesting Services, Inc. (a California corporation)
(FEIN [redacted]) – owned from 10-14-85 to present

URS Construction Services, Inc. (a Florida corporation)
(FEIN [redacted] – owned from 12-14-99 to present

URS Corporation – Ohio (an Ohio corporation)
(FEIN [redacted] – owned from 1-15-02 to present

URS Corporation Great Lakes (a Michigan corporation)
(FEIN [redacted]) – owned from 1-15-02 to present

URS Greiner Woodward-Clyde Consultants, Inc. (a New York corporation)
(FEIN [redacted]) – owned from 9-11-96 to present

URS International, Inc. (a Delaware corporation)
(FEIN: [redacted] – owned from 4-15-91 to present

URS Architecture – Oregon, Inc. (an Oregon corporation)
(FEIN [redacted] – owned from 9-16-03 to present

URS Alaska, LLC (an Alaska limited liability company)
(FEIN [redacted] – owned from 3-21-08 to present

LopezGarcia Group, Inc. (a Texas corporation)
(FEIN [redacted] – owned from 8-22-08 to present)

In addition, the Nevada company is the **partial** owner of the following:

33.33% of URS Architects/Engineers, Inc. (a New Jersey corporation)
(FEIN [redacted] – owned from 1-15-02 to present

33.33% of URS Corporation Services (a Pennsylvania corporation)
(FEIN [redacted]) – owned from 12-28-01 to present

25% of URS Corporation AES (a Connecticut corporation)
(FEIN [redacted] – owned from 12-28-01 to present

The principal executive address of all the above corporations (except URS Alaska) is:
600 Montgomery Street, 25th Floor
San Francisco, CA 94111

The principal executive address for URS Alaska, LLC is
911 West Eighth Avenue
Anchorage, AK 99501

SECTION I. CONFLICT OF INTEREST DECLARATION

Neither URS Corporation – New York, its employees, agents, or subcontractors have any known conflict of interest or appearance of conflict of interest which would adversely affect the work sought under RFP # 22388 Should any such conflict be created or become known, URS Corporation – New York will promptly notify the Port Authority of New York and New Jersey for its evaluation.

SECTION J. EXCEPTIONS TO CONTRACT

Exceptions taken by URS Corporation – New York to the contract included as part of RFP #22388 are delineated in a separate letter, as instructed in the RFP. This letter is provided immediately following.

URS

October 21, 2010

Ms. Mary Lou K. Rivera
Principal Contract Specialist
Professional, Technical and Advisory Services Division
Procurement Department
The Port Authority of New York and New Jersey
One Madison Avenue, 7th floor
New York, NY 10010

Re: Requested Contract Changes to Call-In Contract for RFP No.22388 – Project Management Services As Requested During 2011, 2012, 2013 and 2014

Dear Ms. Rivera:

We have reviewed the contract language and request that the following changes be considered:

1. **Insurance provisions (as provided by our insurance broker):**
   Section 23. A 1.: Insert "and Workers' Compensation & Employers' Liability" after "Professional Liability" in parentheses in the fourteenth line. Delete the second to last sentence in its entirety. (URS has an ISO Commercial General Liability policy. It is written on form CG 00 01 10 01. It, like all other ISO General Liability policies, contains many exclusions other than the exclusion for Professional Services. The ISO General Liability policy is a base form. Exclusions and endorsements are added to the policy to tailor coverage to a particular insured in a particular industry. It is not possible to provide an unendorsed ISO General Liability policy form.)

   Section 23. D. 1.: Delete "including the provisions establishing premiums." URS does not release its premium information to third parties.

2. **Indemnification provisions**
   Section 22, first paragraph: Delete "or willful intentional".

   Sections 22A: Insert "Consultant's or Subconsultants' negligent" before "performance".

   Section 22D: Insert "bodily" before "injuries" on second line. Replace "of any kind whatsoever arising in connection with the performance," with "to tangible property to the extent arising or alleged to arise out of or in connection with the Consultant's or Subconsultants' negligent performance."

URS Corporation
One Penn Plaza, Suite 610
New York, NY 10119-0698
Tel: 212.736.4444
Fax: 212.629.4249
www.urscorp.com

URS

3. **Insert the following sentence within the Contract:**
   "Furthermore, the Contract Documents shall require Contractor to name the Authority and Consultant as Additional Insureds on the General Commercial Liability and Automobile Liability Insurance Policies obtained by Contractor."

We are available to discuss these requested changes at your convenience.

Very truly yours,

URS Corporation – New York

Jay M. Gewirtzman, PE
Vice President

URS Corporation
One Penn Plaza, Suite 610
New York, NY 10119-0698
Tel: 212.736.4444
Fax: 212.629.4249
www.urscorp.com

OCTOBER 2010

Proposal for the Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013, and 2014

RFP #22388

SUBMITTED TO:

THE PORT AUTHORITY OF NY & NJ

SUBMITTED BY:

PB Americas, Inc.

Parsons Brinckerhoff

One Penn Plaza
New York NY
10119-0061
212-465-5000
Fax 212-465-5096

October 21, 2010
The Port Authority of New York & New Jersey
One Madison Avenue, 7th Floor
New York, NY 10010
Attention: Tim Volonakis

Re: Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013, and 2014 (RFP # 22388)

Dear Mr. Volonakis:

PB Americas, Inc. (PB) is pleased to submit this proposal in response to RFP # 22388. We are ready to perform project management services on a variety of projects to assist the Authority as part of its capital program. We meet the requirement of licensure to practice architecture or engineering services in both New York and New Jersey in that PB Americas, Inc. is licensed to provide engineering in both states.

PB brings to this effort a wealth of experience in project/program management, design, inspection, and construction support. Our vast experience with managing projects, ranging from signature, state-of-the-art facilities, combined with our extensive hands-on experience and comprehensive knowledge of Authority infrastructure, provides PB with the requisite skill set necessary to efficiently address the needs of the Authority's various projects.

We assembled a local team of experienced project/program management experts supported by project controls/administration, business analysis, and technical discipline specialists to work with Authority staff. Our **Project Manager, Peter Sweeney, P.E.** has a decade of experience as a PANYNJ project and program manager and has managed or directly supervised Agency and Consultant project managers on aviation, economic development, and World Trade Center assignments. As **Principal-in-Charge**, I will ensure that Peter has the resources necessary to complete Authority projects on time and within budget.

PB has a history of supporting the Authority's goal of providing business opportunities to Minority and Women-owned Businesses Enterprises (WBE/MBE). When selected to submit a proposal, qualified and certified MBE/WBE firms will be added to our team to meet the Authority's goals and guidelines.

PB acknowledges Addendum #1, dated October 13, 2010. If you have any questions, please call me at 212-465-5033 or email me at lucey@pbworld.com. We appreciate the opportunity to continue our relationship with the Authority through this important call-in contract.

Very truly yours,
PB Americas, Inc.

Neil J. Lucey, P.E.
Senior Vice President / New York Area Manager

ATTACHMENT B

PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014

AGREEMENT ON TERMS OF DISCUSSION

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority's Freedom of Information Policy and Procedure adopted by the Port Authority's Board of Commissioners on November 20, 2008, which may be found on the Port Authority website at: *http://www.panynj.gov/corporate-information/pdf/Freedom-of-Information-Policy-and-Procedure.pdf*, not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

PB Americas, Inc.

(Company)

(Signature)

Senior Vice President / New York Area Manager

(Title)

10/21/10

(Date)

ORIGINAL AND PHOTOCOPIES OF THIS PAGE ONLY.
DO NOT RETYPE.

ATTACHMENT C

COMPANY PROFILE

REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

1. Company Name (print or type):

   _____

2. Business Address (to receive mail for this RFP):

   _____

   _____

3. Business Telephone Number: _____
4. Business Fax Number: _____
5. Firm website: _____
6. Federal Employer Identification Number (EIN): [redacted]_____
7. Date (MM/DD/YYYY) Firm was Established: _____/_____/_____
8. Name, Address and EIN of Affiliates or Subsidiaries (use a separate sheet if necessary):

   _____

   _____

9. Officer or Principal of Firm and Title:

   _____

10. Name, telephone number, and email address of contact for questions:

    _____

    _____

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? ☐ Yes ☐ No

    If yes, please attach **Port Authority** certification as a part of this profile.

    If your firm is an M/WBE not currently certified by the Authority, see the Authority's web site – http://www.panynj.gov/business-opportunities/supplier-diversity.html, to receive information and apply for certification.

C. Qualifications and Experience of Staff

For this contract we have assigned a strong, experienced team of professionals, including: engineers; as well as specialists in the areas of program/project management; program controls/administration; financial/economic business analysis; as well as technical resources and discipline support, whose backgrounds and representative project experience enable them to expertly address the critical issues of this contract. Our criteria for personnel selection are: (a) demonstrated skills in the type of work involved; (b) hands-on experience with the required facility type; and (c) familiarity with the guidelines, philosophy, and technical specifications of the Authority. A considerable percentage of our workload comes from call-in projects, and we are organized to handle assignments of a short duration and limited scope, as well as to handle the larger projects that clients request of us.

Our **Project Manager, Peter Sweeney, P.E.,** has extensive experience as a PANYNJ Project and Program Manager, having personally managed or directly supervised Authority and Consultant project managers on aviation, economic development, and World Trade Center assignments. Peter subsequently served as a vice president of New York City's School Construction Authority before joining PB. As vice president and senior engineering manager, he served for the past eight years as program director on a PB-led joint venture assignment for the New Jersey Schools Development Authority. In this capacity, Peter directed a staff of 30 project management and support personnel responsible for planning, design and construction management of projects with budgets ranging from several thousand through $100 million.

Peter will be supported by our **Principal-in-Charge, Neil Lucey, P.E.** He brings a strong background in transportation management and more than 35 years of experience in planning, design and construction of public and private projects totaling more than $3 billion in construction. He brings a former career of 30 years in the consulting engineering industry, most recently serving as northeast transportation area manager for a national firm. Mr. Lucey guided projects that earned national awards for engineering excellence and New York City Design Commission awards for design excellence.

In order to address various task assignments, we have identified program managers for each facility type, all of whom have task and project management experience, and they can all lead tasks to successful completion. These managers will be supported by project managers and deputy project managers familiar with all PANYNJ lines of businesses. Our organization chart is included in Section E. Management Approach.

Included in our team are architects, environmental specialists, and various other resources and engineering discipline support professionals who will assist these managers with projects in aviation; tunnels, bridges, and terminals; PATH; Port Commerce; WTC; and economic development. Our key personnel's experience on similar projects is summarized in the table below with respect to project, project role, and project cost. Complete resumes of our key personnel are included after the table.

Key Personnel Project Experience		
Neil Lucey		
Project Name	**Project Role**	**Project Cost**
FDR Drive	Principal-In-Charge / Project Manager	Const. Cost $150 M
BQE Approach to Williamsburg Bridge	Principal-In-Charge / Project Manager	Const. Cost $80 M
Rout 9A Segment 6	Principal-In-Charge / Project Manager	Const. Cost $45 M
East 153rd Street Cable-Stayed Bridge	Principal-In-Charge / Project Manager	Unknown
Avenue of the Americas	Principal-In-Charge / Project Manager	Unknown
Columbus Avenue	Principal-In-Charge / Project Manager	Unknown
Hunts Point Area Streets	Principal-In-Charge / Project Manager	Unknown
Peter Sweeney		
Project Name	**Project Role**	**Project Cost**
PANYNJ WTC	Engineering Program Manager	Total Cost $1 B
Newark Schools Program Mgmt.	Program Director	Total Cost $1.6 B
NYCSCA	Vice President A/E Dept.	Total Cost $1.4 B
World Trade & Regional Develop.	Engineer of Projects	Unknown
JFK Airport Redevelopment	Senior Project Manager	Total Cost $266 M
Comanche Peak Steam Electric Station	Program Manager	$4 B
George Colban		
Project Name	**Project Role**	**Project Cost**
PANYNJ Security PM Services on an Call-in Basis	Project Executive	Total Cost $500 M
AirTrain JFK	Deputy Project Manager	Total Cost $1.9 B
Charlie Van Cook		
Project Name	**Project Role**	**Project Cost**
FAA Regional Air Service Demand Study	Project Manager	Fee $3 M
JetBlue Terminal Program Mgmt.	Principal-In-Charge	Const. Cost $800 M
Stewart Airport Redevelopment Plan	Project Manager	Fee $1 M
PANYNJ Airport Call-In Services	Project Manager	TO Based Fee Approx. $1 M
JFK International Airport	Program Manager	Const. Cost $1.2 B

James Falvey		
Project Name	**Project Role**	**Project Cost**
RIAC Taxiway Reconstruction	Project Manager	Const. Cost $869,000
RIAC Taxiway Foxtrot Rehabilitation	Deputy Project Manager	Const. Cost $400,000
Susquehanna Regional Airports Authority Call-in	Project Manager	Const. Cost $300,000
Aviation Planning & Business Development	Project Manager	Fee $120,000
PANYNJ Stewart Airport Redevelopment Plan	Engineering Technical Lead	Fee $700,000
Denver IA Taxiway L&M Reconstruction	Construction Admin. Technical Support	Const. Cost $12.5 M
A/E Call-in Services, Statewide RIAC	Project Manager	Const. Cost $5 M
EIS Improvements at T.G. Green Airport	Engineering Lead for Preliminary Design	Fee $1.2 M
GEC New Castle Airport	Project Manager	Const. Cost $5 M
Airfield Improvements, Manchester Airport	Project Manager/Engineer	Unknown
Airfield Improvements, Bangor International Airport	Project Manager	Unknown
Jeff Schechtman		
Project Name	**Project Role**	**Project Cost**
Bridgeport Port Security Systems	Project Manager	Fee $406,000
Port of New Orleans, PP Advisory Services	Project Manager	$300,000
Port Newark Container Terminal Modernization	Principal-in-Charge	Const. Value $50 M
Project Harbour Due Diligence of Container Terminal	Technical Reviewer	Fee $750,000
Port of Guam Owner's Agent/Engineer	Principal-In-Charge	Fee $12 M
Port Freeport Truck Queuing Study	Principal-In-Charge	Fee $132,000
Boston Cargo Terminal Development	Project Engineer	Fee $758,000
Luke Mahier		
Project Name	**Project Role**	**Project Cost**
Levee Flood Control Structure Inspections &Design	Project Manager	Fee $1.1 M
Pier G Mega Terminal Expansion	Construction Manager	Fee $2.5 M
Port of Long Beach Piers Program Management	Program Manager	Fee $2.2. M
Port of Long Beach Pier G Cold Ironing	Program Manager	Fee $350,000
Staten Island Esplanade Contract	Resident Engineer	Fee $350,000
Hyannis Ferry Terminal	Project Manager	Const. Cost $10 M

John Fedun		
Project Name	**Project Role**	**Project Cost**
WTC Transportation HUB Site	Project Engineer	Total Cost $1 B
Newark Regional Schools Program Management Services	Project Executive	Total Cost $1.6 B
Security Strengthening at UN Headquarters	Project Executive	Const. Cost $60 M
Dover Township Industrial Park	Resident Engineer	Const. Cost $25 M
Newark Arts High School Modernization and Expansion	Project Manager	Const. Cost $45 M
James Hickey		
Project Name	**Project Role**	**Project Cost**
WTC Transportation HUB Site	Senior PM / CM	Total Cost $1 B
New Songdo City	Site Director / Senior PM	CM Services $18.4 M
Gerry Chi		
Project Name	**Project Role**	**Project Cost**
PANYNJ CM On-Call Services	Project Manager	Fee $5 M
NYCSCA	Project Executive	Total $50 M
NJ Schools Program	Program Manager	Total Cost $1.6 B
Taiwan High Speed Rail	Project Manager	Const. Cost $15 B
GSA Construction Quality Management	Project Executive	Fee $5 M
NYS OGS CM Program	Downstate Mgr.	Fee $36 M
Foster Nichols		
Project Name	**Project Role**	**Project Cost**
California High-Speed Train Project	Task Leader	Fee $10 M
Amtrak National Market-Based Network Analysis	Project Manager	Fee $400K
Long Island Rail Road	Project Manager	Total $2 M
MARC Commuter Rail System, Maryland	Project Manager	Total $3 M
Virginia Railway Express	Project Manager	Total $2 M
Northeast Ohio Commuter Rail Feasibility (NEORAIL) Study	Project Manager	Total $1 M
NECorridor and Newark Penn Station Operations Study	Deputy Project Manager	Total $2 M
MARC Maintenance Facility Economic Analysis	Task Manager	Total $500,000
ARC Study (initial planning phase)	Task Leader	Fee $500,000

Maryland Strategic Rail Framework	Task Leader, Rail Operations	Fee $500,000
New York State High Speed Rail Study	Task Leader	Fee $1 M
Freight Rail Realignment Feasibility Study	Task Leader	Fee $1 M
Ira Hirschman		
Project Name	**Project Role**	**Project Cost**
TIGER Grant Applications – Economic Analyses	Technical Director	Fee $500,000
PANYNJ Bayonne Bridge Regional Benefit Cost Analysis	Economist	Fee $100,000
MNR Feasibility and Cost Benefit of Cross-Hudson Rail Links	Economist	Fee $250,000
New York City EDC Strategic Investment Options	Economist	Fee $250,000
MDOT – Maryland Strategic Rail Action Agenda Study	Economist	Fee $250,000
Regional Transportation Authority Chicago	Economist	Fee $300,000
Bonner Bridge Replacement Study Economic Impact Report	Economist	Fee $100,000
Panama Canal Master Plan & Third Locks Development	Economist	Fee $750,000
Front Range Railroad Relocation Project	Economist	Fee $250,000
Stephen Grant		
Project Name	**Project Role**	**Project Cost**
MTA Security Hardening Program	Task Manager	Total Cost $9 M
Feasibility Study for Floodgate @ the 148th St. Station	Task Manager	Fee $1.9 M
New Drain Line Valve Installations Around NYC	Task Manager	Const. $6 M
NJ School Construction Corporation	Construction Manager	Total Cost $1.6 B
Governors Island Preservation and Education Corporation	Project Manager	Fee $300,000
NYCSCA	Director of Capital Improvement Prog.	$1 B per year
Newark Schools Program Management	A/E Cap. Improvements Program Dir.	Total Cost $1.6 B
Jenny Kapelyan		
Project Name	**Project Role**	**Project Cost**
NYCT No. 7 Subway Line Extension	Civil Engineer	Cont. Cost $167 M
No. 1 & 9 Subway Line Restoration	Civil Engineer	Unknown
Myrtle Wyckoff Station rehabilitation	Civil Engineer	$1.4 M
Rehabilitation of 1st Ave. & Long Island City Vent. Shafts	Civil Engineer	Unknown
Pelham Parkway Station Rehabilitation	Civil Engineer	$764,000

North River Railroad Tunnels Rehabilitation	Civil Engineer	$4.8 M
42nd Street & Eighth Avenue Station Rehabilitation	Civil Engineer	$615,000
Metro-North Railroad Croton-Harmon Maintenance Facility	Civil Engineer	$5.9 M
Long Island Expressway Development Study	Deputy Project Manager	$4.5 M
Ferdinand Portguez		
Project Name	**Project Role**	**Project Cost**
Rehabilitation/Reconstruction of the Park Avenue Tunnel	Deputy Project Manager	Const. Cost $4.3 M
Brooklyn Battery Tunnel Rehabilitation	Deputy Project Manager	Const. Cost $4.1 M
Queens Midtown Tunnel Inspection Services	TM/ Inspection Team Leader	Const. Cost $120 M
East River Tunnels Leak Repair	Engineer	Const. Cost $7.3 M
Fort Drum Vehicle Maintenance Facility	Inspector	Const. Cost $1.3 M
Myrtle-Wyckoff Station Rehabilitation	Engineer	Const. Cost $1.4 M
LIRR Projects	Engineer	Unknown
Rehabilitation of Beacon Station	Engineering Design	Unknown
Kurt Kauffman		
Project Name	**Project Role**	**Project Cost**
Baldwin Avenue Roadway Improvements	Project Engineer	Const. Cost $7 M
Louisiana Coastal Area Ecosystem Restoration	DPM	Const. Cost $1.6 B
Newark City Subway Broad Street Extension (NERL MOS-1)	Program Manager	Const. Cost $200 M
Newark City Subway Station Renovation, Reconstruction	Project Manager	Const. Cost $23 M
New Jersey Transit Key Station Program/ADA Compliance	Project Manager	Const. Cost $22 M
Anca Baron		
Project Name	**Project Role**	**Project Cost**
Farley Building (Penn Station) Redevelopment	Deputy Project Manager	Const. Cost Est. $550 million
Hilton Corridor Improvement (Penn Station)	Deputy Project Manager	
Amtrak East River Vent. Shaft Rehabilitation	Project Manager	Cont. Cost $212 million
City Tunnel No. 1 Shaft 23 Value/Distribution Project	Deputy Project Manager	Const. Cost $26 million
WTC Disaster Area	On-Site Structural Support	Total Cost $1 B

Neil J. Lucey, P.E.
Principal-in-Charge

Neil is PB's New York area manager responsible for client management and project performance of the firm's New York operation, the largest office in the United States. Throughout his career, he has been a hands-on manager, guiding projects and programs ranging in construction value from $50,000 to more than $2 billion. His diversified experience is focused on work in the New York City metropolitan area, Connecticut and New Jersey and, as such, he is very knowledgeable of local agencies, policies, codes and practices. As a manager, he has led multi-firm teams of architects, engineers, and support specialists in the design of significant projects for highways and bridges, transit and commuter rail, and community and waterfront revitalization involving multi-agency coordination, community involvement, distinctive aesthetics, and phased implementation.

Fast Facts

Years of Experience
37

Education
M.S., Transportation and Engineering, Polytechnic University of New York, 1973; B.E., Civil Engineering, Manhattan College, 1970

Licenses/Registrations
Professional Engineer: New York, 1975 [redacted] New Jersey, 1995 ([redacted] Connecticut, 2010 [redacted]

Professional Affiliations
American Society of Civil Engineers; Society of Municipal Engineers; Women's Transportation Seminar; American Council of Engineering Companies, New York: Chairman

History of Employment
Bronx Boro President Office 1973 - 1979
Daniel Frankfurt 1979 – 2006
HDR 2006 – 2010
PB 2010 – current

Representative Project Experience

- Long Island Rail Road (LIRR), New York: principal-in-charge/project director for:
  - Woodside Station Complex/Joint New York City Transit (NYCT) Intermodal Facility
  - Forest Hills Station Renovation
  - Huntington Station Expansion and Modernization
  - Jamaica Station Renovation
  - New High-Level Platforms for 35 stations
  - Merrick Station E & H project
  - Valley Stream Station Parking Facility
  - Long Beach Parking Facility
  - Huntington Station
  - Historic rehabilitation of Sea Cliff and St. James Stations
- Metro-North Commuter Railroad, New York: project manager for:
  - Yonkers Station Elderly and Handicapped (E&H) project
  - Tarrytown Station E&H project
  - Croton-Harmon Station Expansion and Modernization

  - Yonkers Viaduct Repairs
- New Jersey Transit, New Jersey: joint venture principal/engineering director for:
  - Newark City Subway Stations
  - Kearny Rail Control Center
  - Ridgewood Station Improvements
  - Madison-Morristown Station Improvements
- NYCT: principal-in-charge/project director for:
  - West 72nd Street Station Expansion
  - Court Street/Borough Hall Station
  - Hunts Point Avenue Station
  - Jay/Lawrence Street Complex
  - Lenox Avenue Stations Rehabilitation
  - Lower White Plains Road Stations
  - West 96th Street Station

Neil served as project manager and principal-in-charge on the following:

- FDR Drive East 53rd to 63rd Streets with Outboard Detour for New York State Department of Transportation (NYSDOT).
- BQE Approach to Williamsburg Bridge Brooklyn for NYSDOT: first post-tensioned segmental concrete vehicular bridge structure in New York State.
- Route 9A Segment 6, West 23rd to 42nd Streets for NYSDOT
- East 153rd Street Cable-Stayed Bridge for New York City Department of Transportation (NYCDOT)

Peter Sweeney, Ph.D., P.E.
Project Manager

Peter (Pete) has more than four decades of experience in leadership positions including Officer-In-Charge of U.S. Navy combat construction projects; Supervising Engineer, Project Manager and Division Manager functions with ENR top ten Architect / Engineering / Construction Management firms; Engineering Program Manager for PANYNJ; Vice President, NYC School Construction Authority. A leader in the field, Pete has directed projects comprising as many as 400 multi-disciplinary professionals and regularly transfers his experience to PB clients and aspiring managers through academic service as an adjunct professor.

Fast Facts

Years of Experience
45

Education
Ph.D., New York University, 1991; MPA, New York University, 1986; MS (Management), Manhattan College, 1979; Master of Engineering (Nuclear Engineering), New York University, 1965; Bachelor of Engineering (Electrical), Manhattan College, 1964

Licenses/Registrations
Professional Engineer: New York, 1972 [redacted]; New Jersey, 1974 [redacted]

Professional Affiliations
Municipal Engineers of the City of New York; National Society of Professional Engineers; Society of American Military Engineers, Order of the Engineer

History of Employment
Dravo/Gibbs & Hill 1965 - 1987
PANYNJ 1987 – 1998
NYC School Const 1998 – 2001
PB 2001 -current

Representative Project Experience

- PANYNJ, WTC: as engineering program manager, he marshaled and delivered design and construction management resources required to implement a $1 billion Capital Improvement Program for the 12 million square foot office, commercial, retail, hotel, and public transportation center complex. This program included $22 million in new security enhancements and buttressed the status of the WTC towers as Class A office space. Also oversaw Consultant team which developed design renovations for the VISTA Hotel portion of the complex: project was selected as Construction Management Association of America's 1994 regional Project of the Year. Recipient of 1997 P.A. Engineering Excellence award.
- NJ Schools Program Management, Newark, New Jersey: program director for the $1.6 billion initiative to design, renovate, repair and construct new primary and secondary schools. Repairs and improvements in excess of $130 million were completed in seventy operating schools during 2002 and 2003. A $75 million state of the art Science High School was opened in fall 2006 and a $43 million elementary school, which incorporated NJ homeland security features, was opened in September 2007. Classes commenced in September 2008 at a new multi-academy high school in the city's Central ward. Work in place at three other school sites exceeded $20 million. Designs for 19 projects were advanced consistent with state funding.

- New York City School Construction Authority: as vice president of architecture and engineering department, revitalized the department, facilitating delivery of a record breaking $1.4 billion capital plan for 1999 and a paid construction placement of over $1 billion. New records were again achieved in 2000 and 2001. Directed the efforts of a 200+ person department and oversaw the work of 75 Professional Services firms tasked with design of new schools and modernizations for the nation's largest school system. He was also PM on two, $200,000 management consulting Task Orders for President of New York City School Construction Authority.
- PANYNJ Engineer of Projects, World Trade & Regional Development: supervised project managers directing multi-disciplinary teams of Consultant and P.A. staff developing new, and rehabilitating existing, infrastructure at the Trade Center, Bathgate, Yonkers and Elizabeth Industrial Parks, Newark Legal Center, and the Teleport. Coordinated design, material procurement, construction and operational testing of a temporary refrigeration plant and emergency repairs to essential building service systems allowing WTC towers to reopen within weeks of the 1993 bombing. Recipient of P.A. Exceptional Service award.
- PANYNJ JFK Airport Redevelopment: as Senior Project Manager, he managed diverse design projects including a cogeneration plant, new public roadway segment, replacement of underground fuel storage tanks, and electrical substation refurbishment. ($266 million)
- Mass Burn Resource Recovery: he directed the proposal development, responded to post bid inquiries, and effected presentations to entities seeking to reduce solid waste via Mass Burn Resource Recovery projects.
- Comanche Peak Steam Electric Station , Glen Rose, Texas: Peter managed the permitting, design, QC, and administrative support team for Unit 1 of this $4 billion grassroots power generation complex near Glen Rose, Texas. Monthly staff averaged 400 and billings exceeded $2.5 million.
- Manhattan College: Peter is an adjunct professor, specializing in post graduate construction management courses.
- Directed Purchasing, Estimating, Project Controls, and Technology Transfer Departments - Modernized project management systems, trained internal and client personnel, prepared five year plans, and authored studies contrasting company performance vs. peer group.
- Lecture / seminar presentations to ASCE and Sigma Xi Research Society chapters, US Navy and Department of Commerce conferences, 2004 International Conference on Post Terrorist Attacks, and 2005 Linking Workplace Ethics and Education symposium.

Stephen Grant, P.E.
Quality Assurance/Quality Control
Economic Development Program Manager
Procurement Support

Stephen has 31 years of experience in civil engineering with a strong background in project and program management. As an astute manager, he has varied experience in the development and administration of multi-year capital plans establishing program scopes, budgets and schedules. He has advanced agency's capital programs to comply with organizational objectives, priorities relating to improving customer service, revenue generation and infrastructure maintenance. Stephen is particularly effective in managing workload plans by assessing staff capabilities, delegating assignments commensurate with staff skill and abilities, and providing ongoing support for the project duration, all to ensure that the project objectives are achieved.

Fast Facts

Years of Experience
31

Education
B.S., Civil Engineering, Manhattan College, 1978
Graduate studies in Regional Master Planning, Polytechnic Institute of New York

Licenses/Registrations
New York, 1987 [redacted] New Jersey, 1988 ([redacted])

History of Employment
PANYNJ 1979 – 1998
NYCSCA 1998 – 2002
PB 2002 – current

Representative Project Experience

- Security Hardening Program, New York, New York: in light of the events of September 11, 2001, as part of a MTA Security Program Task Order Contract to improve security at their most critical and vulnerable infrastructure, Steve, as task manager, managed the profession service effort for the design development and contract document preparation phases for the installation of security hardening devices around the perimeter of three facilities in New York City.
- Feasibility Study for the Installation of a Floodgate @ the 148th St. Station, New York, New York: as task manager, Steve managed the development and preparation of a comprehensive feasibility study to identify appropriate flood control measures in the track and yard areas adjacent to the Harlem River to mitigate the impact of flood events due to the 100 yr storm and 100 yr flood. In the past storm conditions in conjunction with high tides caused extensive flooding for an extended period of time causing significant service disruptions and flooding in the tunnel as well as associated land based tunnel and stations.
- New Drain Line Valve Installations at Nine Locations: to preclude future track and station flooding due to backup discharges from the NYC combined sewer system mains at several locations in Manhattan, Brooklyn and the Bronx, Steve, as task manager, is currently managing the preliminary and final design efforts to replace and / or upgrade archaic and deteriorated storm drainage pipe valving and associated appurtenances that provide direct connections to the New York City combined system.
- NJ School Construction Corporation, NJ: Stephen was part of a program management team, as an extension of the New Jersey School Construction Corporation staff, for this $1.6

billion initiative to design, renovate, repair and construct new primary and secondary schools in Newark. Stephen managed the efforts of several architectural firms through all phases of design for the New Science Park High School, McKinley Elementary School, Harold Wilson PreK-8 School and the renovation / addition to West Side High School. He was responsible for ensuring strict compliance with the Department of Education approved model program and delivery of the project within budget and schedule. For the McKinley Elementary School project which involves challenging phasing sequences, Stephen also served as the Construction Manager.

- Governors Island Preservation and Education Corporation South Island Demolition Project: project manager, maintains oversight responsibilities for the preparation of contract documents to demolish 49 buildings situated in the southern portion of the 150 acres under the jurisdiction of GIPEC. The phased demolition is in preparation for a mixed use development in the southern region of the island. The 49 non-historic and non-contributing buildings include low and high rise residential buildings, a school and recreational buildings, and industrial buildings totaling approximately 1.13 million square feet.
- NYCSCA, New York: as the architectural and engineering capital improvement program director, Stephen managed professional and administrative staff, project design teams and consultants with a commitment to delivering the NYC Board of Education's Annual Capital Plan. Improvement projects included, in part, building envelope modernizations, building system upgrades, boiler conversions and physical education facility rehabilitations. Range of projects in design development database in a given year varied between $500 million to over $900 million with a project dollar value ranging from $50 thousand to $20 million. In his first year as Director, Stephen recorded unparalleled levels of design for project completions estimated in excess of $520 million. In his second year as Director, he surpassed preceding SCA record level accomplishment, having completed projects valued at over $600 million including an aggressive boiler conversion program at over 130 schools. Of the schools in this boiler program, thirty-five were completed with the accelerated schedule of 150 days from contract execution. Achieved a milestone never accomplished in the history of the organization by completing design for all Fiscal Year 2001 project identified in the Third Five Year Plan.
- PANYNJ Various Projects: as engineer of projects, he supervised and managed a professional staff of 14 project managers and support groups dedicated to the delivery of capital and expense programs totaling $123 million at LaGuardia and Kennedy Airports. The projects included the JFK Building 208 Improvements for Multi Tenant Occupancy, LGA Terminal Building Garage Improvement Program and the LGA Taxiway Deck Strengthening for New Large Aircrafts.

Charles Van Cook, P.E.
Aviation Program Manager

Charles is a vice president and senior technical manager with PB. His extensive aviation background includes comprehensive management, planning, design and program/construction management (PM/CM) for the development of terminals and landside and airside facilities for domestic and international airports. He has expertise in a variety of project delivery systems, including design-build and design-build-operate-maintain (DBOM) for major airports and other multimodal transportation systems. He is also PB's principal airport security specialist.

Fast Facts

Years of Experience
39

Education
M.A., Economics, New York University, 1980; B.S.C.E., Civil Engineering, Polytechnic Institute of Brooklyn, 1968
Additional Studies: Graduate Studies in Transportation Planning, Polytechnic Institute of Brooklyn, 1971

Licenses/Registrations
Professional Engineer: New York, 1976 [redacted]

History of Employment
Tams Consultants 1971 – 2001
PB 2001 – current

Representative Project Experience

- Federal Aviation Administration (FAA) Regional Air Service Demand Study, New York/New Jersey/Pennsylvania: as project manager, led an 11-member consulting team that analyzed the capacity of nine commercial service airports in the New York, New Jersey and Eastern Pennsylvania region. The ultimate goal of this study was to provide baseline data and demand/capacity analyses to establish the role that each airport will play in providing new capacity to the overall regional aviation system. The project included: aviation demand forecasting, airport demand/capacity analysis, airport passenger and business surveys, regional transportation modeling, and economic and socioeconomic modeling and planning. The project, sponsored by the FAA, the Port Authority of New York and New Jersey, the State of New York, and the Delaware Valley Regional Planning Commission, covers the following commercial services airports:
  - John F. Kennedy International Airport
  - LaGuardia Airport
  - Newark Liberty International Airport
  - Stewart International Airport
  - Atlantic City International Airport
  - Lehigh Valley International Airport
  - Westchester County Airport
  - Long Island/MacArthur Airport
  - Trenton-Mercer Airport

- JetBlue Terminal Program Management: principal-in-charge for PB of JetBlue's new, $800 million Terminal 5 at John F. Kennedy International Airport. The 26 gate, 640,000 square foot facility provides capacity for 20 million passengers annually, and is complemented by a 1,500 space garage and a direct skywalk connection to the JFK Air Train.
- Stewart Airport Redevelopment Plan: project manager for the preparation of a high-level alternatives analysis for phased development of SWF over a 25-year period from 2010 through 2035. The plan will provide the framework for advancing infrastructure projects as growth in passengers and operations is achieved, as facilitated by the PANYNJ Strategic Air Service Development Plan, to ensure the airport fulfills its mission. The study emphasized economical, functional, and sustainable development, with a focus on terminal, landside, intermodal, general aviation, corporate and cargo development opportunities.
- Port Authority of New York & New Jersey Airport Call-In Services: project manager for call-in agreements for 2003-2007 and 2008-2012. Charlie provided strategic consulting services to the Authority in the development of its 10-year capital plan for aviation; led workshops on the redevelopment of Stewart International Airport; and is serving as a peer reviewer for the development of the $4 billion+ Terminal A project at Newark Liberty International Airport, including defining sustainability guidelines for its implementation and operation.
- JFK International Airport, Jamaica, New York: performed the following projects at JFK Airport:
  - International Arrivals Terminal (IAT) Redevelopment: in charge of the design team for the engineering and architectural design/preparation of construction documents, including all terminal facility, landside, and airside elements. The new $1.2 billion, privatized facility will consist of a four-level, 1.5-million-square-foot terminal, 16 aircraft contact gates, and ten handstands. The scope included providing the logistics and proper space for future EDS equipment, one of the first U.S. terminals to address this requirement. A light rail system (AirTrain) station was incorporated within the envelope of the new terminal. A key element involved the development of a detailed construction staging plan to allow the continuous operation of the existing IAT, while constructing the new IAT on the same site, with an overlapping terminal footprint. This project received the ACEC Grand Conceptor Award, the nation's top engineering project honor.
  - American Airlines Terminal Redevelopment: served as project director for alternatives analysis and design of a new, comprehensive $1.2 billion redevelopment of the American Airlines terminal complex, including all terminal facility, landside and airside elements. The redevelopment facility will have a floor area of approximately 2 million square feet and will accommodate 54 contact gates. The design will be fully integrated with a light rail system (AirTrain) that will be constructed concurrently with the new terminal. Staging/phasing plans were prepared that will allow for continuous operation of existing Terminals 8 and 9, throughout the construction period.

James Falvey, P.E.
Aviation Program Manager
Project Manager/Management Support

James has worked on aviation design and construction projects throughout his career. His experience includes the management, design, permitting and construction administration for new and reconstructed runways, taxiways, aircraft aprons and associated landside facilities at various size airports ranging from single runway municipal fields to large international airports. Work for these projects has encompassed pavement designs, design of plans and profiles, layout of runway and taxiway lighting systems, design of site grading and drainage, conducting soil testing, compiling construction cost estimates for requesting funding assistance, assisting in the bidding process, as well as construction phase services. He has also held the position of resident engineer responsible for inspection and acceptance of work during the construction phase of numerous airport projects.

Fast Facts

Years of Experience
23

Education
B.S., Civil Engineering, University of New Hampshire, 1987

Licenses/Registrations
Rhode Island, 2003
Connecticut, 2006
Delaware, 2002
Maryland, 2001 (New Hampshire, 1991

Professional Affiliations
American Society of Civil Engineers; American Association of Airport Executives, Northeast Chapter

History of Employment
Hoyle Tanner 1987 – 1996
Edwards & Kelcey 1996 – 2007
PB 2007 – current

Representative Project Experience

- PANYNJ, Stewart Airport Redevelopment Plan, New Windsor, New York: engineering technical lead.
- South Jersey Transportation Authority, Call-in Airfield Engineering Contract, Atlantic City International Airport, Egg Harbor, New Jersey: deputy project manager.
- Rhode Island Airport Corporation (RIAC) Taxiway A Reconstruction, Quonset Airport, North Kingstown, Rhode Island: project manager.
- RIAC Taxiway Foxtrot Rehabilitation, T.F. Green Airport, Warwick, Rhode Island: deputy project manager.
- Susquehanna Area Regional Airports Authority, Call-in Airport Engineering Consultant, Harrisburg International Airport, Middletown, Pennsylvania: project manager.
- Confidential Client, Aviation Planning and Business Plan Development, Midway Airport Privatization, Chicago, Illinois: project manager.
- Denver International Airport, Taxiway L & M Reconstruction, Denver, Colorado: construction administration technical support.
- A/E Call-in Services, Statewide, RIAC, Rhode Island: project manager for all engineering assignments under a multi-year call-in services contract with RIAC. Projects included the reconstruction of three runways; the construction of new and relocated taxiways; and the

construction of an airfield vehicle service road, building renovations and a fuel farm expansion study. These projects were located at the T.F. Green Airport (PVD) and several of the five reliever and general aviation airports operated by RIAC.

- Environmental Impact Study for Airfield Improvements, T.F. Green Airport, RIAC, Warwick, Rhode Island: engineering lead on preliminary design and analysis for multiple alternative development programs, each one representing over $500 million of possible future improvements. These programs include a major runway extension and possible shifts, significant runway safety area improvements, an eight-gate terminal building expansion, new air cargo and GSE facilities, a new 2-million-gallon fuel farm, a new 2,000-car parking garage, and expansion and realignment of the airport circulation roadways.
- General Engineering Consultant, New Castle Airport, Delaware River & Bay Authority, New Castle, Delaware: project manager responsible for providing full airport design, planning and construction administration services for multi-year, call-in service contract. Projects included designing and permitting over 3,400 linear feet (1,040 meters) of new taxiways; rehabilitating existing taxiways; managing development of the authority-wide (five airports) Airport Pavement Management System; reconstructing Runway 14-32; reconstructing Runway 1-19; developing an Airfield Comprehensive Electrical and Signage Plan; overseeing several small building renovation projects; and constructing safety area improvements. These tasks included pavement analysis and design, drainage, airfield lighting and signage, environmental permitting, and compliance to local land use regulations.
- Miscellaneous Airfield Improvements, Manchester Airport, Manchester, New Hampshire: project manager/engineer on numerous airfield improvements, including drainage system repairs/expansion, security fencing, taxiway and apron construction and reconstruction, and an airfield signage project. Responsibilities also included review of construction documents and phasing as part of program management/construction management assignment for over $350 million in projects at Manchester Airport.
- Miscellaneous Airfield Improvements, Bangor International Airport, Bangor, Maine: project manager on numerous airfield projects at BGR from 1990 to 2000. Projects included taxiway and apron reconstruction, drainage improvements, airfield lighting upgrades, terminal building and airfield maintenance building expansions, equipment procurement, roadway design and general engineering assistance. In addition to overseeing design and construction projects, responsibilities included airfield planning, an airfield electrical study, PFC project justifications, and production of a runway reconstruction method analysis report.

Jeffrey Schechtman, P.E.
Port Commerce Program Manager

As the manager of PB's Ports & Marine Division and a senior program/project manager, Jeffrey (Jeff) provides oversight, management, design, and coordination services for major projects involving port and marine facilities throughout the United States and internationally. He has been responsible for feasibility studies, evaluation, design, and rehabilitation of a number of port and marine facilities, including piers and platforms, fender systems, bulkheads, port security systems, and a confined dredged material disposal facility.

Representative Project Experience

- Bridgeport Port Security Systems: project manager for the design and installation of port security systems for the Bridgeport (CT) Port Authority's facilities, which include a ferry terminal, shipyard, and container barge facility. PB's responsibilities include design and construction supervision for access control systems, CCTV monitoring systems, lighting and fencing. PB also was responsible for developing solicitations and managing the procurement process for the selection of a security systems integrator responsible for installation of the specified systems.
- Port of New Orleans Public-Private Partnership Strategic Advisory Services, New Orleans, Louisiana: project manager responsible for providing advisory services to the Port of New Orleans to develop a business case for expansion of the Napoleon Avenue Container Terminal, determine the infrastructure requirements for the expansion, and identify suitable financing strategies for the expansion utilizing public-private partnership mechanisms.
- Port Newark Container Terminal Modernization, Newark, NJ: principal-in-charge for several projects associated with the modernization and expansion of PNCT including the 15 Acres and West End container yard developments. As Owner's Engineer for the initial phases and Engineer of Record for latter phases of development, PB was responsible for preparation of TAA applications and managing the TAA process on behalf of PNCT, overseeing design and construction of terminal yard pavement, drainage, lighting, an electrical ring main for the terminal, and a welfare building for the straddle carrier operators.

Fast Facts

Years of Experience
19

Education
M.S., Civil Engineering (Structural Concentration), University of California at Davis, 1995;
B.S., Civil Engineering, Columbia University, 1994

Licenses/Registrations
Connecticut, 2001 ([redacted]

Professional Affiliations
American Society of Civil Engineers
American Association of Port Authorities
ASCE Coast, Oceans, Ports, and Rivers Institute (Member, Ports & Harbors Committee)
American Road and Transportation Builders Association

History of Employment
QC, Inc. 1991
Technology Edge Magazine 1992 – 1993
PB 1993; 1995 – current

- Project Harbour (Due Diligence of Container Terminal Facilities in United States & Canada): conducted technical reviews of asset condition assessments, operational efficiency reviews, and expansion opportunities for due diligence activities associated with the acquisition of four container terminals in New York Harbor and Vancouver, British Columbia. The client was not only the successful bidder, but the transaction was awarded Project Finance Magazine's highest honor in the Americas, "Overall Americas Deal of the Year."
- Port of Guam Owner's Agent/Engineer, Guam, Northern Marianas: principal-in-charge for the $200 million modernization of the commercial port facilities owned by the Port Authority of Guam. The upgrade and expansion of the port facilities is being performed to accommodate both population growth and the need to import increased tonnage of construction materials in conjunction with the Defense Policy Review Initiative (DPRI) entailing the relocation of US military personnel to the island. PB's responsibilities include environmental documentation terminal planning, preliminary design to support design/build tenders, and quality assurance during construction on behalf of the Port Authority of Guam.
- Truck Queuing Study, Port Freeport, Texas: principal-in-charge for this study that identified and evaluated potential solutions to truck queuing challenges at Port Freeport. PB's activities included analysis of the port's current and future truck traffic demand using the Texas Statewide Analysis Model (TXSAM); review of port operations and circulation patterns; and future planning for mitigating truck traffic by developing an offsite truck queuing area, truck reservation system, and other measures. PB also outlined a strategy for financing and developing the recommended solution to decrease port truck congestion by more than 50 percent.
- Boston Cargo Terminal Development, South Boston, Massachusetts: project engineer responsible for the inspection, hydrographic survey, condition assessment, and rehabilitation of an 830-foot-long marginal wharf at the Boston Cargo Terminal. Rehabilitation of the wharf includes repairs to the piles, superstructure, and a steel sheetpile bulkhead at the inshore edge of the wharf.
- Floating Drydock Mooring Arm Repairs, Newport News, Virginia: project manager for the investigation of a mooring arm failure at the Northrop Grumman Newport News Shipyard, identification of possible failure mechanisms, and development of repairs.
- Waterfront Street Terminal Evaluation and Upgrade, New Haven, Connecticut: project manager and project engineer for the evaluation and upgrade of an existing waterfront petroleum terminal in New Haven Harbor, currently serving 40,000 deadweight-ton (DWT) vessels. PB performed a study to determine if the berthing structures at the terminal, consisting of steel H-pile mooring and breasting dolphins, are capable of receiving 85,000 DWT vessels. The study included data collection, inspection, mooring and berthing analyses, and the preparation of a report documenting findings and recommendations. As a result of our recommendations, PB was asked to provide engineering services associated with upgrading the fender system at the terminal to accommodate 85,000 DWT vessels.

Luke Mahier, P.G.
Port Commerce Program Manager
Ports Constructibility/Biddability/Staging

Luke has 26 years of experience in domestic and international engineering, program and construction management, and environmental remediation. Some of his specific experience includes construction and project management on marine construction and heavy civil harbor and design-build bridge projects; resident engineering and quality control on offshore structures; and geotechnical and environmental investigations and design on industrial expansion and environmental cleanup projects. Luke's responsibilities have included engineering feasibility reviews, construction supervision, field engineering, and contract/ subcontract administration on projects throughout the United States, Kuwait, Aruba, Bahamas, Chile, Dominican Republic, and Mexico.

Representative Project Experience

- JFK Marina Bulkhead at Trevor Park, Yonkers, New York: project manager for the engineering/underwater inspection. The work consisted of above and below water diver inspection of a 1,100-foot steel sheet-pile bulkhead with many sinkholes developing as a result of soil loss through the bulkhead; engineering analysis of as-built conditions and overall stability of the wall.
- Northeast Regional Manager for Ports & Marine Division of PB, New York City: managing a staff of marine and civil engineers specializing in ports, marine facilities and coastal transportation design and construction projects for public and private sector clients.
- Levee and Flood Control Structure Inspections and Design, USACE, New York and New Jersey: project manager on the NY District portion of a nationwide program to inspect levees and flood control structures using a new computer tablet and software developed for all levee system inspections to be conducted following the same procedures throughout. For the inspection, historical data including design memorandum, construction records, and design criteria are compared to current USACE standards.

Fast Facts

Years of Experience
28

Education
M.S., Civil Engineering, B.S., Geology, minor in Marine Science
Additional Studies: Professional Development Seminars – I & II

Licenses/Registrations
Professional Geologist: Tennessee, 1994 ([redacted]

Professional Affiliations
Construction Management Association of America (CMAA); American Society of Civil Engineers (ASCE); American Institute of Professional Geologist (AIPG)

History of Employment
Dames & Moore 1982 – 1990
ICF – Kaiser Engineers 1990 – 1992; 1995 – 1996
H&R Technical Associates 1993 – 1993
Belfort Engineering 1993 – 1994
AGM Marine Construction 1996 – 1997
Misener Marine 1997 – 1999
Han-Padron Associates 1999 – 2002
PB 2002 - current

- Pier G Mega Terminal Expansion – Phase II, Port of Long Beach, Long Beach, California: construction manager responsible for the construction management and contract administration of a construction contract valued at $46 million. The project scope includes the construction of Berth G232, a 1,343-linear-foot marginal wharf and container terminal backlands for loading and unloading container ships. Construction work involved: dredging; land reclamation; concrete wharf construction; gantry crane rail installation; uplands paving and improvements; electrical substation installation and distribution system for gantry crane power, cold ironing and high mast lighting. Luke's responsibilities included all aspects of construction management, cost and scheduling, subcontract administration, change order and claim processing.
- Port of Long Beach Piers G and J Program Management, Long Beach, California: program manager responsible for numerous individual projects in the Port's Mega Terminal Development Program. These projects include development and design package document preparation for: new wharfs and container terminal expansion, dredging and landfill design, container terminal rail yard expansion, new terminal administration building, new maintenance and repair facilities and new container terminal main entry gate facilities.
- Port of Long Beach Pier G Cold Ironing, Long Beach, California: program manager for the Port's first container wharf project to include cold ironing, also referred to as shore-to-ship power supply. The new wharf will have a new electrical substation and infrastructure to supply ships at berth with electrical power, thereby allowing the ship to turn off its ship-board generators which will reduce air emissions and subsequently improve air quality in the region. Luke's responsibilities included managing in-house and consultant design engineers to complete the design and secure building department permits for construction.
- Esplanade Contract adjacent to the new Ballpark at St. George Station, Staten Island, New York: resident engineer responsible for the construction management and contract administration for the New York City Economic Development Corporation on a $5 million waterfront improvement construction contract. The project scope included the construction of a 20,000-square-foot pile-supported boardwalk bound by two plazas that extend out over New York Harbor; construction and landscaping of a 3,000-linear-foot waterfront park with shoreline stabilization and stone revetment; supervision of all quality control inspections including pile driving, onsite material testing, precast superstructure assembly, utilities, and landscaping. Luke's responsibilities included construction management, cost and scheduling, subcontract administration, change order and claim processing.
- Hyannis Ferry Terminal, Hyannis, Massachusetts: project manager for the construction of a $10 million DOT/Steamship Authority concrete pier and ferry terminal; vehicle transfer bridge and new public timber pier. The project included dredging a new ferry slip and turning basing; reconstruction of site access driveways; parking, drainage; utilities and landscaping. Luke's responsibilities included construction management; cost and scheduling; subcontract administration; and change order and claim processing.

John Fedun, P.E.
WTC Program Manager

John is a senior engineering manager with over 30 years of experience in the construction management of public facilities including landfills, highways and infrastructure projects courthouses, office buildings and schools. In addition, his experience includes constructibility/ biddability and on-site construction management including cost estimating, change-order claims analysis, computerized scheduling, resident engineering and shop drawing review.

Fast Facts

Years of Experience
35

Education
B.S., Civil Engineering, Polytechnic Institute of Brooklyn, 1967; MSCE Credits, Rutgers University
Continuing Education Credits: Bridge Inspector Training; Reinforcing Steel Institute; American Concrete Institute, Hazardous Waste Site Training

Licenses/Registrations
Professional Engineer: New York, 1993 ([redacted] New Jersey, 1982 [redacted]

Professional Affiliations
American Society of Civil Engineers, Member; American Concrete Institute, Member

History of Employment
URS Corporation 1982 – 2004
PB 2004 – current

Representative Project Experience

- Port of New Orleans Public-Private Partnership Strategic WTC Transportation Hub and Site Projects, Manhattan, New York: project engineer for the site coordination projects at the WTC site. The overall WTC Site Redevelopment comprises two primary phases. The first phase of the redevelopment anticipates projects for beneficial occupancy by the end of 2009/early 2010 and provides for:
  - Proposed common infrastructure projects, including a Security Center for vehicular access, with a below grade roadway network and parking areas, new streets, central plant equipment, and other (primarily below grade) structures and systems, all required to support the transportation, commercial, memorial, and cultural facilities.
  - Proposed individual facilities including but not limited to the WTC Memorial, Memorial Center (museum), WTC Cultural Center, Freedom Tower, Tower 2, retail development (in addition to the WTC Transportation Hub), the 9A West Street Reconstruction, Fulton Transit Center connection at Dey Street, as well as IR T Cortlandt Street Station.

  For all projects at the WTC site, John's responsibilities will primarily consist of the day-to-day management and coordination of all construction activities by the PANYNJ and others throughout the WTC site, including site logistics, access, security and safety, coordination with PANYNJ WTC site management and coordination with external entities such as the Lower Manhattan Construction Command Center.
- Newark Regional Schools Program Management Services, Newark, New Jersey: project executive for the City of Newark's school modernization program. PB, in joint venture, was selected to provide project management services, oversight, direction, coordination and

reporting on projects undertaken by the New Jersey School Construction Corporation (NJSCC) for the Newark Public Schools. The work included the construction of 20 new elementary schools, additions/alterations to six existing elementary schools, construction of 15 new elementary/middle schools, additions/alterations to eight elementary/middle schools, construction of five new middle schools, additions/alterations to four existing middle schools, construction of three new high schools, additions/alterations to nine existing high schools, and additions/alterations to two existing special education schools.

- Security Strengthening at UN Headquarters, New York, New York: project executive for the project management services to the United Nations for this $24 million project to increase the level of security preparedness at the New York headquarters of the United Nations. Project scope includes: installation of security cameras; installation of new turnstiles and mantrap gates at all pedestrian entrances to the buildings; a complete upgrade of all exterior lighting; installation of an ID badge system with video display; installation of quick action vehicle barriers at all roadway entrances to the complex, replacement of the perimeter fence including a motion detection system and a relocation and technology upgrade of the central security office.
- Industrial Park, Dover Township, New Jersey: resident engineer for the construction of an $18 million, multi-building industrial park. John was responsible for CPM scheduling, cost estimating, value engineering, cost control, evaluation of change orders, and contract administration.
- Newark Arts High School Modernization and Expansion, Newark, New Jersey: project manager for a major renovation to Newark Arts High School and the construction of a three-story wing to house a new gymnasium, a media center, an experimental theater and administrative and classroom areas for the Newark Board of Education. Newark Arts High School was the first school in the State of New Jersey to specialize in teaching music, theater and graphic arts. John was responsible for design review services including code compliance, program review, constructibility and value engineering and prepared independent estimates during the design phase to monitor the overall $25 million budget. He managed the preparation of the project master schedule for bid purposes and maintained the master schedule incorporating the contractor's monthly updates. He also assisted the Newark Board of Education with bid phase services, including review and analysis. During the construction phase, John provided for on-site construction management, administration and project controls and the verified the quality of the work.

James Hickey, P.E., LEED AP
WTC Program Manager

James (Jim) is a senior project manager PB with over three decades of experience in leadership and management positions of increasing responsibility, focused upon generating and implementing solutions in a rapid paced environment.

He develops relationships with emphasis on up-front team building, clear definition of common objectives, synchronized systems for rapid issue resolution, and frequent joint evaluation of effectiveness. Jim transforms strategic goals into executable operational plans to sustain safety, quality, schedule and budget.

Mr. Hickey is experienced in executive leadership, program and project management, team building, staff development and process innovation. He is a skilled, effective facilitator, communicator and presenter.

His project management experience includes directing activities for the U.S. Army Corps of Engineers for the U.S. Forces Korea program (design and construction) with a total value of over $300 million annually. In addition, Jim led construction management activities at the King Faisal Naval Base, Jeddah, Saudi Arabia.

His program management experience includes directing activities for the development and procurement of fighting systems at the Department of Army level and for the development and procurement of joint warfighting systems at the Department of Defense level (The Joint Staff).

Fast Facts

Years of Experience
38

Education
M.B.A., General Business, Long Island University; M.A., National Security & Strategic Studies, United States Naval War College; M.S., Engineering Science & Mechanics, Georgia Institute of Technology; B.S., Civil Engineering, United States Military Academy

Licenses/Registrations
Virginia [redacted]
Leadership in Energy and Environmental Design, Accredited Professional

Professional Affiliations
Society of American Military Engineers; Association of the U.S. Army

History of Employment
USACE 1972 – 1999
NDC Health 1999 – 2002
Rochester & Associates 2002 – 2007
PB 2007 – current

Representative Project Experience

- World Trade Center Transportation Hub and Site, New York City: senior project manager/construction manager providing program and project management services for the transportation hub and site-wide facilities. Leads the staff integrated on the team of the client, The Port Authority of New York and New Jersey. The staff consists of 3 resident engineers, 3 assistant resident engineers, 6 office engineers, 44 field inspectors, 1 project controls manager, 3 logistics coordinators, 5 - 3D/4D modeling technicians, and 10 document control associates.

- New Songdo City, Incheon, Korea: as site director/senior project manager he provided construction management services for four projects: International School, Central Park, D22 Residential Towers, and North East Asia Trade Tower. Led the growth of the Songdo project office, from 26 to 58 people. Provided Leadership in Energy & Environmental Design (LEED) services for New Songdo City. The staff consisted of 4 expatriate senior project managers, 6 senior Korean construction managers, 40 Korean inspectors and 8 Korean administrative associates.
- South Atlanta Director, Fayetteville, Georgia: provided surveying and site civil engineering services for developers of master planned single family residential communities. Led the growth of the Fayetteville office, from 4 to 12 surveying crews, from 0 to 3 engineers, from 2 to 5 office surveyors and from 0 to 1 dedicated project manager while sustaining a work backlog of 11 months. Responsible for client relationship management, business development, strategic planning and implementation, marketing, program management, contract administration, budget management, cash flow, and invoice and receivables management.
- Director of Strategic Planning Atlanta, Georgia: transformed the vision and mission into operational plans and goals. Led the development and implementation of the corporate Balanced Scorecard Strategic Management System and cascaded the system to 5 strategic business units.
- The Pentagon, Army Staff, Washington, DC: as Director of Modernization, transformed the corporate vision into a five-year plan of operational goals of defined requirements and funding priorities.
- District Commander, US Army Corps of Engineers Seoul, South Korea: provided life-cycle facilities management services for United States Forces Korea and Ministry of National Defense, Korea, including capital construction, major repair and renovation and contracting services. Exercised profit/loss responsibility of a project funded organization ($330 million annually).

George Colban, P.E.
Tunnels, Bridges & Terminals Program Manager

George is a senior engineering manager with PB, with three decades of experience in engineering, management, and construction in the transportation, infrastructure, and power industries. His diverse background has included positions and responsibilities in executive management, program/project management, construction management, engineering, and marketing/business development. He possesses technical expertise and sound judgment, and has developed client relationships based on trust and integrity, established through timely and cost-effective project execution as well as an understanding of clients' needs in both the public and private sectors. He is experienced in management of multiyear capital programs and monitoring program scopes, budgets and schedules with the goal of advancing the client's objectives and priorities. George is effective in assessing staff requirements and capabilities, managing workload and providing support as necessary. He is also familiar with the political arena that shapes the transportation industry and has particular expertise in the New York Tri-state region.

His broad background includes program management oversight, where he served as New York office manager interfacing with the both the NY Metropolitan Transportation Authority (MTA) and the Federal Transit Administration (FTA) and reviewing several landmark projects including the rehabilitation of Grand Central Terminal, and Grand Central's North End Access program. He also has experience at a Railroad property where he was responsible for the rehabilitation of the traction power system, including design and construction of 32 DC traction power substations, contact rail construction, overhead catenary construction, along with ancillary systems including SCADA and communications.

Representative Project Experience

- PANYNJ Security Program Management Services on an Call-in Basis, New York and New Jersey: project executive providing expert professional program management services for the Port Authority of New York and New Jersey's 5-year, $500 million Security Capital

Fast Facts

Years of Experience
38

Education
B.S., Electrical Engineering, Northeastern University
Additional Studies: Engineering Project Management; Construction Law; Defending Contract Claims; Presentation Skills; Federal Transit Administration Project Manager Workshop; Occupational Safety and Health Administration Safety Training

Licenses/Registrations
New Jersey, 1992 [redacted]
New York, 1988 [redacted])

Professional Affiliations
American Public Transportation Association (APTA); American Society of Industrial Security International (ASIS); American Council of Engineering Companies of NY (ACEC); New York Railway Club

History of Employment
Ebasco Services 1972 – 1974
Gibbs & Hill, Inc. 1974 – 1984
Metro North RR 1984– 1991
Stone & Webster 1991 –1995
Day & Zimmermann 1995 – 2000
PB 2000 - current

Program. Working directly with Authority personnel he is responsible for all consultant activity as well as managing, coordinating, scheduling and monitoring the design, systems integration and construction phases of the agency's 2003-2007 Security Capital Program. Program elements include asset strengthening at Port Authority facilities including airports, bridges, tunnels, marine terminals and transit rail; operations and Security Command and Communications centers, intercommunication and public address systems; multi-technology access credentials and integrated CCTV; and integrated perimeter security, including fencing, barriers, detection, deterrent/notification/ apprehension assistance technologies. He is also in charge of developing and implementing project procedures and control systems to allow PANYNJ managers to advance the Security Program forward in a coordinated fashion.

- AirTrain JFK, New York City: deputy project manager responsible for the engineering management for the $400 million rehabilitation of LIRR's Jamaica Station and the intermodal aspects of the AirTrain Jamaica Station with connections to the LIRR, NYCT Subway and MTA and local bus routes. George was engineering project manager for the intermodal station at Jamaica, which included a seven story building that provided the link to the Air Train station at Jamaica and the future site of a new train control center for the LIRR, replacement of the LIRR Jamaica station complex, and new connections to the NYCT Sutphin Blvd. station. His responsibilities included the management of design preparation and engineering support for Jamaica Station construction encompassing all engineering disciplines and LIRR systems. These systems included electrical distribution, lighting, fire protection, CCTV-security, public address, Solari message boards, LIRR TVMs, elevators/escalators, telephone and communications. In this role, George was the liaison between PANYNJ engineering, LIRR, NYCT, and the contractor to ensure that design reflected the requirements of the LIRR, NYCT, and local community groups. He was involved in daily interactions with LIRR operating personnel to facilitate force account activities and systems design.
- Management Consulting, Program Management, and Construction Management Firm - New York: office manager responsible for developing and executing annual business plans and corporate forecasts/budgets to satisfy the objectives and financial goals of the company. He prepared board level reports, monitored and controlled corporate overhead, evaluated and adjusted staffing levels, and supported business development goals. During George's term as vice president, corporate performance met or exceeded forecasts, revenues increased by 25%, and staffing increased by 33%. Projections for the final year of George's service indicated continued growth, with an increase in net contribution of over 50 percent. George was also responsible for day-to-day management of the New York office and the supervision of 30 senior, executive-level personnel, providing oversight for all ongoing projects, including program management. He managed a staff of 18 senior professionals directly responsible to the Metropolitan Transportation Authority (MTA) Board for oversight of the $15 billion MTA capital improvement program.

Thomas Marko, P.E.
Tunnels, Bridges, & Terminals Program Manager
PATH Program Manager
Transit & Rail Constructibility/Biddability/Staging

Tom has a broad base of high quality experience in program/project management for transit, bridge and a variety of facilities, including industrial, commercial and health care. During his career, he has been responsible for project delivery from inception through completion and has served in the capacities of resident engineer, senior resident engineer, construction manager and project manager on assignments including: railroad electrification, industrial facilities, bridges, health care facilities, education facilities and commercial buildings. He is particularly skilled in the management of multiple prime contracts, with all assignments completed on time and within budget. Tom is experienced in coordinating projects with various state and federal agencies as well as with private clients, other consultants, contractors and financial institutions. He has managed an area design office with assignments in the design of industrial, traction power and commercial facilities.

Fast Facts

Years of Experience
29

Education
M.S.C.E., New Jersey Institute of Technology, 1981; B.S.C.E., Newark College of Engineering, 1974

Licenses/Registrations
Professional Engineer: New Jersey, 1980 [redacted] New York, 1988 [redacted]

Professional Affiliations
American Society of Civil Engineers (ASCE)

History of Employment
Gannett Fleming 1981 – 1984
Morrison Knudsen Corp. 1984 – 1995
Frederic Harris 1995 – 1997
PB 1997 – current

Representative Project Experience

- LIRR Maintenance of Way Facility Upper Holban Yard – Hillside, New York: resident engineer on this $11 million call-in project. Work includes the addition of an 8,800-square-foot prefabricated steel building, two new service tracks, roll up doors, an overhead 50-ton gantry crane, interior systems, locker rooms, restroom facilities, and sprinkler systems.
- Morrisville Yard Improvements – Phase II, Morrisville, Pennsylvania: construction manager for complete construction management services for the expansion of the Morrisville Yard facility under Phase 2 of a three phase program. The completed facility, in combination with the NJT Meadows Maintenance Complex, will provide storage capacity near each end of the railroad's NEC service area. The $97 million in planned improvements will provide storage for 250 rail commuter cars as well as service and inspection facilities and wheel truing capabilities at the west end of the NJT NEC service area and will provide the capacity to improve and consolidate storage and running repair functions now served at two different locations, as well as provide adequate capacity to accommodate immediate and long-term service growth on the NEC and Atlantic City lines.
- Woodside Station Rehabilitation, Queens, New York: project manager for the $25 million reconstruction of a joint LIRR and NYCT station serving more than 5,000 daily commuters.

The project was designed to allow 12-car LIRR trains to platform and included bridge rehabilitation, mezzanine expansion over active railroad tracks, and installation of five elevators for compliance with ADA legislation.

- South Boston Piers Transitway, Boston, Massachusetts: design project manager for a new 6.5-mile underground trackless trolley system connecting downtown Boston with the South Boston piers. Responsible for preparation of specifications and development of design parameters for the overhead contact and traction power systems, and for fixed facilities estimating and constructibility reviews during design development.
- Meadows Maintenance Complex, Kearny, New Jersey: construction manager, later project manager, responsible for construction management of a new $150 million rail-car maintenance facility designed to accommodate 1,000 vehicles on an 80-acre site. Overall project included the construction of eight primary buildings, development of a 77-acre tract, including electrification of layover yards at two voltages, and construction of an 800-foot railroad bridge over active PATH and Conrail tracks. Tom had complete responsibility for a field staff of 20, including 3 resident engineers and 12 professional/technical employees assigned to 8 construction contracts and 14 major equipment supply/installation contracts. He supervised construction and determined contract compliance including: engineered fills, pile foundations, general building construction, building mechanical and electrical systems, finish trades, electric traction, site electrical and primary distribution, site utilities, roadways, and access bridges. Tom proposed/implemented several innovative solutions for coordination problems brought on by accelerated owner occupancy requirements. He scheduled and coordinated $7.5 million of railroad force account work for the construction of 15 track-miles of yard and running track. Tom led the project from groundbreaking through owner acceptance.
- Reverse Kearny Connection: supervised the construction of an 800-foot deck girder railroad bridge over active PATH and Conrail tracks. Project included an extension of the Amtrak Northeast Corridor embankment to accommodate a New Jersey Transit lead into the Meadows Maintenance Facility from the Northeast Corridor.

Foster Nichols, Jr.
PATH Program Manager

Fast Facts

Years of Experience
32

Education
B.S.E., Civil Engineering,
Princeton University, 1978

Professional Affiliations
American Society of Civil Engineers; Sigma XI

History of Employment
Tippets Abbett Mccarhty
1978 - 1986
PB 1986 – current

Foster is an experienced program and project manager, with proven expertise in preparing transportation strategic plans and managing complex projects involving engineering, business and policy issues. Foster is an expert in multimodal transportation systems planning, particularly passenger rail transportation and intermodal terminal facilities. He has directed the development of long range strategic plans for four major commuter rail systems—the Long Island Rail Road in New York, the MARC system in Maryland, the Virginia Railway Express, and the Metrorail system in Cape Town, South Africa. He was responsible for the development of an $8 billion, 20-year strategic capital investment plan for Amtrak's Northeast Corridor between New York City and Washington, DC.

Foster's wide-ranging experience has included developing the transport plan for New York's bid for the 2012 Summer Olympics, identifying and prioritizing transportation system investments to catalyze the redevelopment of Lower Manhattan following the events of September 11, 2001, developing a plan for implementing congestion pricing in New York City, and designing new rail passenger facilities for the proposed Moynihan Station development project at Penn Station, New York. His transportation systems planning experience encompasses commuter rail new start proposals in Northeast Ohio, Georgia and North Carolina, intercity rail system planning for the Amtrak U.S. national network and the West Coast high-speed Main Line in the UK, and heavy and light rail transit systems in New York, New Jersey, Maryland, Washington, DC, Chicago and Los Angeles.

Foster has participated in the design of numerous passenger terminal and station facilities in the U.S. and worldwide. He is experienced in the analysis and simulation of pedestrian flows, the analysis and simulation of rail and transit vehicle operations, ridership forecasting, project evaluation and benefit-cost analysis. Foster also spearheaded the development and use of geographic information systems (GIS) in PB's New York and Baltimore offices, and he continually identifies new transportation-related applications for capturing, storing, retrieving and analyzing spatially organized data.

Since 2005, Foster has served on the Citizen's Advisory Committee to the Baltimore Region Transportation Board, the metropolitan planning organization for Baltimore and the five surrounding counties, and has been vice chairman since 2007. He also serves on the board of the Valleys Planning Council, an organization that promotes smart growth and agricultural and rural land preservation in Baltimore County.

Representative Project Experience

- Foster has managed the development of strategic plans and capital investment programs for the following railway systems:
  - Long Island Rail Road
  - Virginia Railway Express
  - MARC Commuter Rail System, Maryland
  - Amtrak Northeast Corridor
  - Cape Town Metropolitan Railway, South Africa
- Foster's operations analysis and systems planning experience also includes management and key technical roles on the following projects:
  - Amtrak National Market-Based Network Analysis
  - California High Speed Train Project
  - New York State High Speed Rail Study
  - Maryland Strategic Rail Framework
  - Access to Region's Core Study, New York City
  - Northeast Ohio Commuter Rail Feasibility (NEORAIL) Study, Cleveland, Ohio
  - Triad Intercity Passenger Rail Study, North Carolina
  - Tri-Rail Operations and Capital Investment Plan, South Florida
  - Commuter Rail Implementation Planning, Atlanta, Georgia
  - Johannesburg International Airport Rail Links Study, South Africa
  - Cross-Hudson and Stewart Airport Rail Links Feasibility and Cost Benefits Study
  - Northeast Corridor and Newark Penn Station Operations Study, New Jersey
  - MARC Maintenance Facility Economic Analysis, Baltimore, Maryland
  - Freight Rail Operations Analysis, Orlando, Florida
- California High-Speed Train Project: task leader responsible for developing operating plans and train schedules for the California high-speed rail network, an 800-mile, $40 billion system linking major urban areas. Foster also is responsible for developing design standards for the 25 planned stations.
- MARC Growth and Investment Plan, Maryland Transit Administration: formulated a comprehensive, multi-phase investment plan to triple the passenger-carrying capacity of the MARC commuter system, which encompasses three branch lines, 210 route-miles and over 40 stations. The plan calls for adding track capacity, expanding station parking, constructing new stations and multi-modal transit connections, more than doubling the size of the rolling stock fleet, and building new fleet storage and maintenance facilities.

Ira Hirschman, Ph.D.
Economic Development Program Manager

Dr. Hirschman heads the Economics practice within PB's Strategic Consulting group. He is the firm's senior leader and practitioner in the field of economic impact analysis, freight and intermodal economic analysis, benefit-cost analysis, transportation pricing, and related areas of transportation economics.

Fast Facts

Years of Experience
30

Education
Ph.D., Urban and Regional Planning, Rutgers University, 1991; M.S. /B.S., Economics, Rutgers University, 1978/1976

Professional Affiliations
Transportation Research Board (TRB), Committee on Transportation and Economic Development committee member; New York Regional Plan Association; American Planning Association (New York Metro Chapter)

History of Employment
New York City Transit Authority – 1980-1984
PB 1984 – current

Representative Project Experience

- TIGER Grant Applications – Economic Analyses, Various Locations, United States: provided technical direction for economics and benefit cost evaluations for multiple TIGER grant applications. Several of these were successful, reflecting PB's nearly 20% overall success rate in TIGER applications for its clients. Recently, managed the economic analysis for highway realignment study in downtown New Haven, a successful TIGER II application.
- Port Authority of NY NJ Bayonne Bridge Regional Benefit Cost Analysis: Member of team of senior economists spearheading the Benefit –Cost Analysis of options to remove or mitigate the channel clearance restrictions posed by the Bayonne Bridge to navigation by mega container ships, especially following expansion of the Panama Canal.
- Economic Impact Study for the Georgia Regional Transportation Authority, Atlanta, Georgia: conducted an economic impacts analysis of the Governor's proposed $8.3 billion program of transportation projects, utilizing innovative financing techniques.
- New York City Movable Bridge Study, New York, New York: responsible for the design and implementation of cost benefit analysis of options to eliminate or improve New York City Department of Transportation-owned movable bridges spanning New York City waterways.
- Brockport-Albion Economic Impacts Study, West of Rochester, New York: principal economic analyst responsible for economic and fiscal impact analyses of a proposed highway extension, including forecasts of land-use impacts in the Rochester region.
- Metro-North Commuter Railroad Feasibility and Cost-Benefit of Cross-Hudson Rail Links, New York: led the economic evaluation of alternative options for rail service from Orange and Rockland Counties to Grand Central Terminal.

- Amtrak Penn Station Redevelopment, Phase II, New York, New York: Dr. Hirschman analyzed the regional, city, and state economic and fiscal impacts of the relocation and development on behalf of the developer.
- New York City EDC Strategic Investment Options - Master Plan – lead analysis of the economic development benefits of congestion pricing and other strategies to reduce core congestion in New York City.
- Maryland Department of Transportation – Maryland Strategic Rail Action Agenda study: conducted strategic analysis of freight, commuter, and Amtrak (intercity) rail service requirements and investments through Maryland. Benefit cost and logistics analysis.
- Regional Transportation Authority Chicago - economic impact and cost benefit analyses of alternative investment programs for the RTA and its service boards.
- Bonner Bridge Replacement Study, Economic Impact Report - local economic impact study of bridge replacement options.
- Panama Canal Master Plan & Third Locks Development Project, Panama: technical lead for the development of the Panama Canal Authority (ACP)'s demand forecasting model. The model is being used by a major financial institution to support financing for the multibillion dollar project. The assessments and forecasts included Panama Canal shipping and cargo transit forecasts, including container traffic, solid and liquid bulk cargo vessels, and auto carriers, and canal tariff structure.
- Front Range Railroad Relocation Project, Colorado: lead economist for the benefit cost assessment of private, public, and public sector benefits and costs of relocating the existing north south freight railroads now operating near Denver to areas further to the east of the state.

Gerald Chi
Project Manager/Management Support

Gerald (Gerry) Chi has extensive experience in planning, design, management, operations and maintenance, and condition auditing of physical plants for transit maintenance facilities, educational facilities, commercial buildings, industrial facilities, power facilities, municipal properties, and bridges and tunnels. He has performed design and construction management for these facilities as well as comprehensive management, staffing, and workflow analysis for maintenance operation and capital improvement programs. His experience also allows him to contribute to the balancing of capital investments and annual operation and maintenance budgets. Gerry has also served as discipline leader, deputy project manager, project manager and project executive for several facilities design and audit projects. His speciality is in mechanical systems but he is also knowledgeable in architectural, civil/structural, electrical, and environmental systems. Gerry has a proven record of managing projects, supervising multidisciplinary operations and completing projects under budget and within schedule and scope.

Fast Facts

Years of Experience
26

Education
M.S., Industrial and Operation Management, University of Michigan, 1986; M.S., Mechanical Engineering, University of Michigan, 1985; B.S., Mechanical Engineering, Fung Chia University, Taiwan, 1982

Profession Affiliations
American Society of Mechanical Engineers; International Society for Pharmaceutical Engineering, Construction Management Association of America

History of Employment
Electrowatt A.G 1985 – 1986
CTCI 1986 – 1987
PB 1987 – current

Representative Project Experience

- PANYNJ CM On-Call services contract, NY/NJ areas: project manager responsible for providing construction managers, inspectors to PANYNJ facilities around NY/NJ area. The staff manage/inspect civil, structural, mechanical and electrical constructions in PANYNJ facilities

- New York City School Construction Authority (SCA), New York: project executive for supplying/managing project officers staff at SCA for construction and management of schools construction projects. There are over 60 construction managers working on the project currently. Gerry manages three consecutive three-year contracts for SCA. $50 million total contract cost.

- New Jersey Schools Program, Newark City, New Jersey: program manager for pre-design and design responsible for planning the 10 years, $1.6 billion, 80 schools program in Newark, New Jersey. Gerry managed the pre-design services with feasibility studies and support land acquisition activities, and managed new schools design through the program phase to construction award. Three of the schools are Green buildings with special equipment and

materials. PB in joint venture with 3DI serves as the Program Management firm for the City of Newark on behalf of the State.

- Taiwan High Speed Rail, Taiwan: acting PB project manager responsible for managing the PB specialists working for the Taiwan High Speed Rail Corporation. The project is a US$16 billion, 250 mile-long high speed rail line with a 186 mile/hour (300 kilometer/hour) average speed. It is one of the largest build-operate-transfer (BOT) projects in the world. Taiwan High Speed Rail.

- General Service Administration (GSA) Region 2 Construction Quality Management Services, Northeast US: project executive for GSA project which includes spaces for the Department of Homeland Security in various locations in New York area, U.S. Court of Appeals, New York, New York; various GSA space alterations projects at 26 Federal Plaza and other projects in NY City, Newark and other areas.

- NYS OGS Construction Management Program: downstate manager for staffing, managing the project staff performance and activities. Coordinate with OGS managers to ensure that capable staff are assigned to the needed projects, manage to the staff to perform to OGS expectation. Gerry manages three consecutive three-year contracts for OGS.

John Taylor, P.E.
Project Manager/Management Support

John is a senior manager and civil engineer with PB experienced in program and project management with federal agencies, industrial clients, and state and local governments for civil works projects, facilities infrastructure, hazardous waste remediation, and environmental studies. His program and project management duties have included supervising and coordinating the work of teams of engineers, technical personnel, and subcontractors. Mr. Taylor's responsibilities have included schematic through final design development; quality control; project scheduling; progress reporting; public presentations; preparing subcontractor agreements and budgets; performing feasibility studies; and preparing final contract documents and construction cost estimates.

Representative Project Experience

- Program Management Services for Security Capital Programs for the Port Authority of New York and New Jersey (PANYNJ): on-site project manager in PANYNJ facility to assist in implementing rail transit and tunnel security improvements. For the tunnel program, he has provided management of design consultant technical teams; coordination with PANYNJ engineering and operations staff; scheduling; cost control and monitoring; report preparation; constructibility reviews; and quality assurance. Mr. Taylor prepared grant applications for the American Recovery and Reinvestment Act of 2009 (ARRA) Transit Grant Security Program that resulted in the award of two grants to the PANYNJ totaling over $48 million for PATH tunnel security projects. He prepared another grant application for FY 2010 that is pending.
- U.S. Army Corps of Engineers (USACE), Norfolk: quality assurance and client relations support for Fort Drum access control design, ammunition supply point, and utilities upgrade charrettes under the indefinite delivery contract (IDC) for multidisciplinary A/E design services. When the New York District approached PB for fast-track task orders to develop alternatives for security, traffic, and utility upgrades, Mr. Taylor coordinated with district contract staff to transfer contract capacity. He reviewed task order requirements, assisted in assembling a PB team and developed subcontracts for surveys and cost estimating services. He also provided QA support to the team.

Fast Facts

Years of Experience
34

Education
M.S.E, Civil Engineering, University of Pennsylvania, 1985; B.S., United States Military Academy, 1976

Licenses/Registrations
Pennsylvania, 1986 ([redacted] Virginia, 1987 [redacted] Maryland 1988 [redacted]; New Jersey, 1997 [redacted] New York, 2006 ([redacted]

Professional Affiliations
American Society of Civil Engineers; Society of American Military Engineers: Director, Philadelphia Post

History of Employment
US Army Corps of Engineers 1976 – 1982
Naval Facil ENCC 1982 – 1986
Wilbur Smith 1986 – 1990
Black & Veatch 1990 – 2007
PB 2007 – current

- 1745 Bathgate Avenue Phase I and II Environmental Site Investigations, Bronx, New York: quality assurance reviewer under MTA NYCT contract. This site was being considered for renovation/conversion of a warehouse building into a depot for the storage of bus and maintenance parts and equipment. Mr. Taylor reviewed work plan documents, draft reports, and final reports of soil and groundwater investigations by PB staff.
- Grass Dale Ecosystem Restoration, USACE Philadelphia District, Chesapeake City, Delaware: program and project manager for IDC that included several tasks for this Water Resource Development Act project.
- Intracoastal Waterway Dredged Material Disposal Facilities Geotechnical Investigation, New Jersey: project manager for a geotechnical investigation of five disposal sites located between Cape May and Tuckerton on the NJ Intracoastal Waterway.
- Aircraft De-Icing Study, Dover Air Force Base, Delaware: project manager for a study to evaluate the impact of aircraft de-icing on storm water run off. The base National Pollutant Discharge Elimination System (NPDES) permit was being evaluated by regulators for renewal, and the base was required to decrease the impact of de-icing fluids on BOD in run off.
- IDC for Naval Facilities Engineering Command, Washington, DC: project engineer and task manager for civil/structural services at facilities in the Washington, DC, area. Projects included an erosion control study at Chesapeake Beach, Maryland; septic system tie-in design plans and specifications; White Oak Naval Weapons Station; design plans and specifications for pavement, curb, and gutter repairs at Henderson Hall; structural analysis of gymnasium roof truss at Bethesda Naval Hospital; design plans and specifications for a new drinking water well and structural analysis of swimming pool cracking at the U.S. Naval Academy; and pavement repair study and recommendations at White Oak Naval Weapons Station.
- USEPA Region III Remedial Action Contract: program manager for $28 million contract that included coordination of various disciplines, civil engineering, and contract management.
- North Penn Area 6 Operable Unit 1 Superfund Site Remedial Design, Lansdale, Pennsylvania: project manager for the design of soil and underground storage tank removal for four locations.
- North Penn Area 6 Operable Unit 3 Superfund Site Remedial Design, Lansdale, Pennsylvania: project manager for the groundwater extraction and treatment systems for four locations.

Jamil Ahmed, P.E.
Project Manager/Management Suport

Jamil is a project manager for PB with experience in managing major projects, including transportation facilities, light rail transit, tunnels, security projects, buildings, design/build projects and condition assessments. His experience is noted below.

Fast Facts

Years of Experience
22

Education
Master of Engineering, Civil Engineering, Texas A&M University, 1986; B.S., Civil Engineering, Purdue University, 1983
Additional Studies: Management Training Program, New York City Leadership Institute; Value Engineering Workshop Training Program; Pursuit Management; Presentation Skills

Licenses/Registrations
New York, 1994 [redacted]

History of Employment
Office of Management and Budget 1988 – 1996
Department of Environmental Protection 1986 - 1988
PB 1996 – current

Representative Project Experience

- Tappan Zee Bridge, New York: project manager for the design of a security surveillance system for the critical elements of the bridge. The project includes cameras, video servers and LAN switches, lighting, motion detectors and fiber optic cabling. To detect any breaches in the security corridors, video analytic software will be used. The surveillance system will transmit video and alarm conditions via the Thruway Authority WAN to remote monitoring workstations.
- Airport Access Program, JFK International Airport, New York City: project manager/project engineer for this PANYNJ design-build-operate-maintain (DBOM) project to improve public access to JFK. The 8.4-mile (13.5-kilometer), ten-station light rail line connects JFK with other local and regional rail systems. PB provided program management services for this $1.8 billion project, while also helping to jointly operate a program office with PANYNJ staff members. Jamil's responsibilities have included:
  - Early Action Contract: managed the preliminary and final designs, and design services during construction for the 1,900-foot-long (580-meter-long) twin cell cut-and-cover tunnel and retained cut sections under Taxiways `A' and `B' and the relocation of the Van Wyck Expressway North Service Road. Construction cost $100 million.
  - DBOM Contract: managed design reviews by interdisciplinary teams comprised of PB and PANYNJ technical staff for structural, geotechnical, architectural, mechanical, electrical, civil, utilities, noise and vibration analysis, construction management disciplines, for all design submittals and contract deliverables. Managed review of over 260 separate design submittals. Construction cost $950 million.
  - Program Management: assisted the program manager in establishment of management and tracking procedures. Prepared monthly progress reports on critical project issues, package closeout and acceptance criteria.

  - DBOM Procurement Services: prepared RFP and addenda documents for DBOM procurement; managed the evaluation of technical proposals; prepared detailed and summary reports of evaluation results for the selection committee; and coordinated efforts with other ongoing and planned construction projects at JFK and third party agreements. Also prepared the form of contract, technical provisions, and management provisions for the DBOM contract.
  - NYC Economic Development Corporation, Municipal Land Use Study: project manager for this municipal land use study for NYC based on a projected 25 year population growth of 1 million. Assess the existing industrial land utilization practices and operations of the City's largest operating agencies, identify common land uses or functions to multiple agencies, identify under-utilized sites and recommend specific proposals to improve land use efficiencies and reduce space needs as projected through 2030. A compendium of global best practices including centralization, technological innovations and improving processes and operations was also compiled.
  - Underriver NYCT (MTA) Tunnels, New York: project manager for design of protection systems for 9 underriver tunnels located in the East River and Harlem River. Tunnel hardening designs were developed and constructed to provide exterior and interior protection for the tunnels. Protection systems for vent shaft structures were also developed. Blast analysis was conducted to model failure analysis of structures and mitigation designs were developed based on results obtained.

- George Washington Bridge, New York and New Jersey: project manager for design of protection and security systems for the suspender cables and tower bases for the George Washington Bridge for PANYNJ. A sleeve protection system for 1,200 suspender cables was designed and tested to withstand possible attacks. Design was completed and construction contract was awarded for this first-of-its-kind project in the U.S.
- Bayonne Bridge, New York and New Jersey: project manager for design of protection and security systems for the suspender cables, upper and bottom arch cords and abutments for the Bayonne Bridge for PANYNJ.
- Holland and Lincoln Tunnels, New York and New Jersey: project manager for design of cross passage protection systems for PANYNJ. Provide protection of individual tubes of the two tunnels in the case of a breach in one of the two tubes of the Holland Tunnel or the three tubes of the Lincoln Tunnel. Protection systems for doors, walls, sump chambers and utility penetrations are to be provided in the cross passageways to prevent cross infiltration of water in the event one of the tubes is damaged.

Stephen Denes, P.E.
Project Manager/Management Support

Stephen (Steve) is a senior engineering manager with PB and has been involved in managing the planning, design and construction of complex airport infrastructure and aviation facilities. His experience includes managing the design of a new runway complex at Washington Dulles International Airport and managing the development of a wide variety of airline facilities projects in the US and abroad. As an active pilot, Steve has a keen understanding of the aviation environment and the unique challenges of working on airports and with aviation customers.

Representative Project Experience

- Quonset Airport Taxiway A (North) and Taxiway N Reconstruction, North Kingstown, Rhode Island: reviewed final contract documents for quality control and compliance with FAA airfield design criteria and guidelines.
- Los Angeles International Airport Development Program, Los Angeles, California: developed program design criteria manual, including general requirements; codes, standards and regulations; architecture; civil, environmental, structural, mechanical, electrical, and fire protection engineering; fueling; and communications and security systems. Also provided third-party reviews of drawings, specifications and engineers' design reports for two major crossfield taxiway design projects.
- Chicago Midway Airport Privatization Study, Chicago, Illinois: estimated potential airfield and rental car development work for potential privatization of airport. Analyzed existing documents and developed cost estimating model for pavement maintenance, rehabilitation and replacement program.

Fast Facts

Years of Experience
26

Education
Master of Real Estate and Construction Management, University of Denver, Colorado, 1995, which included a course in airport management through Embry-Riddle Aeronautical University; B.S., Civil Engineering Technology, Metropolitan State College of Denver, Colorado, 1985

Licenses/Registrations
Professional Engineer: Colorado; Virginia; New York

Professional Affiliations
American Society of Civil Engineers
Airport Consultants Council, Safety and Security Committee, Safety Management Systems Subcommittee

History of Employment
US Airways 1984– 2002
Carter & Burgess 2002 –2005
Hertz Corp 2005 – 2008
PB 2008 - current

- Rental Car Company, Park Ridge, New Jersey: eastern region director of construction overseeing all business management responsibilities related to the design and construction of corporate facilities in the eastern United States for both rent-a-car and equipment rental divisions. He reviewed and approved budgets and program requirements. He also drafted, reviewed, and approved contracts, change orders, and purchasing commitments for architects, engineers, contractors, and related vendors. He reviewed and approved all invoices for payment, reviewed and negotiated claims, and resolved any controversies. One of his key contributions was rewriting the company's construction management procedures to incorporate elements of more than two dozen corporate policies and procedures, along with best management practices for project management, into one cohesive how-to manual for project managers. He also worked with the legal and risk management departments to ensure company contracts were up-to-date.
- International Architectural and Engineering Firm, Washington, DC: northeast regional aviation services manager. Steve managed the technical activities and internal resources for aviation projects assigned to the New York and Washington offices. He established budgets for design and construction-phase services, managed the assignment and progress of engineering work, and ensured client satisfaction with services performed and products delivered. His key projects included:
  - New Runway and Associated Taxiways, Washington Dulles International Airport: managed the work of staff engineers and subconsultants on the preliminary and final design of a new air carrier runway and associated taxiways and facilities. The preliminary engineering phase consisted of an engineering study of two potential runway alignments and configurations. The project included the design of the runway and taxiway system, airfield lighting, aircraft deicing pad and building, airport maintenance building, service roads for maintenance and emergency vehicles, and navigational aids. As the design team project manager, he interfaced with the client on all technical, managerial and contractual issues and coordinated the work of all design task leaders and consultants. He was responsible for detailed monthly reports to the client and company management, updating the schedule, preparing client invoices, negotiating consultant subcontracts, and processing consultant invoices.
  - US Airways Baggage Screening Room Improvements, Philadelphia International Airport: managed the work of staff engineers and architects on a project to design building improvements to a baggage screening room to accommodate automated baggage screening devices for international arrivals. He coordinated activities with the airline, TSA, City of Philadelphia Division of Aviation, other design consultants, and contractors.

Albert Himaia
Project Manager/Management Support

Albert (Al) has worked in the construction engineering field with an emphasis on highway and bridge construction. He has served in a variety of positions including inspector, assistant office engineer, and design engineer on projects involving bridge rehabilitation, highway expansion to accommodate high occupancy vehicle (HOV) lanes, and highway drainage improvements. Albert is also experienced in residential, watermain and sanitary and storm drainage system construction.

Fast Facts

Years of Experience
21

Education
B.S., Civil Engineering, New Jersey Institute of Technology, 1988; A.A.S., Civil Engineering, Middlesex County College, 1986; Paralegal Degree, Middlesex County College, 1994

Licenses/Registrations
Residential Real Estate License: Edison School of Real Estate, 1995

Professional Affiliations
American Engineering Alliance

History of Employment
AMERTECH Engineering 1989
Marcel Cleaners 1989 - 1993
Raytheon Engineers 1993–1997
PB 1997 – current

Representative Project Experience

- Newark Abbott School District, Newark, New Jersey: planner on a $1.6 billion program. Al is responsible for assisting the New Jersey School Construction Corporation (NJSCC) in acquiring the necessary property to construct new schools. As planner, Al reviews and oversees feasibility studies, conducts progress meetings and coordinates efforts with DEP and DOE for fast track approvals. He also reviews and approves consultant's invoices and assists the NJSCC in the appraisal, purchase and relocation of homes and manufacturing facilities that are displaced through property acquisition.
- Parsons Brinckerhoff Construction Services, Inc., Northeast Region, New York, New York: as senior marketing coordinator, Al took on new responsibilities that included coordinating, preparing, and developing proposal documents for the northeast office. He prepared and maintained bi-weekly reports on submittal status and business development, developed an active listing of all project opportunities with information gathered, developed monthly input for the Activities Report, projected new business, and best prospects list. Al also prepared and maintained a database of possible client, proposal and staff additions.
- New Jersey Department of Motor Vehicles Inspection and Maintenance Facility Retrofit Program Management, New Jersey: lead engineer assigned to this project which involved the retrofitting of centralized and private inspection and maintenance facilities statewide to meet the new USEPA emissions standards. In this position, Al was responsible for reviewing subcontracts and scopes of work completed by subconsultants. He also developed and implemented the Project Management Plan; developed and implemented quality assurance/quality control procedures and plan; reviewed contract documents and field

construction to confirm drawings were being followed; and performed quality assurance on construction activities.

- Installation of Electronic Toll Collection System (E-ZPASS) on the New Jersey Turnpike, Garden State Parkway, Atlantic City Expressway, along with tie-ins to a portion of NJ Route 73, DelDOT and PANYNJ facilities: as a resident engineer his responsibilities included planning, reviewing, and assignments of work of subordinate field personnel. Al reviewed all construction processes and engineering layouts, reviewed project activities with the client representative and contractor field supervisor resolving disputes and daily issues, and reviewed daily inspector reports and prepared resident engineers summary report from his/her comments as well as data compiled from the inspection reports.
- Manhattan Bridge Painting & Interim Rehabilitation, New York, New York: assistant office engineer responsible for preparation of partial payments using the project's computerized engineering estimate system (CEES) for preparing, as well as for processing of change orders and time and material sheets. Al also certified all material brought to the site, reviewed shop drawings, and monitored the progress of the job through progress meetings and correspondence between the field office and all involved agencies. Parsons Brinckerhoff (PB) served on the resident engineer inspection team on this $124 million project for the New York City Department of Transportation.
- Manhattan Bridge West Upper Roadway Rehabilitation, New York, New York: assistant office engineer on this $96 million project to rehabilitate the entire west upper roadway of the Manhattan Bridge including replacement of the suspended span deck. Working with the project's CEES program, Al processed payments to the contractor for work performed, as well as changes orders and time and material costs. He also certified all material brought to the site to ensure it met contract specifications, reviewed shop drawings, attended project progress meetings, and reviewed contractor progress against bar charts and the critical path method (CPM) schedule.
- N.J. Turnpike Exit 13A Expansion, Elizabeth, New Jersey: inspector on this $24 million highway expansion project to accommodate HOV lanes for the New Jersey Turnpike Authority. Al's responsibilities included overseeing and inspecting highway expansion, working with steel members crossing over several interior streets in the town of Elizabeth, and latex-modified concrete.
- Garden State Parkway Drainage Rehabilitation, New Jersey: inspector on this $45 million project to rehabilitate storm drainage systems running along and underneath the Garden State Parkway from Exit 122 to Exit 38, a length of 100 miles (161 kilometers). Al's responsibilities included overseeing the contractor during the rehabilitation of the drainage systems.

Derick Hallahan, P.E.
Deputy Project Manager

Derick's experience includes transportation project planning and preliminary engineering assignments, encompassing alternatives analyses, traffic analyses, and environmental impacts assessment and documentation. Derick has also been extensively involved with the design of Intelligent Transportation Systems (ITS) along major New York City highways. His experience includes engineering assignments using AASHTO geometric design criteria, traffic analysis using Highway Capacity Manual (HCM) software, Synchro, and critical lane intersection capacity analyses; development and preliminary design of improvement alternatives; and analysis and documentation of environmental and cost impacts. Derick has prepared ITS final design plans, environmental impact statements, as well as roadway, traffic, transit, and parking studies for federal, state, and local agencies.

Fast Facts

Years of Experience
16

Education
B.S., Civil Engineering, Lehigh University, 1994

Licenses/Registrations
Professional Engineer, Maryland, 2001 [redacted]

History of Employment
IT Corporation 1994 – 1995
RK&K Engineers 1995 – 2002
PB 2002-current

Representative Project Experience

- Access to the Region's Core (ARC)/Trans-Hudson Express (THE) Tunnel Project, NJ TRANSIT /PANYNJ: Derick is the contract package manager as part of a joint venture performing final design services for a new commuter rail tunnel under the Hudson River to a new rail station adjacent to Penn Station. Other project responsibilities included work as a configuration manager to develop a project configuration management plan to monitor and track project design changes that impact overall project costs and/or schedule. He also worked with the project controls group to coordinate with the joint venture team and NJ TRANSIT, PANYNJ and FTA personnel to manage monthly progress reporting and invoicing requirements for the entire project.
- Bronx and Manhattan ITS, New York, New York: involved with design, preparation of plans, construction feasibility, safety reviews of proposed equipment locations, maintenance and protection of traffic (MPT) issues, and field data collection. Extensively involved in coordination efforts NYS and NYC agencies, including NYS/NYC DOT and NYC Department of Parks and Recreation, as well as with other consultants. Responsible for preparing design plans, specifications, and cost estimates for ITS equipment and a dedicated fiber optic communications network along the Cross Bronx Expressway, Major Deegan Expressway, and Harlem River Drive for submittal to the NYSDOT. The system's purpose is to provide traffic management tools including surveillance (CCTV cameras), incident detection (radar detectors), motorist information (variable message signs and hazard alert radio broadcast) and collection of traffic data (vehicle number and classification).

- I-270/US 15 Multi-Modal Corridor Study – Montgomery/Frederick Counties, Maryland: performing deputy project management responsibilities for a corridor planning study consisting of approximately 31 miles of highway improvements (estimated cost of over $2 Billion) and a proposed 14 mile transitway alignment (either Bus Rapid Transit or Light Rail Transit; estimated costs of $792 Million to $857 Million, respectively) in suburban Washington, D.C. Developing scope, schedule, and budget information for submittal to Maryland State Highway Administration and Maryland Transit Administration. Creating and maintaining project schedule. Assisting with the development of initial plans for addressing Federal Transit Administration New Starts Criteria for funding assistance with transit preliminary engineering.
- Montrose Road/Randolph Road Value Engineering Study, Maryland: participated in a value engineering study for the State Highway Administration (SHA) on the proposed $95 Million intersection improvement study for the MD 355/Montrose Road/Randolph Road intersection. Helped to identify and develop potential cost saving improvement options of up to $24 Million for further evaluation by SHA.
- East Street Extended, Maryland: performed project planning responsibilities for the extension of East Street. Prepared an environmental assessment/Section 4(f) Evaluation document and coordinated with the cultural resources subconsultant for the development of a draft Cultural Resources Assessment. Participated in presentations to federal, state, and local representatives, as well as at a Location/Design Public Hearing.
- MD 6 Feasibility Study, Maryland: performed a feasibility study for the evaluation of existing geometric and safety conditions along a one mile portion of MD 6 in Charles County; developed improvement concepts; reviewed accident analyses; and determined engineering feasibility and environmental impacts of the proposed improvements. Evaluated right-of-way impacts, environmental impacts, and costs for each alternative. Presented results at several meetings and prepared a final report summarizing the analyses performed, alternates developed, and results of the study.
- Baltimore Regional Rail System Plan Study, Maryland: involved in a technical analysis and study process to create a 40-year rail system plan for Baltimore. Worked closely with Maryland Transit Administration staff and a 23-member advisory committee to create a rail plan to strengthen transit accessibility and connectivity. Participated and presented at multiple public meetings in the Baltimore metropolitan area. The rail plan was successfully developed and increases Metro and Light Rail from 43 to 109 miles and from 54 to 122 stations.
- Glen Burnie LRT Expansion, Maryland: performed traffic analyses for a proposed light rail extension route. Analyzed major intersections using Highway Capacity Manual techniques and software for unsignalized and signalized intersections, as well as the Maryland State Highway Administration's critical lane and queuing analysis methodologies. Mitigated intersections that resulted in poor levels of service due to the light rail train (build scenario) by altering lane usage and providing additional intersection capacity. All results were documented and included in a Draft Environmental Impact Statement.

Jenny Kapelyan, P.E.
Assistant Project Manager/Management Support

Jenny is a project controls manager with PB experienced with cost control, subcontract administration, subconsultant coordination, documentation, presentation preparation, and project office management. Her previous experience was as a civil engineer experienced in Right-of-Way determination, preparing profiles and cross sections; site grading; roadway drainage; utility relocation; maintenance and protection of traffic schemes; and corresponding calculations, details, and estimating engineering quantities for major highway and transit projects. She is also familiar with conducting hydraulic and hydrologic analyses, investigating environmental claims, and analyzing remediation processes. Jenny is familiar with several computer software packages and applications, including Microsoft Office, Microstation, AutoCAD 14, Visio, and Visual Basic. All duties are carried out in accordance with ISO 9000 quality assurance procedures.

Fast Facts

Years of Experience
13

Education
B.S., Civil and Environmental Engineering, Cornell University, 1997

Licenses/Registrations
New York, 2003 [redacted]

Professional Affiliations
Women's Transportation Seminar: Director-At-Large

History of Employment
Leonard Jackson Associate 1997
PB 1994 – current

Representative Project Experience

- No. 7 Subway Line Extension, NYCT, New York City: project controls manager responsible for cost control, subcontract administration, subconsultant coordination, documentation, presentation preparation, and project office management. In her previous role as civil engineer, she was responsible for Right-Of-Way determination, interagency coordination, and all forms of civil design and support associated with EIS, conceptual and preliminary engineering design for a design/build package and a design-bid-build package. This project included the EIS and preliminary engineering design for the extension of an existing subway within Manhattan and is associated with the rezoning/redevelopment of the west side of Manhattan.
- No. 1 & 9 Subway Line Restoration, New York City Transit (NYCT), New York City: civil engineer responsible for maintenance and protection of traffic scheme, street grading, combined sewer cross-sections and profiles, and temporary and permanent utility relocations as part of a project exploring the reconstruction of a portion of existing subway track by adding a bellmouth structure to accommodate an additional turnaround track.
- Myrtle/Wyckoff Station Rehabilitation, Brooklyn, New York: civil engineer responsible for maintenance and protection of traffic scheme, street grading, utility relocations, and interagency coordination during the rehabilitation of this NYCT subway station. Potential street conflicts include placement of new elevator shafts to improve Americans with Disabilities Act (ADA) station accessibility.

- Rehabilitation of First Avenue and Long Island City Ventilation Shafts, New York City: civil engineer responsible for interagency coordination, utility relocations, new service connections, site grading, maintenance and protection of traffic schemes, and correspondence with project surveyor for the rehabilitation of Amtrak and Long Island Rail Road (LIRR) ventilation shafts and buildings in the boroughs of Manhattan and Queens.
- Pelham Parkway Station Rehabilitation, Bronx, New York: civil engineer responsible for maintenance and protection of traffic scheme, street grading, and utility relocations for rehabilitating this NYCT subway station. Potential street conflicts include placement of new elevator shafts to improve ADA station accessibility.
- Rehabilitation of North River Railroad Tunnels and Facilities at Weehawken Ventilation Shaft, Weehawken, New Jersey: civil engineer responsible for interagency coordination, utility relocations, new service connections, site grading, and correspondence with the project surveyor for the rehabilitation of Amtrak's ventilation shafts and buildings in Weehawken.
- 42nd Street and Eighth Avenue Station Rehabilitation, New York City: civil engineer responsible for design of a temporary maintenance and protection of traffic scheme, street grading, and utility relocations for this NYCT subway complex.
- Metro-North Railroad Croton-Harmon Maintenance Facility, New York: civil engineer responsible for correspondence with the project surveyor, design of utility relocations, new utility service connections, site grading, preparation of details, cross sections, drainage calculations, and an existing utility assessment report for the rehabilitation of Metro-North's Croton-Harmon Yard and maintenance repair facility. In addition, the project also included the preparation of a master plan for the entire 100-acre site, for which she assisted in reviewing the design and construction impacts to the stormwater collection system.
- Long Island Expressway Development Study, New York City: deputy project manager responsible for assisting with the preparation of technical reports and public presentation information. In addition, Jenny directly interfaced with the client and was responsible for cost control and reporting. This project investigated the feasibility of upgrading a portion of the Grand Central Parkway (GCP) between the Triborough Bridge and the West Spur of the Brooklyn Queens Expressway (BQE) to interstate highway standards.

Kurt Kauffman, P.E.
Project Managewr/Management Support

Kurt is a civil engineer at PB with over 17 years of professional experience in the management of transportation projects, specifically in the area of public transit facilities and infrastructure. He also has experience in right-of-way engineering, utility relocation engineering and permit preparations. Furthermore, as a commissioned officer in the United States Navy, Civil Engineer Corps Mr. Kauffman had proven leadership skills and a proven track record in contingency engineering.

Fast Facts

Years of Experience
17

Education
M.S., Engineering Management, New Jersey Institute of Technology, 2003; B.S., Civil Engineering, New Jersey Institute of Technology, January 1992

Licenses/Registrations
New Jersey, 1996

Professional Affiliations
American Society of Civil Engineers, Member; Society of Military Engineers, Member

History of Employment
NJ Transit 1992– 2008
US Navy 1999Stuart Consulting 2009
PB 2009 - current

Representative Project Experience

- Louisiana Coastal Area Ecosystem Restoration, Coastal Parishes, Louisiana: deputy program manager for the US Army Corp of Engineers (USACE) responsible for program oversight of USACE project managers to deliver coastal restoration studies authorized by the Water Resources Development Act of 2007. Responsibilities included monitoring of schedules, budgets and deliverable products, regular reporting to the Branch Chief for program progress and tracking, periodic reporting and preparation of briefing material for the New Orleans District Commanding Officer and technical oversight of study engineering activities.
- Newark City Subway Broad Street Extension (NERL MOS-1), City of Newark, New Jersey: program manager for the final design and construction of a 1-mile (1.6 kilometer) extension of the Newark City Subway from Penn Station to NJ TRANSIT's Broad Street Station on the Morristown Line. Responsibilities included management of a multi-disciplinary team overseeing issues such as right of way engineering, signal design, track design, electric traction power, facilities, and communications. Also responsible for the management of a Federal Transit Administration (FTA) full funding grant agreement and maintenance of the project management plan.
- Newark City Subway, Station Renovation, Reconstruction and Americans with Disabilities Act (ADA) Compliance, City of Newark, New Jersey: project manager for preliminary and final design, and construction of major renovations or new construction of passenger facilities. Duties included contract procurement for design and construction services, right-of-way engineering, trackwork engineering, coordination with signal design and installation, coordination with installation of a new catenary system, facilities design and real estate procurement.

- New Jersey Transit Key Station Program/ADA Compliance, New Jersey: project manager for final design and implementation of measure to bring NJ TRANSIT's passenger rail system into compliance with the ADA. Features of the program included new passenger facility construction, renovations of historic faciliaites, development of compliance standards, and coordination with citizens' advocacy groups. Duties included contract management for final design and construction of 10 contract packages, trackwork engineering, facilities engineering, and coordination with railroad entities for design and construction, site planning, and accessibility surveys.
- Hurricane Katrina Recovery, Gulfport, Mississippi: orders and reports writer for the US Naval Construction Force's role in the recovery from the effects of Hurricane Katrina on the Gulf Coast from New Orleans, Loisiana to Bayou LaBatre, Alabama. Duties included preparation of daily engineering situation reports from subordinate units in the field, presentation of recovery efforts and plans to higher headquarters and general staff, coordination with adjacent Army, Navy, and Air Force commands for assistance in the recovery efforts and preparation of project plans and orders to subordinate operating units.
- Operation Enduring Freedom, 22 Naval Construction Regiment, Gulfport, Mississippi: assistant operations officer for Naval Construction Regiment in support of Operation Enduring Freedom and Iraqi Freedom. Duties included assisting the operations officer in preparation of regimental operating plans and orders for subordinate units operating in CENTCOM and the United States, tracking and monitoring of over 45 projects in support of ongoing operations and reporting to customers such as the Army and other Navy units operating under the regimental command.
- Baldwin Avenue Roadway Improvements, Township of Weehawken, New Jersey: project engineer responsible for environmental compliance issues and site utility coordination. Responsibilities include coordination with utility and environmental sub-consultants, preparation of right-of-way (ROW) documents, environmental permit plans and coordination/preparation of contract plans and documents.

Steven Kaufman, P.E.
Assistant Project Manager/Management Support

Steven specializes in bridge analysis and design, and inspection and rehabilitation of long-span and complex rail and highway bridges. Bridge types he has worked on include segmental concrete box girders, suspension, truss, arch and cable stay. He is skilled in the use of FORTRAN, GTSTRUDL, TANGO, and STAAD, and has participated in on-site emergency inspections and construction inspection operations.

Fast Facts

Years of Experience
28

Education
M.S., Civil Engineering, City College of New York, 1987;
B.S., Civil Engineering, City College of New York, 1982

Licenses/Registrations
New York, 198 [redacted]
Michigan, 1997 [redacted]

History of Employment
Hardesty & Hanover 1982 – 1983
Steinman 1987 – 1994
DRC Consultants 1994 - 1998
PB 1983 – 1987; 1998 – current

Representative Project Experience

- New York State Department of Transportation, Region 10, New York: project manager and team leader for inspection of approximately 150 sign support structures of various framing and support configurations, and fabricated primarily of welded aluminum or steel elements. A bucket truck, free climbing, digital cameras, a D-meter and dye penetrant testing were used to identify and record cracks, and other structural deficiencies.
- Jamestown-Verrazzano Bridge, Jamestown, Rhode Island: deputy project manager and task manager for the biennial inspection and evaluation of the structure performed in May 2009 Inspection utilized Advitam Scanprint bridge inspection and data management system, a laptop PC-based system that permits direct input of data into digital files saving time, improving efficiency and eliminating subsequent office transcription of hand-written data into digital format with the extensive time and potential opportunities for inaccuracy inherent in this process. Structure comprises segmental concrete box girder main structure and precast AASHTO girder approach structure. Together, the bridge measures approximately 7,355 feet (2,242 meters) in length. Steven's primary responsibilities included planning, scheduling, on-site coordination and supervision, developing protocols associated with use of the Scanprint system that were compatible with RIDOT requirements, quality control and report preparation.
- MTA-Long Island Rail Road (LIRR) 2002 Comprehensive Assessment of Line Structures, New York: team leader on this $2.3 million LIRR project to assess the existing structural condition of 513 undergrade bridges, 29 viaducts, four tunnels and 182 culverts.
- Manhattan Bridge Biennial Inspection, New York, New York: team leader for inspection of the roadway and NYCT railway portions of the structure. The inspection was performed in accordance with American Association of State Highway and Transportation Officials

(AASHTO), New York State Department of Transportation (NYSDOT), and Uniform Code of Bridge Inspection requirements.

- Long-Term Bridge Performance Project, Federal Highway Administration, nation-wide: task manager for development and implementation of program inspection plan and associated training. The LTBP program is envisioned as a 20-year research study to expand quality information available on bridge performance in order to help bridge and highway managers make better decisions. This study will be the first to collect uniform bridge performance data at the national level. The funding for this contract was authorized by Congress in 2005 under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Among the study's objectives are improved life-cycle cost and predictive models, better understanding of bridge deterioration and more effective maintenance and repair strategies. LTBP results should also support improved design methods and bridge preservation practices and help develop the next generation of bridges and bridge management systems. Over the next five years, the program partners will inspect, document, evaluate and periodically monitor a representative sample of bridges nationwide, taking advantage of advanced condition monitoring technologies in addition to detailed visual inspections. The high-quality data gathered in the process and the subsequent data analysis and mining aim to significantly enhance knowledge of bridge performance.
- Mount Macdonald Tunnel, British Columbia, Canada: analyzed, designed and checked portions of the reinforced concrete cut-and-cover rectangular sections of the longest railroad tunnel—9.1 miles (14.6 kilometers) long—in North America. Steven designed a tied-back reinforced concrete panel retaining wall and designed and checked members of a steel-framed tunnel ventilation building.
- A lead auditor for the firm's New York office ISO9001-2001-certified quality management system and ISO14001-2001-certified environmental management system.
- A lead auditor for the firm's New York office ISO9001-2001-certified quality management system and ISO14001-2001-certified environmental management system.
- Passenger Ship Terminal Piers 40, 88, 90, 92 and 94, New York, New York: responsible for inspection.
- Brooklyn Terminal Piers, New York, New York: responsible for inspection.
- Port Elizabeth and Port Newark Shipping Terminals, New Jersey: responsible for inspection.
- Newport News Shipyard, Virginia: checked design of reinforced concrete apron structure resting on an elastic foundation, designed portions of reinforced concrete electrical vault structures, and modeled portions of gantry crane structure supported on piles on elastic foundation.

Thomas Li, P.E., C.Eng.
Project Manager/Management Support

Thomas has extensive professional experience in the field of electrical engineering gained in the United States of America, South America, United Kingdom, and Hong Kong. He has performed conceptual and detailed engineering, including the development of design criteria, design reports, specifications, and standard, directive, and contract drawings. He has provided these services for electrical systems on a variety of transportation and commercial projects. He has developed proficiency in computer simulation operation for modelling both train operations and traction power systems. Thomas is also an experienced project manager who has successfully led design teams in undertaking transit and building services related projects.

Representative Project Experience

- Newark-Elizabeth Rail Link, New Jersey Transit, Newark, New Jersey: project manager for construction phase services to provide tunnel ventilation in the existing subway and incorporate a new jet fan-based ventilation system for the extension. Project elements include: 4.16-kV medium and low voltage power distribution, supervisory control and data acquisition (SCADA) system, tunnel ventilation, plumbing, fire protection and other disciplines.
- Amtrak Pennsylvania Station, New York City: project manager for construction phase services for the rehabilitation of Penn Station serving Amtrak, LIRR, and NJ TRANSIT lines. Closely coordinated with Amtrak, LIRR, the construction manager, the contractor, and subcontractors for immediate resolution of construction issues and evaluation of contractor claims for additional services.
- PATH Tunnel Negative Return Simulation, PANYNJ, New York City: performed computer simulation and analysis on traction power negative return system to establish negative supplementary cabling requirements for multiple-car transit operation. Simulation required innovative adaptation of configuration to model established sectionalization scheme to obtain desired

Fast Facts

Years of Experience
30

Education
B.S. (Honors), Electrical and Electronic Engineering, Nottingham University, U.K., 1980

Licenses/Registrations
Professional Engineer: New York, 1993 [redacted] New Jersey, 1996 [redacted] Missouri, 2003 [redacted] ; Pennsylvania, 2006 [redacted] Chartered Engineer (Building Services, Electrical): UK; Professional Engineer (Building Services, Electrical

Professional Affiliations
Institute of Electrical and Electronics Engineers; Illuminating Engineering Society of North America; Hong Kong Institution of Engineers; Institution of Electrical Engineers, UK; Chartered Institution of Building Services Engineers, UK; European Federation of National Engineering Associations

History of Employment
Jardine Engineering Corp Ltd
1980 – 1981
PB 1982 – current

results.

- Brooklyn Arena/ Vanderbilt Avenue (VD) Yard Replacement, Long Island Rail Road (LIRR), Brooklyn, New York: project electrical engineer for the design and construction support services to relocate LIRR's VD Yard to facilitate construction of an arena designed by Frank Gehry for use by the Brooklyn Nets basketball team. The relocated yard must be constructed in a phased manner to allow continuance of LIRR's fleet storage and maintenance on the Atlantic Branch.
- PATH Harrison Rail Car Maintenance Facility Rehabilitation, PANYNJ, New Jersey: supervised the design of the 650V DC traction power system for the truing machine facility and yard tracks. Also performed QA/QC review of all other electrical and communications system designs.
- No. 7 Subway Line Extension, New York City: as project electrical engineer for design of electrical systems, Thomas leads a group of engineers responsible for the preliminary design of all electrical systems and coordination with the mechanical engineers for this project.
- Hudson-Bergen Light Rail Transit (LRT) System, New Jersey: participated in the conceptual and detail design of DC traction power system. This project for NJ TRANSIT involves providing general design consultant services for a $1.2 billion, 20.5-mile light rail transit system.
- AirTrain, New York City: supervised the conceptual and detail design of the electrical power system for the restricted service road/tunnel and the automated light rail transit tunnel at John F. Kennedy International Airport. Prepared the detail design of the approaches and tunnel lighting systems.
- Blue Mountain and Kittatinny Mountain Tunnels, Franklin County, Pennsylvania: project engineer responsible for the design report for complete renovation of tunnel lighting systems for these two twin-bore tunnels, 4,339 feet and 4,727 feet in length, respectively. Supervised the detail design of the tunnel lighting system.
- Port Newark Container Terminal – 13.2 KV Ring Main, PANYNJ, New Jersey: project electrical engineer responsible for supervising the design of the electrical infrastructure consisting of a medium voltage ring main, duct banks, manholes and splicing to MV switches. Reviewed main substation loads including 13.2 kV port cranes, RTG (Gantry Crane) power, high mast lighting, and duct bank systems. Coordinated with existing and future load growth and prepared construction documents. Also provided support services during construction, including review of shop drawings and witnessing of field tests.
- Proposed Duplin County Cogeneration Facility, North Carolina: preliminary electrical design for a 26-MVA coal-fired steam turbine generator and associated plant equipment.

Ruth Lu, P.E.
Project Manager/Management Support

Ruth is the manager of the structures group of PB and she has extensive experience in the engineering and management of transit and rail structures, facilities and bridge projects.

Fast Facts

Years of Experience
20

Education
M.E., Civil Engineering, Manhattan College, 1988
B.S., Civil Engineering, Union College, 1983

Licenses/Registrations
New Jersey, 1998 [redacted] New York, 1989 [redacted]

History of Employment
Metro-North RR 1990 – 1995
Systra Consulting 1995 – 2000
NYCT 1995
PB 2000 – current

Representative Project Experience

- Amtrak, Old Saybrook, Connecticut: project manager for the final design of trackwork configurations, high-level platforms, and a pedestrian overpass at the historic Old Saybrook Station.
- NJ TRANSIT Lyons Station, New Jersey: project manager for final design of Lyons Station. The design elements included station rehabilitation, improved low-level platform, a new mini high-level platform, and site improvement.
- NJ TRANSIT Union Station, New Jersey: project manager for preliminary design of Union Station, a new facility for NJ TRANSIT's Raritan Valley Line between Roselle Park and Newark's Pennsylvania Station. The design included total site development, a pedestrian underpass, a high-level platform on an embankment, station building, and track and signal design. The project also included preparation of an environmental report that was approved by the Federal Transit Administration.
- Northern New Jersey Maintenance Facility, Clifton, New Jersey: supervising structural engineer for the foundation design of bus maintenance facility for 250 buses.
- Greenville Bus Facility, New Jersey: project manager during construction phase for NJ TRANSIT's Greenville bus facility. Ruth's responsibilities included regularly scheduled construction meetings with the client and the contractor, resolution of conflicts, and shop drawing review.
- New Jersey Schools Construction Corporation (NJSCC), Newark, New Jersey: project manager in the design phase of new Pre-Kindergarten to 8th grade schools for the Newark Public Schools. Ruth's projects included the First Avenue School, Ann Street School and Hawkins Street School. PB is providing program management services to the NJSCC.
- West 42nd Street Development Overbuild, NYC: providing catenary modification options to a developer for replacement of existing structures over the Amtrak's Empire Line right-of-way. Tasks include schematic and final design which may include dead-end of existing catenary, lowering the existing catenary during construction, coordination with design team

on catenary location, temporary and final support and heights and also coordination with Amtrak on the proposed catenary modifications.

- Schalk's Crossing, Princeton, New Jersey: PB is providing engineering design of bridge superstructure replacement and widening over the Northeast Corridor. The overhead catenary system (OCS) work includes developing options to relocate the existing catenary systems wires attached to the existing bridge, field measurement of the catenary wires and developing wire profiles to clear the proposed bridge widening. Ruth provided engineering design on this project.
- New Haven Rail Yard Improvement, New Haven, Connecticut: lead catenary engineer for the design of the overhead catenary system and task lead for the systems design. PB is providing engineering services to reconfigure and improve the existing Metro-North Rail Yard to increase capacity to support the expansion of the MNR fleet.
- Hampton Roads Transit (HRT), Norfolk, Virginia: senior catenary engineer providing the design of the OCS layout plans. PB is providing engineering services for the new approximate 7 miles of new light rail transit system including OCS, traction power and signals and communications.
- Hudson-Bergen Light Rail Transit System, New Jersey: supervising structural engineer for MOS-3 which encompassed an extension from 21st Street to 8th Street in Bayonne, and a 12-mile extension from Tonnelle Avenue Station to Tenafly. Work includes viaduct structures and station facilities.
- Southern New Jersey Light Rail Transit, New Jersey: lead structural engineer for final design of station facilities from Camden to Trenton.
- Massachusetts Bay Transportation Authority (MBTA), Wilmington, Massachusetts: project lead structural engineer for the design of MBTA's Wilmington Station.
- North Avenue Corridor Improvements, New Jersey: supervising structural engineer in final design of four new bridges located at NJ Turnpike Interchange 13A.

Christopher MacDonnell, P.E.
Assistant Project Manager/Management Support

Christopher (Chris) has spent 19 years designing, rehabilitating and inspecting bridges, with a focus on long-span, complex, suspension and cable-supported bridges. In the U.S., he has worked on structures throughout New York, Connecticut, Pennsylvania, Rhode Island and Minnesota. He has also worked in Scotland, Denmark and Panama, providing him experience with addressing a variety of different cultural and agency needs.

Chris spent 10 years working for the Connecticut Department of Transportation and the Triborough Bridge and Tunnel Authority, a major public authority that owns and operates seven major bridges and two tunnels in New York City. This firsthand experience gives him a thorough understanding of the needs of a public agency. With much of his project experience centered in high population urban centers, Chris is also familiar with the high traffic demands and variety of needs of the public that come into play in bridge projects in these areas.

He approaches projects with a 'big picture' point of view, taking into account design and construction concerns, as well as those of the client and public. He has experience with the preparation of design documents and inspection and rehabilitation reports; developing contract drawings; and has been a team leader and site and field coordinator on various inspections.

Fast Facts

Years of Experience
19

Education
B.S., Civil Engineering, Worcester Polytechnic Institute, 1986

Licenses/Registrations
New York, 1996 ([redacted];
Connecticut, 1994 [redacted]

History of Employment
MTA Bridge & Tunnel 1991 – 1997
Leonard Jackson Associate 1997
Monberg & Thursen 1998 – 2000
Amman & Whitney 2000 – 2006
PB 2006 -current

As part of Minnesota's emergency bridge inspections that followed the Interstate 35W bridge collapse, he participated in a compliance review of the Minnesota Department of Transportation's (MnDOT) inspection program. He also helped develop procedures surrounding emergency gusset plate inspection for a number of MnDOT's truss bridges.

Representative Project Experience

- Throgs Neck Bridge Special Inspection, New York City: project manager for the interim inspection of the Throgs Neck Bridge for the TBTA. He prepared invoicing, monthly schedule and budget updates, while also providing quality control for flag and final reports. He scheduled and coordinated with equipment and maintenance and protection of traffic (MPT) vendors for access and lane closures, and he closely coordinated activities with facility operations personnel, including advanced notice for all lane closure and access to high-security areas.

- East Side Access, New York City: package manager for the 55th street ventilation facility. As part of this tunnel mega-project he leads a multi-discipline team to produce design documents for an underground ventilation facility that included street excavation in a sensitive location of midtown Manhattan.
- Newport Pell Bridge, Rhode Island: structural inspection, team leader and field coordinator for structural inspection of the suspenders and main span structural elements anchorage. The inspections also included the fracture critical approach truss spans.
- Emergency Bridge Inspection, Minneapolis, Minnesota: field coordinator and team leader for the inspection of MnDOT's Hennepin Avenue suspension bridge. Inspections included the main cable, suspender ropes and sockets of the main cable in the anchorage; the suspender ropes of three cable supported arch bridges; and multiple fracture critical trusses. He also participated in the compliance review and process improvement.
- Robert Moses Causeway Bridge, Islip, New York: as part of rehabilitation design for the New York State Department of Transportation (NYSDOT), performed an in-depth inspection of this arch bridge over the Fire Island inlet.
- Hoboken Blocks Inspection, Hoboken, New Jersey: team leader for a façade inspection of two residential structures for the Port Authority of New York and New Jersey, located on Port Authority land on the Hoboken River.
- Henry Hudson Bridge Call-in Inspection and Design Services, New York: task manager for two assignments at the Henry Hudson Bridge for the TBTA. These projects included the preparation of budgets and schedules, inspections, and coordination with in-house design staff in the preparation of plans and specifications. Work also included concrete repairs and the inspection and repair of underground tanks.
- Bridge of the Americas, Balboa, Panama: he was project engineer and local site manager for inspection of bridge suspenders, cables and substructure elements for the Panama Canal Authority. His responsibility included managing local subcontractors for rigging and access, and interfacing with local officials for MPT. The project also included preparation of a report for the client that recommended repair alternatives for replacement and cost estimates for each alternative.
- Triborough Bridge Biennial Inspection, New York City: team leader for inspection of the anchorages and various other structural elements. The inspection included paint condition and structural ratings, preparation of flag reports and participation in writing the inspection report.

Ferdinand Portuguez, P.E.
Assistant Project Manager\Management Support

Ferdinand offers extensive field and rehabilitation experience. He has worked on many local projects, including transportation, structural and civil disciplines. He is currently serving as deputy project manager for PB's work on the rehabilitation/ reconstruction of the Park Avenue Tunnel in New York City. Ferdinand is certified as a PB Internal Auditor and conduct quality audits within PB.

Fast Facts

Years of Experience
20

Education
M.S., Structural Engineering, The City College of New York, June 1996; B.S., Civil Engineering, Polytechnic University, June 1990; B.S., Physical Science, St. John's University, June 1990

Licenses/Registrations
New York, 2001 [redacted]

Professional Affiliations
American Society of Civil Engineers (ASCE)
American Institute of Steel Construction (AISC)

History of Employment
Slattery Associates 1990 – 1995
Goodkind & O'dea 1996 – 2001
PB 2001 -current

Representative Project Experience

- Rehabilitation/ Reconstruction of the Park Avenue Tunnel, New York: deputy project manager for NYCDOT project as well as inspection team leader for an in-depth hands-on inspection of structural elements. Project involves preparation of structural inspection report, test pit investigation report, environmental site assessment report, emergency ventilation analysis report, electrical power, lighting, and traffic systems inspection report, final design drawings, specifications and cost estimate for the rehabilitation of the Park Avenue Tunnel. Reports include condition evaluations and recommendations. Key elements are structural repair to the tunnel elements, analysis of brick arch and strengthening techniques, concrete and brick coring investigation, evaluate waterproofing techniques and waterproof tunnel, replacement of roadway, geotechnical soils investigation, environmental/ hazmat investigation/ mitigation, design tunnel lighting system, re-examine existing heat detection system, re-examine CO sensors and tubing, analyze existing ventilation system and vehicles emissions, design of new standpipe system.
- Brooklyn Battery Tunnel Rehabilitation, New York: deputy project manager for the rehabilitation of the tunnel walls, roadway and drainage system and the rebuilding of the tunnel water system. Key field elements included an environmental site assessment, hands-on field inspection, material testing including concrete coring and compressive strength tests, unit weight measurements, chloride content tests and petrographic examinations, ultrasonic steel thickness measurements, half-cell corrosion measurements, impact-echo tests, preparing an inspection report including conclusions and recommendations, top of roadway slab repair evaluation report and ceramic wall tiles replacement/ repair report. Ferdinand was responsible for developing contract documents, including drawings, specifications and construction cost estimate take-offs and was responsible for the shop

drawing review and document control for the construction support services phase. He attended progress meetings, directed subconsultants and maintained a dialogue with the client during the design phase which was successfully completed.

- Queens Midtown Tunnel Inspection Services, New York City: task manager and inspection team leader responsible for developing an inspection program for various civil/ structural elements of the tunnel including, assessment of the existing molten zinc corrosion protection system located on the underside of the roadway slab, the hanger assemblies supporting the precast roadway ceiling panels, concrete surfaces in the Fresh Air and Exhaust Air Ducts, as well as roadway level elements. Developed an inspection and recommendation report.
- East River Tunnels Leak Repair between 1st Avenue Shaft and 7th Avenue Portals, New York: responsibilities included developing an existing condition plans based on survey performed at track level, preparation of final design drawings and preparation of technical specifications and support during construction.
- La Guardia Airport Inspection Services, New York: performed inspections of Hangar Building 19. Inspection included the roof truss members and connections, and attachments from roof truss. Inspection access was performed from 135 foot manlift.
- Myrtle-Wyckoff Station Rehabilitation, New York: assisted with girder retrofit design and platform rehabilitation.
- LIRR Projects, New York: projects included rehabilitation of and construction phase services for Grand Avenue and DB Bridges, in Queens New York; rehabilitation of and construction phase services for eight Queens bridges; and replacement and construction phase services for the Manhasset Avenue Bridge in Manhasset, New York. For these LIRR projects Ferdinand coordinated with and requested permits from the New York City Department of Transportation; coordinated with and requested flagmen and track outages from LIRR; performed field inspection at track level and below track level including a swing bridge; prepared flag reports; prepared coring plan and inspection findings report with rehabilitation recommendations; designed thru girder-floorbeam-stringer bridge carrying two railroad tracks over two directional roadways; checked design of reinforced concrete pivot pier for swing bridge carrying railroad over waterway; prepared design plans and specifications using CSI format; prepared progress schedules; reviewed submittals; attended construction progress meetings; performed site visits for field condition inspection; and responded to Request for Information issues.
- Rehabilitation of Beacon Station, Beacon, New York: responsibilities for this Metro-North project included the design of the Beacon Station temporary timber passenger platform including access ramp in conformance to Americans with Disabilities Act (ADA) standards.

Therese Edwards, P.E.
Assistant Project Manager\Management Support

Therese is a civil engineer experienced in preparing preliminary and final designs for highways, conducting major transportation planning studies, Intelligent Transportation Systems (ITS) and site design. Therese is also experienced in project controls and is familiar with computer-aided design software.

Fast Facts

Years of Experience
23

Education
B.S., Civil Engineering, University of Notre Dame, 1997

Licenses/Registrations
Professional Engineer: Pennsylvania, 2003

History of Employment
JCA Associates Inc. 1987-1998
PB 1998-current

Representative Project Experience

- No. 7 Subway Extension, New York: assistant project controller and subconsultant coordinator during the Preliminary Engineering and DGEIS development of the 7 Subway Extension Project and Midtown Manhattan Rezoning. Therese's duties included development of cost proposal documents and Prime Contract Modifications, Subconsultant and Per Diem Contracts and Modifications, budget and staff tracking, preparation of monthly progress reports, invoicing.
- Access to the Region's Core, New York/New Jersey Region: developed plans and profiles for different alternative routes for improving commuter and freight access to the core of the New York/New Jersey Metropolitan region. Alternatives included rapid transit, commuter rail, and freight rail which linked existing lines in New Jersey, Manhattan and Queens.
- No. 1 & 9 Subway Rehabilitation, New York: project engineer working on the conceptual studies of rehabilitating the Lower Manhattan subway line and stations damaged on 9/11. Therese developed track and station plans and profiles for different reconstruction and rehabilitation alternatives.
- New York Metropolitan Region ITS Full Deployment Plan, Bronx and Northern Manhattan, New York: project engineer responsible for the preparation of plans, specifications, and estimates (PS&E) documents. This effort included detailed design of field equipment such as incident detection, variable message signs (VMS), classification detection, closed circuit television surveillance cameras, and weather and pavement icing detectors on the region's limited access highways. She performed and oversaw data collection for contract documents; guiderail design; and equipment, ramp meter equipment location, basic conduit, and sign structure layout. In addition, she supervised the CADD staff assigned to the project and developed the final estimate of quantities. The project, which required extensive coordination with multiple consultants, introduced her to NYSDOT policies and procedures. Therese's assistance was instrumental during this process.
- Traffic Signal and Coordination System Installation, New Rochelle, New York: project engineer responsible for configuration of the traffic signal layout for new traffic signals

along North Avenue. Therese also assisted in re-striping design and preparing bid documents, quantity take-offs, and cost estimates.

- Staten Island Expressway Bus Lane, New York: assisted in the development of the design report for the extension of a bus lane, new bus ramps and rehabilitation of mainline bridges. This work included studies of different bus lane/ramp configurations, drainage analyses, quantity/cost estimates, coordination with different disciplines and report writing. Work also included development of a project presentation for a Public Information Meeting.
- Long Island Expressway Capacity Improvement Project Exits 36-40, New York: project engineer responsible for design of guiderail and barriers for the project corridor. Therese assisted in the development of the contract drawings including plans, profiles, special details and tables, and engineering quantity and cost estimates.
- I-84/I-87 Interchange Design, New York: assisted in the development of horizontal and vertical alignments using Microstation and InRoads for a new highway interchange.
- Central Westchester Parkway Safety Improvements, Westchester County, New York: project engineer for schematic design of the Central Westchester Parkway widening to accommodate placement of a corrugated beam mall barrier and asphaltic concrete overlay on the parkway between Grant Avenue and State Route (SR) 22 in the city of White Plains and the town of New Castle. Therese assisted in preparing PS&E documents. This effort involved site investigations to determine present drainage conditions and potential impacts to landscaping, altering the existing stormwater management system, and preparing quantity take-offs and cost estimates.
- Long Island Transportation Management Center, New York: assisted in preparing PS&E documents for reconstructing an existing building and site work for the NYSDOT Region 10 Transportation Management Center. Her role included stormwater management design, and development of profiles. Therese also prepared quantity take-offs and developed cost estimates using the NYSDOT's PES (design cost estimating) Program.
- Southern New Jersey Light Rail Transit, New Jersey: project engineer for the planning, engineering, and design of station stops along the new light rail line. Therese's responsibilities have included design of access roads, parking lots and station layouts, as well as design of site stormwater management systems.

Anca Baron
Assistant Project Manager\Management Support

Anca, a lead engineer at PB, possesses extensive experience in the field of civil/structural engineering design, project management, and jobsite construction supervision. Her background includes a variety of commercial, residential, and institutional projects. Her professional experience includes the analysis and design of new steel and concrete buildings, as well as the renovation and rehabilitation of existing structures.

Fast Facts

Years of Experience
26

Education
M.S.C.E., Civil/Structural Engineering, Institute of Construction, Bucharest, Romania, 1979

Professional Affiliations
Structural Engineers Association of New York

History of Employment
WSP Cantor Seinuk
1984 – 2001
PB 2001 - current

Representative Project Experience

- Farley Building (Pennsylvania Station) Redevelopment, New York City: served as a deputy project manager for engineering and worked with teams of architects, engineers, and specialty consultants to redevelop the historic James. A. Farley Post Office into a state-of-the-art intermodal transportation facility from the conceptual phase through project implementation. The project includes restoration of the building's historic exterior and public spaces and construction of a new concourse level above active Amtrak railroad tracks and a major redesign of the United States Postal Service (USPS) truck dock parking facility. Responsibilities included managing and coordinating the structural and mechanical, electrical, plumbing (MEP) design effort; agency review and coordination; reviewing cost estimating and construction schedules; coordinating postal and rail operations; and developing the master phasing/staging plans for the railroads and USPS.
- Hilton Corridor Improvement at Penn Station, New York City: as part of the Farley Building redevelopment, this involved renovating an existing corridor to improve circulation and access in the station. She worked with architects and other engineering consultants to develop the implementation and phasing plan to allow for the renovation while minimizing impacts on railroads, passenger safety, and comfort.
- Amtrak East River Tunnel Ventilation Shaft Rehabilitation, New York City: serving as deputy project manager, she is responsible for managing and coordinating the structural, architectural, and MEP design effort for the reconstruction of Amtrak's East River tunnel ventilation shafts at Long Island City, Queens and First Avenue in Manhattan (four shafts at each site). The shafts will be reconstructed with new emergency ventilation plants and evacuation stairwells.
- City Tunnel No. 1, Shaft 23 Value/Distribution Project, Brooklyn, New York: deputy project manager for a critical New York City Department of Environmental Protection (NYCDEP)

water supply project involving valve/distribution chambers 23 and 16A, shaft sites on city water tunnels 1 and 2.

- World Trade Center Disaster Area, New York City: responsible for on-site structural support during contractor's debris removal efforts.
- Performing Arts Center of Greater Miami, Florida: facility includes a 200,000-square-foot concert hall and 300,000-square-foot ballet/opera house with a connecting pedestrian bridge. Both buildings are framed in steel supporting concrete and metal deck floor slabs. This is a highly unique structure tailored to the special acoustical needs of the performing arts environment.
- Court Street Development, Brooklyn, New York: involved in the construction of a 13-story structural steel building, retail space, and 12 cinema theaters framed in lightweight steel.
- 383 Madison Avenue, New York City: 1.2 million-square-foot, 45-story structural steel building constructed over Metropolitan Transportation Authority/Metro-North Railroad tracks to house Bear Stearns Companies Inc.'s new corporate headquarters. The 800-foot-high structure features a steel frame with a concrete shear wall lateral system. The project was awarded the *New York Construction News* 2001 Award of Merit.
- Grand Central Terminal Revitalization, New York City: this major renovation of the landmark Grand Central Terminal building was awarded the *New York Construction News* 1998 Project of the Year Award.
- Steinway Street Theaters, Astoria, Queens: two-story parking garage and a structure to house an 11-cinema theater.
- Mellon Bank Center, Philadelphia, Pennsylvania: 55-story, composite structure. The project was awarded the New York Association of Consulting Engineers 1991 Award of Engineering Excellence.
- Brooklyn Union Gas Building, Brooklyn, New York: 22-story steel structure.
- 1325 Avenue of the Americas, New York City: 47-story structural steel building.
- Newport Office Tower, Newport, New Jersey: 47-story steel structure.
- 425 Lexington Avenue, New York City: 38-story structural steel building.
- 7 World Trade Center, New York City: 46-story structural steel building. The project was awarded the New York Association of Consulting Engineers 1987 Award of Engineering Excellence.

David Hiester
Assistant Project Manager/Management Support
Document Control

David is a senior technical specialist and environmental engineer with PB. He possesses extensive knowledge of lead and asbestos regulatory compliance and remediation, and is well versed in the scientific methodologies regarding the sampling, reporting, and finalizing of field generated data. David has also conducted risk assessments for hazardous lead-based paint conditions; consulted on the legal and regulatory ramifications associated with risks; and managed steel structure abrasive blasting projects involving total suspended particulate (TSP) and particulate matter (PM-10) monitoring. In addition, drawing on excellent technical writing and communications skills, he has created formats and designs to clearly present concepts, methodologies, and procedures to clients and staff.

Fast Facts

Years of Experience
22

Education
B.A., Environmental Science, Planning, and Management of Natural Resources, Plattsburgh State College, 1988

Licenses/Registrations
New York State Department of Labor: Project Designer, Asbestos Inspector, Asbestos Management Planner

History of Employment
Ambient Labs 1988 – 1989
ATC Associates 1989 – 1998
PB 1998-current

Representative Project Experience

- NYCT Indefinite Quantity Environmental Engineering Services, New York City: responsible for coordinating all aspects of environmental survey and design services provided by PB and sub consultants. David is responsible for interacting with sub consultants and NYCT to ensure contractual compliance and product delivery.
- State University Construction Fund, SUNY Binghamton and Purchase, New York (Various): responsible for reviewing and approving asbestos contractor credentials for performing asbestos abatement at SUNY campuses.
- Miller Highway Project Final Environmental Impact Statement (FEIS), New York City: responsible for providing an assessment of potential impacts that the positive identification of asbestos would have on the Miller Highway project. Responsibilities included review of existing reports and a visual site inspection to determine the potential for project impacts.
- Airport Access Program, JFK Airport, Queens, New York: lead design document control coordinator responsible for the distribution of all Contract documents, shop drawings, and RFIs to lead disciplines for review and comment. Responsibilities involve the use of Expedition Software for tracking shop drawing and RFI review schedules and preparation of status reports. Associated tasks involve coordination of multi-discipline review documents into one consolidated package for the General Contractor's use during construction. Additional responsibilities include the coordination and distribution of Post Award Contract Changes and Non-Conformance documents resulting from inspections performed by the Resident Engineer's Office. All of these responsibilities involve extensive coordination with

the design team, Contractor, LIRR, and NYCT to ensure timely turnaround of design documents to remain within the scope, schedule, and budget.

- Port Authority Security Capital Program, Jersey City, New Jersey: as part of the project controls group, responsibilities include financial and contract authorization for call-in design consultants, weekly and monthly program status reporting, and development of contract bid documents to facilitate implementation of the Security Capital Program. Project authorization and reporting covers tasks from preliminary design through construction and implementation. Duties involve the standardization of reporting and task order authorization processes to facilitate the execution of the program while maintaining adherence to Port Authority guidelines and policies. Responsible for standardizing internal budget proposals, development of standardized reporting methodologies, and coordination for the implementation of Stage IV construction submittals and RFIs via Expedition Software.
- New York City Department of General Services, New York City: managed and supervised a $750,000 asbestos contract. Services ranged from environmental assessments to all aspects of lead and asbestos services for properties throughout New York City. Environmental services were performed on a variety of facilities ranging from health clinics, fire departments, museums, educational facilities and transportation terminals.
- Metropolitan Transportation Authority (MTA), NYCT, New York City: managed and supervised an $800,000 asbestos contract with this major mass transit agency. Responsibilities included the supervision and oversight of asbestos abatement projects throughout various facilities in New York City. Services included quality control of contractor services, deployment of technician staff responsible for monitoring the project, development of design documents detailing procedures associated with hazardous waste materials, and all administrative duties associated with the contract.
- MTA Bridges and Tunnels, New York City: provided quality assurance testing for lead-based paint clean-up projects at agency facilities throughout New York City.
- Risk Assessment Studies: managed and supervised risk assessment studies to evaluate the liability associated with lead insurance programs provided by Home Insurance and RSA.

Erik Metzger
Assistant Project Manager/Management Support

Erik is a transportation engineer with PB with considerable experience in conducting traffic and transportation analyses for New York City and New York State environmental impact studies (CEQR/SEQRA). He has also undertaken a variety of roles in urban development projects, including the forecasting of travel demand, the simulation of traffic networks using VISSIM, and the development of transportation master plans.

Representative Project Experience

- Sunrise Highway Corridor Sustainable Transportation Study, Suffolk County, New York: transportation engineer for a NYSDOT study to develop near term and long term transportation solutions for the Route 27 corridor in the Town of Brookhaven. The project involved the development of a VISSIM micro-simulation model for 11 miles of limited access highway, service roads, nine grade separated interchanges, and more than 50 signalized intersections. He worked on the calibration of the base year models, which were based on dynamic trip assignments using origin-destination tables, and also compiled Measures of Effectiveness (MOE) statistics for evaluation purposes.
- Logan Airport ConRAC Concept Design Study, Boston, Massachusetts: transportation engineer for a study to develop a consolidated rental car (ConRAC) facility at Logan International Airport. Using VISSIM, a detailed simulation model was developed for on-airport roadways to simulate traffic conditions and assess how the consolidation of shuttle buses serving individual rental car companies into a common busing system serving the proposed ConRAC facility would affect congestion levels at terminal curbsides and travel times on potential shuttle bus routes. The study required a sophisticated data collection program to support the development and calibration of the traffic simulation model. He also developed a 3D model of the airport that was used to create videos of the traffic simulations for presentation purposes and prepared a technical report summarizing the results of the simulation model. As part of the final design phase, he used the VISSIM model to evaluate configuration options for new ramp junctions and

Fast Facts

Years of Experience
10

Education
M.E., Civil Engineering, Rensselaer Polytechnic Institute, 2000; B.S. (Cum Laude), Civil Engineering, Rensselaer Polytechnic Institute, 1998

Licenses/Registrations
Engineer-in-Training: New York, 1998 [redacted]

Professional Affiliations
American Society of Civil Engineers, Metropolitan Section: Listserv Coordinator (2006-), Website Coordinator (2008-), Technology Committee Chair (2009-), Younger Member Forum Secretary (2004-06), Younger Member Forum President (2003-04), Younger Member Forum Student Outreach Coordinator (2002-03); Institute of Transportation Engineers

History of Employment
Philip Habib & Associates from 2000-2003
PB – 2003 –current

weaving segments, assess the effects of temporarily relocating the taxi pool during the construction phase, and analyze potential options in changes to bus routings.

- Southern Staten Island Traffic Study, New York City: project engineer responsible for the development of short and long-term strategies to address increasing traffic demand to and from the Charleston area. He developed and evaluated conceptual alternatives involving new and relocated ramp connections to the West Shore Expressway and Korean War Veterans Parkway as well as improvements to service roads and local streets accessing the existing and proposed ramps. The study included land use and traffic data collection, traffic forecasting, traffic capacity and operational analysis including micro simulation, accident and safety analysis, and the development of Transportation System Management (TSM) measures for immediate-term improvements.
- No. 7 Subway Extension - Hudson Yards Rezoning and Development Program FEIS, New York City: transportation engineer for the PB-led team that prepared an environmental impact statement for an extension of the No. 7 subway line and a rezoning of the west side of Manhattan. Erik's responsibilities included developing trip generation forecasts, traffic assignments, and parking accumulation projections for multiple land uses as well as traffic engineering support for a generic EIS to assess the impacts of a $1.5 billion extension of the No. 7 subway line from Times Square. The proposed project included a rezoning of the Hudson Yards area to permit 40 million square feet of residential and commercial development, a 1 million square foot expansion and modernization of the Jacob Javits Convention Center, and a 75,000-seat multi-use sports and exhibition facility. He was also involved with analyzing maintenance and protection of traffic (MPT) schemes for construction phasing as part of the preliminary and final engineering design services.
- NYCSCA Call-in SEQRA, New York City: responsible for traffic and transportation analyses in conjunction with the proposed development of new early childhood centers, elementary, intermediate and high schools or expansions to existing public schools. He prepared data collection plans, managed the development of balanced traffic volume networks, developed trip generation forecasts, conducted traffic, parking, transit, and pedestrian impact analyses, and prepared final reports for various schools in the Bronx, Manhattan, and Queens with enrollments ranging from 400 to 1,200 students.
- Access to the Region's Core DEIS, New York City: prepared the traffic analysis associated with the development of a new commuter rail terminal in the midtown Manhattan core. He developed traffic assignments for taxi trips by New Jersey Transit riders at the new station and prepared a traffic impact analysis for the environmental impact statement.
- Lincoln Tunnel Exclusive Bus Lane (XBL) Capacity Enhancement Feasibility Study, New York/New Jersey: provided technical support in the development of traffic volume and vehicle classification data for the complex network of access and egress roadways at the New York portal and direct ramps leading to/from the Port Authority Bus Terminal.

D. Firm Experience

Anticipated specific tasks are grouped under five major headings in the RFP:

1. Project Initiation (Task A)
2. Project Implementation (Task B)
3. Project Monitoring and Reporting (Task C)
4. Program Level Management (Task D)
5. Program Management (Task E)

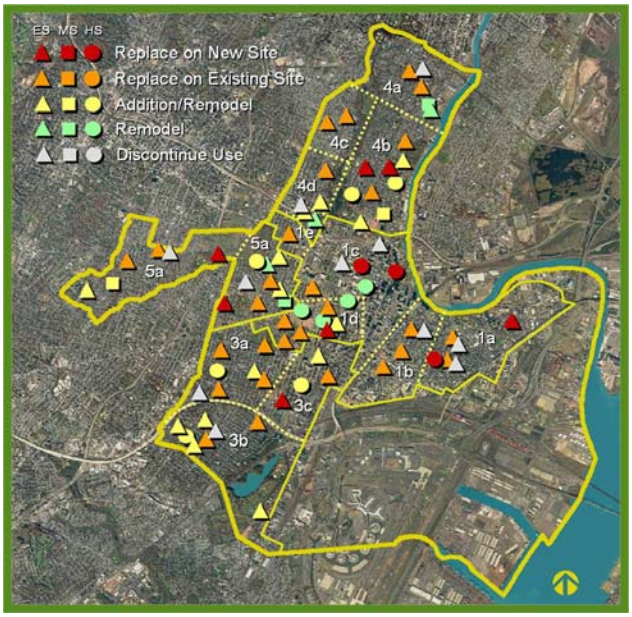
Specific services cited under Tasks B (ex. RFI processing) and C (ex. Invoice review) epitomize core competencies expected of a professional project manager. PB's Project Manager Certification Process is founded on ***demonstrated successful project management performance,*** completion of a robust suite of ***PM Training Courses,*** and prescribed ***criteria on mentoring, education, and licensing.*** This process is illustrated in the graphic to the right. Training alone is an insufficient achievement to qualify for PB's PM certification. The Authority should expect no less from any selected PM services provider.

From the vantage point of a prospective service provider, the experienced resources required to successfully deliver Tasks A, D, and E are what differentiates the best-in-class responders from those who simply have PM skill sets at the good industry practice level. Of the three, Task A, Project Initiation Services, is arguably most important because of its specific services 1 through 5 are not executed exceptionally well, subsequent project and program services will entail more challenges than should be the case.

Project Initiation Services (Task A)

PB personnel have recent relevant experience developing project scopes, schedules, and budgets for hundreds of projects in the Port District, all done with the realization that these individuals would subsequently be responsible for managing the projects from design initiation through turnover to the owner. Particularly noteworthy is our program management assignment for the New Jersey Schools Development Authority, led by our project manager, Pete Sweeney, which required preparation of scopes, schedules and budgets for:

- Existing buildings with emergent issues requiring prompt action to restore them to a state of good repair
- New LEED compliant buildings featuring geothermal, photovoltaic, and ice storage systems as part of their heating and cooling design.



We also performed an independent assessment of a proposed $1.6 billion construction program comprising new buildings, addition –renovation, and alteration projects involving more than 70 sites in the city of Newark, shown below.

PB is engaged as Program Manager the Port Authority's Security Capital Program and has provided overall support and guidance to the PA in the development, budgeting, scoping and execution of the $900M program for the Past six years.

In this role PB staff have been involved in the management of projects, ranging from $500,000 up to over $300 million (total project cost), from project implementation through construction.

With the PANYNJ having gone through significant organizational change with respect to its project / program management approach during the past few years, and given the potential impact of its ongoing early retirement initiative, team alignment and team building workshops can help to fundamentally improve the way a team members relate to each other and the project team as a whole. PB recently completed a similar organizational development assignment for the New York City School Construction Authority. This engagement initially focused on the Authority's in-house A/E division and was expanded to include improvements throughout the capital program delivery pipeline.

Nominated project management personnel such as Gerry Chi, Stephen Grant, and Tom Marko, among others, are experienced in the preparation of professional A/E service RFPs, having regularly done this type of work on various projects. PB staff have been instrumental in preparing RFPs for technical design services and construction management/general contractor contracts. We prepared scope documents, dealt with Authority contracts personnel, and have a thorough knowledge of the Authority's processes that must be followed to release an RFP, including Board requirements.

Overall success lies in managing the risks. Experience has taught us that project/program implementation presents a continuing succession of risks and options faced by the project owner and users, and successful project management must recognize and work diligently and collaboratively to mitigate those risks and clarify those options.

For program-level tasks that may arise from this agreement, PB can conduct, as required, an internal team risk management workshop to initiate the process of defining risks to the successful implementation of the program, describe potential threats to that success, and

probability of occurrence—and thereby provide a basis for defining mitigative action. At the project level, our Project Managers have a thorough understanding of the risks inherent in the execution of projects. It is critical that the project risks be identified early on in scope and budget development so that actions to mitigate the risk can be taken.

There are many potential benefits of conducting a joint risk management workshop with senior Authority personnel and other key stakeholders, as deemed appropriate, early in the program initiation phase. Our key team members can thereby identify mitigating measures that will reduce the potential impact of the identified risk, with the overall goal that high probability and high impact risks be eliminated.

Program Level and Program Management Services (Tasks D and E)

PB is well versed in scheduling and overseeing the implementation of programs /groups of projects. On the Newark Schools program, PB project management staff assembled numerous small project work scopes first into design bundles for A/E services and subsequently into construction bid packages that were within the capabilities of local M/WBE design firms and contractors. PB personnel are currently providing construction management services on a major segment of the NJ Turnpike widening program. We have the experience to concurrently manage large and small projects. Currently, we are managing the PANYNJ Security program, where we helped develop and deliver multiple security projects for the $900 million security capital program in six years.

For the past decade, PB has assisted the NYCSCA in establish annual program requirements for its capital improvement program by collecting current condition assessment data , prioritizing repair needs, and developing construction cost estimates for each work element.

PB project control staff will provide advance alerts to the PANYNJ/ PB Program Management team members regarding the need to mobilize and properly staff projects as needed to meet schedule commitments and will regularly update program level schedules. They will also track the submittal of contractor markups required for preparation of Record Documents

PB's construction services experts will evaluate and recommend appropriate M/WBE sub-contractor goals, provide staging assistance, and coordinate biddability/constructability reviews and force account matters as needed by facility type:

- Tom Marko/Martin Hall – rail transportation projects
- Mark Schultz – general aviation projects
- Ron Duncan/Daniel Lochard – aviation terminal projects
- Luke Maher/Craig Johnson – port and marine projects
- Ray Moran/Dhia Shubber – tunnel, road, and bridge projects
- Paul Dickens – building projects and rail transportation projects on aviation facilities
- Ian Hubbard – major bridges
- Tom Peyton – major tunnels

It is our understanding that the Authority's PM Manual of Standards currently reflects the policies and procedures in force at the time the former PMD unit was disbanded. PB is prepared to develop updates and new procedures as requested.
PB's project controls personnel such as Chiri Fitzpatrick have Authority specific experience with Oracle Primavera Contracts Manager and the full portfolio of Oracle Primavera PM software products and stand ready to provide support service as needed.

Our nominated program managers are trained and experienced presenters who are accustomed to dealing with inquiries from the general public and other external stakeholders. They have also completed PB's Presentation Training and are prepared to lend response assistance necessary consistent with Authority policy on the particular topic of inquiry.

As noted under the discussion of PB's Project Manager certification process, mentoring / PM peer development and training is a criteria used in our internal process. PB staff will be delighted to provide PM training as requested. Our project manager, Pete Sweeney, an experienced trainer, first began serving as an adjunct professor while an Authority employee and has continued to "give back" to local institutions of higher education ever since. PMO can be assured that training provided under his watch will be nothing short of excellent.

PB understands the enormity of the challenges faced by PANYNJ and is committed to helping ensure its continued success. Below is a table of some of our representative projects similar to work under this contract.

	Project Scoping	Program Scoping	Cost & Schedule Control	Oversight: Conceptual Design to Contract Prep.	Oversight: NTP to Contract Closeout
PANYNJ Security Program Management	X	X	X	X	X
Ronald Reagan Washington National / Dulles International Airports	X	X	X	X	X
JFK JetBlue Terminal 5 Redevelopment	X	X	X		X
PANYNJ JFK AirTrain	X	X	X	X	X
Louisiana Department of Transportation and Development TIMED Program	X	X	X	X	X
MARTA Transit System	X	X	X	X	X
South Carolina DOT Construction and Resource Manager Program	X	X	X	X	X

PANYNJ Security Program Management

Client Reference
PANYNJ
Michael Valletta, Program Director
Security Capital Program
201-595-4748
mvallett@panynj.gov

Project Schedule
5/2004 – ongoing

Total Cost
$500 million

PB, as program manager, has been providing a team of project managers, project engineers and controls specialists to assist the PANYNJ with the development and implementation of the agency's security capital improvement program to address the post 9/11 needs since 2003. The program includes upgrades at all Port Authority facilities, including the metropolitan region's airports, the Hudson River Bridge and tunnel crossings (George Washington Bridge, Lincoln Tunnel, Holland Tunnel), the PATH rail transit system, and the regions ports and Staten Island Bridges (Bayonne Bridge). Services include project management, coordinating, scheduling, and monitoring the design, systems integration, and construction support services of the Agency's Security Capital Program currently valued at approximately $1.0 Billion. PB also performed off-site inspection, conflict resolution, management of design consultants and other services as needed in support of the massive undertaking.

PB's initial agreement covered a period from 2003-2007, however with the continuation of the Security Capital Program, PB was awarded an amendment to continue services through 2012. Upon project completion PB will have assisted in the management of approximately $1.0 Billion in security upgrades for the PANYNJ.

Typical projects for the PANYNJ include various methods of facility hardening, upgrades and new installations to access control systems and CCTV systems, electronic perimeter protection and detection, perimeter strengthening, physical barriers, bridge abutment, bridge strengthening and CCTV surveillance, extending and installation of pile systems for collision protection, installation of crash rated roadway barriers, fencing, lights, hardened gates, vehicle access control systems, laser intrusion detection at PATH, and integration of new with existing security systems such as access control/alarm monitoring, and communication systems. More specific information cannot be divulged due to Confidentiality issues.

For the PANYNJ tunnels, PB provided services including management of design consultant technical teams; coordination with PANYNJ engineering and operations staff; scheduling; cost control and monitoring; report preparation; and constructibility reviews with consultants. Projects included the installation of CCTV systems, event detection systems, and hardening of miscellaneous facilities.

The PB team also developed and implemented the Security Program Handbook and Information Security Handbook which set the standard for Agency wide security practices and document control. The system is used to handle and distribute confidential project information and provides training in security protocol.

Ronald Reagan Washington National/Dulles International Airports

To meet the ever-increasing passenger demands at the two DC-area airports, the Metropolitan Washington Airports Authority (MWAA) was created in 1987 through an act of Congress. The mission of this entity is to plan, provide, and actively manager world-class access to the global aviation system in a way that anticipates and servies the needs ot the National Capital area, an area experiencing increasing growth.

Client Reference
MWAA
Frank Holly
Vice President of Engineering
[redacted]

Project Schedule
03/1988 – 8/2008

Total Cost
$9.1 billion

Since 1988, PB, as part of a joint venture, has been continuously retained by MWAA as a partner firm to provide comprehensive PM services for capital development programs at the Ronald Reagan Washington National and Washington Dulles International Airports.

The original Capital Development Program was completed in 1999 at a program budget of $2 billion. In 2000, the Authority commenced a new $4.2 billion capital construction program, commonly known as the Dulles Development Program, that has grown to $7.1 billion with more than $3.1 billion complted. The developmnet works at these airports are one of the largest ongoing capital improvement programs in the world. A total of $5 billion has been expended at the two airports on more than 165 design and 484 construction contrtacts. PB's joint venture has served as an effective asset to MWAA, helping to put in place more than 150 projects at the two airports since 1988, with a total value of construction work in place of more than $3.5 billion.

JFK JetBlue Terminal 5 Redevelopment

Due to increasing demand, JetBlue will soon outgrow its 13 contact gates at Terminal 5 at JFK, and initiated an expansion program to double this capacity – its largest infrastructure investment since its inception. JetBlue's new $800 million Terminal 5 was designed to put customers first. Open to passenger traffic in October 2008, it supports 500 daily departures and arrivals and features a spacious check-in lobby, and a 20-lane security checkpoint – one of the largest in the US. It also features wide roadway access, a 1,500-space car park, and a direct skywalk connection to the JFK AirTrain (a project which PB was also a part of).

Client Reference
PANYNJ
Steve Plate
718-244-4196
splate@panynj.gov

Project Schedule
05/2006 – 03/2009

Total Cost
$800 million

PB assisted JetBlue with PM services for the terminal as well as access roadways, an airside apron, ramp layout, a parking structure, and a pedestrian connector to the garage and AirTrain. Terminal 5 is JetBlue's larges infrastructure investment.

With a relatively short time frame for such an ambitious project, PB's primary challenge was to keep the project on time and under budget. A challenge accepted and fully completed. PB also provided a scheduler and cost controller to establish and maintain the project's baseline schedule and cost control system.

AirTrain JFK

An 8.1-mile, 10-station light rail line links JFK International Airport terminals, car rental agencies, and employee/long-term parking lot with New York's mass transit system and the LIRR. The system is a key element in a multi-year, multibillion-dollar program designed to upgrade New York's primary airport.

Client Reference
PANYNJ
Hugh McCann
718-244-4274
hmccann@panynj.gov

Project Schedule
3/1995 – 12/2003

Total Cost
$1.9 billion

PANYNJ retained PB as its general engineering consultant for the DBOM Airport Access Program. PB's participation involved providing planning, design, environmental analysis, construction management, and procurement activities, while also helping to operate a program office jointly with Authority staff members, including the agency's program director. We also assisted the Authority to effectively respond to revisions in project scope necessitated by budget issues, service considerations, and input from local and regional governmental entities. Various services are also being performed by other PB offices on a task order basis.

Noteworthy features included:

- Markedly improves public transportation access between JFK and Manhattan, other New York City boroughs, and Long Island
- Greatly enhances circulation within JFK's central terminal area, benefiting air travelers making domestic and international air carrier transfers
- Expected to ease surface traffic congestion trying to reach JFK as well as lessen the number of private cars and taxis negotiating terminal roadways
- Program features state-of-the-art systems as well as turnkey procurement methods in combination with traditional U.S. civil works construction techniques

Louisiana Department of Transportation and Development (LA DOTD) TIMED Program

The PB-led LTM joint venture is an extension of the LA DOTD's staff to complete the remaining TIMED Program 20 years ahead of schedule. LA DOTD selected LTM to accelerate the remaining construction and to provide support staff in program controls, financial management, public outreach, and engineering. In

Client Reference
Michael Bridges
LA DOTD
1201 Capitol Access Road
(PO Box 94245)
Baton Rouge, Louisiana 70804-9245
[redacted]

Project Schedule
02/2002 – 12/2012

Total Cost
$4.7 billion program

addition, LTM will perform extended work on 55 project segments, including design oversight, environ-mental permitting, real estate acquisition and relocation, utility relocation, and construction engineering and inspection services.

The project team is supporting alternate project delivery methods to encourage further acceleration of the TIMED program. Implementation of lump sum bidding and design-build delivery pilot projects is bringing innovation to LA DOTD. The team has evaluated all cost saving and innovative elements applied through the program management contract and, to date, estimate a total added value to the LA DOTD of $500 million.

Noteworthy features included:
- Louisiana's largest transportation program in state history.
- LA DOTD's first design-build delivery project, the $404 million John James Audubon Bridge.

Metropolitan Atlanta Rapid Transit Authority (MARTA) Transit System

The MARTA heavy rail system was planned in a cruciform design with an East-West Line and a North/Northeast-South Line intersecting in Atlanta's downtown. Integrated with a 1,500-mile bus network, the fully built rail system has 45 passenger stations designed to facilitate transferring between buses and trains.

Client Reference
MARTA
Jayant Patel
Director of Quality Assurance and Configuration Management
[redacted]
Davis Allen
[redacted]

Project Schedule
1966 – 2008

Total Cost
$1.9 million

The MARTA rapid transit system was developed in phases:
- Phase A "starter" system consisted of an East-West Line and a portion of the North-South Line. Phase A included 17 stations, a major yard/shop facility and 13.7 miles
- Phase B, part of the North-South Line, adding 10 miles of track and seven stations
- Phase C, also part of the North-South Line, added 10 miles of track, six stations and a major yard/shop facility
- Phase D, extension of the East Line, a West Line Branch and the north corridor, largely in Georgia DOT right-of-way, added 11 miles of track and five stations
- Phase E included extension of the North Line

The system continues to be expanded as funding becomes available. PB, in joint venture, has been involved in the MARTA system for over 40 years. We have provided services to MARTA for planning assistance, design, and construction of the Authority's rapid transit system.

Services include:

- Project and program management
- Planning assistance
- Design
- Quality control
- Procurement management for select contracts
- Construction management
- Testing and start-up support
- Infrastructure rehabilitation and renovation to include security enhancement
- Information technology
- Other GEC support

South Carolina Department of Transportation (SCDOT) Construction and Resource Manager Program

PB, as a CRM, is acting as an extension of the SCDOT's staff to complete 200 construction projects in 7 years. The CRM contract is a lump sum for management functions over 5 years, paid on a schedule of payments. Preliminary engineering (PE) and construction engineering and inspection functions (CEI) are fixed price by identified project, paid upon physical progress of each project. Right-of-way services are provided on a per parcel fee basis. There are two option periods of 2 years each. An incentive/ disincentive bonus/penalty program is included with achievements in innovation, schedule, cost control and customer satisfaction being evaluated.

Client Reference
SCDOT
Clem Watson
CRM Program Manager
[redacted]

Project Schedule
07-1999 – 01/2008

Total Cost
$750 million includes the cost of prelim/final design, ROW, CRM PM/FM/CM, CRM CEI and construction costs of projects

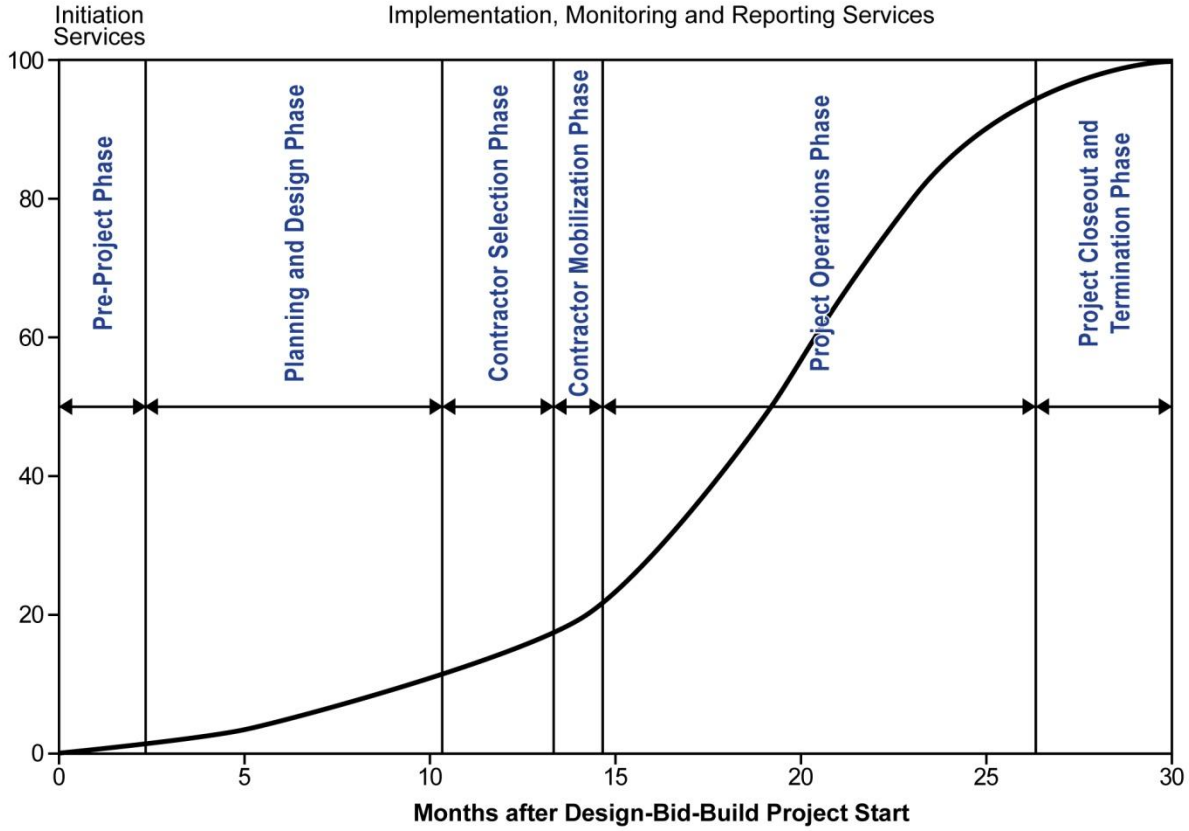
The CRM is responsible for right-of-way acquisition, although contracts and payments are executed by the DOT. Construction contract preparation and administration will be performed by the CRM; however, the actual letting of the contract will be performed by the DOT. The CRM is also tasked with other selected support services such as CEI for DOT-developed projects and information management assistance and advice. The CRM consultant may not perform final design or construction. This work must be performed by a third party under contract to the DOT, but managed by the CRM. Projects can be added and removed from the CRM program by the DOT with no change in the management fees unless such actions exceed +/- 20 percent of the initial project numbers.

Advantages of the CRM concept are:

- The owner receives a rapid expansion of its capacity. As appropriate, the capacity can also be rapidly shrunk when the contracted program is completed.
- The owner receives expertise that may not otherwise be obtainable or affordable. (Some DOTs cannot attract, hire and retain adequate engineering staff in today's marketplace.)
- The owner receives a highly agile capability. Concerns for "leveling the workload" and "moving the work where the people are" characterize resource planning and management. A CRM tailors its work force to the job at hand, near the work and the client. As the work shifts, the CRM shifts. As the work ends, the CRM goes elsewhere.

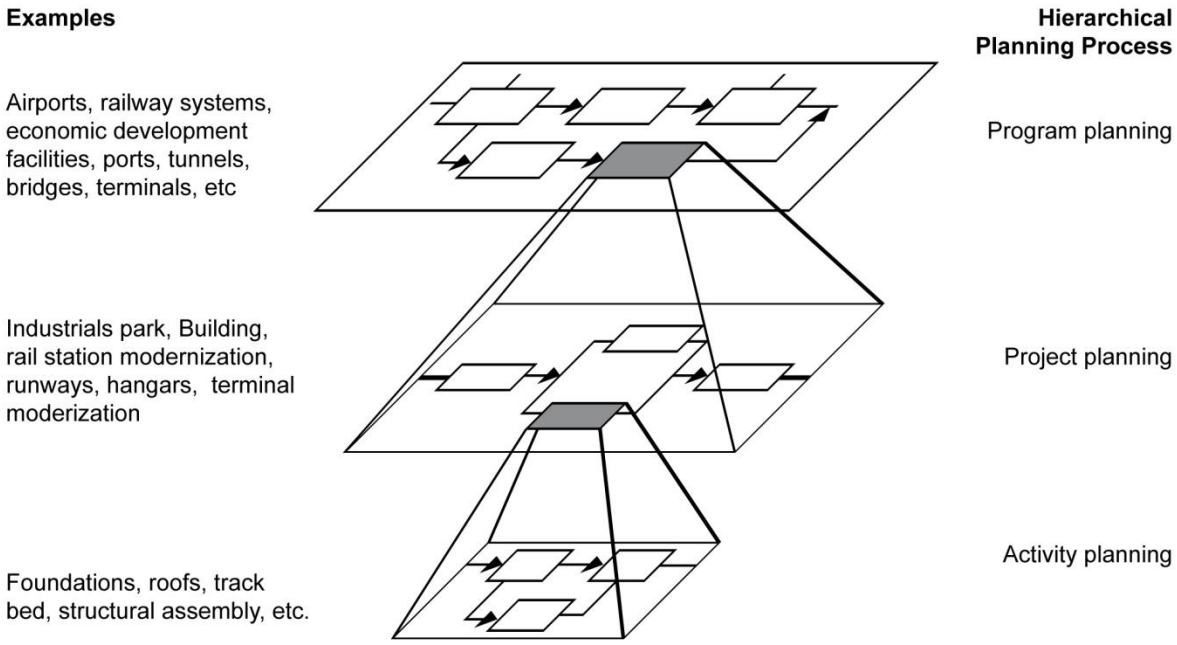
E. Management Approach

All call-in agreements inherently require that selected firms have the experience and resources needed to promptly and effectively respond to a client summons for assistance or consultation. This reality is further underscored in RFP 22388, which contemplates a need for services through the entire construction project life cycle, from project initiation through preparations for closeout.



Typical Design Bid Build Construction Project Life Cycle was adapted from The Management of Construction: A Project Life Cycle Approach, F. Lawrence Bennett, 2007 reprint published by Butterworth Heinemann, p. 7

The anticipated need for services across multiple Authority business lines, at both the project ($50,000 and greater) and program (up to $100 million) levels, further demands a service provider capable of marshalling appropriate expertise across the full construction project planning spectrum from activity level (e.g. constructability review of a novel design element) through program level (e.g. schedule and resource updates).



Hierarchical Planning process was adapted from Construction Planning for Engineers, F.H. (Bud) Griffis and John V. Farr, McGraw-Hill 2000, p. 4

When selected project/program management services are outsourced, three distinct approaches have commonly been followed as outlined below:

- An external PM firm is given responsibility for part of the program, typically a project or set of projects
- Owner retains one or more PM firms who report to a client manager familiar with industry best practices and who has the capabilities and experience to direct the work
- Staff augmentation occurs whereby positions from basic to key are filled by individuals available from one or multiple consultant organizations

Below is a graphic representation of three approaches the Authority can take for this contract. PB is prepared to serve the PANYNJ PMO using any of the foregoing approaches or a combination of them.

Finding and Placing Senior PM Staff

Over the last 50 years, PB has placed staff in senior level, public sector; program management positions all reporting to executive – level client personnel. For example, the current need to replace obsolescent facilities throughout the nation's largest urban public school systems has generated significant use of senior staff augmentation. PB has been at the forefront, helping to fulfill needs at the Los Angeles Unified School District, Orange County (Florida) Public Schools, Miami-Dade County Public Schools, and the New York City School Construction

Authority. In addition to the education sector, PB has placed more than 80 senior professionals in other public sector and transportation PM programs, most notably:

PROGRAM - VALUE	KEY SENIOR STAFF AND REPORTING
Louisiana Department of Transportation Timed Program - $4.9B	Program Director, Deputy Program Director, Deputy Finance Director, Deputy Director Major Bridges, Deputy Operations, and Deputy Director Communications reporting to LA DOT's Program Manager
Smithsonian Institution - $310M	Program Director and Project Manager reporting to Construction Divison Director
Orange County Toll Roads - $3B	Project Director reporting to Interim Chief Engineer
Metropolitan Washington Airports Authority (Dulles International and Ronald Reagon National Airports) - $7.2B	Program Controls Manager, Construction Site Manager, Resident Engineers (3), Design Task Managers (2) and Quality Assurance Manager reporting up to the Vice President, Engineering and Construction
California High Speed Rail - $40B - 45B	Program Manager, Engineering Manager, and Environmental Manager reporting to the Executive Director
NY State Office of General Services - $5B	Two Project Directors reporting to Director of Construction

Key staff that filled the majority of these positions were selected from PB's leadership ranks. On average, less than one in five was recruited from outside. PB has the flexibility to support both internal and client staffing requirements with equal emphasis.

PB has a proven record of successful collaboration with the PANYNJ in the completion of call-in separately procured projects involving all of the Authority facilities, including structures, tunnels, buildings, bridges, airport facilities, ports and marine facilities and the PATH and AirTrain systems. PB has a long standing culture geared toward maintaining a strong focus on project delivery which includes continual confirmation of client's needs, development of staff for technical excellence, consistent quality control and assurance protocols and delivering in accordance with contracts (scope/schedule/budget) and commitments. The success of our work with the Authority has been achieved by using a proven management approach to meeting the Authority's objectives. This approach is based on careful planning, continuous communication, scheduling and managing of costs, strict budget and quality control, team commitment, and conflict avoidance. We are confident that the combination of technical skill, the depth of PB's staff resources, management ability, and PB's knowledge of the Authority's facilities, personnel and needs, make PB ideally suited to serve the Authority for this call-in assignment. The management process and approach that will be followed to control project performance is presented below.

Assignment of Skilled Personnel

PB can offer qualified staff from our offices in New York and New Jersey that can respond quickly and effectively to assignment requests from the Authority. This staff will be led by our proposed Project manager, Pete Sweeney. From his experience working at the Authority and with other Regional Authorities, Pete knows that marshalling the project team is the key to a

successful project. In selecting his highly qualified team for this assignment, he has the resources to assign individuals with relevant experience and expertise in delivering any of the services outlined in the Scope of Work included in the RFP.

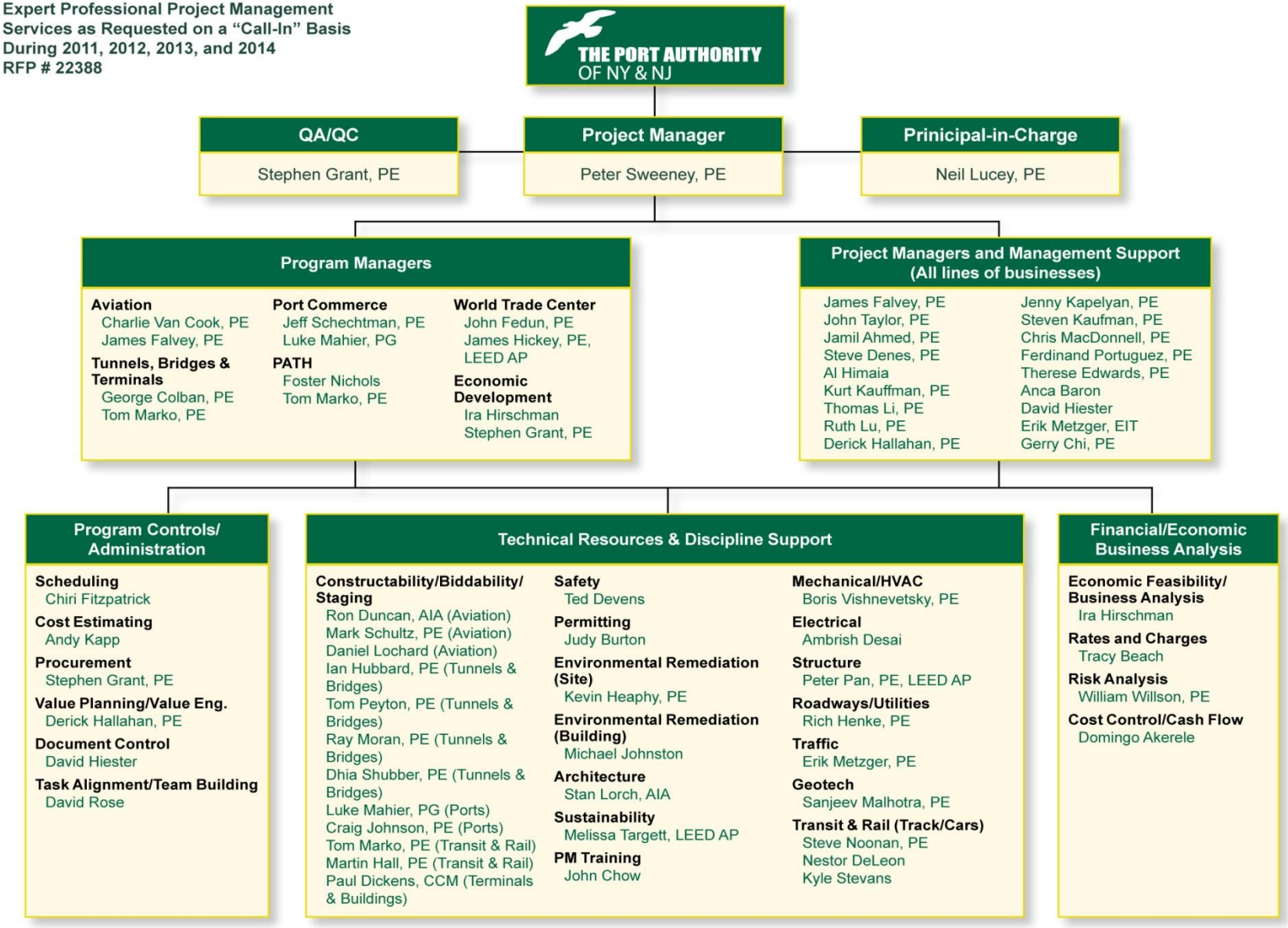
The PB Team offers the Authority the ideal combination of field/design project management and support staff who bring to the Authority:

- Project management and professional expertise in all the technical areas associated with each task/project.
- Extensive experience in performing call-in structural inspection, evaluation, design and construction phase services for the Authority and other agencies in the region and across the country.
- Assured availability, since PB's team is comprised entirely of local resources resident in the New York/New Jersey metropolitan area who can be on-site within hours of notice.
- Exceptional leadership proven through the successful completion of similar projects throughout the New York/New Jersey metropolitan area as well as across the U.S.
- Proven ability to respond to multiple task orders simultaneously, made possible by the depth and breadth of experience of our proposed project team, backed by a group of over 700 professionals and support personnel in the New York/New Jersey area.

Through the leadership of our project manager, we will deliver a support staff that collectively possess the proven technical skills, management expertise and interpersonal skills that are required for assigned call-in tasks. We are confident that the combination of technical skill, management ability, and PB's knowledge of the Authority's facilities, personnel and needs, make PB ideally suited to serve the Authority for this call-in assignment.

Our organization chart is included below, detailing how the PB team will be responsive to the Authority's needs and perform tasks. Resumes for our key personnel are included in Section C. Qualifications and Experience of Staff. While we only show resumes for our key personnel, all personnel selected for this assignment have extensive experience in their specialty.

Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013, and 2014 RFP # 22388



Strong Project Management

Effective project management starts at the top with thorough planning and continuous communication with the Authority. PB has developed a rigorous Project Delivery Management System as part of our overall Quality Assurance Program that will be implemented for each task assigned under this call-in contract. This system defines the roles and responsibilities of all project participants and is the formula for the success that we have enjoyed with the Authority and other clients throughout the metropolitan area.

Project Manager — Peter Sweeney, P.E. will be the main point of contact with the Authority on all project-related matters. He will be responsible for managing the assigned tasks in accordance with the Authority's objectives and ensuring that the project team provides all required services to the professional quality that the Authority has come to expect from PB. He will provide personal leadership to the project team and will be accountable for and drive the project's technical success, financial success, schedule compliance, and client coordination. At the outset of the project and through the execution of all assigned task orders, Peter will be responsible for:

- Communicating with the Authority on a regular basis and resolving any issues that may arise.
- Developing and maintaining the Project Management Plan (in collaboration with the Authority's Project manager), which is distributed to all project staff and becomes the document that governs all project-related activities.
- Developing, managing and tracking the scope, schedule and budget for each task order.
- Administering the prime contract and any subcontracts, including billing and collecting, so that all project parties adhere to the terms of the contract and subcontracts.
- Ensuring use of the agreed-upon systems for risk, quality, peer and technical reviews and verification.
- Establishing and maintaining a quality control program for the project and required deliverables.
- Meeting with task leaders at the outset of each task order assignment and regularly during the execution of each task order to keep them on track.
- Coordinating with the Principal-in-Charge to ensure that project resource requirements are addressed in a timely fashion to meet all Authority needs.
- Closing out each task order in a timely fashion.

Principal-in-Charge — Neil Lucey, P.E. will serve as Principal-in-Charge for this assignment. He will provide a dual role: (1) to obtain feedback from the Authority on the performance of the project team and ensure that the appropriate action is being taken to resolve any technical and financial issues, and (2) to ensure that our Project manager, Peter Sweeney, has the resources he needs to satisfy the requirements of all task orders assigned to PB under this contract. Should PB be responding to several task-orders simultaneously, Neil will ensure that Peter has the full resources of the company at his disposal to complete all task orders in a timely and cost-effective manner.

Project Management Plan

The project management approach for this call-in project begins with the preparation of a project management plan (PMP) by the PM for the overall contract which meets with the Authority's established procedures. The PMP will cover the items that apply to all task assignments, such as lines communication protocol; document control procedures; quality review procedures; invoicing procedures and discipline disagreement resolution hierarchy procedures. As tasks are assigned by the Authority, the plan will be updated to include the specific requirements for each task. The update will clearly define the goals of the assignment down to the subtask levels, identify the personnel assigned to each task, and establish operational and communication guidelines to be used throughout the life of the assignment. It will include task information such as the scope of work, the organization chart, schedule, budget and documentation of the project control and administration processes specific to the particular task. It will also cover key areas such as: the understanding of issues and objectives of the task; the roles/responsibilities of the team members; schedule of deliverables.

The PMP will identify a protocol agreed to by the Authority regarding the frequency and forum for routine progress updates, via meetings, telephone or email, based on the preference of the Authority's assignment manager. The plan will be reviewed and approved by the Principal-in-Charge prior to distribution, and will be updated as-needed throughout the life of the contract. All the personnel assigned to the project will implement the PMP on their routine work. PMPs have been successfully implemented for call-in contracts requiring quick mobilization and delivery on simultaneous assignments. The thoroughness and effectiveness of those plans allowed the successful completion of the required services with no surprises or unanticipated difficulties.

Development of Task Scope, Budget and Schedule

PB knows that to be successful, we must first get a full understanding of the Authority's task objectives, so that a clear and concise scope of work can be established. Working closely with the Authority's PM, PB will provide an approach to the task that meets the Authority's objectives as well as your budget and schedule constraints.

PB's method of project management of call-in projects is simple and straight forward:

- A seasoned Task Leader (TL) is placed in charge of each task assignment and participates in the development of the scope, budget and schedule. Providing highly qualified project manager level Task Leaders is one of PB's strengths.
- An experienced team of professionals is assigned to the task. Having the full gamut of professionals locally in-house is another of PB's strengths, allowing the most appropriate staff with the right skills to be assigned to each task.
- The PMP will be updated for the specific task and distributed to the task team members so that the task can be executed within the established PMP and Authority protocols.

Schedule and Cost Control

Call-in assignments often require immediate and professional responses to situations as they develop, making schedule and cost control imperative. PB is highly adept at assembling a team of qualified personnel on short notice and starting an assignment promptly upon authorization from the client. We are equally adept at managing staff performance to meet specific deadlines for deliverables while emphasizing schedule and cost control. The task schedule will show the sub-tasks identified for the assignment, durations and relationships, deliverables and key milestones. It will also identify regularly scheduled progress meetings, to facilitate keeping Authority staff apprised of key task activities and findings. While our PM provides oversight for each task, the TL has budget and schedule responsibility for his assignment. The schedule will be closely monitored and updated throughout the life of the project. The TL will be guided by PB's policies, procedures and standards as detailed in PB's Business Management Systems and the PB Quality Systems Manual and Procedures. The main cost control tool will be PB's computerized management information system (PBIS), which provides data on charges for labor and expenses by task on a weekly basis. This can be supplemented with spreadsheets adapted to the needs of a specific assignment. The actual job charges will be tracked and compared to the task budgets by the TL, and timely corrective measures will be taken if potential deviations from the plan are detected.

Quality Assurance and Quality Control

Of paramount importance on every PB project is a strict program of quality assurance and quality control (QA/QC). The proposed call-in contract work will be no exception. PB is an ISO-9000 and ISO-14001 (environmental) certified firm that ensures strict quality control procedures. The Project Quality Control Plan (PQCP) will be put into execution on assignments received throughout the life of the agreement. Quality control will be performed in terms of technical adequacy of the work, conformance to the standards of the Authority, and adherence to PB's established procedures. All members of the project team will be responsible for quality control starting with the project and task managers.

Regular QA/QC reviews will be performed for the project. The interval between reviews will be set to suit the specific requirements of each task and to ensure that all submittals are preceded by a review confirming that the quality control standards established in the PQCP plan are being enforced properly. PB's long-standing commitment to quality is at the heart of the firm's culture and it's the basis of more than a century of client satisfaction. The quality control plan is but one element of our total quality management (TQM) system, which is applied to all PB projects and has qualified it to receive and maintain the ISO certification from the International Standards Organization. Another key element of PB's quality system is the internal and external auditing performed routinely to confirm policies are being followed.

Invoicing

Invoice formats and schedules for PB services, as well as sub-consultants, contractors, and vendors, will be consistent with formats currently used on existing Authority call-in agreements. When requested, the format will be modified to comply with new Authority

requirements. At the beginning of the project, our PM and invoice support staff will meet with and provide each service provider a sample invoice, progress report outline, and invoicing schedule. This time invested, particularly with MBE and WBE firms to establish invoicing protocols will benefit all parties. PB will submit updated salary rosters on a regular basis so that invoices can be processed efficiently. PB's invoices will include subconsultants' invoices after review by PB's TL and project manager. It is assumed that invoices will be submitted electronically.

Project Third-Parties

With PB's experience in working with the Authority we know that there are many layers of "clients" within the Authority, besides the assignment manager, who all have significant objectives that we must consider. PB's project management approach will allow us to accommodate multiple objectives with professional attention to detail. During the early stages of each assignment our task managers will establish, and maintain, close working relationships with the Authority's individual assignment managers and confirm their support of the various unit's objectives as they are identified. There may also be "third-party" participants involved in implementation of some project elements including, but not limited to, the New York State, New Jersey and New York City Departments of Transportation; MTA Capital Construction; New York City DEP; NJ Transit; other local, state or regional agencies; utility companies; Port Authority tenants and consultants working on adjacent projects. Management of the roles and participation of third-party participants will be crucial to project success. PB has many existing relationships with these parties stemming from our work with them on other projects and will implement a collaborative environment with all parties to facilitate implementation.

F. Names, Titles, and Hourly Rates

Overtime pay for PB and subcontractor's non-exempt employees is paid at 1.5 times direct labor (with 0.5 time direct labor being premium pay) and exempt employees paid at 1.0 times direct labor (both include wages, payroll taxes and payroll insurance). Premium pay is billed as a direct expense when permitted per contract. Holiday policy: regular full-time employees and temporary full-time employees are eligible for holiday pay. Observed holidays are considered a day of work regarding computing overtime pay. All work over 40 hours is considered overtime (regardless of weekends/night work). PB does not employ union workers.

Name	Title	NY/NJ PE	Hourly Rate
Neil Lucey	Principal-in-Charge	NY/NY	$250.00*
Peter Sweeney	Project Manager	NY/NJ	$98.66
Stephen Grant	QA/QC; Economic Development; Procurement	NY/NJ	$83.11
Charlie Van Cook	Aviation Program Manager	NY	$100.03
James Falvey	Aviation Program Manager / Project Manager/Management Support		$61.99
Jeff Schechtman	Port Commerce Program Manager		$86.54
Luke Mahier	Port Commerce Program Manager Constructibility/Biddability/Staging (Ports)		$75.00
John Fedun	WTC Program Manager	NY/NJ	$106.18
James Hickey	WTC Program Manager		$108.17
George Colban	Tunnels, Bridges & Terminals	NY/NJ	$100.72
Thomas Marko	Tunnels, Bridges, & Terminals Program Manager / PATH Program Manager Constructibility/Biddability/Staging (Transit & Rail)	NY/NJ	$74.82
Foster Nichols	PATH Program Manager		$87.66
Ira Hirschman	Economic Development Economic Feasibility / Business Analysis		$89.42
John Taylor	Project Manager/Management Support	NY/NJ	$75.99
Jamil Ahmed	Project Manager/Management Support	NY	$68.78
Steve Denes	Project Manager/Management Support	NY	$74.87
Al Himaia	Project Manager/Management Support		$51.70
Kurt Kauffman	Project Manager/Management Support	NJ	$52.25
Thomas Li	Project Manager/Management Support	NY/NJ	$85.32
Ruth Lu	Project Manager/Management Support	NY/NJ	$69.51
Derick Hallahan	Project Manager/Management Support Value Planning / Value Form		$69.61

Jenny Kapelyan	Project Manager/Management Support	NY	$51.44
Steven Kaufman	Project Manager/Management Support	NY	$59.89
Chris MacDonnell	Project Manager/Management Support	NY	$56.51
Ferdinand Portuguez	Project Manager/Management Support	NY	$47.97
Therese Edwards	Project Manager/Management Support		$52.89
Anca Baron	Project Manager/Management Support		$58.77
David Hiester	Project Manager/Management Support Document Control		$53.84
Erik Metzger	Project Manager/Management Support\ Traffic		$40.48
Gerry Chi	Tunnels, Bridges, & Terminals Program Manager		$72.28
Chiri Fitzpatrick	Scheduling		$59.20
Andy Kapp	Cost Estimating		$77.13
David Rose	Task Alignment / Team Building		$112.02
Ron Duncan	Constructibility/Biddability/Staging (Aviation)		$73.82
Mark Schultz	Constructibility/Biddability/Staging (Aviation)		$73.66
Daniel Lochard	Constructibility/Biddability/Staging (Aviation)		$57.00
Ian Hubbard	Constructibility/Biddability/Staging (Tunnels & Bridges)	NY	$86.22
Tom Peyton	Constructibility/Biddability/Staging (Tunnels & Bridges)	NY/NJ	$126.38
Ray Moran	Constructibility/Biddability/Staging (Tunnels & Bridges)	NY/NJ	$69.15
Diaa Shubber	Constructibility/Biddability/Staging (Tunnels & Bridges)	NY	$88.33
Craig Johnson	Constructibility/Biddability/Staging (Ports)		$80.38
Martin Hall	Constructibility/Biddability/Staging (Transit & Rail)		$84.75
Paul Dickens	Constructibility/Biddability/Staging (Terminals & Buildings)		$87.22
Ted Devens	Safety		$73.61
Judy Burton	Permitting		$54.62
Kevin Heaphy	Environmental Remediation (Site)	NY/NJ	$54.75
Michael Johnston	Environmental Remediation (Building)		$54.61
Stan Lorch	Architecture		$81.75
Melissa Targett	Sustainability		$30.38
John Chow	PM Training		$72.56

Boris Vishnevetsky	Mechanical / HVAC	NY	$64.42
Ambrish Desai	Electrical		$60.34
Peter Pan	Structure	NY/NJ	$68.07
Rich Henke	Roadways/Utilities	NY	$78.79
Erik Metzger	Traffic		$40.48
Sanjeev Malhotra	Geotech	NY	$62.82
Steve Noonan	Transit & Rail (Track/Cars)	NY/NJ	$91.29
Nestor DeLeon	Transit & Rail (Track/Cars)		$45.44
Kyle Stevans	Transit & Rail (Track/Cars)		$27.55
Tracy Beach	Rates and Charges		$47.12
William Willson	Risk Analysis		$71.81
Domingo Akerele	Cost Control / Cash Flow		$52.03

*the rates for principals are hourly billing rates without the multiplier

Multiplier and Breakdown (Authority's Office)

Direct Labor Base	$70,520,143	Percentage of Direct Labor
Fringe Benefits (Direct Labor)		
Payroll Taxes	5,942,832	8.4%
Group Insurance and Workers' Compensation	5,902,685	8.4%
Fringe Salaries	8,794,609	12.5%
Other Employee Benefits	2,625,469	3.7%
Total Fringe Benefits (Direct Labor)	**$23,265,595**	**33.0%**
General Overhead Expenses		
Office Rent	3,524,766	5.0%
Depreciation	650,542	0.9%
Amortization	384,943	0.5%
Repairs and Maintenance	996,946	1.4%
Indirect Salaries	22,197,188	31.7%
Fringe Benefits (Administrative)	7,348,128	10.4%
Computer, Supplies, Reproduction	1,663,784	2.4%
Travel and Related Expenses	1,650,440	2.3%
Office Relocation and Moving	159,254	0.2%
Communications	454,700	0.6%
Subscriptions, Books, Publications	276,157	0.4%
Consultant Fees	1,097,940	1.6%
Additional Compensation	4,828,915	6.8%
Miscellaneous Expenses	(17,290)	0.0%
General Insurance Others	848,385	1.2%
E & O Insurance	1,936,716	2.7%
Other Taxes	484,394	0.7%
State & Local Income Taxes	1,351,424	1.9%
Audit and Legal	872,431	1.2%
Bids and Proposals/Research and Development	6,652,638	9.4%
Total General Overhead Expenses	$57,362,401	81.3%
Total Allowable Overhead For Profit Calculation	**$80,627,996**	**114.3%**
Profit		**6.6%**
Multiplier		**2.28**

Multiplier and Breakdown (Consultant's Office)

	PB	PB's Percentage
Direct Labor Base	**$172,854,737**	**Of Direct Labor**
Fringe Benefits (Direct Labor)		
Payroll Taxes	14,566,713	8.4%
Group Insurance &Workers' Compensation	14,468,308	8.4%
Fringe Salaries	21,556,817	12.5%
Other Employee Benefits	6,435,391	3.7%
Total Fringe Benefits (Direct Labor)	**$57,027,229**	**33.0%**
General Overhead		
Office Rent	29,944,486	17.3%
Depreciation	4,907,761	2.8%
Amortization	2,851,734	1.6%
Repairs and Maintenance	4,180,440	2.4%
Indirect Salaries	70,650,918	41.0%
Fringe Benefits (Administrative)	22,786,334	13.2%
Computer, Supplies, Reproduction	12,529,882	7.2%
Travel & Related Expenses	4,972,864	2.9%
Office Relocation &Moving	390,355	0.2%
Communications	4,038,521	2.3%
Subscriptions, Books, Publications	859,837	0.5%
Consultant Fees	3,398,326	2.0%
Additional Compensation	15,067,792	8.7%
Miscellaneous Expenses	637,585	0.4%
General Insurance Others	2,079,510	1.2%
E & O Insurance	12,372,254	7.2%
Other Taxes	1,386,368	0.8%
State & Local Income Tax	4,455,653	2.6%
Audit and Legal	2,138,451	1.2%
Bids & Proposals/R&D	16,306,548	9.4%
Total General Overhead	$215,955,619	124.9%
Total Allowable Overhead For Profit Calculation	**$272,982,848**	**157.9%**
Profit		**6.6%**
Multiplier		**2.75**

G

G. M/WBE Participation

Commitment to MBE/WBE Goals

PB also recognizes, accepts and takes very seriously the Authority's MBE/WBE goals. It is our expectation that for assigned tasks, numerous appropriate opportunities will be available in areas such as scheduling, cost estimating, and document control to enable PB to meet the Authority's goals. PB has worked with many MBE/WBE firms and has supported their development and growth. PB will add firms to our team for specific assignments that have the needed expertise and have provided timely and technically excellent work for our clients to meet the 12% MBE and 5% WBE goals of this project. The PB project manager will identify opportunities for these firms (and others, as may be appropriate) and will monitor and periodically report the results.

H. List of Affiliates

Name of Affiliated Company	Address	Ownership
Parsons Brinckerhoff Inc. [redacted]	One Penn Plaza, New York, NY 10119 (212) 465-5000	Parent of PB Americas, Inc. and its affiliates; Parsons Brinckerhoff, Inc. is owned 100% by Balfour Beatty Group, Inc.
PB Power, Inc. [redacted]		100% by Parsons Brinckerhoff Inc.
Parsons Brinckerhoff Development Corporation [redacted]		100% by Parsons Brinckerhoff Inc.
Parsons Brinckerhoff Group Administration, Inc [redacted]		100% by Parsons Brinckerhoff Inc.
Parsons Brinckerhoff International, Inc. [redacted]		100% by Parsons Brinckerhoff Inc.
Parsons Brinckerhoff Infrastructure Development Company, Inc. [redacted]		100% by Parsons Brinckerhoff Inc.
PB Consult, In [redacted]	1401 K Street NW, Suite 300, Washington, DC 20005 (202) 661-5308	100% by Parsons Brinckerhoff Inc.
PB Constructors Inc. [redacted]	465 Spring Park Place, Herndon, VA 20170 (703) 742-5700	100% by Parsons Brinckerhoff Inc.
Alltech, Inc. [redacted]	465 Spring Park Place, Herndon, VA 20170 (703) 742-5700	100% by Parsons Brinckerhoff Inc.
PB Services Inc. [redacted]	One Penn Plaza, New York, NY 10119 (212) 465-5000	100% by Parsons Brinckerhoff Inc.
Parsons Brinckerhoff-FG, Inc. [redacted]	506 Carnegie Center Boulevard, 2nd Floor Princeton, NJ 08540 (609) 734-7000	100% by Parsons Brinckerhoff Inc.
Parsons Brinckerhoff Ohio, Inc. [redacted]	6235 Enterprise Court, Dublin, OH 43016 (614) 793-0191	100% by PB Americas, Inc.

Name of Affiliated Company	Address	Ownership
PB Booker Associates Inc. 4[redacted]	1831 Chestnut Street, Suite 700, St. Louis, MO 63103-2225 (314) 421-1476	100% by PB Americas, Inc.
Parsons Brinkerhoff Michigan, Inc. [redacted]	535 Griswold Street, Suite 1940, Detroit, MI 48226 (313) 963-5760	100% by PB Americas, Inc.
PB Energy Storage Services, Inc. [redacted]	11757 Katy Freeway, Suite 600 , Houston, TX (281) 589-5803	6% by Parsons Brinckerhoff Inc. 74% by ALLTECH, Inc. 20% PB Network Services, Inc.
PB Transit & Rail Systems, Inc. [redacted]	Two Gateway Center, 4th Floor, Newark, NJ 07102 (973) 648-8700	100% by PB Americas, Inc.
PB Facilities Inc.[redacted]	One Penn Plaza, New York, NY 10119 (212) 465-5000	100% by Parsons Brinckerhoff Inc.
PB Architecture, Inc. [redacted]	One Penn Plaza, New York, NY 10119 (212) 465-5000	33% by PB Americas, Inc.
Associated Engineers, Inc.[redacted]	3311 E. Shelby Street, Ontario, CA 91764	100% by PB Americas, Inc.
Keystone Environmental Planning, Inc. [redacted]	One Penn Plaza, New York, NY 10119 (212) 465-5000	100% by PB Americas, Inc.
Avid Engineering, Inc. [redacted]		100% by PB Americas, Inc.
Parsons Brinckerhoff Canada, Inc. (No US Tax ID Number)		100% by PB Americas, Inc.
PB Panama S.A (No US Tax ID Number)		100% by PB Americas, Inc.

"PB Americas, Inc. formerly did business as Parsons Brinckerhoff Quade & Douglas, Inc. (PBQD) and Parsons Brinckerhoff Construction Services, Inc.(PBCS). On November 14, 2006, PBQD and PBCS merged to form PB Americas, Inc. which retained the EIN number for PBQD [redacted]."

I. Conflict of Interest

Neither PB Americas, Inc., nor any of its employees, agents, or possible subcontractors is aware of any possible conflict of interest or appearance of conflict of interest relating to the provision of expert professional project management services as requested on a call-in basis during 2011, 2012, 2013, and 2014, as defined in III. I of this Request for Proposal (RFP #22388). If we become aware of a conflict, or the appearance of a conflict, we will immediately notify the Authority as required, giving full details thereof. Also, as prospective assignments are identified, PB will review each for potential conflicts.

J. Contract Exceptions

PB Americas, Inc. has reviewed the form of contract and its terms and conditions included with RFP Number 22388. PB Americas, Inc. takes no exceptions.

THE PORT AUTHORITY
OF NY & NJ

PROPOSAL

Expert Professional Services As Requested On A "Call-In" Basis
During 2011, 2012, 2013 & 2014

PROJECT MANAGEMENT SERVICES

RFP NO: 22388

STV Incorporated

STV

October 21, 2010

The Port Authority of New York and New Jersey
One Madison Avenue, 7th Floor
New York, NY 10010
Attention: RFP Custodian

Re: RFP No. 22388, Performance of Expert Professional Project Management Services on a "Call-In" Basis During 2011, 2012, 2013, and 2014

Dear RFP Custodian:

STV Incorporated (STV) understands the importance to the Port Authority of New York and New Jersey (PANYNJ) of meeting the transportation needs of the bi-state region to provide safe and efficient service to its patrons at all times, and to attract business users from around the world. To successfully implement projects and programs to maintain and improve its numerous Port facilities, it is necessary for the Port Authority, at times, to obtain project management services from outside professional consultants to assist its in-house staff.

As an incumbent for this contract, STV believes that there is no better provider of project management services than our firm. In fact, STV's relationship with the PANYNJ dates back to the 1980s, when the company helped the improve PATH facilities. Since that time, we have worked with the PANYNJ's Project Management Department (PMD) on projects in virtually all of its line businesses, including Aviation, Tunnels, Bridges & Terminals, Port Commerce, PATH, and World Trade Center. We have been responsible for performing project management services on several high-profile, complex projects including:

- *One World Trade Center and the National September 11th Memorial and Museum* projects, where we have been supporting the PANYNJ's mission to construct the building and museum on time, on budget, and with high quality.

- *AirTrain JFK Design-Build-Operate-Maintain* project for which we instituted a program to effectively administer the more than 20 subconsultants working on the project, including identification of each subconsultant's role and scope of work, the timely establishment of budgets, and fast-track negotiation of all contracts. These efforts resulted in an award-winning project that was on time and within the approved budget.

This experience, coupled with our similar experience on other projects, such as our role as Program Managment Oversight consultants for the Federal Transit Administration for many years, our Project Management contract on the reconstruction of Route 9A which phased into a construction management project, has made STV an industry leader in the delivery of multidisciplinary project management, architectural, engineering, and construction management services, especially for "call-in" contracts.

We have the depth and breadth of resources to augment the Project Management Department's own staff's capabilities in maintaining the PANYNJ's line businesses. STV has the technical, professional and managerial experience, as planners, architects, and engineers with facilities and services comparable to each of the PANYNJ's areas of operations. As a result, we can hit the ground running and work closely with you to maintain safe and continuous operations at all your facilities.

225 PARK AVENUE SOUTH
NEW YORK, NEW YORK 10003-1604
(212) 777-4400 FAX: (212) 529-5237

Qualifications and Experience of Staff

We have proposed **David Frank, P.E.** as our Project Director and Task Leader for World Trade Center projects. He has more than 20 years of experience overseeing, coordinating, and inspecting construction for a wide variety of transportation projects. Mr. Frank is Deputy Project Executive at the World Trade Center (WTC) Site on the National September 11th Memorial and Museum projects currently serving the PANYNJ as an owner's project manager. Through his involvement with the WTC site reconstruction, he has become familiar with the existing stakeholders involved in all of the WTC projects, and has become fully versed in PANYNJ policies, procedures, quality assurance requirements, and the specific security requirements of the site.

To further define STV's commitment to the Port Authority, we have assigned four additional Task Leaders. These include **Ted Kleiner, AIA (Aviation)**, who prior to joining STV held senior management positions with PANYNJ, incluidng 3 years as the Assistant Director of Aviation for Capital Programs; **Luigi Brasacchio, P.E. (Tunnels, Bridges & Terminals)**, who brings more than 30 years of experience in the rehabilitation of bridges, viaducts, and highways including major suspension bridges in New York for various state agencies; **Tarek Hatab, P.E. (Port Commerce)**, who has more than 20 years of experience in program, project, and construction management, with a strong emphasis on marine terminals and piers transportation facilities, tunnels, and waterfront projects; and **David Augustine, AIA, LEED® AP (PATH)**, who brings more than 35 years of experience in the design and construction of new and renovated transportation facilities.

Mr. Frank and our designated Task Leaders will be supported by a team of project executives, managers, and support personnel whose expertise will provide the PANYNJ with a knowledgeable, diversified team that is able to respond to all tasks under this contract. Included in this pool of resources is the staff from our carefully selected subconsultants: Halcrow, Inc.; SCI Engineering, P.C.(MBE); Jenny Engineering Corporation (MBE); Metron Incorporation (MBE); DACK Consulting LLC (WBE). These carefully selected subconsultants will augment our services and help us meet the PANYNJ's 12% MBE and 5% WBE participation goals.

Qualifications and Experience of the Firm

STV recognizes that to successfully manage a project of this magnitude and complexity, the Project Management Consultant, as a team, must address the issues necessary to meet the PANYNJ's goals, and must have the capacity and experience to oversee, administer, and seamlessly integrate every component of the "call-in" program. Because we are a multidisciplinary firm with over 600 project management professionals, architects, planners, environmental specialists, and engineers in our New York office alone, we have the capacity and experience to manage various types of assignments.

Management Approach

STV's management approach will provide the PANYNJ with effective and timely solutions to the project requirements. This will be accomplished by appropriate project personnel who have a thorough understanding of the tasks required, and who have a history of working together in similar assignments. Furthermore, we have chosen qualified subconsultants for this project who will work under the direction of STV's Principal-in-Charge and Project Director, both of whom are experienced with managing multiple and concurrent assignments for PANYNJ and for other "call-in" contracts. Moreover, STV has

in-place project control systems to track costs, schedules, staff commitments, and subcontractor assignments. Our approach to "call-in" contracts reflects an understanding of the processes and procedures that must be implemented to facilitate thorough, expedient, and effective execution of the work assignments.

Cost

We believe that our choice of staffing, hourly rates, and multipliers indicate a realistic and efficient application of STV's resources for assisting with project management services for this contract. Furthermore, we believe that our choice of subconsultants provides greater service capabilities without any overlap in staffing or redundancy of services.

Acknowledgements

We acknowledge the receipt of Addendum #1 dated October 13, 2010. Please find enclosed a separately sealed letter in response to Article 24(c) of the Agreement.

Oral Presentations

Steven Pressler, Executive Vice President, should be contacted for presentation scheduling by phone at (212) 614-3319 or by e-mail at steven.pressler@stvinc.com.

We look forward to continuing our successful relationship with the PANYNJ through this contract for Project Management Services as Requested on a "Call-In" Basis.

Sincerely,

Steven Pressler
Executive Vice President

A. Attachment B

ATTACHMENT B

PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014

AGREEMENT ON TERMS OF DISCUSSION

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority's Freedom of Information Policy and Procedure adopted by the Port Authority's Board of Commissioners on November 20, 2008, which may be found on the Port Authority website at: *http://www.panynj.gov/corporate-information/pdf/Freedom-of-Information-Policy-and-Procedure.pdf*, not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

STV Incorporated
(Company)

(Signature)

Steven J. Pressler

Executive Vice President
(Title)

October 18, 2010
(Date)

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DO NOT RETYPE.

B. Attachment C

ATTACHMENT C

COMPANY PROFILE

REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

1. Company Name (print or type):

   STV Incorporated

2. Business Address (to receive mail for this RFP):

   225 Park Avenue South

   New York, New York 10003-1604

3. Business Telephone Number: (212) 777-4400

4. Business Fax Number: (212) 529-5237

5. Firm website: www.stvinc.com

6. Federal Employer Identification Number (EIN): [redacted]

7. Date (MM/DD/YYYY) Firm was Established: 05 / 12 / 1932 (Incorporated) 1912 (Established)

8. Name, Address and EIN of Affiliates or Subsidiaries (use a separate sheet if necessary):

   A complete list of affiliates and subsidiaries is provided in Section H.

9. Officer or Principal of Firm and Title:

   Steven J. Pressler, Executive Vice President

10. Name, telephone number, and email address of contact for questions:
    Steven J. Pressler, (212) 614-3319

    steven.pressler@stvinc.com

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? ☐ Yes ☒ No

    If yes, please attach **Port Authority** certification as a part of this profile.

    If your firm is an M/WBE not currently certified by the Authority, see the Authority's web site – http://www.panynj.gov/business-opportunities/supplier-diversity.html, to receive information and apply for certification.

C. Personnel

C. Personnel

STV understands that our role on this project will be to solely represent the needs and interests of the PANYNJ's Departments by acting as your representative through all stages of any project. The skills of our team enable us to anticipate the many technical, logistical, and administrative issues the project will pose and to develop and assess alternative solutions to address those issues effectively. STV brings not only the technical expertise necessary to provide these services but also a thorough knowledge and familiarity with the locality, both of which will be essential to make sure of the success of services provided under this call-in contract.

STV understands our role as Project Manager and Owner's Representative and will work to achieve the PANYNJ's goals for improving your infrastructure and facilities. Accordingly, the first step in making this project a success is retaining the services of a Project Management firm with unsurpassed local agency experience as well as PANYNJ knowledge and familiarity. The second step will be to have that Project Manager provide its insight and expertise to the PANYNJ so that the day-to-day issues associated with the call-in program are resolved quickly and efficiently.

STV's role is to become an integrated member of the PANYNJ's team—working as an extension of staff—providing resources and expertise in key areas, from project definition and problem solving, through construction and close-out. We will bring unique skills and experience to the PANYNJ's project management efforts, as well as the additional resources you may need. We will work side-by-side with your in-house staff—in a seamless organization. We firmly believe in the philosophy that all team members "wear the same hard hat," whether they are employees of the PANYNJ or STV. STV will be proactive in its approach to providing the PANYNJ with Project Management/Owner Representative Services. For this program, we have developed an approach based on our expertise with PANYNJ facilities and on-call projects. This approach has worked on other complex assignments and we are confident it will allow us to meet and/or exceed the PANYNJ's expectations.

STV has chosen **David Frank, P.E.** to serve as **Project Director**. Mr. Frank is a Senior Associate at STV and the Deputy Project Executive at the World Trade Center (WTC) Site on the National September 11th Memorial and Museum project, currently serving the PANYNJ as an owner's project manager. He brings over 20 years of experience to this assignment and has both in-depth and broad experience working on stations, terminals, airports, and roadways from the vantage point of a contractor, project manager, and public sector owner. Through his involvement with the WTC site reconstruction, he has become familiar with the existing stakeholders involved in all of the WTC projects, and has become fully versed in PANYNJ policies, procedures, quality assurance requirements, and the specific security requirements of the site.

Our hand-picked team of professionals, working under the direction of Mr. Frank**,** have many years of experience, significant public sector experience, and all have experience in iinfrastructure design and construction work. In addition, most have worked in transportation-related facilities, ports and terminals, and other PANYNJ facilities. As the organization chart on the following page indicates, this team has a diversity of expertise in all necessary disciplines available under one roof within the New York metropolitan area.

Finally, many of STV's professionals have experience working in different roles within the industry—many have been owners or contractors in past points in their careers. This provides the PANYNJ with professionals that have a better understanding of the motivations and needs of project stakeholders as a project moves forward, resulting in a team that can forge the necessary relationships more efficiently and productively to deliver projects right the first time.

Resumes & Project Experience

Resumes of key personnel follow the organization chart and project experience matrix.

THE PORT AUTHORITY OF NY & NJ

Principal-in-Charge
S. Pressler, PE*

Project Director
D. Frank, PE*

QA/QC
D. Cooksley*

Task Leader Aviation
T. Kleiner, AIA*

Task Leader Tunnels, Bridges & Terminals
L. Brasacchio, PE*

Task Leader Port Commerce
T. Hatab, PE (Metron)*

Task Leader WTC
D. Frank, PE*

Task Leader PATH
D. Augustine, AIA, LEED®AP*

Program & Project Initiation, Implementation, Monitoring & Reporting Services

Project Executives
B. Fox*
G. Maimis*
C. Ludlow*
D. Nazzaro*
G. Koerner*
R. Davidson, FAIA*

Senior Project Managers
J. Anserian, PE*
A. Basta, PE, CCM*
M. El Wakil, RA (Metron)*
D. Dillon, PE*
C. Kneaves, PE*
J. Valerio*
J. Cenzoprano
M. Colban, RA
J. Hauser

Project Managers
T. Gardner*
T. Savas*
A. Robson (Metron)*
S. Manii*
A. Overholser, PE*
M. Joye, PE (JEC)*
S. Figueroa*
R. Durante (SCI)*
J. Cohen, PE (SCI)*
T. Abed*
K. Patel (SCI)*

MEP Project Managers
C. Mohacsi*
R. Dries*

Resident Engineers
S. Prest, PE*
R. Rajapaske, PE, CCM, CCE, AVS*
E. Marra,Jr. PE*

Superintendents
R. DePaoli*
R. Stalcoskie*
V. Ruggiero*
M. Seelig*
J. Graves*
A. Calderon
K. Falowski
S. Hilal
G. Blutner
K. Baumgarten

Inspectors
T. Motyka*
K. Gaspar, PE (JEC)*
G. Saninocencio
M. Maiorano
Y. Portman
Z. Saliby
P. Jarmak
A. Ranginwala
G. Sumner (SCI)

Safety Specialist
G. Garbarino

Project Engineers
M. McDonald*
K. McPherson (JEC)*
J. Tookmanian, CMIT*
M. Verhagen*
R. Kelly*
L. Porcelli
M. Nguyen
A. Gaddi
S. Constaninou
R. Krause
S. Dreher

Project Controls & Support

Estimating
K. Baldivia*
A. Chancy (DACK)*
R. Aviles, PE
M. Finkelstein
V. Tornatore
R. Holder (DACK)

Senior Risk Assessor/Value Engineer
D. Kirk, AIA, CCC, CCS, CVS, LEED®AP*

FTA Funding Specialist
W. King*

Scheduling
A. Boyajian*
A. Sehic*
R. Quickel
E. Christodoulou
S. Janjua

Document Control
Y. Dennis*
D. Abbate
N. Constantino
M. Rodriguez

Accounting
D. Ohrsell
M. Salvador
M. Chen

Clerical
F. Jordan
Y. Candelario
S. Garrison-Toye

Technical Support

Diving
D. Friend (Halcrow)
A. Austin (Halcrow)

Architectural
B. Jabbonsky, RA

Mechanical
C. Romano, PE

Fire Protection/Plumbing
L. Matlick, PE

Electrical
M. Friedman, PE, LEED®AP

Structural
J. Chen, PE

Site/Civil
D. Yue, PE

Coastal
C. Carr, PE (Halcrow)

Tunneling
S. Niemiec, PE (JEC)*

Legend:
DACK – DACK Consulting, LLC (WBE)
Halcrow – Halcrow, Inc
JEC – Jenny Engineering Corporation (MBE)
Metron – Metron Incorporated (MBE)
SCI – SCI Engineering, P.C. (MBE)

Key Personnel Experience Matrix

Job Title	Name	Years Experience	Licenses &/or Certifications	Safety Training	PANYNJ	NYC Public Sector	$50K-$100M	Aviation	Tunnels, Bridges & Terminals	Port Commerce	PATH	World Trade Center	Key Projects Managed	Project Management	Project Monitoring
Project Director	D. Frank, PE	20	PE	X	X	X	X	X	X	X	X	X	X	X	X
Task Manager - Aviation	T. Kleiner, AIA	38	AIA		X	X	X	X					X	X	X
Task Manager - Tunnels, Bridges & Terminals	L. Brasacchio, PE	31	PE	X		X	X		X				X	X	X
Task Manager - Port Commerce	T. Hatab, PE (Metron)	22	PE	X		X	X			X	X		X	X	X
Task Manager - WTC Site	D. Frank, PE	20	PE	X	X	X	X		X		X	X	X	X	X
Task Manager - PATH	D. Augustine, AIA, LEED® AP	38	AIA/LEED® AP	X	X	X	X		X		X	X	X	X	X
Principal-in-Change	S. Pressler	32		X		X	X	X	X	X			X	X	X
QA/QC	D. Cooksley	25		X		X	X						X	X	X
Project Executives	B. Fox, PE	30	PE		X	X	X				X	X	X	X	
	G. Maimis	25		X	X	X	X					X	X	X	
	C. Ludlow	30												X	
	D. Nazzaro	35		X		X	X		X					X	
	G. Koerner	32		X		X	X	X						X	X
	R. Davidson, FAIA	41	FAIA		X		X	X	X		X		X	X	X
Senior Project Managers	J. Anserian, PE, PMP	34	PE/PMP		X	X	X	X	X				X	X	
	A. Basta, PE, CCM	25	PE/CCM	X	X	X	X	X	X		X	X	X		
	M. El Wakil, RA (Metron)	30	RA			X	X		X					X	
	D. Dillon, PE	28	PE	X		X	X		X	X			X	X	X
	C. Kneaves, PE	15	PE	X	X	X	X				X	X		X	
	J. Valerio, LEED®AP	25	LEED® AP	X	X	X	X					X	X	X	
Project Managers	T. Gardner	8		X	X	X	X		X	X	X	X	X	X	
	T. Savas	25		X	X	X	X		X		X	X	X	X	
	A. Robson (Metron)	20		X		X	X		X	X			X	X	X
	S. Manii	20		X	X	X	X				X	X	X	X	
	A. Overholser, PE	17	PE	X	X	X	X		X						
	M. Joye, P.E. (JEC)	31	PE	X	X	X	X		X				X	X	X
	S. Figueroa	15		X	X	X	X				X	X		X	
	R. Durante (SCI)	23		X	X	X	X	X	X		X	X	X	X	X
	J. Cohen, PE (SCI)	53	PE		X		X	X	X		X		X	X	X
	K. Patel (SCI)	35			X	X	X	X	X		X		X	X	
	T. Abed	12	ACI	X	X	X	X	X							X
MEP Project Managers	C. Mohacsi	30		X	X	X	X	X			X	X	X	X	
	R. Dries	25		X	X	X	X				X	X	X	X	
Resident Engineer	S. Prest, PE	30	PE	X	X	X	X	X	X				X		
	R. Rajapaske, PE, CCM, CCE, AVS	15	PE/CCM/CCE/ AVS	X	X	X	X		X			X	X		X
	E. Marra, Jr., PE	30	PE	X		X	X		X						X
Superintendents	R. DePaoli	14		X		X	X								
	R. Stalcoskie	25		X		X	X						X		X
	V. Ruggiero	20		X	X	X									
	M. Seelig	20		X	X	X	X	X				X		X	X
	J. Graves	35		X	X	X	X	X							
Inspectors	T. Motyka	20	NICET IV	X		X	X		X						X
	K.Gaspar, PE (JEC)	13	PE	X	X	X	X		X		X	X	X	X	X
Project Engineers	M. McDonald	15			X	X	X				X	X	X		
	K. McPherson, (JEC)	17		X	X	X	X		X		X		X	X	X
	J. Tookmanian	8	LEED® AP	X			X		X					X	
	M. Verhagen	2		X	X	X	X					X	X		
	R. Kelly	5		X	X	X	X					X	X		
Estimators	K. Baldivia	12		X	X	X	X	X	X	X		X	X	X	
	A. Chancy (DACK)	27		X	X	X	X	X	X		X	X	X		
Senior Risk Assessor/Value Engineer	D. Kirk, AIA, CCC, CCS, CVS, LEED®AP	40	AIA/CCC/CCS		X	X	X	X	X	X			X	X	
FTA Funding Specialist	W. King	25	CVS/LEED® AP			X	X		X					X	
Schedulers	A. Boyajian, PE	52	PE		X	X	X	X	X	X	X	X			
	A. Sehic	11		X	X	X	X				X	X	X		
Document Control	Y. Dennis	42			X		X	X	X		X	X			
Tunnel Engineering	S. Niemiec, PE (JEC)	27	PE	X	X	X	X		X		X	X	X	X	X

D. Firm Experience

The Team

STV

STV Incorporated (STV) is a leading multidisciplinary construction management, engineering, architectural, planning, and environmental firm of over 1,700 personnel in 33 offices throughout North America, and a staff of more than 600 in New York City. STV Construction, Inc., located in New York City, was established in 1996 as a wholly-owned subsidiary of STV Incorporated.

STV has performed a variety of services for the Port Authority of NY & NJ (PANYNJ), some under on-call contracts, at the Port Authority Bus Terminal, One World Trade Center (WTC) (formerly named Freedom Tower) and the National September 11th Memorial and Museum, JFK Intermodal Airport, LaGuardia Airport, the Lincoln Tunnel, and the George Washington Bridge Bus Station, among others. Drawing on this experience and on many other completed PANYNJ transportation facility improvement projects, STV has become well-versed in the PANYNJ organization of client departments and their relationship to the engineering department and its various divisions; PANYNJ procedures and regulations; and the overall PANYNJ organizational structure.

STV is noted for providing flexible, focused project management and technical services that our clients depend on time and again. With resources of over 160 local project management professionals, The firm is currently managing projects with construction costs ranging from $50,000 to $2.5 billion. STV provides the flexibility to serve as the CM, CM/builder, or Owner's Representative offering in-house technical skills in cost estimating, scheduling, risk analysis, and value engineering.

STV's Project Controls Department provides all of STV and its clients with the specialized tools and expertise needed to successfully manage projects. Incorporating the guidance of recognized industry standards and practices with our in-house staff of professional estimators, cost engineers, risk assessment managers, and value engineering professionals, and utilizing the latest advancements in software and related technology, this department supports our project managers and project-specific control staff in developing and monitoring cost and schedule data, resource allocation methodologies, risk assessments, value engineering, and related reviews. The department also offers assistance in the utilization of documents and project data control formats such as Expedition or Prolog.

Subconsultants

We have chosen the following subconsultants based on a successful working relationship with STV and our staff members in the past while considering our commitment to utilizing M/WBE firms where possible. We will provide PANYNJ with a seamlessly integrated project team, resulting in a coherently organized and efficient final product. A brief profile of each of these team members follows.

SCI Engineering, P.C. (MBE)

SCI Engineering, P.C. (SCI) offers comprehensive engineering services and construction management services that include bridge engineering, construction inspection, highway, traffic, and transportation engineering, green energy management, intelligent transportation systems (ITS), project control solutions, and construction management. Founded in 1981, SCI has built a formidable public sector market client base that includes federal, state, county, and local government agencies.

SCI's multidisciplinary engineering professionals bring experience to the team in the areas of civil, electrical, mechanical, and structural engineering. SCI's construction management team consists of experienced professionals who are trained in a variety of disciplines allowing them to provide preconstruction services through master scheduling, cost estimating, constructability reviews and value engineering, as well as project management and inspection during the construction phases.

Jenny Engineering Corporation (MBE)

Jenny Engineering Corporation (JEC) is an internationally recognized consulting engineering firm specializing in the planning, design, and construction management of tunnels and underground structures. JEC has more than 45 years experience in design and construction phases of a project. JEC provides a full range of services as applied to feasibility studies, construction methods, design and cost estimates, the preparation of plans and specifications, construction management and contract administration for new structures and the rehabilitation of existing facilities.

For over 15 years, JEC has maintained an exceptional working relationship with PANYNJ on many projects and has performed condition surveys/inspections, rehabilitation, design, and construction engineering services on many of the major tunnels in the New York metropolitan area including the Lincoln, Holland, and PATH Tunnels. Other services provided include the WTC Transportation Hub project where JEC was responsible for the structural design of various foundation elements and earth support systems during construction, including 60-foot-high shear wall bracing, shoring for grade slab construction, retaining walls, temporary support of existing 78-foot-diameter sanitary sewer, and bracing of various north projection elements during demolition.

Metron Incorporated (MBE-Pending)

Founded in 1994, Metron Incorporated (formerly Madnet Corp) is a New York-based, small-sized firm specializing in construction, project management, resident engineering, and Owner's Representative services for high-end private and public sector commercial, transportation, sports facilities, and recreational projects. Management services provided are furnished during early design development and continue through completion of construction. A highly qualified team of architects, engineers, and construction professionals give Metron the reputation of being among the small and highly sought after construction management firms in New York City.

Metron's range of projects and clients includes the New York City Economic Development Corporation (NYCEDC) for which Metron provided Owner's representative and construction management services for the East River Bikeway, Stuyvesant Cove Waterfront project, and the Mets Minor League Stadium/Keyspan Park at Coney Island, the West Midtown Ferry Terminal, the Staten Island St George Ferry Terminal, the MTA's Rockaway Park Police Headquarters Station, and the Randall's island Sports Fields Development project

DACK Consulting, LLC (WBE)

Established in 1997, DACK Consulting (DACK) provides estimating, scheduling, and project management services to agencies, municipalities, developers, construction managers, general contractors, and architects for governmental, institutional, commercial, industrial, and residential projects. DACK has provided estimating and construction services for projects such as the Bronx Criminal Courthouse Renovation, World Trade Center HUB, NYCHA Change Order Evaluation, Westchester County Courthouse, and Battery Park Site #3.

Halcrow, Inc.

Halcrow was founded more than 140 years ago and is now a global multidisciplined engineering firm with more than 500 staff in 24 offices in North America. In the 2010 rankings of port/marine engineering firms by *Engineering News-Record,* Halcrow is ranked as the fifth largest in the United States. Halcrow has carried out more waterfront projects than any other consulting engineering firm in the New York region.

Halcrow is known for providing cutting-edge designs and services for projects in the marine environment and has a long history of working in New York City with government agencies, architects, developers, corporations and contractors. Halcrow's projects vary from rehabilitation, repair, or upgrade of existing facilities, to brownfield and greenfield developments and new facilities.

Halcrow works with all of the Authority's line departments and divisions and currently holds "call-in" contracts for the design of waterfront structures, the inspection of waterfront structures, port planning, and asset management, and is currently undertaking the Runway Safety Areas Improvement Analysis at LaGuardia Airport, the New York Regional Goods

Movement Plan, and the Interagency Study of Regional Private Passenger Ferry Services in the New York Metropolitan Area.

Project Experience

The STV team is extremely well qualified for this important PANYNJ Project Management Services Call-In contract. We combine extensive experience and leadership in owner's representative projects, a history working on similar facilities, and past relationships with PANYNJ. A matrix is included at the end of the section comparing team experience to PANYNJ needs.

One World Trade Center & National September 11th Memorial and Museum Program Management

New York, NY [2006 - Ongoing]

Client: *PANYNJ*
Reference: *Steven Plate, Director, World Trade Center Construction, (212) 435-5529*

- Repeat client
- Complex project stakeholder

STV is the expert program manager and owner's representative for the construction of the tower at One World Trade Center and the National September 11th Memorial and Museum in Lower Manhattan, NY. One World Trade Center comprises more than 3.6 million gross sf, some 2.6 million sf of which will be available for office space, restaurants, an observation deck, and broadcast facilities. The building will also house below-grade shopping, access to the PATH transit system, and the World Financial Center (WFC).

As the program manager and owner's representative since August 2006, STV's team has been supporting the PANYNJ's mission to construct the building on time, on budget, and with high quality. One World Trade Center encompasses a sophisticated array of sustainable design elements, a unique curtainwall system, and advanced building control systems.

$85 M IN PACCS SAVINGS

STV's careful review and negotiation of PACCS has generated a savings of over $85 million to the PANYNJ, over 55% of the original value of the PACCs' submitted.

Complementing the Memorial, a state-of-the-art museum will offer visitors an opportunity to deepen their experience of the site.

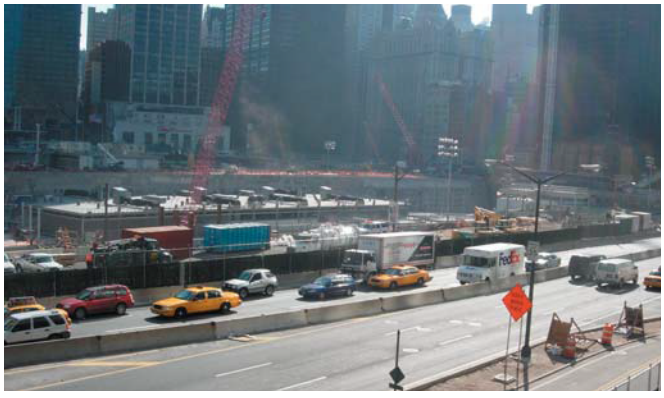
Route 9A Construction Management

New York, NY [2004 - Ongoing]

Client: *NYSDOT*
Reference: *Joseph Brown, Project Director* [redacted]

- Repeat client
- Program management
- Construction in operating environment
- Complex agency coordination

After being damaged by the September 11th attacks, Route 9A (West Street), a major artery in Lower Manhattan, was reopened in March, 2002 with temporary facilities. STV, in joint venture, is serving as CM for this complex project to restore Route 9A's traffic capacity, reconstruct the utility infrastructure, and improve pedestrian circulation. Temporary



bridges across West Street are being replaced by wide, architecturally delineated, at-grade crossings; a new underground pedestrian concourse will provide Battery Park City residents and workers with a safe means to cross West Street; and an appealing tree-lined pedestrian promenade will connect to Hudson River Park.

STV's wide-ranging responsibilities include implementing complex traffic management strategies during roadway realignment, reviewing erection plans for pedestrian bridges, and designing a temporary traffic surveillance system. When construction of Route 9A from West Thames to Chambers Street required work at the frontage of the WTC Memorial, the WFC, and several new high rise office buildings concurrently under construction, STV coordinated with agencies, developers, and their contractors. Executing complex traffic and construction access strategies and strict adherence to schedule commitments have been critical throughout the project.

Amtrak East and North River Tunnel Fire Standpipe Installation CM

New York, NY [2002 - 2005]

Client: *Amtrak*
Reference: Stephen Riley, Project Manager
[redacted]

- Repeat client

Fire suppression capabilities in Amtrak's century old, 16-mile tunnel system under the New York City region were lacking. In response, STV, in joint venture, provided CM services during the installation of dry fire standpipes in 72,500 feet of the East and North River tunnels. The new dry fire standpipes, served by fire department connections on shore, extend into the tunnels from both ends. New risers and connections were constructed as needed. In addition, 2,500-feet of old standpipe was removed to complete the rehabilitation of the East River Tunnel's ventilation systems. Because of STV's successful performance on this assignment, the firm was awarded the second phase of this contract.

To maintain weekday service in the three tunnels, work was performed during 55-hour weekend shifts. STV made sure that work areas were ready for construction at the beginning of each shift and that Amtrak service could resume at the end of each shift. The firm is currently managing Phases III and IV, of this project; a $22.5 million effort to add deluge valve and air monitoring systems, along with several mechanical equipment rooms to the existing fire standpipe systems.

Newark Light Rail Broad Street Extension CM

Newark, NJ [2002 - 2007]

Client: *NJ TRANSIT*
Reference: Joseph Marcello, Project Manager
[redacted]

- Construction adjacent to heavy congestion
- Rail coordination
- Complex agency coordination

The 1.5-mile link from Broad Street to Newark Penn Station is the first of three planned additions on the Newark City Subway Line, which will eventually extend to Newark Airport. STV, in joint venture, provided program and construction management services for the $120 million extension. The project entailed utility relocations, open-cut tunnel construction, street reconstruction, and coordination of the new line with the current transit system. To minimize disruption to vehicular traffic, STV worked nights and weekends and helped the City and the police department design traffic detours. Thorough review of the range of motion for equipment, types of barricades to be used, and flagging requirements prior to commencement of any work, resulted in the project's exemplary safety record.

STV made every effort to bring the efficiency and low operations and maintenance costs of the current system to the expanded network. In 2008, the American Council of Engineering Companies of New York awarded STV the Platinum Award for Engineering Excellence in Transportation for the project.

Federal Transit Administration Project Management Oversight

New York, NY [2004 - Ongoing]

Client: *FTA*
Reference: Steve Asatoorian, Director, PMO [redacted]

For more than 20 years, STV has been responsible for providing expert consultant services to the Federal Transit Administration (FTA) for new transit investments throughout the U.S. Key assignments have ranged in scope from the analysis and feasibility of new transit lines, to the oversight of new multi-million dollar transit systems serving major U.S. cities.

Working directly with the FTA, STV has been involved in evaluating the ability of various transportation agencies to carry out specific FTA-funded capital projects, including New Starts and Small Starts; determining how well the Grantee is following its own Project Management Plan; and generally monitoring the procedures, processes and activities to ensure that the overall programs result in timely, quality products delivered within budget.

STV has performed Project Management Oversight (PMO) services for a number of FTA initiatives, including the following:

- Salt Lake City LRT - $209 million construction
- Downtown Seattle Transit Project - $2.4 billion construction
- San Francisco Muni Metro Turnaround Facility - $160 million construction
- San Francisco Bay Area Rapid Transit Capital Projects - $2.2 billion construction
- Denver-RTD/CDOT Capital Program - $1.7 billion construction
- New Orleans St. Charles and Riverfront Streetcar Line Rehabilitations - $51.8 million construction

CM/Builder Call-in Requirements Contract

New York, NY [2005 - Ongoing]

Client: *NYCHA*
Reference: Douglas McNevin, Program Director- Bronx/ Queens Program Unit, [redacted]

- Repeat client
- Construction in operating environment

The New York City Housing Authority (NYCHA) provides affordable low- and moderate-income housing for residents throughout New York City. STV is serving as CM on a task-order basis for NYCHA as part of a CM/builder requirements contract. The firm provided pre-construction, CPM scheduling, cost estimating, claims analysis, and change order preparation services for various roofing, brickwork repairs, concrete structural rehabilitation, and interior modification projects. In addition, STV provided pre-qualification, project management, and procurement services.

Under this on-call contract, the firm managed the $41.5 million renovation of the Johnson Houses, which

was completed six months ahead of schedule and approximately $3 million under budget, and is currently managing renovations to six additional buildings in the complex. STV also managed $9.8 million exterior renovations at Surfside Gardens, in Brooklyn; a $7.3 million renovation of five buildings in the Bronx, NY; and the $10 million rehabilitation of five buildings at the Washington Heights housing development in Manhattan.

Because of STV's performance under the contract, the firm was awarded an additional $150 million worth of construction to manage.

Roslyn Viaduct Construction Monitoring

Roslyn, Nassau County, NY [2005 - 2009]

Client: *NYSDOT*
Reference: Charles Maas, Engineer-in-Charge
[redacted]

- Repeat client
- Significant construction staging

STV, in joint venture provided resident engineering and inspection (REI) services during construction of the $133 million Roslyn Viaduct carrying Route 25A over Hempstead Harbor. The, 4-lane, 0.5-mile structure features twin segmental precast concrete viaducts on bored-in piles. After staged demolition of the existing steel viaduct, approaches were re-profiled and realigned to improve highway geometry. Access to a local shopping district surrounding the structure had to be maintained during construction. Facing a restrictive construction footprint and an aggressive schedule, STV implemented several measures to minimize construction congestion; oversaw installation of intelligent transportation system (ITS) infrastructure; completed required field inspections and testing; and prepared progress payments. In addition, STV developed a proactive inspection and maintenance manual intended to help regional maintenance personnel manage defects before they lead to roadway closures. The manual identifies trouble-prone areas and links repairs for typical problems to a tabulated level of severity. A first for the region, the manual has allowed in-house staff to function without external assistance.

WTC Transportation Hub

New York, NY [2003 - Ongoing]

Client: *PANYNJ*
Reference: Steven Plate, Director, World Trade Center Construction, (212) 435-5529

- Complex security
- Operating environment
- Complex agency coordination

The WTC Transportation Hub is an integral part of the reconstruction of the WTC site. STV, in joint venture, is providing engineering design services and serving as Architect-of-Record for the Hub, which will house a permanent Port Authority Trans-Hudson (PATH) terminal, connect to 13 subway lines, and link pedestrians to the World Financial Center (WFC) and its ferries through an underground concourse.

STV used a variety of computer simulation programs during the design process. Pedestrian flow was modeled to minimize queuing at stairs and escalators during rush hours. Complex roof mechanisms required to open and close the steel wings on September 11th, in memory of the attacks, are being simulated. The firm is also using Computational Fluid Dynamics (CFD) modeling to make sure smoke and heat do not impede the evacuation of the facility during an emergency.

As a high-profile facility, security considerations for the WTC Transportation Hub—not only in the design, but in the management of the project—are paramount. STV has worked with the PANYNJ to develop a handbook for proper document control and tracking.

Lincoln Center Projects Program Management

New York, NY [2008 - 2010]

Client: *NYCEDC*
Reference: Corinna Cole, Senior Project Manager
[redacted]

- Federal funding
- Repeat client
- Construction in operating environment
- Complex agency coordination

A triumph of city planning in the 1950s, Manhattan's aging 16-acre Lincoln Center campus is undergoing a massive renovation and upgrade. The design for total transformation of Lincoln Center's primary entryways and access points — known as the "Promenade Project, calls for sinking the existing service road leading up to the plaza to below street level and expanding the current monumental steps to the plaza.

STV, in joint venture, is serving as the Funding Agency's Representative, monitoring the expenditure of $240 million of city and federal funding to expand and modernize facilities. The firm has recommended several ways to improve contractor performance, such as the implementation of a contractor's schedule of values to avoid front loading of vendor requisitions. In addition, Lincoln Center's adoption of an STV-developed structured format for all design changes and agreement to enlist the services of an independent estimating firm, helped streamline the change order process. With respect to funding applications, STV designed a format, adopted by Lincoln Center, to account for multiple levels of detail, including vendor payments, sources of public funding, and segregation of non-eligible costs. The firm is currently overseeing transformation of the West 65th Street corridor into a more pedestrian-oriented thoroughfare.

East Side Access

Manhattan and Queens, NY [1999 - Ongoing]

Client: *MTACC/LIRR*
Reference: Alan Paskoff, Program Manager
[redacted]

- Complex agency coordination

The $7.2 billion East Side Access (ESA) project will ease congestion at Penn Station by bringing LIRR service to Grand Central Station, in Manhattan STV was involved in all of the prior planning studies for this project, which involves construction of new soft-ground tunnels in Queens, new hard-rock tunnels, rehabilitation of the existing 63rd Street tunnel, multiple crossovers, as well as access, emergency egress, and ventilation tunnels. To determine the design criteria, the firm undertook the largest geotechnical site investigation and characterization at the time in New York City, employing such innovative approaches as in-situ stress measurement and borehole core orientation.

STV's services include conceptual through final design, including construction staging and noise mitigation plans, for a variety of structures to accommodate the new alignment of the main line tracks in Queens. STV also developed the conceptual design for the new line's signal, communications, and traction power systems. For the tunnel's terminus in Grand Central Terminal, STV developed conceptual designs for train platforms, cross-passageways, and entranceways, with consideration given to the intermodal requirements of the terminal, which presently serves Metro-North and New York City Transit (NYCT) subway lines.

JFK AirTrain Project Controls

New York, NY [1998 - 2004]

Client: *PANYNJ*

Reference: *Steven Plate, Director, World Trade Center Construction, (212) 435-5529*

- Managing more than 20 subconsultants
- Coordination with multiple agency stakeholders
- On-time project delivery

To link remote parking, car rental services, and commuter rail, subway and bus systems that service the New York metropolitan area, the PANYNJ commissioned the design-build of a $1.3 billion light rail transit (LRT) system to serve the central terminal area of John F. Kennedy International Airport. The project features an innovative elevated track structure, 10 award-winning stations, and a sophisticated operations, maintenance, and storage facility (OMSF). STV developed a state-of-the-art, performance-based design approach to meet the stringent design criteria required by the client,

To manage a project of this scope, STV established three groups of management teams; section design, technical resources, and project controls. Committed to the effective administration of more than 20 subconsultants working on the project, STV instituted a program to identify each subconsultant's role and scope of work; establish budgets; and manage the fast-track negotiation of all contracts for the Project Controls Group. The firm used a combination of industry-standard software and sophisticated in-house systems to manage the project controls of this massive program. Expedition software was used for overall project management; Primavera software for master scheduling; and in-house systems with full Expedition interface capabilities for document control, configuration management, contract administration, and financial reporting. The software was used to manage extensive project data, the firm scheduled the release of more than 217 design packages to correspond with the construction schedule.

Innovative resource and cost-loading analysis techniques enabled the firm to allocate budgets and resources (including all professional and support personnel) efficiently. Related to this was the firm's management of all contract deliverables, verifying their proper submission to and approval by the client. With STV's aggressive subconsultant progress and budget tracking, quick resolution of all claims for additional services, and timely approval and payment of all submitted invoices, the project was completed on schedule and within the approved budget.

Willis Avenue Bridge Reconstruction Resident Engineering and Inspection

New York, NY [2007 - 2011]

Client: *NYCDOT*

Reference: *Robert Collyer, P.E., (Deputy Director, Movable Bridges)*

- Complex agency coordination
- Construction adjacent to operating environment

As part of a joint venture, STV is providing resident engineering and inspection (REI) services for the replacement of the Willis Avenue Bridge over the Harlem River in Manhattan with a new, 11-span structure consisting of a composite reinforced concrete deck, concrete barriers, steel-rolled sections, steel-welded girders, and transverse steel box girders. The project includes reconstruction of the bridge's interchanges; construction of a new connector ramp bridge to the northbound Major Deegan Expressway; and replacement of a 2-span bridge over the Major Deegan Expressway with a 4-span, 400-foot-long, continuous curved girder bridge. The waterway spans of the swing-span bridge over the Harlem River, Bronx approach spans, and approach ramps will be demolished.

With an emphasis on foundations, substructures, and superstructures of the fixed spans and approaches, STV will also oversee mechanical and electrical inspection of the movable span. STV has direct re-

sponsibility for CPM scheduling, geotechnical and environmental engineering, and architectural elements during the demolition and reconstruction of the bridges; providing qualified inspectors with expertise on the fabrication and installation of components for heavy movable bridges and other related structures. The firm performs visual quality, tolerance, compatibility, and functionality inspections of the bridge components.

Emergency Project and Construction Management Services Program

New York, NY [2005 - 2008]

Client: *NYCSCA*

Reference: Mary Ann Motto, Manager of Operations - SCA Emergency Work, [redacted]

- Repeat client
- Construction in operating environment
- Call-in contract

STV was the construction manager (CM) throughout a $65.5 million Emergency On-Call Construction Management Program Contract for the NYCSCA. The projects varied from small interior room conversions and renovations to large reconstructions of school buildings. Under this program, STV held more than 36 master subcontractor agreements with on-call prequalified contractors, and executed and administered more than 115 task-order agreements over the life of the program. The most challenging aspect of these projects was maintaining a safe and secure work environment for the adjacent K-12 community. STV completed all assignments on or ahead of schedule, and met the quality and budget expectations of the NYCSCA.

STV's scope of services included design review, construction administration, procurement, and project management.

Cost Control for WTC Projects

New York, NY [2006 - Ongoing]

Client: *PANYNJ*

Reference: Steven Plate, Director, World Trade Center Construction, (212) 435-5529

- Cost controls for complex PANYNJ project
- Coordination with multiple contractors and stakeholders

On behalf of the Port Authority of New York and New Jersey (PANYNJ), STV is developing, implementing, and managing a cost engineering and cost estimating program to integrate and control costs among all projects composing the redevelopment of the 16-acre WTC site. The firm's services include comprehensive cost engineering reports and trend analyses, independent estimate evaluations, analysis of bids, and independent scheduling and logistics review.

Construction of this highly complex WTC redevelopment project has already begun within the logistically challenging project site. To assist PANYNJ in facilitating a guaranteed maximum price (GMP) and maintaining rigorous budgetary control, the leadership of STV's Project Controls department has been engaged to independently evaluate the cost of the entire project.

Through the course of this task, STV has chaired numerous reconciliation and negotiation meetings with the construction management team, independent cost consultants, and contractors, as well as actively participated in design meetings to clarify specific elements of the project that have the potential to escalate the cost.

Rehabilitation of St. George Ferry Terminal
Staten Island, NY [2001 - 2006]

Client: *NYCEDC*
Reference: Eve Michel, Assistant Deputy Manager, NYCHA, [redacted]

- Owner's Representative
- Monitored contractor and CM's performance
- Coordinated agency reviews

Public and private ferries, the Staten Island Railway, New York City Transit buses, and taxis converge at the St. George Ferry Terminal in Staten Island, NY. To provide a more welcoming experience for travelers, the terminal was converted into a state-of-the-art intermodal transportation facility. This $150 million renovation included a 20,000-sf addition of public space, infrastructure upgrades, replacement of the Terminal's piers, rehabilitation of the private ferry slip, and site improvements.

As Owner's Representative for the New York City Economic Development Corporation, Madnet helped manage this project from design kickoff through close-out. The firm coordinated the design process to make sure the New York City Department of Transportation's concerns were addressed. As the project progressed, Madnet assisted with selection of the construction manager and contractors, made sure that the requirements of various City agencies were met, and monitored the contractor's and construction manager's performance. This successful project has been commended by the New York City Arts commission for its innovative design.

Hudson River Park Marine Inspection, Design, and Construction Administration
New York, NY [Ongoing]

Client: *Hudson River Park Trust*
Reference: Marc Boddewyn, [redacted]

- Inspection & design of waterfront structures

The 5-mile Hudson River Park, under development by the Hudson River Park Trust (HRPT), will stretch along the Hudson River from Battery Park City to 59th Street, in Manhattan. When completed, the park will encompass over 550 acres of riverfront property and include thirteen pier structures.

Halcrow is performing inspection, engineering, design, and construction administration services for the marine structures throughout the full length of the park. Included in the scope of this work are condition surveys to monitor structures that are scheduled for replacement; inspection and rehabilitation design of structures that will remain in use by the park; inspection and design of demolition for structures that will be removed; and monitoring of pile fields for previously demolished piers. Structures to be inspected within the park include timber and steel pile supported piers, granite block seawalls, and timber pile fields.

On-Call Waterfront Facility Condition Surveys
New York, NY [1998 - Ongoing]

Client: *PANYNJ*
Reference: Barry Feldman, [redacted]

- PANYNJ On-Call Contract
- Waterfront Structures

Halcrow has worked with the Design Division of the PANYNJ continuously since 1998 under annual "Call-In" contracts to provide professional waterfront structural engineering services. This is the twelfth consecutive, annual, open-ended, multi-task contract that has been awarded to Halcrow by the PANYNJ's Quality Assurance Division. Under this contract, Halcrow performs above water and underwater condition surveys and prepares Condition Survey Reports for the specified waterfront installations. These reports outline the condition of the facilities at the time of inspection, identify deficiencies which may present a hazard to personnel or the environment, and include recommendations and cost estimates for correcting such deficiencies.

In many cases, the inspection projects have continued to the design stage and Halcrow has designed repairs to piers, wharves, bulkheads, buildings, bridges, bridge pier protection, and other miscellaneous structures. Some notable assignments include: design of bridge pier protection cell replacement for Outerbridge Crossing; upgrade of Howland Hook Container Terminal; inspection/evaluation of the 230,000 sf Brooklyn Pier 12 and adjacent 700-foot seawall; and inspection/evaluation of the relieving platform-type seawall that constitutes the wharf for 57 ship berths at Port Elizabeth and Port Newark.

How the STV Team Experience meets PANYNJ Needs

Project Name	PROJECT SIZE		NY local Public Sector	SERVICES PROVIDED						PROJECT TYPE					
	Project Value $50,000-$100 million	Project Value greater than $100M		Pre-construction/ Design Management	Construction Completion/ Monitoring	Project Controls - Cost & Schedule Management	Document Control	Program Level Management	Program Management Support	Public Transportation	Major Facilities/ Infrastructure	Marine	Aviation	Tunnels, Bridges / Terminals	Rail Facilities
One World Trade Center		X	X	X	X	X	X	X	X		X				
National September 11th Memorial & Museum		X	X	X	X	X	X	X	X		X				
Route 9A Program & Construction Management		X	X	X	X	X	X	X	X	X	X			X	
Amtrak East & North River Tunnel Fire Standpipe Installation	X		X	X	X	X	X			X	X			X	X
Newark Light Rail Broad Street Extension		X	X	X	X	X	X			X	X			X	X
FTA PMO		X		X	X	X		X	X	X	X			X	X
NY CHA CM/Build Requirements Contract	X		X	X	X	X	X	X			X				
Roslyn Viaduct		X	X		X	X	X			X	X			X	
WTC Transportation HUB		X	X	X		X	X			X	X			X	X
Lincoln Center Program Management		X	X	X	X	X		X	X	X	X				
East Side Access		X	X			X	X		X	X	X			X	X
JFK Airtrain		X	X			X	X		X	X	X		X	X	X
Willis Avenue Bridge Replacement		X	X		X	X	X			X	X			X	
SCA Emergency Call In Contract	X		X	X	X	X	X	X	X		X				
Cost Control for WTC Projects		X	X			X				X	X				X

E. Management Approach

Project Understanding

This consultant services contract involves the performance of project management and related project/program and support services for the Port Authority's Project Management Department (PMD) on an "as needed" basis for various projects and/or programs at the Authority's facilities. These "call-in" services will be provided for projects/programs relating to the Authority's Aviation; Tunnels, Bridges and Terminals (TB&T); Port Commerce, PATH; World Trade Center, Economic; and Security line businesses, and will be performed during calendar years 2007-2010.

We understand that these services will be predominately performed at the Authority's facilities within the Port District but may, in some instances, be performed at the consultant's offices. Progress and projects will consist of various types, sizes, and complexities ranging in value from approximately $50,000 to $100 million. Under authorized task orders issued by the Port Authority for assignment of professional staff on an individual project manager or team basis, the required services will include responsibility for managing the following engineering and business activities, from conceptual and preliminary (Stage I & II) design through contract preparation (Stage III) and construction (Stage IV) completion:

- *Establishment of Project Management Plans*, including staff resource planning; design procurement documents (RFQs/RFPs); project controls (scope, schedule, budget); and presentation/reports.
- *Program Level Management Services*, including implementation; staff requirements; scheduling; budgeting; administrative oversight and evaluation/recommendation of M/WBE goals.

STV will implement proven operating procedures with which we can manage a multitude of small or large task assignments simultaneously. We have demonstrated this capability on numerous call-in contracts in the past for such clients as:

- Port Authority of New York and New Jersey
- New Jersey Transit
- New York City Transit
- Metro-North Railroad
- Long Island Rail Road
- NYC Department of Transportation
- NYC Economic Development Corporation
- NYC Department of Design and Construction
- NYC School Construction Authority
- NYC Department of Citywide Administrative Services
- US Army Corps of Engineers
- US Postal Service

Currently, a major segment of STV's work consists of call-in assignments under requirements and general engineering consultant contracts; accordingly, we have developed specific methodologies for work of this type. As an experienced call-in consultant for local public agencies, STV recognizes that there is no such thing as a "minor" task; all tasks—no matter how large or small—play a significant part in the daily operation of public facilities. We pride ourselves on our ability to mobilize our resources quickly and address all bridge, tunnel, and site issues successfully.

Key Issues

STV recognizes that, in order to meet the Port Authority's goals, the following key issues must be addressed as expeditiously as possible.

- *Augmenting the Port Authority's staff, increasing the Port Authority's reach and ability to meet its schedules:* STV has made available a team of senior level managers and project managers, from its New York and New Jersey offices, ready for immediate assignment to the Port Authority. These individuals will be selected based on their PM experienced and trade discipline background, in response to the Authority's task requests, and upon PA acceptance will receive orientation and

training from the Project Director and his senior PM staff prior to their assignment.

- *Handling a diverse range of projects, providing the range of services needed to meet the needs of six different lines of business:* Our Project Managers possess a wide range of technical backgrounds. Complementing these skills, those individuals also have extensive experience in managing the non-technical, programmatic and business elements of successful projects, dealing with both internal and external interfaces. These responsibilities, for both public and private clients, relate to transportation and building facilities, over the entire spectrum of the Port Authority's regional mission. Given the recent re-organization of the Port's project management functions in establishing the Project Management Department, STV's broad range of project management abilities become even more beneficial.
- *Handle Multiple Projects Simultaneously, freeing the Port Authority from the administrative burden of managing more than one consultant:* STV has formed a team of Senior Project Managers and Project Managers, with the necessary administrative, managerial and supervisory skills, to handle and track multiple involving projects simultaneously, involving different consultants and multidisciplinary trades. In order to accomplish this most efficiently, and to deliver the quality of deliverable that is expected, these individuals must have the experience working in dynamic professional environments, be proficient in the most recent engineering management systems, and be able to lead teams of diverse architectural/engineering functional staff. Our proposed project managers possess those qualities and will be supported if requested, with experienced project management control systems, provided by both STV and its M/WBE subconsultants.

An alternate approach to handling multiple projects is to set up a complete project team, led by an STV Senior Project Manager, and compromised of several STV assigned project managers, to manage a number of projects of similar type, program or Port facility. Under this arrangement, the STV "squad" would report to a PMD Program Manager, and could be located either in Port facility or STV New York or New Jersey offices.

- *Complying with Port Authority Policies and Procedures, eliminating the need for the Port Authority to adjust to different management styles:* As previously stated, it is the intent of STV to assign Project Managers who, through prior Port Authority employment or experience, and for orientation by our Project Director, Jerry Dinkels, and his senior project management staff, are familiar with the Port Authority's capital authorization process; reporting structure; management style; policies and procedures; quality standards and work ethic. It is essential that these individuals are able to perform their assigned duties in an efficient, professional and competent manner, under the direction of the Port Authority and to the satisfaction of their PA supervisor.

The PANYNJ must have absolute confidence in the managerial and technical talent of its call-in consultants. The team must have the depth and breadth of resources to respond to any request for service, a clearly predefined and field-tested management plan, and strong management capabilities to keep all project activities on track.

Our Project Director will work with our Task Leaders to direct and coordinate the project teams and monitor progress.

A call-in contract differs from a standard construction program in that the consultant needs to react quickly to the PANYNJ's specific request for services, and be able to be responsive to the widely varying needs and concerns that arise. Therefore, the program must be managed and staffed by seasoned personnel who are experienced with PANYNJ standards and operations. Project work will often be performed in a condensed time period and a project learning curve will be virtually nonexistent. Work may include the provision of a wide variety of project management and technical support professionals on projects ranging in value from $50,000 to $100 million. These services may be performed for any of the PANYNJ's 32 potential locations with a particular emphasis on five lines of businesses: aviation; tunnels, bridges & terminals; port commerce; PATH, and the World Trade Center site.

The Team

The team on this assignment is led by STV's highly seasoned professionals, all with experience serving the Authority and with expertise in each of the five lines of businesses identified above. This team is also complemented by handpicked subconsultants with specific PANYNJ expertise relevant to the lines of business this contract is meant to serve.

Management Structure

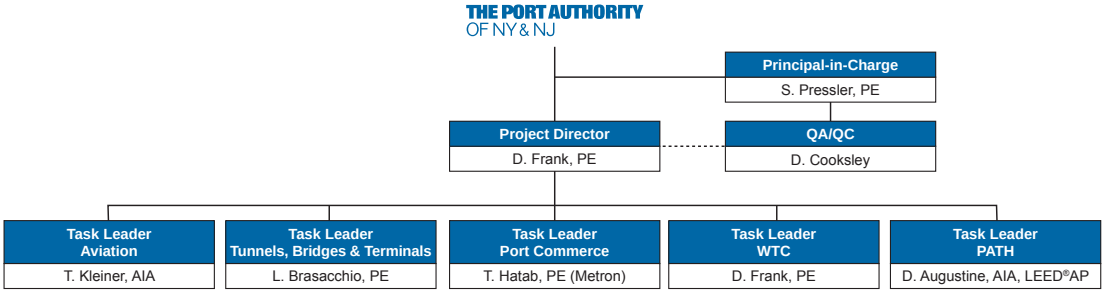
STV has developed a proven approach to manage call-in contracts for task services. This approach is based on STV's experience working with many different programs and agencies. Our management approach is geared toward rapid response to task proposals, assignment of the correct staff, and project execution through adherence to a management plan and work plan drafted specifically for each assignment and geared to understand and represent the best interests of the lines of businesses for which this contract may be utilized. In addition, this structure incorporates a total quality approach to the provision of our services, such that the senior level leaders are active participants in the Quality Assurance/Quality Control (QA/QC) plan for the contract. (See Task Leadership Organization below)

Management Plan

Successful project execution depends on planning and communication, in addition to sound management and engineering principles and practices. In conformance with PANYNJ's Quality Assurance Division, our management plan has been specifically developed for successful completion of the tasks using the best owner representative professional for each specific assignment. The objectives of our management approach are to:

- Allocate necessary resources in a timely manner and secure on-time task completion
- Define all project goals and work towards those goals on the PANYNJ's behalf at all times
- Satisfy task technical requirements
- Comply with budgetary limits and invoicing requirements
- Comply with PANYNJ and STV quality standards
- Monitor construction management and/or contractor enforcement of safety regulations
- Communicate and report regularly to PANYNJ regarding key project issues

The team's management approach will provide the PANYNJ with effective and timely solutions



Task Leadership Organization

to whatever project requirements arise in any of the PANYNJ's lines of business. This will be accomplished by appropriate technical specialists who have a thorough understanding of the tasks required, working under experienced task managers and project leaders and the team's Project Director, David Frank, P.E. Mr. Frank is a Senior Associate at STV and the Deputy Project Executive at the WTC site on the National September 11th Memorial and Museum project, currently serving the PANYNJ as an owner's project manager. He brings to this assignment over 20 years of experience and has both in-depth and broad experience working on stations, terminals, airports, and roadways, as a contractor, project manager, and public-sector owner. Through his involvement with the WTC site reconstruction, he has become familiar with the existing stakeholders involved in all of the WTC projects, and has become fully versed in PANYNJ policies, procedures, quality assurance requirements, and the specific security requirements of the site.

Supporting Mr. Frank will be a team of highly experienced task managers, all senior managers in the lines of business identified in this specific assignment.

Task Management

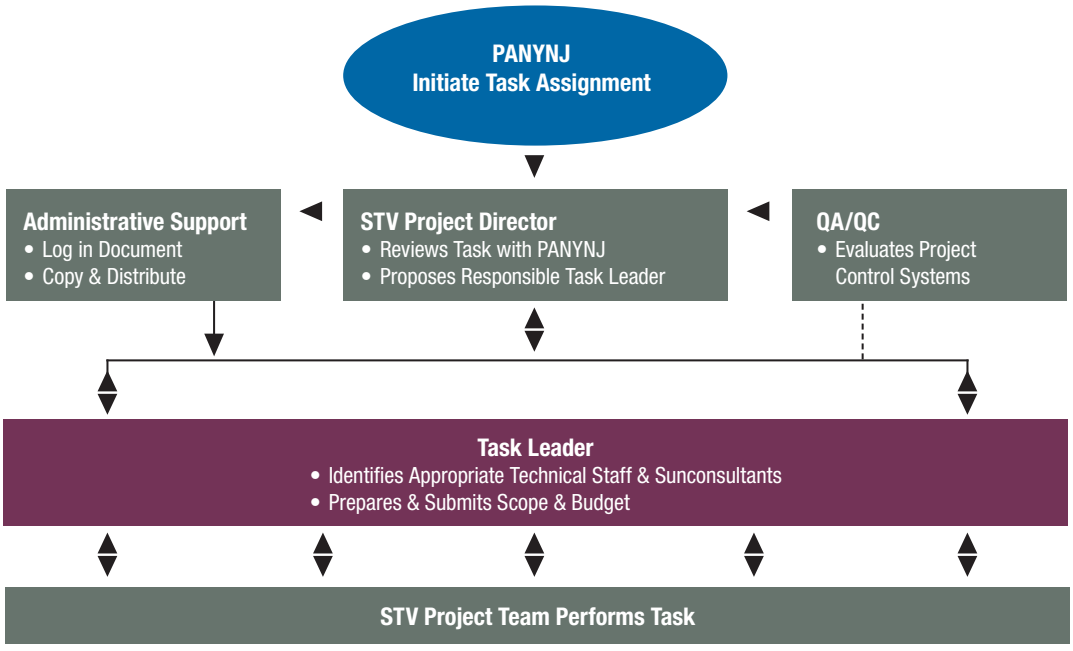
Upon receiving a task from the PANYNJ, Mr. Frank will assess and coordinate the assignment with the appropriate task manager and subconsultants, on this project and will begin the planning and scheduling activities and allocate the necessary owner representative and project professionals to effectively complete the task assigned as indicated in the Task Management Flow Chart below.

The following questions will be addressed:

- What is the work to be done?
- When is this work to be done?
- How much will the execution of the work cost?
- Who will perform the work?

Project Definition

Upon receiving a task assignment, the Task Manager will define the project's requirements and the methodology to be utilized during each task and activity. We recognize that particular assignments will vary in terms of complexity, duration and types of resources required.



Task Management Flow Chart

Project Staff Selection

We will select the appropriate staff from our large pool of qualified individuals. The project team members will be selected based on the following criteria:

- Their technical skills and expertise
- Their familiarity with the project issues involved
- Their availability at the time of the assignment

Managing Multiple Projects

We are aware that this contract will require managing multiple tasks simultaneously. The STV team offers the breadth and depth of staff resources to manage and execute multiple and diverse assignments concurrently. Our project management procedures and on-line communications capability facilitate the close coordination needed to manage multiple assignments effectively. Mr. Drygulski will receive weekly updates of work completed versus work planned for all project assignments, enabling him to maintain cost and schedule control, anticipate problems before they arise, and take corrective action when necessary. This management information will be compiled and sent to the PANYNJ as an indication of the staff loading and time spent versus work completed for each task order.

Work Plan

For this specific assignment, the work plan will directly correlate with the programmatic and/or project needs of the PANYNJ's line business and all project goals. Our professionals will work alongside the PANYNJ and fill the areas of expertise requested to accomplish the goals at hand.

Regardless of the phase, many of STV's professionals have worked as owner's project managers, and almost all have worked during all project phases - from concept to preconstruction, construction, and closeout. The STV team has developed a general approach to project management and owner's representative services, inclusive of keeping the PANYNJ apprised of project status, maintaining service delivery, and assuring the quality of work. Understanding the nature of a call-in contract, we will modify the approach according to the complexity and duration of each task to which we are assigned.

Establishing Project Guidelines

At the beginning of the project, STV will assist the PANYNJ in establishing responsibilities for the project team members, other project stakeholders, and the PANYNJ. We will develop and implement a comprehensive task-specific project management plan and an outline of procedures covering all aspects of communication, coordination, distribution of project paperwork, schedule of meetings, organizational responsibilities, and lines of authority for project personnel.

RFP Development & Preparation

For a specific task, the STV team may assist the PANYNJ with the development, compilation, and preparation of Request for Proposals on projects that the team is managing. These RFPs will integrate the PANYNJ's requirements while incorporating project specific parameters and requirements.

Review of Project Requirements

The STV team will review all design documents, PANYNJ's quality assurance plan, capital project operating procedures and the project management plan. We will also review design criteria for each of the projects and the construction contract documents.

Design Review

The STV team will review design criteria for each task, if required. In this systematic manner, we will develop a complete understanding of all aspects of the construction efforts including the related environmental issues and the scope of work to be performed. We have included, as part of the team, engineers in a variety of disciplines who will perform shop drawing reviews.

Coordination with Outside Agencies & Organizations

The STV team will coordinate all project activities among the designer, contractor, adjacent owners, utility companies and various public agencies, as deemed appropriate by the PANYNJ. In addition, our team will work on the specific business line's behalf and interface with the PANYNJ's Quality Assurance Division, Construction Management Division, and all other departmental project stakeholders.

Communication & Reporting Requirements & Implementation

Communication for any call-in contract requires a multi-pronged approach. STV will identify in the project management plan the level and frequency of communication throughout the life of the assignment with all PANYNJ and project-related stakeholders. In addition, the owner representative team will communicate and report regularly to STV's Project Director the progress of all assignments. This communication will include STV's monthly report and weekly or biweekly meetings.

Daily, Weekly & Monthly Reports

The primary purpose of STV's reports is to provide a complete chronological history of all significant events during the construction period. These reports will be considered documents of record in possible future claims hearing or court cases. Therefore, the writing style will feature clear and concise presentation of facts in a neat and legible handwriting. By noon on the Wednesday of the week following any construction work on the site, we will furnish to the PANYNJ a weekly activity report. We will also prepare and deliver a detailed monthly report to the PANYNJ. Copies of the report will be submitted by the 10th of each month covering the work performed during the previous month.

Contractor Monitoring & Coordination during Construction

On the PANYNJ's behalf, STV's professionals will monitor, review, and evaluate the actual construction by the contractor in accordance with contract documents, PANYNJ requirements, and industry procedures. To achieve close coordination of all work activities among the numerous parties, we will participate in contractor coordination meetings. Attendees may include our field representatives, the construction manager or contractor's representatives, PANYNJ representatives, and design team members, as appropriate.

Additional activities which STV's project management and technical professionals may complete during the construction phase will include but not be limited to:

- Monitor that work is performed in accordance with the contract documents, with PANYNJ requirements and with previously agreed-to methodology
- Verify the contractor has obtained all necessary easements, permits, and variances
- Make sure of the contractor's compliance with contractual reporting requirement
- Facilitate the resolution of outstanding submittals and/or RFIs

Safety

The STV team cannot overemphasize the prime importance of safety on any construction site. Hard hats, safety vests, eye protection, ear protection, respirators, work shoes, emergency telephone numbers, tool box meetings, and OSHA, to name a few things related to safety, are common topics of discussion on a construction project. Throughout the life of the project, and during each task, we will continue to maintain safe work conditions.

The STV team will monitor the contractor's compliance with their own safety guidelines, standard industry safety practices, and client site safety regulations. To verify the contractor's understanding of the job site safety regulations and procedures, we will make sure that the contractor submits a project safety program.

In the process of monitoring the contractor's adherence to safety practices, the STV team will notify the contractor and the PANYNJ's safety department of any safety violations or noncompliance observed by filing a safety infraction report. Safety issues or violations will also be reported in the monthly reports that we will prepare for the PANYNJ.

Change Orders & Claims Management

It is anticipated that contract change orders may result from design revisions, field changes, or claims. The STV team will establish a case file for each potential change and accumulate all information and data relevant to that case.

The STV team will maintain a file for each item for which the contractor may claim a contract change for additional costs and/or time. The STV team will

review each contractor's claim and will prepare and submit a claim analysis to the PANYNJ Contract Manager. Our Project Manager will be responsible for preparing the claim analysis. He/she will coordinate our comments and those from the PANYNJ.

Post-Construction, Closeout & Acceptance

For completion and acceptance of each portion of the work, we will develop a detailed plan and schedule for the completion and acceptance of each stage, and of the closeout of the construction contract. The development of the completion plan will be initiated at least 60 days prior to scheduled completion of each phase.

The completion plan will establish the administrative and management activities necessary to accomplish the remaining work and will provide for a coordinated turnover to the PANYNJ. The plan will be completed and submitted to the PANYNJ, 30 calendar days prior to completion of each phase.

Contract Closeout

Our final inspection and acceptance of work will certify completion of punchlists and will close out the contract when the construction and installation contract is completed. The STV team will consider a contract to be closed out when the following items have been finished:

- Final punch list has been completed and signed
- Contract closeout checklist has been completed and signed off by the appropriate entity
- Final amendment has been approved, issued and signed
- Final progress payment request has been checked and agreed upon and paid, including retention
- Function or performance of equipment installed has been verified
- All claims have been resolved

Construction Records

Throughout the course of the project, the STV team will maintain records in accordance with the requirements set forth in the QA Plan. Using this method, we will constantly maintain the records so that they are easily accessible to all involved parties. At project completion, we will inventory and document all records so that they can be easily transferred and used in the PANYNJ archives.

Quality Assurance & Quality Control

The team's mission will be to provide high quality products and services that meet your requirements. We accomplish this on each project by integrating a high level of vision, innovation, and integrity with a quality system that is based on clear objectives and a commitment to continual improvement. The STV quality manual, for example, adheres to the latest applicable standards and procedures defined in ANSI/ASQ Q9001.

Port Authority Bus Terminal

With extensive quality assurance guidelines defined within the PANYNJ's Quality Assurance Department, our job will be to identify all necessary QA/QC requirements on the project from the onset, recognize the role each member of the project team plays in the QA/QC program's implementation, and then manage and report on the quality of the v ork product to be produced. This is done through the development of the Quality Management Plan, a document which we will develop based on criteria indicated

in the project plans and specifications and within the PANYNJ's quality assurance requirements. After review and approval by the PANYNJ, we will clearly define the plan to all project team members, especially all consultants, construction manager and contractor. If necessary on the assignment, the field oriented team, superintendents, or the inspection staff, will use the plan as a guideline to carry out their duties and responsibilities and to determine if the work is being performed in accordance with the construction contract documents. The assigned project manager or owner's representative will audit the activity of the field team who will have no authority for allowing deviations from the contract requirements. The field team will also assist the project manager in verifying quantities of work performed, materials used, fabrication dimensions, consistency with contract documents and adequacy of the contractor's resources.

The field team will be trained in our project specific QA Plan and will become familiar with the contractor's plan and procedures. They will monitor the work of the contractor using these documents as a basis. We will provide the services of a survey party, if required, to monitor the layout of the placement structures, verify elevations and confirm accuracy of the contractor's survey control. Other services we may provide to assist PANYNJ include:

Facility Inspection - Based on the requirements of the PANYNJ and the complexity and importance of the specific component being fabricated, we will determine if full- or part-time inspection will be required at the facility.

Materials Monitoring - We will monitor the contractor's placement of material orders to determine if scheduled delivery will support the project milestones. We will review any early procurement items or long-lead items.

Maintenance & Protection of Traffic (MPT) - If required, we are able to call in our expertise to mitigate potential situations.

Night & Weekend Work - STV is accustomed to performing work in multiple shifts, such as night work and weekend work. We are aware of the importance of revenue collections and the need to keep buildings occupied with tenants.

Security - The STV team understands the need to maintain a secure work site. We are aware of additional security measures that have been instituted as a result of 9/11 and will carefully follow and observe all rules, regulations and measures. We will be ever mindful to "lock the gate behind us." We will follow security control protocol by coordinating with facility police; by issuing ID badges to personnel cleared to be present in the work zones and making sure that personnel carry that identification while on site and by making sure proper identification is displayed on vehicles and equipment to be used on the site.

Project Controls

Cost Control

The STV team's proven systems provide for total cost control from task inception through completion. Cost reports will provide the owner's representative with detailed analysis, as well as an overall summary, of all functional task areas. Monitoring these reports, along with weekly meetings with project staff, will be used to keep tasks on schedule and within budget. The basic control document, a Work Breakdown Structure (WBS), will be prepared defining responsibilities, design progress schedule, direct cost, and direct labor budgets for functional areas. The WBS is updated to reflect current task status, and is used to incorporate task data into the computerized control reports. Project reports are generated to show budget hours and dollars; hours and dollars, to date; hours and dollars, for the week; total hours and dollars; estimate to complete; total estimate; and hours and dollars over/under budget.

These reports will provide the Project Manager with sufficient cost and man-hour data to control the task.

Schedule Control

STV recognizes that schedule control is an essential element for the successful execution of project task assignments. To provide necessary schedule control for a given task, we will utilize a scheduling system appropriate to the task. A Milestone Project Schedule will be developed for all applicable task assignments.

This schedule will be utilized as a guide for further planning and scheduling. From this schedule, a master CPM network diagram or bar schedule will be developed setting the priorities and pace of individual task elements to meet the requirements for completion of the task. The master CPM network diagram or bar schedule will be updated periodically as deemed necessary by the Project Manager, and is thoroughly reevaluated immediately before work begins on each phase.

Document Control

Information and directions received by the assigned Project Manager will be copied, distributed, and filed according to the needs of the PANYNJ. Documents will be filed in a central file. The team has capabilities for secure document handling and control, when necessary. We have implemented a system for maintaining strict controls for confidential projects, including under projects serving the PANYNJ.

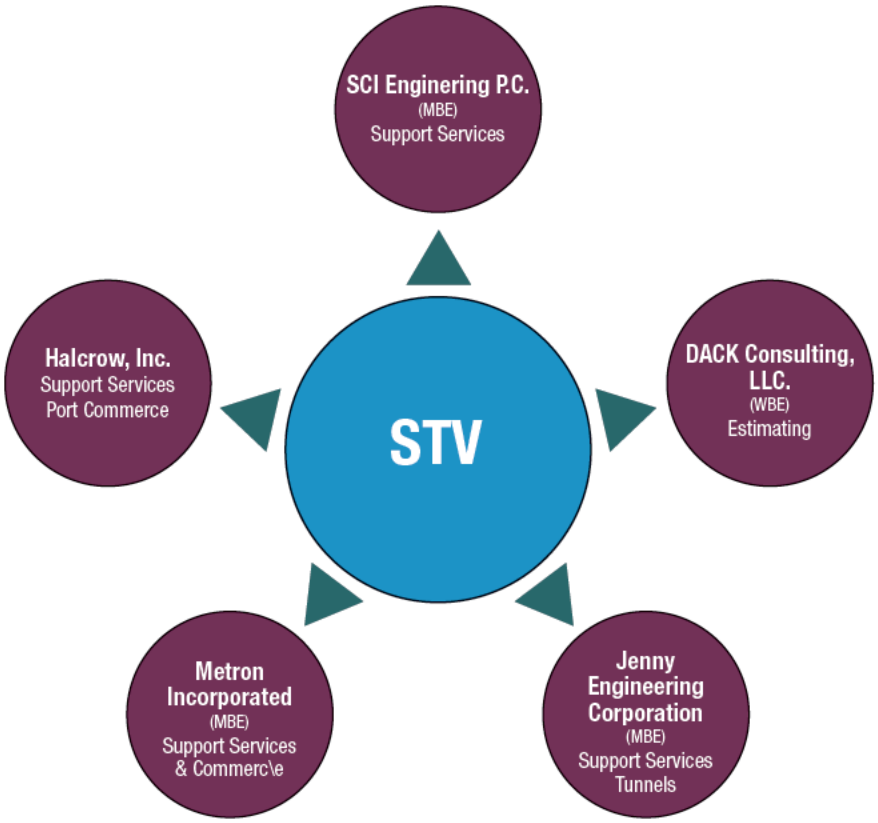
Managing Our Subconsultants

STV recognizes the Authority's need to have a "call-in" consultant with the greatest possible depth and breadth of engineering capability at its disposal so that resources are always available to respond to the PANYNJ's project requirements in a timely manner. To meet this need, STV has carefully selected a team of specialty subconsultants, including M/WBE firms, to assist us in providing specialized services. The subconsultants who will augment our team are SCI Engineering, P.C. (MBE), Jenny Engineering Corporation (MBE), Metron Incoproration (MBE-pending), and DACK Consulting LLC (WBE).

Summary

STV is uniquely qualified to undertake the variety of assignments that may result from this "call-in" contract. Our firm offers the range of expertise required to creatively address all of the key issues for this contract because we offer the depth of experience and the management capabilities need to respond to diverse needs in a timely manner. The STV team, conveniently located in Manhattan (over 600 personnel at our 225/233 Park Avenue South location) near the PANYNJ's executive offices and facilities, can provide a rapid response team to provide you with needed and critical staff support. Additionally, our multidisciplined staff members and subconsultants will function together cohesively as a team, reporting to a single point of Port Authority contact, STV's Program Director.

The STV Team



F. Rates & Multiplier

F. Rates/Multipliers

Name	Role	Hourly Rate
STV		
S. Pressler, PE	Principal-in-Charge	N/A
D. Frank, PE	Project Director/Task Leader WTC	200.08
T. Kleiner, AIA**	Task Leader Aviation	306.11
L. Brasacchio, PE**	Task Leader Tunnels, Bridges & Terminals	238.82
D. Augustine, AIA, LEED® AP**	Task Leader PATH	226.58
D. Cooksley	QA/QC	108.89
B. Fox	Project Executive	308.81
G. Maimis	Project Executive	251.53
C. Ludlow	Project Executive	271.60
D. Nazzaro	Project Executive	206.76
G. Koerner	Project Executive	271.60
R. Davidson, FAIA**	Project Executive	383.40
J. Anserian, PE	Senior Project Manager	153.95
A. Basta, PE, CCM	Senior Project Manager	208.00
D. Dillon, PE	Senior Project Manager	179.55
C. Kneaves, PE	Senior Project Manager	236.68
J. Valerio	Senior Project Manager	215.24
J. Cenzoprano	Senior Project Manager	165.41
M. Colban, RA	Senior Project Manager	173.17
J. Hauser	Senior Project Manager	152.35
T. Gardner	Project Manager	131.50
T. Savas	Project Manager	128.85
S. Manii	Project Manager	181.18
A. Overholser, PE	Project Manager	130.60
S. Figueroa	Project Manager	142.68
T. Abed	Project Manager	98.14
C. Mohacsi	MEP Project Manager	185.16
R. Dries	MEP Project Manager	163.23
S. Prest	Resident Engineer	141.46
R. Rajapaske, PE, CCM, CCE, AVS	Resident Engineer	119.73
E. Marra, Jr. PE	Resident Engineer	173.81
R. DePaoli	Superintendent	97.37
R. Stalcoskie	Superintendent	90.83
V. Ruggiero	Superintendent	97.17
M. Seelig	Superintendent	99.88
J. Graves	Superintendent	562.26
A. Calderon	Superintendent	119.71
K. Falowski	Superintendent	108.82
S. Hilal	Superintendent	87.07
G. Blutner	Superintendent	130.60
K. Baumgarten	Superintendent	120.86
T. Motyka	Inspector	127.62
G. Saninocencio	Inspector	122.76
M. Maiorano	Inspector	122.76
Y. Portman	Inspector	100.64
Z. Saliby	Inspector	72.93
P. Jarmak	Inspector	123.13
A. Ranginwala	Inspector	89.94
G. Garbarino	Safety Specialist	118.92
M. McDonald	Project Engineer	65.30

Name	Role	Hourly Rate
J. Tookmanian	Project Engineer	77.02
M. Verhagen	Project Engineer	56.58
R. Kelly	Project Engineer	56.58
L. Porcelli	Project Engineer	58.78
M. Nguyen	Project Engineer	67.00
A. Gaddi	Project Engineer	58.78
S. Constaninou	Project Engineer	58.78
R. Krause	Project Engineer	58.78
S. Dreher	Project Engineer	56.58
K. Baldivia	Estimator	109.18
R. AViles, PE	Estimator	118.87
M. Finkelstein	Estimator	127.25
V. Tonatore	Estimator	156.10
D. Kirk, AIA, CCC, CCS, CVS, LEED® AP	Senior Risk Assessor/Value Engineer	166.36
W. King	FTA Funding Specialist	150.06
A. Byajian	Scheduler	172.49
A. Sehic	Scheduler	81.64
R. Quickel	Scheduler	87.59
E. Christodoulou	Scheduler	96.60
S. Janjua	Scheduler	91.94
Y. Dennis	Document Control Specialist	73.36
D. Abbate	Document Control Specialist	66.25
N. Constantino	Document Control Specialist	105.74
M. Rodriguez	Document Control Specialist	86.73
D. Ohrsell	Accountant	51.79
M.Salvador	Accountant	86.69
M. Chen	Accountant	53.12
F. Jordan	Clerical Support	45.18
Y. Candelario	Clerical Support	59.71
S. Garrison-Toye	Clerical Support	56.58
B. Jabbonsky, RA	Architectural Support	211.23
C. Romano, PE	Mechanical Support	171.60
L. Matlick, PE	Fire Protection/Plumbing Support	196.01
M. Friedman, PE, LEED® AP	Electrical Support	201.98
J. Chen, PE	Structural Support	165.63
D. Yue, PE	Site/Civil Support	271.57
DACK Consulting, LLC		
A. Chancy	Estimator	160.38
R. Holder	Estimator	106.92
Halcrow, Inc.		
D. Friend	Diver	265.03
A. Austin	Diver	217.14
C. Carr, PE	Coastal Support	494.94
Jenny Engineering Corporation		
M. Joye, PE	Project Manager	194.30
K. Gaspar, PE	Inspector	127.55
K. McPherson	Project Engineer	101.59
S. Niemiec, PE	Tunneling Support	221.19
Metron Incorporated		
T. Harab, PE	Task Leader Port Commerce	174.81
M. El Wakil, RA	Senior Project Manager	168.64
A. Robson	Project Manager	131.62

Name	Role	Hourly Rate
SCI Engineering, P.C.		
R. Durante	Project Manager	143.69
J. Cohen, PE	Project Manager	192.40
K. Patel	Project Manager	121.77
G. Sumner	Inspector	73.23

* Maximum Hourly Billing Rate includes 2% escalation per year in addition to the applicable multiplier.

** Home multipliers were applied to these hourly rates.

Company Policy for Premium Pay

STV employees do not normally receive differential compensation for working on weekends or at night. If a contract has a provision for differential compensation, STV will abide by the terms of the contract. Full-time salaried employees who work more than 40 hours per week receive overtime pay at their normal rate. If an employee is classified as an non-exempt employee, they are paid at the premium rate of time-and-one-half their rate for all hours worked in excess of 40 hours worked per work week, except where state law requires over-time pay in excess of 8 hours worked per day.

Multipliers

	Field	Home
STV Incorporated	2.25	2.53
STV Construction, Inc.	2.09	2.43

All multipliers include 7.5% profit.

The contract will be held by STV Incorporated; however, where construction management staff members are needed, they will be supplied by STV Construction, Inc., a wholly-owned subsidiary of STV Incorporated. Following are STV's projected financial STV's multipliers are as follows:

STV Incorporated

FIELD MULTIPLIER	
DIRECT LABOR (Field Office)	1.0000
Field Overhead 79.55% (times Direct Labor)	0.7955
Subtotal	1.7955
G&A 29.32% (times Direct Labor)	0.2932
Subtotal	2.0887
FCCM Overhead and G&A 0.0426% (times Direct Labor)	0.0004
Total Contract Field Office	2.0891
Profit at 7.5%	1.075
TOTAL FIELD MULTIPLIER	**2.25**
HOME MULTIPLIER	
DIRECT LABOR (Home Office)	1.0000
Home Overhead 105.70% (times Direct Labor)	1.0570
Subtotal	2.0570
G&A 29.32% (times Direct Labor)	0.2932
Subtotal	2.3502
FCCM Overhead and G&A 0.18% (times Direct Labor)	0.0018
Total Contract Home Office	2.3520
Profit at 7.5%	1.075
TOTAL HOME MULTIPLIER	**2.53**

STV Construction, Inc.

FIELD MULTIPLIER	
DIRECT LABOR (Field Office)	1.0000
Field Overhead 77.16% (times Direct Labor)	0.7716
Subtotal	1.7716
G&A 17.34% (times Direct Labor)	0.1734
Subtotal	1.9450
FCCM Overhead and G&A 0.00137% (times Direct Labor)	0.0001
Total Contract Field Office	1.9451
Profit at 7.5%	1.075
TOTAL FIELD MULTIPLIER	**2.09**

HOME MULTIPLIER	
DIRECT LABOR (Home Office)	1.0000
Home Overhead 103.21% (times Direct Labor)	1.0321
Subtotal	2.0321
G&A 17.34% (times Direct Labor)	0.1734
Subtotal	2.2055
FCCM Overhead and G&A 0.0838% (times Direct Labor)	0.0008
Total Contract Home Office	2.2063
Profit at 7.5%	1.075
TOTAL HOME MULTIPLIER	**2.43**

G. M/WBE Participation

G. M/WBE Participation

STV is committed to the practice of engaging minority-owned and woman-owned business enterprises (M/WBE) as its subconsultants whenever possible. We typically meet or exceed our client's established guidelines for the meaningful participation of these types of business enterprises in the projects we undertake. STV has worked with hundreds of public agencies throughout the United States, during which we have established a well-documented record of engaging MBE, WBE, and other identified business enterprises to the mutual benefit of our clients and the communities we serve.

A Strong Relationship with M/WBE Firms

Our firm has established working relationships with numerous MBE and WBE business enterprises in many specialties. STV selects the most appropriate and qualified firms to enhance our capabilities as required to meet the particular needs of a project. In addition, STV actively solicits the participation of M/WBE firms and, as a long-established professional services firm, we are continually approached by these business enterprises to join our project teams.

STV has met or exceeded M/WBE goals on previous assignments by engaging firms with the appropriate certifications to provide required specialty services in areas that STV does not have expertise or to extend the reach and capabilities of STV's established services. For example, STV does not employ personnel for asbestos or lead-based paint abatement. This is a typical opportunity for STV to achieve M/WBE goals by engaging services in this appropriate category. To extend our own capabilities, STV typically engages minority-owned and woman-owned business enterprises in many architectural, engineering, and construction management disciplines such as cost estimating, document control, and printing and reproduction services—as we have for this "call-in" contract.

Meeting the PANYNJ's Goals

STV will meet, or exceed, the stated goals of 12% MBE and 5% WBE participation for this contract, through the meaningful participation of SCI Engineering, P.C. (MBE), Jenny Engineering Corporation (MBE), Metron Incoproration (MBE-pending), and DACK Consulting LLC (WBE). SCI will provide general support services. JEC and Metron will also provide general support focusing on tunnels and ports respectively. DACK will provide cost estimating services.

Our Project Director, David Frank, P.E., will work with our Task Leaders to assign appropriate resources to each task under this "call-in" contract. By assigning our subconsultants meaningful and appropriate roles, our project management staff will make sure these firms participate to the maximum extent possible and that the Port Authority's participation goals are met, or even exceeded.

STV has successfully led consultant teams for many projects, so we already have proven project management procedures and mechanisms in place. For example, each of the firms participating on the STV team for this contract will be bound as a subcontractor to STV. The terms and conditions of the contract with STV will be passed down contractually to the participating firms on the team. Furthermore, STV has strong existing relationships with each of the firms selected for this team. With the strength of these relationships and proven management techniques, the client will benefit from the expertise of the participating firms seamlessly integrated into one team focused on providing the highest quality of service. We will provide you with all requisite services in a quick, effective, and creative manner specially tailored to meet your needs.

H. Affiliates

H. List of Affiliates

STV Group, Incorporated (Parent Company)
225 Park Avenue South
New York, NY 10003-1604
EIN: [redacted]

STV Incorporated
225 Park Avenue South
New York, NY 10003-1604
EIN: [redacted]

STV Architects, P.C.
225 Park Avenue South
New York, NY 10003-1604
EIN [redacted]

STV Architects, Inc.
205 West Welsh Drive
Douglassville, PA 19518-8713
EIN: [redacted]

STV Architects I, P.C.
1037 Raymond Boulevard, Suite 200
Newark, NJ 07102-5425
EIN [redacted]

STV Engineering, Inc.
205 West Welsh Drive
Douglassville, PA 19518-8713
EIN: [redacted]

STV Silver & Ziskind
225 Park Avenue South
New York, NY 10003-1604
EIN [redacted]

STV Silver & Ziskind Architects, P.C.
225 Park Avenue South
New York, NY 10003-1604
EIN [redacted]

STV Middle East, Inc.
205 West Welsh Drive
Douglassville, PA 19518-8713
EIN: [redacted]

STV Construction Services, Inc.
205 West Welsh Drive
Douglassville, PA 19518-8713
EIN: [redacted]

STV Construction, Inc.
225 Park Avenue South
New York, NY 10003-1604
EIN [redacted]

STV Environmental, Inc.
205 West Welsh Drive
Douglassville, PA 19518-8713
EIN: [redacted]

STV International, Inc.
205 West Welsh Drive
Douglassville, PA 19518-8713
EIN: [redacted]

STV Massachusetts, Inc.
205 West Welsh Drive
Douglassville, PA 19518-8713
EIN: [redacted]

STV Michael Lynn Associates
205 West Welsh Drive
Douglassville, PA 19518-8713
EIN [redacted]

STV Security Solutions Group, Inc.
2722 Merrilee Drive, Suite 350
Fairfax, VA 22031-4427
EIN: [redacted]

STV Canada Architects, Inc.
1920 Yonge Street, Suite 200
Office No. 220
Toronto, ON M4S 3E2, Canada
Ontario Corporation Number (OCN): [redacted]

STV Canada Construction, Inc.
1920 Yonge Street, Suite 200
Office No. 258
Toronto, ON M4S 3E2, Canada
Ontario Corporation Number (OCN): [redacted]

STV Canada Consulting, Inc.
1920 Yonge Street, Suite 200, Office No. 258
Toronto, ON M4S 3E2, Canada
Ontario Corporation Number (OCN): [redacted]

STV Architects Ireland Limited
2 Grand Canal Square
Dublin 2, Ireland
Registration Number: [redacted]

I. Conflict of Interest

I. Conflict of Interest

Neither STV nor any employee, agent, or subcontractor of STV has any conflicts of interest to disclose regarding this contract. STV Incorporated, STV Construction, Inc and its affiliates, currently provide services to the PANYNJ on multiple projects. Some of these contracts include, but are not limited to the following:

- One World Trade Center and National September 11th Memorial and Museum Owner's Representative and Expert Program Management Service
- World Trade Center Chiller Plant
- World Trade Center Transportation Hub
- Cost Control and Project Management Services for World Trade Center (WTC) Projects
- World Trade Center Site-Wide Operations Control Center
- World Trade Center Vehicular Security Center and Tour Bus Parking Facility
- NYCT Cortland Street Station Reconstruction

As this is a call-in contract, it is possible that a particular assignment could conflict with STV's other contracts with the PANYNJ. Upon receipt of a call-in assignment, STV would review the assignment's scope of work against its prior and existing contracts with the PANYNJ to determine if there would be a potential conflict with the new assignment.

If there appeared to be a conflict of interest, or the appearance of one, STV would bring the matter to the attention of the PANYNJ and respond as directed, while implementing STV's conflict mitigation procedures.

HAKS Construction Management Engineers Architecture
Land Surveyors Material Testing

40 Wall Street, 11th Floor, New York, NY 10005 • Phone (212) 747-1997• Fax: (212) 747-0861• www.haks.net

October 21, 2010

The Port Authority of New York and New Jersey
One Madison Avenue, 7th Floor
New York, NY 10010
Attn: RFP Custodian

Ref: Performance of Expert Professional Project/Program Management as Requested on a "Call In" Basis during 2011-2014 (RFP #22388)

Dear Sir/Madam:

In response to the port Authority of New York/New Jersey's (the Authority) Request for Proposals issued on September 30, 2010, HAKS is extremely interested in providing project/program management services on a "Call-In" Basis. We have assembled a multi-disciplinary team of experienced professionals and we are confident we can provide value added services to the Authority. The HAKS team has the expertise needed in key areas such as Program Management, Program Planning and Organization, Design Management, Construction Management, and Program Controls and Reporting. We are committed to providing the services described within the prescribed timeframe with the personnel specified in this submission.

Our team of professionals can provide support to the Authority at varying levels as necessary to augment and provide specialized expertise as needed. The size and depth of our team allows us to provide a wide range of options to meet the needs of the Authority as you move forward.

The HAKS Team
HAKS is one of the region's top construction management, engineering/architectural firms and employs more than 400 people. With more than 20 years of experience, the firm is a leader in providing engineering, design and construction solutions to clients in today's industries.

Also included on the HAKS team are Halcrow, which will provide its expertise in marine facilities, Burns Engineering will provide its expertise in aviation, and Delcan will provide its expertise in rail/transit. We have teamed with these firms because of the expertise and knowledge they bring having worked for the Authority in the past in similar capacities. Additionally, to meet the proscribed M/WBE goals we have added Ellena, a certified WBE firm and AG Consulting a certified MBE firm to augment our services, both Ellena and AG have also worked for the Authority on similar assignments.

Our focus from day one is co-operative proactive management. To that end we will work with the design teams to issue complete design packages, employ the best contracting strategies for optimum results, effectively manage the utilities infrastructure, encourage competitive bidding with the ultimate of obtaining for the Authority the best value achievable from the contracting community while minimizing risk for all parties and issuing well developed bid sets that provide for optimum bidability and constructability.

THE HAKS ADVANTAGE

The complexities of this program demand a team that can work alongside and effectively manage the design team's deliverables, perform comprehensive design and constructability reviews and manage the construction, commissioning, and start-up process. Consequently, the decisions made by our management team will result in known cost and schedule outcomes and lead to no surprises. HAKS has built a successful record of project execution and strong and continuing support for their clients. Our history of superb construction experience,

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along with our staff's knowledge, expertise and dedication, provide the tools and experience that will make this program a success for the Authority. In summary, HAKS will:

Provide the Right Leadership

- A Program Manager with the necessary expertise and leadership skills
- A team of experts, all leaders in their respective fields
- Relevant experience with all the project elements comprising the Authority's program
- Leadership that promotes a collaborative style with open communications that is response oriented and solution driven
- Leadership that understands the importance of exceeding safety, quality, time and cost parameters

Employ the Best Practices

- A management team that has managed nearly identical programs and knows how to DRIVE the program to a successful conclusion
- Expert document controls systems
- Schedule driven process utilizing best scheduling practices
- A process driven by uncovering and mitigating risk
- Expert change order strategies and negotiations
- Expert budget development, including proper contingencies

Lead the Team

- We bring and will maintain a positive win/win thinking and attitude
- Communicate critical information at all levels through project controls
- Promote and share a common vision
- Build and maintain momentum

We appreciate the opportunity to submit our Technical Proposal and look forward to your favorable response. We hope that we have fully expressed our interest and enthusiasm for assisting the Authority with this important project. In summary, HAKS has built a successful record of completing projects on budget, on-time and that work and, equally important, receiving strong and continuing support from our clients during and after working together.

Sincerely,
HAKS

Jeffrey Terzakis
Senior Vice President

THE PORT AUTHORITY OF NY & NJ

PROJECT MANAGEMENT SERVICES as REQUESTED on a "CALL-IN" BASIS DURING 2011-2014 (RFP No. 22388)

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B	Attachment C	
C	Key Personnel - Resumes	1- 85
	• *HAKS*	
	• *AG CONSULTING (MBE)*	
	• *BURNS GROUP*	
	• *DELCAN CORPORATION*	
	• *ELLANA, INC. (WBE)*	
	• *HALCROW, INC.*	
D	Firm Experience	86 - 93
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G	M/WBE Participation	119
H	Affiliates	120
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ATTACHMENT B

PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014

AGREEMENT ON TERMS OF DISCUSSION

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority's Freedom of Information Policy and Procedure adopted by the Port Authority's Board of Commissioners on November 20, 2008, which may be found on the Port Authority website at: *http://www.panynj.gov/corporate-information/pdf/Freedom-of-Information-Policy-and-Procedure.pdf*, not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

HAKS
(Company)

(Signature)

Jeffrey Terzakis, Senior Vice President
(Title)

October 21, 2010
(Date)

ORIGINAL AND PHOTOCOPIES OF THIS PAGE ONLY.
DO NOT RETYPE.

ATTACHMENT C

COMPANY PROFILE

REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

1. Company Name (print or type):

   HAKS

2. Business Address (to receive mail for this RFP):

   40 Wall Street, 11th Floor

   New York, NY 10005

3. Business Telephone Number: (212) 747-1997

4. Business Fax Number: (212) 747-1960

5. Firm website: www.haks.net

6. Federal Employer Identification Number (EIN): [redacted]

7. Date (MM/DD/YYYY) Firm was Established: 07 / 25 / 1994

8. Name, Address and EIN of Affiliates or Subsidiaries (use a separate sheet if necessary):

   See attached sheet.

9. Officer or Principal of Firm and Title:

   Husam Ahmad, PE, President/CEO

10. Name, telephone number, and email address of contact for questions:
    Jeffrey Terzakis

    Phone: (212) 747-1997 Email: jterzakis@haks.net

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? ☒ Yes ☐ No

    If yes, please attach **Port Authority** certification as a part of this profile.

    If your firm is an M/WBE not currently certified by the Authority, see the Authority's web site – http://www.panynj.gov/business-opportunities/supplier-diversity.html, to receive information and apply for certification.

HAKS LIST OF AFFILIATES

Entity: HAKS Engineers, P.C. (CT)
Address: 306 Industrial Park Road
Suite 201
Middletown, CT 06457 **EIN/TIN:** [redacted]

Entity: HAKS Engineers, Architects and Land Surveyors, P.C. (NJ)
Address: 570 Broad Street
Suite 401
Newark, NJ 07102 **EIN/TIN:** [redacted]

Entity: HAKS Stone & Webster (JV)
Address: 40 Wall Street
11th Floor
New York, NY 10005 **EIN/TIN:** [redacted]

HAKS

Entity: HAKS/DMJM + Harris (JV)
Address: 605 Third Avenue
New York, NY 10158 **EIN/TIN:** [redacted]

HASA

Entity: HAKS/Earth Tech (JV)
Address: 40 Wall Street
11th Floor
New York, NY 10005 **EIN/TIN:** [redacted]

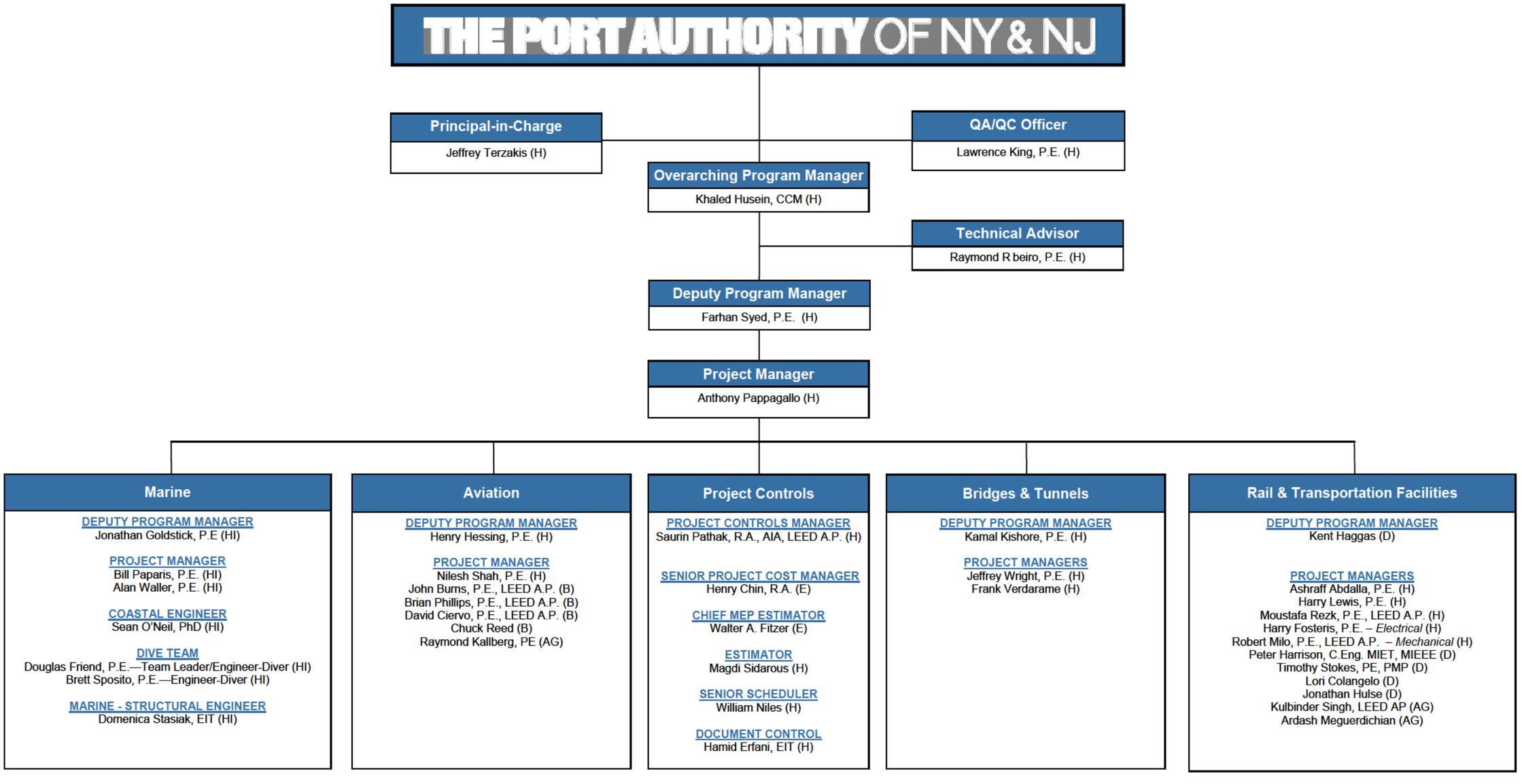
Entity: HASA Construction, LLC
Address: 40 Wall Street
11th Floor
New York, NY 10005 **EIN/TIN:** [redacted]

Entity: HASA Realty, LLC
Address: 22 Central Drive
Farmingdale, NY 11735 **EIN/TIN:** [redacted]

Entity: SIMCO Engineering, P.C.
Address: 80 Maiden Lane
Suite 501
New York, NY 10038 **EIN/TIN:** [redacted]

Entity: Washington Group/HAKS (JV)
Address: One Penn Plaza
32nd Floor
New York, NY 10119-2901 **EIN/TIN:** [redacted]

ORGANIZATION CHART
EXPERT PROFESSIONAL PROJECT/PROGRAM MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011-2014



H: HAKS
D: Delcan Corporation
AG: AG Consulting (MBE)
E: Ellana, Inc. (WBE)
B: Burns Group
HI: Halcrow, Inc.

STAFF INTRODUCTION

Mr. Husein was deeply involved in every facet of historic New York County Courthouse renovation project.

During the entire seven years, he displayed technical excellence, highly impressive interpersonal skills and dedication and devotion to the project.

Quite simply, it would be difficult for me to imagine us having completed this complex undertaking without his critical assistance.

- John F. Werner,
Supreme Court of the State of New York

If there is an outstanding set of skills which characterize his efforts it would include his ability to adapt to special circustances, to get tough but never to losee hsi cool under pressure. His personal approach to working with a variety of demanding personnel, including myself, has enabled the project to achieve smooth transitions.

- A. Jordan Barnes, Project Manager,
Bureau of Construction for the City New York

HAKS designated **Overarching Program Manager and Team Leader** for the PANYNJ's Professional Project/Program Management Services Contract will be one of our top managers, **Khaled Husein, CCM, Vice President.** Mr. Husein has planned and managed large, complex construction projects as well as multiple-site, multiple contractor public sector programs and projects. These include his assignment the DDC's School Rehabilitation Program where he managed the rehabilitation of 25 schools in three boroughs and his past assignment for the GSA managing multiple construction projects as part of the extensive Brooklyn Courthouse Program which required the demolition and removal of the Emanuel Cellar Federal Office Building, the new construction of a 18-story Federal Office Building, the modernization of the existing Federal Courthouse, and the renovation of the historic Brooklyn General Post Office. Additionally, Mr. Husein has more than 25 years of experience in all phases of construction and project management, including preconstruction, construction, and post-construction and is expert in developing comprehensive yet workable procedures for multiple-project, multiple-site construction programs.

Mr. Husein will employ HAKS successful management methods that embody key organizational principles used repeatedly as keystones to achieve a fully integrated effort. These management methods include:

- Setting clear lines of communication, responsibility and authority.
- Enforcing uniform means of collecting and disseminating information.
- Establishing and maintaining realistic baselines—cost estimates and schedules—against which performance can be measured.
- Promoting the use of standardized and disciplined work practices for all project participants and verifying compliance with these practices.
- Assigning personnel with proven leadership and experience whose first priority is to the project.

STAFF INTRODUCTION

Project/Program Management Personnel

The individuals who will fill the key positions on our team have been selected because of their many years of similar experience and their proven record of performance. HAKS has developed an organization and staffing plan to account for the different requirements of managing the overall program and managing the individual projects within it.

In selecting our staff to man this work, HAKS has drawn upon the collective experience of our top executives who have planned and managed large, complex design and construction projects. We will initially utilize senior management staff, all of whom have previously participated in planning similar programs. We have found that progress in the early days of an assignment is critical, especially to one such as this, and sets the tone for its duration.

HAKS core management and other key personnel will be supported by the full resources of our firm. We can muster the resources of more than 400 professional and technical staff members to support the project. Additionally, **HAKS has aligned itself with several notable firms to augment our capabilities and resources they include: Halcrow to provide expertise in port and marine facilities; Delcan to provide expertise in rail transit systems; Burns Engineering to provide expertise in aviation facilities and systems.** We sought to add firms that not only complimented the expertise and resources of HAKS, but added true value by sharing common visions, goals, attitudes and an overall corporate culture of dedication to comprehensively serve their clients, Halcrow, Delcan and Burns bring this element. The rationale for bringing these firms together to form a super team is based upon our respective complementary qualifications and corporate culture and values. This team will bring its direct knowledge of the Authority and in-depth understanding of all the legal and institutional arrangements under which the program will operate.

Providing overall support for the project will be our **Principal-in-Charge, Jeffrey Tezakis.** Mr. Terzakis offers a tremendous wealth of experience gleaned from years of providing the necessary senior management level oversight of major, world-class construction efforts. He also has a keen understanding of the factors that will influence the project. Leading HAKS core staff as Overarching Program Management will be Mr. Khaled Husein, CCM. Mr. Husein has more than 25 years of experience in all phases of construction and project management, including preconstruction, construction, and post-construction and is expert in developing comprehensive yet workable procedures for large programs. He has managed numerous multi-site projects and programs involving multiple prime contracts.

Supporting Mr. Husein will be his **Deputy Program Manager, Farhan Syed, PE.** He is a highly qualified construction professional, capable of interfacing with the Authority and providing executive oversight as a result of his decades of experience. His guiding hand will keep the professional staff focused on performing their duties; by anticipating project/program issues from the beginning, he manages outcomes through preparedness, consensus, and accountability.

Also supporting Mr. Husein will be **five Deputy Program Managers** assigned to specific project types: **the Deputy Program Manager for Marine will be Jonathan Goldstick, PE from Halcrow.** Mr. Goldstick has 30 years of domestic and international experience in waterfront engineering and project management. He has been involved in the design, analysis, construction, rehabilitation, and installation of a wide variety of waterfront structures worldwide. His expertise also includes project management and engineering support for urban waterfronts.

STAFF INTRODUCTION

The **Deputy Program Manager for Aviation will be Henry Hessing, PE** from HAKS. Mr. Hessing has over 34 years experience as a professional engineer with extensive knowledge of construction management and resident engineering for new and rehabilitated highways, bridge structures, rail line segments and transportation-related buildings and airports. He served as Program Manager for the $9.5 billion JFK redevelopment program

The **Deputy Program Manager for Bridges and Tunnels will be Kamal Kishore, PE** from HAKS. Mr. Kishore has over 40 years of experience working with various engineering organizations and was involved in approximately 500 bridges. He has served as New York City's Department of Transportation's Deputy Chief Engineer responsible for managing all activities associated with design and rehabilitation or replacement of all deficient bridges owned by the City of New York.

The Deputy Program Manager for Rail and Transportation Facilities will be Kent Haggas from Delcan. He has over 35 years of professional experience in the rail transit industry, in both major project and passenger operations executive management positions including extensive experience in the design, construction and test of large highly integrated rail transit projects which employ high technology control systems. In the last five years, his key responsibilities have focused on general design management, civil-systems design /construction integration and design program control.

HAKS will use a team approach to the coordination and integration of the program and the individual projects. Serving as an extension of the Authority's staff, our construction management team will provide the depth and variety of resources required to fully support this program. The Program Manager, Khaled Husein, CCM and his support staff will be responsible for performing the full scope of project/program management services. The project team will be appropriately staffed with the civil/structural, mechanical/electrical project managers and inspectors during the construction phase so that each project's quality standards are met. The project team will be responsible for delivering a fully integrated facility on-time, within budget, and in compliance with the objectives of the project. They will be the direct interface for the Authority in managing and overseeing the work of the various contractors. The key to our team's performance will be our Program Manager, Khaled Husein, who will have complete authority to act on behalf of the team in all matters relating to the services to be provided. The organization, led by Mr. Husein, will utilize a management structure incorporating established methods and techniques to mitigate future cost, schedule, and quality disputes. The organization is designed to simplify and streamline reporting and responsibility assignments and head-off an issue before it becomes a problem, thereby preventing surprises. It utilizes the concept of three functional levels of reporting:

- Design Management
- Construction Management
- Contract Administration

Supporting these three functional levels will be a support staff with the technical knowledge and expertise to provide the necessary services such as design review, value engineering, scheduling, contract administration, construction inspection and testing oversight. This organization uses a matrix system of checks and balances. Design management, project management, and contract administration are focused on the integration and interaction of the individual projects within the overall program, uniformly monitoring the overall quality, schedule, and cost of the project. Program Management is designed as a matrix management unit charged with managing the individual projects from initial planning through start-up. In essence, they will be responsible for delivering the required renovations and upgrades on-time, within budget, and in compliance with project objectives.

STAFF INTRODUCTION

During the design phase, Design Management will review designs for constructability and completeness, develop contract packaging, phasing and sequencing the work, and supporting the value engineering endeavors. As contracts are let for construction, Project Management will begin to take the lead in the day-to-day activities of implementing the job in the field. The group will be responsible for all construction coordination, contractor safety program oversight, inspection, systems and material testing oversight, and contract closeout. The Project Management group will also provide bid and procurement assistance and oversight of delivery of long-lead materials and equipment purchased directly for the Authority. Upon letting of contracts, this group will provide change order control and analysis.

Contract Administration will provide control of the schedule, cost/budget, estimating, and documentation from the beginning of the project through closeout of the final construction contract. They will also be responsible for the master schedule and project reporting functions.

HAKS understands that no project is formula-built or trouble-free. We have the experience, expertise, creativity and the dedication to control the schedule, the cost and quality. Our skills enable us to anticipate the many technical, logistical and administrative problems the program may pose and we will develop and assess alternative schemes to ward off those problems. We will work hand-in-hand with the Authority to develop a winning project team.

JEFFREY TERZAKIS, PRINCIPAL-IN-CHARGE

Mr. Terzakis has over 21 years of diversified experience in construction management and the inspection of facilities including airport terminals, transportation facilities, hospitals, schools, etc. He has proven effectiveness in project management, problem solving and leadership roles.His comprehensive experience in project management includes an emphasis on large capital programs, pre-construction services, and construction management. He offers clients a unique and customized approach to their project needs. By anticipating project issues from the beginning, he manages outcomes through preparedness, consensus, and accountability.

EDUCATION

MBA, Finance, Fordham University, New York, NY

B.S., Mechanical Engineering, Villanova University, Villanova, PA

THE RIGHT EXPERIENCE

Continental Airlines, Global Gateway Program, Newark International Airport, Newark, NJ

Managed the complete renovation of Terminal C at Newark International Airport as part of Continental's $1.4 Billion Global Getaway Project; responsibilities included managing the design team as required by the phasing of the work for an extremely aggressive 2-year schedule. Directed the construction manager in the coordination and phasing of the work while maintaining operations at one of America's busiest airports; managed scope reviews and buys for major subcontractors; championed cost control efforts by managing the forecasting and updating of the Paragon cost report on a daily basis. Negotiated directly with all subcontractors on change orders this resulted in saving millions of dollars; and negotiated subcontractor close-outs which resulted in cost savings over $2 million more than anticipated.

New York City Housing Authority Requirements Contract, New York, NY

Serving as Principal-in-Charge for a $80 million capital improvement program for the New York City Housing Authority (NYCHA); the work includes:

- Fort Washington Roofing Project, $6 million, requires the removal of existing asbestos-containing roofing materials, asbestos abatement, new roof installation and related work;
- Harlem River Brickwork Project, $7.6 million, entails extensive brickwork, the replacement of steel lintels and incidental roofing;
- Rangel Brickwork and Roofing Project, $8.6 million, calls for replacing roofs on all buildings and the parapets for two buildings, and selective replacement/repair of brickwork and steel lintels.
- Queensbridge Boiler Replacement Project, $20 million, boiler plant replacement project at the fully occupied Queensbridge Houses; the project consists of the removal of 9 existing Boilers/Burners and related control equipment and the replacement of 18 Boilers/ Burners and related control equipment, at 6 Boiler Plants.

- Williams Plaza, $6.1 million project requires replacing all roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.
- Independence Towers, $6.1 million project requires replacing roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.
- Bushwick Houses, $9.3 million project requires replacing all roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.
- Stapleton Houses, $7 million project requires replacing all roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.

Miscellaneous Projects in the Downstate Area, New York

He serves as Project Executive providing Program/Construction Management services in the New York Downstate area; project assignments include:

- Barretto Point, $10 million, remediation project 15,000 cubic yards of contaminated soil were excavated and replaced with clean fill over 3 acres at the site, which in the past housed a paint and varnish making facility.
- Red Hook WPCP, $2.5 million project demolishing the existing system and installing a new state-of-the-art Fire Alarm System (Notifier) in nine designated plant areas.
- Sludge Dewatering Facilities Improvements at New York City Waste Water Treatment Plants, $12 million, upgrade the heating and ventilation system for air changes in chemical areas; installation of emergency eyewash stations and showers; installing chemical and containment piping with heat tracing system; raising chemical containment areas; installing ammonia detection alarm systems; modifications to sludge cake pumps; replacing sump pumps.
- Richmond Chlorination Facility, $2.5 million, modifications and upgrades to the following systems: automated hypo-chlorite, analyzer, liquid chemical feeds system, PLC/ MCC Automation Controls.
- Station 24, $24 million, principal items of work include: new recovery wells; well pumps for both the existing recovery well and the new recovery well; enclosures for well pump motors on both locations; 6 Granular Activated Carbon (GAC) treatment systems.

Facilities Development - NYC Health and Hospitals Corporation, New York, NY

Served as Senior Director responsible for managing the Office of Facilities Development's $1.2 billion 5-year Capital Plan; oversaw a $100 million-plus Major Modernization projects at two of the Corporation's Long-Term Care Facilities and managing a corporate-wide $80 million emergency generator system upgrade project. Coordinated and managed the design teams from master planning, to the production of final construction documents for major modernization projects. Organized, directed, and coordinated activities of Engineering Support and Technical Services staff to perform value engineering, constructability reviews, and estimating services for proposed construction projects. Responsible for reviewing project scope, zoning analysis, economic feasibility analysis, preparation of Request for Proposals, assist with Uniform Land Use Review Procedure (ULURP) process, participation in negotiation of lease/sale business terms, and assist Legal Affairs with drafting of real estate agreement; and directed all activities of the contract Services Group including the solicitation, processing, and award of all capital construction contracts.

KHALED HUSEIN, OVERARCHING PROGRAM MANAGER

Mr. Husein has 25 years of professional experience, both nationally and internationally, in the construction industry working on public and private sector projects. He has provided executive leadership for a general contracting firm where he solicited and negotiated joint ventures, solicited international partnerships, recruited upper management professionals and guided the restructuring efforts of the firm. Responsibilities have included project management, cost control, claim review, payment reviews, change orders, time impact analysis, and coordination between trade contractors. He performs various administrative duties including report preparation and maintaining project records; interpreting plans, drawings and specifications and negotiating contract adjustments. He is knowledgeable in proper construction practices, including safety practices, claim avoidance and claim mitigation and QA/QC procedures.

EDUCATION

BS, Civil Engineering, New Mexico State University, Las Cruces

AS, Applied Science, Rockland Community College, Suffern, New York

Engineer-In-Training, New York, Certificate [redacted]

Ordinary National Diploma in Engineering, United Kingdom

REGISTRATION

Certified Construction Manager (CCM) by CMCI/2005

Member, Construction Management Association of America (CMAA)

Member, American Society of Civil Engineers (ASCE)

Member, NYC Metro Building Information Modeling Forum (BIM)

40-hr OSHA Site Safety Managers Course

30-hr OSHA Construction Safety & Health

10-hr OSHA Construction Safety & Health

THE RIGHT EXPERIENCE

Brooklyn Courthouse Program, Brooklyn, NY

Served as Senior Project Manager for the General Services Administration's (GSA) $400 million construction program in downtown Brooklyn's Cadman Plaza area supervising a staff of 22 professionals. The scope of work included the demolition of the Emanuel Cellar Federal Office Building, construction of a new 18-story Federal Office Building, the modernization of the existing Federal Courthouse, and the renovation of the historic Brooklyn General Post Office. Program/Construction Management services included constructability analysis, schedule control, estimating, resolve construction issues, construction phasing, contractor coordination, cost control, quality assurance, dispute resolution, claim mitigation and acted as a liaison between the client, tenants, contractors and A/E team.

New York City Housing Authority Requirements Contract, New York, NY

Serving as Project Executive for a $80 million capital improvement program for the New York City Housing Authority (NYCHA); the work includes:

- Fort Washington Roofing Project, $6 million, requires the removal of existing asbestos-containing roofing materials, asbestos abatement, new roof installation and related work;
- Harlem River Brickwork Project, $7.6 million, entails extensive brickwork, the replacement of steel lintels and incidental roofing;
- Rangel Brickwork and Roofing Project, $8.6 million, calls for replacing roofs on all buildings and the parapets for two buildings, and selective replacement/repair of brickwork and steel lintels.
- Queensbridge Boiler Replacement Project, $20 million, boiler plant replacement project at the fully occupied Queensbridge Houses; the

project consists of the removal of 9 existing Boilers/Burners and related control equipment and the replacement of 18 Boilers/Burners and related control equipment, at 6 Boiler Plants.

- Williams Plaza, $6.1 million project requires replacing all roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.
- Independence Towers, $6.1 million project requires replacing roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.
- Bushwick Houses, $9.3 million project requires replacing all roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.
- Stapleton Houses, $7 million project requires replacing all roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.

Manhattan Supreme Court Reconstruction & Restoration, New York, NY

Served as General Superintendent for $45 million reconstruction and restoration of the Manhattan Supreme Court in downtown Manhattan; additionally, he served as a member of a team of engineers and inspectors responsible for overall management and coordination of multiple prime contracts for the three phases of work. Scope of work includes demolition, upgrade of heating, ventilation, and air-conditioning (HVAC), power distribution, and fire alarm systems; new lighting and service elevator; window and roof restoration and skylight replacement; waterproofing; and a new service ramp and sidewalk lift meeting Americans with Disability Act (ADA) compliance. Provided construction management service and was responsible for managing implementation of project scheduling, contractor coordination, cost control, quality assurance, dispute resolution, change orders, technical submittals, progress payments, and design reviews.

DDC Schools Construction Program, Brooklyn, NY

Served as Project/Program Manager for a series of school renovation projects; the program consisted of total of eight schools. The scope of work for this construction management assignment included new built-up roofing, brick repair and reconstruction, new reinforced concrete parapet walls, terracotta restoration, and plaster and paint work. The entire renovation program was completed under a fast track and accelerated schedule in order not to interfere with the new school year. He was responsible for overseeing field operations, which included: schedule control, resolution of construction issues, construction phasing, contractors' coordination, and quality assurance.

Rikers Island Kitchens, Queens, NY

He served as Project Manager for the $61.5 million construction of a new 40,000-sf kitchen facility capable of serving 15,000 meals per day; the 32,000-sf renovation of an existing kitchen as well as a new food delivery system and other kitchen renovations work. All work was performed within 4 active correctional facilities. Construction management services included constructability analysis, schedule control, estimating, resolve construction issues, construction phasing, contractor coordination, cost control, quality assurance, dispute resolution, and acted as a liaison between the client, the Department of Design and Construction, Department of Corrections, design consultants, vendors, and contractors.

FARHAN SYED, DEPUTY PROGRAM MANAGER

Mr. Syed has 20 years of professional experience, both nationally and internationally, in the construction industry. Additionally, he has managed complicated concrete and brick rehabilitation masonry projects concerning occupied multi-level buildings including designated landmark structures. Responsibilities have included project management, cost control, claim review, payment reviews, change orders, time impact analysis, coordination and various administrative duties such monthly reports and maintaining project records; interpreted plans, drawings and specifications, and negotiated contract adjustments. He is knowledgeable in proper construction practices, including safety practices, claim avoidance and claim mitigation and QA/QC procedures.

EDUCATION

M.S. Civil Engineering – New Jersey, Institute of Technology

B.S. in Civil Engineering, N.E.D. University of Engineering and Technology, Karachi Pakistan

REGISTRATION

Professional Engineer (PE)
New York - No. [redacted]

THE RIGHT EXPERIENCE

New York City Housing Authority, New York, NY

As a Capital Projects Division Project Administrator, provided guidance and leadership in administering capital and bond issues, funded contracts awarded to CM/Build firms and manage teams of NYCHA's in-house construction project managers to monitor construction contracts. As a Team Leader he provided reviews of technical specifications and proposals, feasibility analyses and budget allocations for each contract. Provided guidance at all stages of design development and preparation of final design documents; oversaw and managed bidding process, as well as construction through substantial completion and project close-out. These construction contracts ranged from $6 million to $50 million each depending on the scope of work. Program Management for Major Modernizations and Rehabilitations for Building Exteriors Program Unit included the following:

- Lillian Wald Houses -$45 million
- Johnson Houses -$47 million
- Washington Houses-$18 million
- Vladeck Houses Elevator Replacement and Upgrade - $11 million
- Miscellaneous Construction & Rehabilitation - $20 million

Miscellaneous Projects in the Downstate Area, New York

He serves as Project Executive providing Program/Construction Management services in the New York Downstate area; project assignments include:

- Barretto Point, $10 million, remediation project 15,000 cubic yards of contaminated soil were excavated and replaced with clean fill over 3 acres at the site, which in the past housed a paint and varnish making facility.

- Red Hook WPCP, $2.5 million project demolishing the existing system and installing a new state-of-the-art Fire Alarm System (Notifier) in nine designated plant areas.
- Sludge Dewatering Facilities Improvements at New York City Waste Water Treatment Plants, $12 million, upgrade the heating and ventilation system for air changes in chemical areas; installation of emergency eyewash stations and showers; installing chemical and containment piping with heat tracing system; raising chemical containment areas; installing ammonia detection alarm systems; modifications to sludge cake pumps; replacing sump pumps.
- Richmond Chlorination Facility, $2.5 million, modifications and upgrades to the following systems: automated hypo-chlorite, analyzer, liquid chemical feeds system, PLC/ MCC Automation Controls.
- Station 24, $24 million, principal items of work include: new recovery wells; well pumps for both the existing recovery well and the new recovery well; enclosures for well pump motors on both locations; 6 Granular Activated Carbon (GAC) treatment systems.

New York State Division of Housing & Community Renewal, On-call Contract, New York, NY

He is serving as Project Executive to monitor the construction activities of 11 Task Order projects with a total construction value of $100 million. The projects include new construction as well as major rehabilitation of existing buildings in the following developments Spring Valley Senior Living, Sleepy Hollow, Odell Clark, Clinton Place, Melrose and Jefferson Street Senior Citizen Apartments.

New York City Housing Authority, New York, NY

Team leader for PSA/Major Structural Repairs Division, responsible for Capital Project contracts worth $65-$70 million; project included construction of new Police Service Areas, Modernization and Extension of Community Centers, Major Brick and Concrete Repairs Contracts, Construction of New Garages and Curtain Wall Systems. He was responsible for on time completion of the contacts, meeting the deadlines for spending the Grant funds and for overseeing the daily work of the construction team. The construction team consisted of 26 Project Managers, 4 Field Supervisors, 2 Professional Engineers, 3 Office Project Managers and Assistant Chief. Also, he was the point person to resolve technical as well as administrative issues for these contracts as well as resolving daily work issues and change of design issues with the contractors due to field conditions.

New York City Housing Authority, New York, NY

As Assistant Chief Engineer under the Guidance of the Division Chief managed all exterior brick repair, structural repair and requirement contracts city wide, numbering from 25 to 50 contracts at a time. Provided review of bid documents, oversaw contract drawings and specification reviews, review and recommend the qualifications of low bidders and approved and signed all payment requisitions, reviewed and signed-off contractor's performance evaluations. Guided and supervised office staff in all technical report writing and correspondence with contractors. Reviewed and signed off on all change orders and work with the office of Quality and Cost control for processing change orders. Resolved and administered all field related and technical issues and provided guidance to a total field staff of 37 field inspectors, project managers and field supervisors.

HENRY HESSING, PE, AVIATION-DEP. PROGRAM MGR.

Mr. Hessing will be your Deputy Program Manager for Aviation projects. He has over 34 years experience as a professional engineer with extensive knowledge of construction management and resident engineering for new and rehabilitated highways, bridge structures, rail line segments and transportation-related buildings and airports. Mr. Hessing has a strong background in design engineering, interdisciplinary coordination, transportation planning programs, highways and bridges, airports, rail lines, utilities and constructability review.

EDUCATION

Master of Science, Transportation Planning, Polytechnic Institute of New York

Bachelor of Science, Engineering, State University of New York, Stony Brook

REGISTRATION

Professional Engineer
New York, [redacted]
Pennsylvania, [redacted]
New Jersey, [redacted]

REGISTRATION

Outstanding Service Award for Project Management

Exceptional Service Team Award was given by PANYNJ

The Aviation Department - PANNYNJ - gave two letters of commendation

American Registry of Outstanding Professionals

ASCE L.I., NY Branch President

THE RIGHT EXPERIENCE

JFK International Airport Redevelopment Program, Queens, NY

Served as Program Manager for the $9.5 billion JFK redevelopment program; developed construction staging and maintenance of traffic plans for the passenger distribution systems; performed in house constructability review of the baggage handling tunnel, electrical substation and 27k V duct bank; prepared cost estimates for site work for the East Parking Garage and evaluated various alternatives for piles and foundations for the electrical substation. Other responsibilities included establishing budgets and schedules for multiple construction contracts; developing, updating and maintaining planning parameters; monitoring budgets and schedules for functional, preliminary and final design of all contracts. This included monitoring construction so that airport operations were not interrupted along with coordinating with other design/ construction projects. He also analyzed multi-million claims for the Port Authority and made recommendations for resolution. Individual projects included coordinating the performance of this work through the Port Authority's tenant alternation application process for each passenger and baggage screening check point at all nine terminals in the Central Terminal Area; also managing development and implementation of $550 million in roadway and utility improvements while fully coordinating with airport operations and other components of the program.

- Air Traffic Control Tower Demolition, $3.5 million, for the design and demolition phase of this project which was successfully completed with minimal impact to airport operations. The airports general manager described the job as, "a model for how construction should be undertaken in an operating airport environment. The job was well planned, the work site was properly managed and maintained and the communication of the project schedule to airport staff was very effective."
- Airport Deicing Facility, provided program management for the $9.5 million design/build/operate/maintain (DBOM) new, state-of-the-art, infrared aircraft deicing facility; the structure deices aircraft up to

and including 747-300. The project earned the "Quality of Life" award from ASCE Long Island in May of 2007.

- Explosive Detection Systems and Electronic Trace Detection, Transportation Security Administration installations of Explosive Detection Systems and Electronic Trace Detection for baggage screening IT rack installation at JFK International Airport; coordinated the performance of this work through the Authority's tenant alternation application process for each passenger and baggage screening check point at all nine terminals in the Central Terminal Area. This work included civil and traffic engineering technical reviews, evaluations, recommendation and administration for the various terminal redevelopments in the CTA.
- Air Train Light Rail System, the system links airport terminals with car rental facilities, parking areas and the New York City transportation network, including the LIRR and the NYC subway and bus network. Mr. Hessing was responsible for civil specifications, LRS drainage design, pavement design, civil details and permit reports.

Rehabilitation of Co-op City, Bronx, NY

Served as Program Manager responsible for managing contracts and staff for construction supervision and inspection of the replacement of dual temperature hot water (RIC-WEL System) and electric duct bank system for 55,000 unit housing project, six public garages and three shopping malls as part of this $200 million project which took 11 years to complete. Five miles of piping were replaced; using micro-tunneling, installed new 250 feet long, 60" diameter precast concrete pipe under Hutchinson River Parkway to accommodate the installation of new 48" diameter steel pipes heating and cooling piping; additionally, installed new 6", 8", 10" and 12" diameter water mains, new fire lines, storm, sewer and 2" diameter gas lines. Work also included roadway concrete pavement, interlocking concrete payers, asphalt roadway and landscaping.

KAMAL KISHORE, PE, BRIDGE & TUNNEL- DEP. PROGRAM MGR.

Mr. Kishore has over 40 years of experience working with various engineering organizations and was involved in approximately 500 bridges. Areas of specialized expertise include, but not limited to, Load Rating of bridges to establish the posting value and to establish criteria for allowing unusually heavy vehicles to travel on it; developing scope of work for acquiring consulting engineering services for various bridge projects, developing scope of work for acquiring expert engineering services for matters requiring highly complex studies related to policy decisions as owner of large inventory of bridge infrastructure; developing alternative schemes for a bridge project, clearly discussing merits and demerits of the schemes and recommending the best suited scheme; inspecting bridges to establish its condition rating based on NYSDOT and FHWA criteria; developing details for bridge structure that incorporates new technological advancements and blends with the long standing details being frequently used in bridges.

EDUCATION

Master of Technology Structures, Indian Institute of Technology, Kanpur, India

Bachelor of Science, Civil Engineering, Bihar College of Engineering, Patna, India

REGISTRATION

Professional Engineer –
New York 1988, [redacted]
New Jersey 1986, [redacted]

THE RIGHT EXPERIENCE

Bureau of Engineering Review and Supports, NYC Department of Transportation, Division of Bridges, New York, NY

Serving as Deputy Chief Engineer responsible for managing all activities associated with design and rehabilitation or replacement of all deficient bridges owned by the City of New York. NYC is responsible for about 687 bridges in the five boroughs. In charge of 100 engineers divided into four groups; In-House Design Group, Engineering Review Group, Engineering Support Group and Quality Assurance Group.

- In House Design Group – Responsible for design of the $90 million 145th Street Bridge over the East River, the design of the $200 million Paerdegat Basins Bridge over the Belt Parkway as well as supervising the consulting engineering firm designing the $8 million pedestrian ramp from Park Row to Police Plaza.
- Engineering Review Group – Responsible for the review of all bridges and establishing seismic design criteria for them; identifying land use issues; rehabilitating and inspecting retaining walls. The job of creating scopes of work for future bridge project lies with the Engineering Review Group; it also manages the development of bridge designs prepared by private developers who build bridges that become City property after acceptance including 7 bridges built by EXTELL/Trump New World in Manhattan at cost of $40 million and the construction of the $15 million Carlton Avenue Bridge in Brooklyn by Forest City Ratner.
- Engineering Support Group – Responsible for preparing the specifications for all construction contracts pertaining to bridge

construction and also maintains archived specifications and as-built drawings. This Group also includes a Survey Unit that is responsible for monitoring and surveying low-rated bridges. This group was responsible for managing the engineering consultant performing remediation and rehabilitating city-owned bridges infested with marine borers.

- Quality Assurance Group – Responsible for reviewing of fabrication shop drawings, spot inspections of the fabrication yard, maintaining concrete-mix records, inspection of the reinforcing bars and bearings; also responsible for painting inspections and enforcing compliance to environmental issues during construction.

Engineering Review, Bridge Design, NYC Department of Transportation, Bridges and Roadway Division, New York, NY

He served as Director managing four engineering sections, Engineering Estimating and Review, Geotechnical Engineering, Utilities and Permits Land Acquisition, consisting of fifteen engineers.

- Engineering Estimating and Review – Responsible for creating preliminary scopes of work and technical documents for the preparation of Request for Proposals for the rehabilitation of deficient bridges; establishing criteria for project initiation estimates; preparing standard fee curve for consultants; establishing and reviewing seismic design and retrofit criteria; reviewing load rating calculations; training employees in the use of the metric system to conform to NYSDOT/FHWA requirements.
- Geotechnical Engineering – Responsible for subsurface exploration, laboratory testing, geotechnical designs and reports, plans and specifications; modifications to documents; ensuring that the design documents comply to federal/state/city design standards; reviewing subsurface and foundation designs for conformance with AASHTO/ NYSDOT seismic design criteria; establishing criteria for foundation plans and proposals of complex nature prepared by others which may impact structures or facilities owned by the city.
- Utilities and Permits – Responsible for reviewing consultant submissions to establish conformance to city policies and ensuring that all bridge utilities can be accommodated without jeopardizing the bridge's structural integrity; interacting with utility companies to make them aware of Bureau's special requirements; and resolving all matters with the utilities.
- Land Acquisition – Responsible for reviewing each project for any possible land issues; requesting and tracking title searches, coordinating and processing ULURP activities, and the mapping and/or de-mapping of streets as required.

LAWRENCE KING, PE, QA/QC OFFICER

Mr. King has over 38 years of design, construction and quality assurance experience. He is currently HAKS' QA/QC Officer overseeing inspection and record keeping quality and safety on all company projects. Before joining HAKS he was Deputy Chief Engineer for the New York City Department of Transportation, responsible for consultant and contract supervision, management and quality control of design, construction and rehabilitation of all fixed land and waterway bridges under the City's jurisdiction, and a budget of $2.3 billion over the past 10 years. Before that he served for 10 years as Director of Quality Assurance in the Department's Division of Bridges, where he developed and initiated QA policy and Materials Acceptance Procedures.

EDUCATION

B.S. in Civil Engineering, CCNY – School of Engineering, NY

REGISTRATION

Professional Engineer
New York, [redacted]

THE RIGHT EXPERIENCE

Capital Commitment Program, Bureau of Roadway Bridges, NYC Department of Transportation, New York, NY

As the Deputy Chief Engineer/Assistant Commissioner of the NYCDOT Bureau of Roadway Bridges, he had responsibility for the Bureau's Capital Commitment Program which encompassed the 10 year Design/Bid/Build Plan for all fixed land and waterway bridges under DOT'S jurisdiction. In this capacity, he oversaw on a 3 time per year basis the updating of this plan, having ultimate latitude in the plans modifications so as to meet the NYCOMB target needs. This 10 year Program consisted of approximately 48 bridges in various stages of design valued at $1.3 billion, one of the most notable being the Manhattan Westside Bridges Program consisting of 21 bridges valued at $304 million. Additionally the construction arm of this Program managed some 15 - 20 bridges in rehabilitation through the 5 Boroughs valued at $450 million, the most notable project being the reconstruction of 3 Belt Parkway bridges registered for $365 million.

HAKS, New York, NY

He is serving as Quality Assurance, Quality Control Officer for all HAKS construction management, engineering, architecture, land surveying and material testing projects, ensures the quality of design, inspection and record keeping. Responsible for the development and implementation of processes that enable each Department to become ISO 9001 certified.

Alley Creek CSO Abatement Facilities, Queens, NY

Serving as Quality Assurance, Quality Control Officer for the complete upgrade of the existing Old Douglaston Pump Station (ODPS), including construction of an Interim Pump Station (IPS), with renovation and rehabilitation of the existing (ODPS) structure and process equipment, and HVAC, plumbing, electrical and associated control work; demolition,

rehabilitation and reconstruction of two existing outfalls, which will involve temporary roadway construction through adjacent wetlands to provide access; and activation of the CSO Retention Facility, which was constructed under Phase I of this work.

Alley Park Environmental Restoration and Oakland Lake Park Improvement, Queens, NY

He is serving as Quality Assurance, Quality Control Officer for this $12 million project at Alley Park that involves the excavation and stockpiling of the wetland area north of Northern Boulevard, transporting and disposing of the excavated material at the approved disposal facility, subgrade fine grading and spreading sand planting material in the Western Basin, planting in wetland salt marsh and maintaining erosion and sedimentation control facilities. Additional items to be undertaken include planning of trees, shrubs, warm season grass and wildflower seeding. Construction at Oakland Park involves restoring five isolated locations within Alley Park including reconstruction of sidewalks, remediation of gullies, removal of invasive plants, trees and common weed near the lake, modification of catch basins and shrub and tree plantings.

Bureau of Roadway Bridges, NYC Department of Transportation, New York, NY

So as to ensure the uninterrupted flow of design and construction services for this Program, I interfaced and problem solved with numerous stakeholders (City/State/Federal Agencies, Elected Officials, Community Boards, etc.). Areas of involvement included scheduling, cost negotiations, funding stream identification, quality of deliverables, site safety and quality of life issues.

He served as Deputy Chief Engineer for all fixed land and waterway bridges under jurisdiction of the Division of Bridges, directing all activities related to consultant supervision, contract supervision and contract management for design, construction, reconstruction and rehabilitation projects on all fixed land and waterway bridges and related structures; overseeing an ongoing program to reconstruct all fixed land and waterway bridges and related structures; executing structural, electrical and architectural design and related engineering work for the construction and/or rehabilitation of all fixed land and waterway bridges and related structures, at all times coordinating design efforts with interested public and private agencies; reviewing and commenting on structural plans submitted by private developers, governmental agencies, and public utility companies; managing all work of the Bureau under the terms of the Interfund Agreement (IFA), keeping its budget in line with fees charged by private consulting contractors.

Directly responsible for managing a technical staff of 75 Professional Engineers, Construction Managers and Administrators with a ten year capital budget approaching $2.3 billion dollars. At any given time some 90 projects were in various states of design with upwards of 20 projects in the construction phase. Major projects advanced during his tenure include:

- Reconstruction of Queens Boulevard and Honeywell Street over Sunnyside Yards – $81 million
- Reconstruction of the Grand Concourse over East 161 Street – $56 million
- Reconstruction of three Belt Parkway Bridges--Paerdegat Basin, Fresh Creek and Rockaway Parkway – $345 million
- City Island Cable Stayed Bridge – $100 to $120 million
- Protection against Marine Borers along the FDR – $80 to $100 million
- Reconstruction of three Belt Parkway Bridges--Gerritsen Inlet, Mill Basin and Nostrand Avenue – $350 to $400 million
- East 153 Street over Metro-North Rail Road, $100 to $120 million

RAYMOND A. RIBEIRO, P.E, TECHNICAL ADIVISOR

Mr. Ribeiero has 20 years of professional experience directing and managing public sector projects. His responsibilities have included project management, cost control, , change orders, time impact analysis, prepared reports and maintained project records; interpreted plans, drawings and specifications, and negotiated contract adjustments. He is knowledgeable in proper construction practices, including safety practices, claim avoidance and claim mitigation and QA/QC procedures.

EDUCATION

Bachelor of Science, Civil Engineering,
Polytechnic University, Farmingdale, NY

REGISTRATION

Professional Engineer
New York, [redacted]

THE RIGHT EXPERIENCE

Nassau County 4 year Capital Improvement Plan, Mineola, NY

Served as Commissioner responsible for the coordination, scheduling, fiscal control and implementation of the County's 4-year capital program worth a total of $800 million. The program included over 325 projects in roads, bridges, infrastructure, buildings, storm water and sewage treatment, park improvements and traffic/transportation. The program required coordination with many outside funding agencies/programs including STP, CMAQ, HBBR, SRF, ARRA, Earmarks, etc.

Environmental Bond Act, Mineola, NY

Served as Commissioner responsible for the overall management and implementation of all design and construction associated with two voter approved Environmental Bond Act programs worth $150 million. The Act funded 23 open space land acquisitions, 7 Brownfield remediation projects, 46 storm water improvement projects and 64 improvements.

Commissioner, Nassau County

Establish policy, direct operations and manage resources associated with a department of nearly 900 employees. General management of all engineering, construction and maintenance associated with public infrastructure including buildings, roads, bridges, traffic controls, passenger cars, emergency vehicles and heavy truck fleet, sewage treatment plants and collection systems, storm water management, groundwater monitoring and mosquito control. Responsible for developing and managing a 280 million dollar annual operating budget and an annual 160 million dollar capital budget; represent the department on all the above in meetings with the County Executive, Legislature, other elected officials and civic groups.

Assistant Director of Traffic Engineering

Managed daily operations of the entire traffic engineering unit, including supervision of a staff of nearly 60 employees; met and communicated with elected officials and civic groups regarding various traffic issues; coordinated federal aid programs with County Capital Transportation Funds.

ANTHONY PAPPAGALLO, PROJECT MANAGER

Mr. Pappagallo has over 33 years of experience in Construction Management. He has worked successfully at the executive level of management for governmental, private and employee-owned firms in the New York metropolitan area. Responsibilities have included project management, cost control, claim review, payment reviews, change orders, time impact analysis, coordination between the owner and the contractor, and various administrative duties including preparing reports and maintaining project records; interpreting plans, drawings and specifications, and negotiating contract adjustments. He is knowledgeable in proper construction practices, including safety practices, claim avoidance and claim mitigation and QA/QC procedures.

EDUCATION

MS, Structural Engineering,
Polytechnic Institute of Brooklyn, NY

BS, Civil Engineering, Polytechnic Institute, NY

REGISTRATION

American Society of Civil Engineers

Building Trades Association Member

National, Local, State Board of Realtors License

Path/PANYNJ-Roadway Worker Protection Certificate

NYC Department of Buildings 4-hour Supported Scaffold User Certificate

NYC Department of Buildings 8-hour Scaffold Safety Training Certificate
OSHA 30-hour Safety Training Course

Contract Changes-Extra Work Claims, Differing Site Conditions, Achievement Award

American Arbitration Association Member

THE RIGHT EXPERIENCE

WTC Memorial & Memorial Museum, New York, NY

Served as Project Manager for the new construction of the WTC Memorial and Museum in downtown Manhattan; responsibilities included extensive repair of existing slurry wall; second interior "liner wall" (keep out) Hudson River, to augment original "bathtub", prior to permanent rebuilding. Over seven-lines of tiebacks were drilled and grouted to bedrock; excavated and installed guide walls for support of excavation wall for slurry wall at counter-fort, with seven reinforced pilasters, dewatering, excavation into bedrock, to 7-story depth, will support 62-ft of exposed slurry wall; utility and secant pile obstructions. Approximately 6600-cy of 5000-psi concrete, 500 tons of reinforcing steel, 300, steel rod tiebacks drilled, cased and grouted to bedrock. Project also required extensive coordination with major subway and PATH projects, and MTA's #1 and #9-subway tunnel.

New York City Housing Authority Requirements Contract, NY, NY

Serving as Project Manager for a $80 million capital improvement program for the New York City Housing Authority (NYCHA); the work includes:

- Fort Washington Roofing Project, $6 million, requires the removal of existing asbestos-containing roofing materials, asbestos abatement, new roof installation and related work;
- Harlem River Brickwork Project, $7.6 million, entails extensive brickwork, the replacement of steel lintels and incidental roofing;
- Rangel Brickwork and Roofing Project, $8.6 million, calls for replacing roofs on all buildings and the parapets for two buildings, and selective replacement/repair of brickwork and steel lintels.
- Queensbridge Boiler Replacement Project, $20 million, boiler plant replacement project at the fully occupied Queensbridge Houses; the project consists of the removal of 9 existing Boilers/Burners and related control equipment and the replacement of 18 Boilers/Burners and related control equipment, at 6 Boiler Plants.

- Williams Plaza, $6.1 million project requires replacing all roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.
- Independence Towers, $6.1 million project requires replacing roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.
- Bushwick Houses, $9.3 million project requires replacing all roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.
- Stapleton Houses, $7 million project requires replacing all roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.

PS 269 Annex, Brooklyn, NY

He served as Senior Project Manager for the boiler retrofit and replacement of power-flame burners at 2 separate school boiler plants. Included removal and replacement of chemical feed-water tank, condensate receiver tanks, vacuum, recirculation and sump pumps; lead/lag controller, power distribution panels, and related piping. Coordinated, procured, managed, and inspected all activities, cost management, and final close-out, including the Bureau of Air Resources and Facilities Inspection Division for this Capital Improvement Project.

Namm Building, New York City College of Technology, Brooklyn, NY

As Project Manager, coordinated and managed the $19 million exterior modernization of the 12-story Namm Building for the Dormitory Authority of the State of New York's. This seven-phased project included replacement of limestone cladding, new windows; interior fit-up an extensive program of asbestos abatement in an occupied facility; included relocation of occupants into pre-constructed swing space. Attached, 6-Story (G/Bldg) included roofing, window replacements, and abatements at 200-station computer lab, new fire alarm system, GPR surveying prior to filling-sinkholes. Project completed five months ahead of schedule.

Fordham Road Station, Bronx, NY

Served as Project Manager for Metro-North Rail Road's Harlem Line-Rehabilitation of the Station and platform including lighting, communication & signal; foundation, and concrete renovations; ADA compliance.

Roosevelt Island, New York, NY

Served as Project Manager for various facilities renovations such as Goldwater Hospital, Blackwell Park, including de-watering, excavation and installations of seawall bulkheads, pilings, utility storm, sewer, security gates, guard booths, and landscaping.

Beneficial Management Headquarters, Peapack-Gladstone, NJ

Served as Project Manager responsible for design and construction of 5-story-retaining walls foundations, structural steel, metal deck, two-way waffle slabs, underground parking, computer, mechanical, site design, on pile caps, including water tank with clock tower of this eight-building office complex. This 1-million-sf facility consisted of structural steel framing/ concrete slab on metal deck, concrete waffle slabs, underground parking structures, computer rooms, remote mechanical buildings.

NILESH SHAH, PE, AVIATION - PROJECT MANAGER

Mr. Shah has 24 years of professional experience in the construction industry working. He is knowledgeable in proper construction practices, including safety practices and QA/QC procedures.

EDUCATION

Master of Science, Civil Engineering,
Stevens Institute of Technology,
New Jersey

Bachelor of Science, Civil Engineering,
Sardar Patel University, India

REGISTRATION

Professional Engineer –
New York [redacted]
Delaware, # [redacted]

THE RIGHT EXPERIENCE

Continental Airlines Global Gateway Program, Newark International Airport, NJ

Serving as Geotechnical Project Engineer responsibilities included oversight of the installation of over 4,000 piles which consisted of 12" diameter steel pipe and 8" diameter mini piles supporting the expansion of Terminal C, reconfiguration and the enclosure of an airside drainage ditch about a half-mile in length. When low overhead and/or vibrations to existing structures were an issue, mini piles were used. The threaded joint casing was installed to the full depth of the pile. After the tremie pipe was placed to the bottom of casing and flushed with water, grout was pumped through the tremie pipe to top of pile; after inserting a center reinforcing bar the casing was withdrawn to a specified elevation while pressure grouting continued; static load tests were later performed.

Terminal 4 Redevelopment and Landside Roadways, JFK International Airport, NY

Served as Senior Geotechnical Engineer, responsibilities included oversight of the installation of over 3,400 piles supporting the construction of a new $1.8 billion international arrivals terminal and the reconfiguration of the access roadway to the terminal. The pile-testing program included dynamic and pile integrity I compression, lateral and tension tests.

Removal of Northbound Tolls at Pascack Valley Toll Plaza, NJ

He is serving as Resident Engineer for the staged operations to remove the Northbound Toll Plaza on the Garden State Parkway at MP 165. Stage 1A includes removal of the four "EZ Pass Only" pavement markings; existing toll plaza advance signs and installation of temporary work zone. Stage 1B consists of the removal of remaining concrete barriers, removal of existing toll islands, booths and canopy. Stage 2 involves shifting traffic from Northbound Express lanes to Northbound lanes reconstructed in Stage 1. Other work involves drainage, sign structure foundations with drilled shafts and structure removals and installations, electrical lighting, conduit and wiring, rip-rap stone and sidewalks. Stage 3, the final stage, involves installing the final surface course of hot-mix asphalt with permanent traffic striping and signing. Traffic control and coordination with toll facility and Turnpike operations is a major responsibility.

Paulding Avenue Area, Bronx, NY

Served as Resident Engineer for the replacement and regarding of worn and deteriorated streets, curbs, pedestrian ramps and geometric alignment modifications, new street lighting, drainage and environmental studies, and study of traffic patterns.

Reconstruction of Step Street at East 183rd Street, Bronx, NY

He served as Resident Engineer responsibilities included demolition of the north and south stairs and replacement with new stairs, structural steel installation (box beam gutter) including expansion bearings, reconstruction of sidewalks, utility lines, replacing lights, traffic signals, roadway pavements, pavement markings, stabilization of the rock face by installing rock anchors and protection of the rock face by installing wire mesh and anti-climb fences.

Downtown Flushing Pedestrian Project, Queens, NY

Served as Resident Engineer for this project which provides pedestrian amenities at various locations in Historic Downtown Flushing; project includes rehabilitation of the Lippmann Arcade that connects Roosevelt Avenue to a municipal parking lot, sidewalk and roadway rehabilitation on 39th Avenue between Union Street and 138th Street and at the intersection of Bowne Street and 37th Avenue. In addition, 16 historic sites received pedestrian amenities such as lighting, signage, historic markers and inlaid thermoplastic crosswalks.

Rehabilitation of Lincoln Road Bridge, Brooklyn, NY

Served as Resident Engineer responsible for overseeing the removal and reconstruction of the existing bridge and its surrounding sidewalks, curbs and approach roadways, the bridge abutments will be demolished except for the upper portions which will remain as a retaining wall. The project required the construction of a new abutment on Steel H piles driven behind the existing abutment and a new parapet.

Bronx-Whitestone Bridge Rehabilitation, Bronx, NY

Served as Resident Engineer responsible for partial and full-depth repairs of deck and the oversight of the removal of existing overlay and its replacement with rapid setting LMC; work included replacement of missing gutter plates, installation of weep pipes, removal and replacement of deck expansion joints, bearings and damaged finger joint.

JEFFREY WRIGHT, PE, BRIDGE & TUNNEL- PROJECT MANAGER

Mr. Wright has 26 years of experience in the inspection of structural steel and reinforced concrete structures with an emphasis in bridges. His experience includes inspecting over 500 bridges and the load rating of over 150 bridges. He has been involved in the bridge inspection field from Assistant Team Leader to Project Manager. He has inspected bridges from simple spans to suspension and truss bridges. He is thoroughly familiar with the day-to-day operations of a biennial inspection projects including scheduling, cost control, coordination with railroads and utilities and client communication.

EDUCATION

Bachelor of Science, Civil Engineering, Rensselaer, Polytechnic Institute

REGISTRATION

Professional Engineer – New York, [redacted]

CERTIFICATION

NYSDOT Bridge Inspector's Training Course

Bridge Climbing Class

C3- Supervisor/ Competent Person Training for Deleading of Industrial Structures SSPC

MPT ATSSA Traffic Control Supervisor

OSHA 10-Hour Construction Safety and Health Training Course

OSHA Confined Space Awareness

NACE Coating Inspector Training, [redacted]

Individual Member of NACE - [redacted]

THE RIGHT EXPERIENCE

2009-2010 Biennial Bridge Inspection & Design of Miscellaneous Repairs at the Marine Parkway and Cross Bay Bridges, Queens, NY

Serving as Project Director for the inspection of bridges, preparing reports and reviewing all available plans, inventory updating, load rating verification and structural integrity evaluation of bridges which included updating NYCDOT database for various bridge elements.

2008-2009 Biennial and Interim Bridge Inspection, New York, NY

Served as Project Director for the inspection of 689 bridges in 7 counties located in Region 8 for the New York State DOT bridges, prepared reports, and reviewed all available plans, updated inventory, verified load ratings and structural integrity evaluations using BIPPI.

Biennial and Interim Bridge Inspections, New York County, NY

He served as Project Manager for the inspection of 200 bridges with 2,800 spans located in Region 11 for NYSDOT. Overall project responsibilities included ensuring quality of work; inspection; scheduling; maintenance and protection of traffic implementation and public notifications.

2007-2008 Biennial Bridge Inspection & Design of Miscellaneous Repairs, New York, NY

Served as Team Leader for the inspection of the Henry Hudson and Queens Midtown Tunnel Approach Bridges, prepared reports, reviewed available plans, updated the inventory, verified load ratings and structural integrity evaluations of the approach ramps which included updating database for various elements of the bridges and their approach ramps.

Superstructure Painting of Rip Van Winkle Bridge, Brooklyn, NY

Served as Resident Engineer for sandblasting the existing through truss portion of the bridge to a near white finish and painting with a zinc-rich epoxy primer and two-coat water based acrylic; additional work included cleaning and repainting 9,950-lineal feet of railings. The existing paint

contained lead, therefore class 1A containments were erected and all debris was classified as hazardous waste. The work was performed successfully over traffic and over the Hudson River. Rip Van Winkle Bridge is a cantilever bridge spanning the Hudson River between Hudson, NY and Catskill, New York

Biennial Bridge and Under Water Inspection, NY

Served as Team Leader for the inspection of the Tappan Zee Bridge underdeck elements of the through truss as well as the towers and caissons; the inspection utilized the existing travelers under the bridge to inspect the bottom chords, floor beams, stringers and curb support steel. The four main towers were inspected by climbing and the insides of the caissons were inspected by climbing ladders and utilizing flash lights.

Inspection Services for the West Approach Rehabilitation of Mid-Hudson Bridge, NY

He served as Resident Engineer responsible for budget, schedule, and quality of workmanship for replacing the concrete deck of the NYS Route 9W overpass to the Mid-Hudson Bridge with a new concrete deck, new approach slabs and concrete barriers. In addition to the bridge work, over five lane miles of asphalt concrete pavement were milled and filled. Work also included the installation of a half mile of fiber optic and electric power conduits for security work.

Kingston-Rhinecliff Bridge Superstructure Painting, Kingston and Rhinecliff, NY

Served as Resident Engineer for the blast cleaning and repainting the 5,200-feet of deck trusses of this Hudson River bridge. Work included utilizing class 1A containment during blasting operations, as the existing paint contains lead; hazardous waste removal and air quality were closely monitored. The paint system consisted of a moisture cure zinc primer followed by a sealer stripe coat and two coats of a waterborne latex paint.

Newburgh-Beacon Bridge Expansion Joint Construction Inspection, Newburgh-Beacon, NY

Served as Resident Engineer for the replacement of existing armored joints and plug joints with 10 new asphaltic plug joints, replacement of 12 existing modular expansion joints with new modular expansion joints, full-depth concrete repairs, and removal of concrete haunches at 47 floor beam locations.

Truss Removal, Aerodynamic Fairing Installation, Cable Inspection, Bronx-Whitestone Bridge, NY

Served as the Resident Engineer for the removal and disposal of the existing stiffening trusses, and temporary reinforcement of stiffening girders, paint removal for steel repairs and repainting on the Bronx-Whitestone Bridge. In addition, a new walkway, access platforms, temporary work platform, and ladders were installed, as were new vent holes and new access openings in the stiffening girder, removal and disposal of seizing wires from suspenders and stay ropes, and removal and resetting of rope collars.

FRANK VERDARAME, BRIDGE & TUNNEL- PROJECT MANAGER

Mr. Verderame has over 16 years of experience in construction management his responsibilities have included project management, cost control, payment reviews, change orders, time impact analysis, coordination between the trades and various administrative duties, prepared reports and maintained project records; interpreted plans, drawings and specifications, and negotiated contract adjustments. He is knowledgeable in proper construction practices, including safety practices and QA/QC procedures.

EDUCATION

BS Civil Engineering, Manhattan College, Riverdale, NY

CERTIFICATION

OSHA 10-Hour Construction Safety and Health Training Course

OSHA 40-Hour Construction Safety and Health Training Course

OSHA Confined Space Awareness

PATH Railroad Worker Safety Training

ACI NJ Chapter Concrete Construction Technology Course

NJSAT Asphalt Paving Construction Technologist

Rutgers Traffic Control Coordinator

Rutgers Traffic Control Coordinator – Refresher Course

Contract Administration and Management using Primavera Expedition –Etrac Solutions

Bentley ProjectWise Course

THE RIGHT EXPERIENCE

PANYNJ, Construction Management Services on a "Call-in" Basis, New York, NY

Served as Project Manager for an on-call construction management assignment at multiple Port Authority facilities in the metropolitan area; performed various tasks including Resident Engineering Inspection and Tenant Alteration Application (TAA) projects for the Authority. Responsibilities included monitoring pile installation, pile repairs, wrapping, jacking, relieving platforms rehabilitation, underwater and above-water pier repairs, bulkhead repairs and new construction, fender systems, buildings, digital video monitoring systems, paving, concrete, asphalt, and other site work. Fire Safety Engineers focused on maintaining a fire safe environment at Authority facilities for employees, tenants and patrons and on an effective HPR-(highly protected risk) based property loss prevention program. Work included conducting and witnessing annual and acceptance tests of fixed fire protection systems and equipment; reviewing and commenting on plans for fire code compliance, and participating in special technical investigations.

Construction Management for NY Projects on a Call-in Basis for PANYNJ, NY/NJ

Responsibilities included administration of pre-construction meetings and preparation of minutes; processing contractor payment; preparing contract change orders; preparing additional lump sum and unit price conversions; performing requests for additional funds for contracts, auditing contractor proposals, estimates and submittals; processing audit requests and assisting auditors; updating financial details and construction forecasts on a monthly basis to track budgets; issuing directives for on-call contracts; updating, preparing and filing contract correspondence, specifications, drawings & submittals; scheduling inspections for all contracts; verifying compliance with changing security regulations; researching information from closed-out contracts; closing out completed contracts including: verifying and processing final financial documents for payments and preparing completion memos, certificates, permits, audits for facility, Construction Managers and Chief Engineer's approvals. Scope of work on various

projects included installation of new piles, pile repairs, wrapping, jacking, rehabilitation of relieving platforms, underwater and above water pier repairs, bulkhead repairs and new construction, fender systems, fence, guide rail, lighting, signage, guard booths, building construction, sprinkler systems, roofing, digital fiber optic video monitoring systems, paving, etc for various contract assignments including:

- Brooklyn PA Marine Terminal, Pier 8 Roof and Sprinkler Rehabilitation
- Brooklyn PA Marine Terminal, Bulkhead Rehabilitation Between Piers 2 and 3 and Piers 4 and 5
- Brooklyn PA Marine Terminal, Piers 1, 2 and 3 Rehabilitation of Low Level Relieving Platforms
- Brooklyn PA Marine Terminal, Streetscape Program
- Brooklyn PA Marine Terminal, Rehabilitation of Piles-Piers 1, 2, 3 and 5
- Red Hook Marine Terminal, Wharf A, Bulkhead Rehabilitation
- Downtown Manhattan Heliport, Pier and Barge Repairs
- Port Commerce Department, New York Facilities, Asbestos Removal
- New York Marine Terminals, Priority Building Construction
- NY/NJ Marine Terminals, Wharf Repairs
- NY/NJ Marine Terminals, Underwater Wharf Repairs
- NY Marine Terminals, Wharf Repairs
- NY Marine Terminals, General Building Construction
- NY Marine Terminals, Underwater Wharf Repairs
- NY/NJ Marine Terminals, Multi-Facility Fender System Repairs
- NY Marine Terminal, Fencing, Guide Rail, Guard Booths, Lighting and Site Work
- Queens West Wharf Repairs
- Battery Park Ferry Landing, Pier A Landing Removal

Stewart International Airport Access Improvement Project, Stewart, NY

Served as Project Manager for the construction of a new interchange on Interstate 84 at Drury Lane with the staged reconstruction of Drury Lane and an access road from Drury Lane to Stewart International Airport; creation of new Federal Wetlands; drainage installations including box and pipe culverts; construction of MSES (mechanically stabilized earth system) walls; installation of extensive erosion control measures and environmental friendly features such as vernal pools and amphibian borders; installation of new utilities (overhead and buried) throughout project.

Reconstruction of Grand Concourse Bridge over East 161st Street, Bronx, NY

Served as Project Manager for a scope of work that included the demolition of arched bridge; demolition of the abutments, concrete deck, steel grating and steel stringers; construction of top of bridge abutment and back walls utilizing soldier piles and wood lagging; rehabilitation of existing concrete on abutment wall; construction of new stringer seat pedestals and installation of elastomeric bearings; construction of new superstructure; installation of a new water main crossing the bridge under Grand Concourse and a water main at E161st Street north service road; construction of Lou Gehrig Plaza, sidewalks, median island and bridge parapets with architectural fencing; demolition and reconstruction of concrete staircases at East and West portals of the bridge; reconstruction of the underpass roadway and sidewalks; construction of two new approach slabs; roadway resurfacing of both upper arteries at E161st Street; installation of new tunnel/street lighting system, pavement striping and traffic signals. Scope of work for the latter includes full depth reconstruction of the roadway; reconstruction of sidewalks and medians, installation of pedestrian ramps; construction of new combined sewer system, drainage, Con Edison duck banks and telephone systems; installation of new street lighting system, pavement striping and traffic signals.

ASHRAFF ABDALLA, PE, RAIL & TRANSPORTATION- PROJECT MANAGER

Mr. Abdalla has over 20 years of experience in the construction management of various facilities including police facilities, residential, hospitality facilities and airports. Responsibilities have included project management, cost control, payment reviews, change orders, trade coordination and various administrative duties, prepared reports and maintained project records; interpreted plans, drawings and specifications, and negotiated contract adjustments. He is knowledgeable in proper construction practices, including safety and QA/QC procedures.

EDUCATION

Bachelor of Science in Civil Engineering, Alexandria University, Egypt,

OSHA/EPA Lead Inspector Training

REGISTRATION

Professional Engineer, Pennsylvania, [redacted]

THE RIGHT EXPERIENCE

New Terminal at JFK Airport, Queens, NY

Provided field inspection in compliance with contract documents for the construction of a new international arrivals terminal; adhered to building codes and industry standards. Maintained extensive inspection and progress reports and follow-up to assure compliance with the contract documents and evaluated field conditions and provided solutions to conditions not detailed in drawings. Attended progress meetings on a weekly basis to discuss work progress and prepared meeting minutes as well as issued directives and field memos to contractors for non-compliance.

121st Precinct, Staten Island, NY

Serving as Superintendent for the new $52 million, 52,000-sf 121st Precinct which is being constructed under a CM/Build contract. The LEED Silver facility was designed by world renowned architect Rafael Vinoly and is expected to be completed within 33 months. As this project is a CM/Build assignment, HAKS will procure, hold and manage all contractor contracts. HAKS has completed the constructability review and reconciled the estimate with the design team and client. HAKS competitively bid the project and a notice to proceed was issued to the contractors and the project is presently under construction.

NJ State Police Facility, Holmdel, NJ

Served as Project Manager for a new $9 million state-of-the-art, three-level State Police barracks and headquarter which will house administrative offices, holding cells, training and conference rooms, interview rooms, ammunition storage, motorcycle and other vehicle storage, a sally port, an exercise room, lounges, elevators, and a new helipad. This project was constructed adjacent to an operating police facility and was carefully planned and phased to accommodate the existing operation. Responsibilities included complete oversight and management of the contractor to deliver the new barracks and headquarters on-time and within budget. Specific duties included conducting preconstruction and progress meetings, resolving field

issues, coordinating the work with the existing operations, processing contractor's payment requests, negotiating and processing of change orders, and all related project correspondence. This project was completed in November 2009 and is the recipient of an ACEC Distinguished Project Award for 2009.

Police Service Area No. 4, New York, NY

This new $23 million 5-story, 90,000-sf building with a separate 100-car parking located in lower Manhattan houses administrative offices, interview rooms, holding cells, conference/training rooms, recreational facilities, lounge areas, secured storage, etc. Responsibilities included monitoring and overseeing the construction from preconstruction through close-out, conduct progress meetings, reviewed field inspection reports, progress reports, submittals, and requests for payments, change orders and other related correspondence throughout the project. Discussed technical problems with consultants and developed practical solutions.

189 Stanton Street, New York, NY

Managed and supervised construction activities for the construction of a new $12 million residential building in compliance with contract documents and industry standards. Reviewed field inspection reports, progress reports, submittals, requests for payments, change orders and other related correspondence throughout the project; attended progress meetings with senior management and executives.

New York City Housing Authority, Brick Facades/Concrete Repairs Citywide, New York, NY

Responsible for administrating and managing construction projects from inception through to completion by serving as the single point of accountability during design, construction and closeout phases. Provided technical support and trained division staff responsible for preparing project status reports and logs. Reviewed change orders and payment requests; coordinated and supervised activities of designers and adherence to performance schedules, compliance with design criteria and satisfaction of end-user needs; resolved design-related issues and coordinated design process with consultants and end users. Monitored compliance with all safety rules and regulations; held weekly meeting, resolved all field issues with the designers and contractors, reviewed and approved contractor payments, reviewed, negotiated and approved change orders as required.

Trump New World, New York, NY

For the new construction of a 48-story residential tower provided inspection of concrete, reinforcement, masonry, waterproofing and installation of architectural reinforced concrete pre- cast panels; inspected all welded and bolted connections between the building and the pre-cast façade panels and monitored on-site material testing including concrete and backfill.

Building Condition Survey, NYC Housing Authority, New York, NY

Work included condition surveys of approximately 2,400 residential and facility buildings. The overall project objective was to provide NYCHA with a Capital Plan to maintain its building assets in a state of good repair for many years to come. Surveys were conducted for the sites, buildings and facilities (assets). Site inspections included paved and unpaved surfaces, landscaping, site drainage, lighting, playgrounds, and street furniture. Building and facilities inspections included all exterior and interior components such as facade, roof, stairs, structure, doors, windows, finishes, and electrical and mechanical systems.

HARRY LEWIS, PE, TRANSPORTATION FACILITIES- PROJECT MANAGER

Mr. Lewis has over 27 years experience in the construction industry. His background includes positions as Project Manager, Resident Engineer, Quality Control Manager and Design Engineer. He is expert in concrete construction with an emphasis on parking garages and similar structures. As a Project Manager, much of his experience includes site inspection and investigation and the development of practical engineering solutions to field issues. He is knowledgeable in proper construction practices, including safety, claim avoidance and QA/QC procedures.

EDUCATION

BS - Civil Engineering University of Florida

REGISTRATION

Professional Engineer,
New York - [redacted]
Connecticut - #[redacted]

THE RIGHT EXPERIENCE

New Haven Bus Maintenance, Storage and Administration Facility, Hamden, CT

Serving as Project Manager for the new construction of a $70 million 290,000-square-foot facility to be used for repairing and maintaining CT Transit buses, and will provide storage for up to 150 buses. It will be a state-of-the-art facility and include vehicle washing and cleaning, internal vehicle storage, vehicle inspection pits, 11 maintenance bays, maintenance shops, body repair, painting, parts storage and a two-story administration building. Responsibilities include coordinating the work of various trades so the work is completed in a logical, expeditious manner. Also protects the interests of the client by monitoring quality and compliance with the contract documents, resolving field issues, negotiating and processing change orders, managing cost and budget, and conducting regular progress meetings.

Willamette Distribution Center, Plant City, FL

Served as Project Manager for the construction of a concrete-clad steel frame regional distribution center with extremely aggressive construction schedule and initiated innovative project scheduling techniques in order to complete project on-time. By tightly coordinating the reviews and approval of drawings by contractor, architect and engineer of record, the project was completed within owner's time requirements. Coordinated the work of various trades so the work was completed in a logical, expeditious manner; responsibilities included protecting the interests of the client by monitoring quality and compliance with the contract documents, resolved field issues as they arose, negotiated and processed change orders as required, managed cost and budget, conducted periodic progress meetings.

City of Clearwater Municipal Parking Garage, Clearwater, FL

He served as Project Manager for the new construction of a 4-level garage which included a secure lower level for police vehicles designed to withstand a substantial blast load. Responsibilities included coordinating the work, protecting the interests of the client by monitoring quality and compliance

with the contract documents, resolved field issues as they arose, negotiated and processed change orders as required, managed cost and budget, conducted periodic progress meetings and reviewed and approved payment requests by the contractor.

Blake High School Parking Garage, Tampa, FL

Served as Project Manager for the construction of a new parking structure on an active high school campus that required an extensive redesign after the competitive bids far exceeded the project's budget. After all bids were rejected, the owner invited Mr. Lewis to redesign garage to lower the overall construction cost, while maintaining design footprint and number of spaces. By sizing materials more efficiently and improving structural layout (column spacing), he was able to increase the number of parking spaces and bring project back within budget. During construction phase he negotiated subcontracts and directed subcontractors for compliance with the contract documents as well as conducting periodic meetings to review progress and resolving field issues.

Shell Point Parking Garage, Fort Myers, FL

He served as Project Manager for the construction of a new parking structure designed to withstand a 100-year storm. This parking garage will also serve as a hurricane shelter for a neighboring progressive care retirement community. The extreme design required innovative approaches to the design of the precast components and their connections, as well as methods of construction. Responsibilities included coordinating the work, protecting the interests of the client, monitoring quality and compliance with the contract documents, resolving field issues, conducting progress meetings, and reviewed and approving payment requests by the contractor.

Concrete Quality Assurance Services, New York, NY

He served as Project Manager and project liaison between a joint venture team and the client for the monitoring of all concrete batched and placed at NYCDEP projects throughout New York City and the northern watershed areas. Reviewed/ coordinated design plans and specifications, coordinated processing and response to contractors' submittals regarding concrete and related contract items, special projects and related activities as required. Administrative responsibilities included manpower review and projection, financial analysis, invoice review and coordination with subconsultants and subcontractors, in addition to general contract administration.

Rock Remediation and Soil Slope Stabilization, Rockland County, NY

Mr. Lewis served as Resident Engineer supervising the inspection staff to see that the work complied with contract documents; reviewed shop drawings and calculations for conformance to contract documents as well as maintaining project documents as per MURK requirements. Organized and conducted preconstruction and progress meetings, in addition to ad hoc meetings required by execution of the work; submitted partial estimates based on work performed by use of CEES and processed change orders and orders-on-contract.

City of Fort Myers Municipal Parking Garage, Fort Myers, FL

Served as Engineer working as a consultant to the precast concrete subcontractor, designed a 5-level precast/prestressed concrete parking garage with post-tensioned shear walls, from the anchor bolts up. The design had to allow for future vertical expansion of two levels, with the possibility of alternate uses resulting in increased design loads; by using plant-cast prestressed concrete shear walls, post-tensioned in the field, we were able to achieve the owner's goals.

HARRY LEWIS, PE, TRANSPORTATION FACILITIES- PROJECT MANAGER

Mr. Lewis has over 27 years experience in the construction industry. His background includes positions as Project Manager, Resident Engineer, Quality Control Manager and Design Engineer. He is expert in concrete construction with an emphasis on parking garages and similar structures. As a Project Manager, much of his experience includes site inspection and investigation and the development of practical engineering solutions to field issues. He is knowledgeable in proper construction practices, including safety, claim avoidance and QA/QC procedures.

EDUCATION

BS - Civil Engineering University of Florida

REGISTRATION

Professional Engineer,
New York - #[redacted]
Connecticut - [redacted]

THE RIGHT EXPERIENCE

New Haven Bus Maintenance, Storage and Administration Facility, Hamden, CT

Serving as Project Manager for the new construction of a $70 million 290,000-square-foot facility to be used for repairing and maintaining CT Transit buses, and will provide storage for up to 150 buses. It will be a state-of-the-art facility and include vehicle washing and cleaning, internal vehicle storage, vehicle inspection pits, 11 maintenance bays, maintenance shops, body repair, painting, parts storage and a two-story administration building. Responsibilities include coordinating the work of various trades so the work is completed in a logical, expeditious manner. Also protects the interests of the client by monitoring quality and compliance with the contract documents, resolving field issues, negotiating and processing change orders, managing cost and budget, and conducting regular progress meetings.

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City of Clearwater Municipal Parking Garage, Clearwater, FL

He served as Project Manager for the new construction of a 4-level garage which included a secure lower level for police vehicles designed to withstand a substantial blast load. Responsibilities included coordinating the work, protecting the interests of the client by monitoring quality and compliance

MOUSTAFA REZK, PE, TRANSPORTATION FACILITIES - PROJECT MGR.

Mr. Rezk has over 24 years providing construction management and construction inspection services for various public sector building projects and he has managed multiple construction contracts in New York City under the Wicks Law. As superintendent, Mr. Rezk successfully coordinates various contractors and subcontractors, conducts weekly meetings including prepares meeting minutes and completes projects on time and within budget. He is conversant with CPM scheduling and updating monthly construction schedules to maintain proper construction sequencing for building projects. He is knowledgeable in proper construction practices, including safety practices and QA/QC procedures.

EDUCATION

B.S Degree in Civil Engineering-
Alexandria University-Egypt

Construction Field Management – NYU

REGISTRATION

Professional Engineer
New York [redacted]

Certified Construction Site Safety Manager - NYC Dept. of Buildings - [redacted]

7-Hour Refresher Course for Site Safety Manager

Rooftop Quality Assurance - Roof Consultants Institute

THE RIGHT EXPERIENCE

Charleston Bus Depot Annex, Staten Island, NY

He is currently serving as Resident Engineer/superintendent for the new construction of a $113 million new bus annex for New York City Transit, the project will assist with meeting bus storage and service assignments in Staten Island. Duties include monitoring the contractor's work daily to assure conformance to the contract plans, specifications and quality requirements, review the contractor's payment requisitions and coordinating material testing on site and at independent testing labs, to assure the quality of materials going into the project.

Brooklyn Battery Tunnel Service Building, Brooklyn, NY

As Resident Engineer was responsible for construction supervision, inspection and coordination for this $15 million renovation project; which required extensive interaction with ongoing building activities to monitor tenant safety and maintain uninterrupted tunnel operations. Project work included removing the existing roofing to the roof deck, making deck repairs, and installing a new SBS built-up, modified-bitumen roof throughout. Other components included expanding the General Manager's office on the second floor, installing a new HVAC system, replacing window and door and installing new doors, the removal/replacement of the second floor façade—the new facade is insulated stainless steel panels, restoring and power washing the brick facade and stone, concrete repairs in the basement boiler room, and installing a new concrete floor slab. Work also included asbestos and incidental lead abatement.

Inspection at JFK Airport, Terminal 4 – Terminal 7, New York, NY

Resident Engineer for a scope of work which consisted of pile driving inspection, indicator piles, load test and production piles; civil work, utility lines, sewer system, water main and pavement as well as structural inspection, reinforcing steel, concrete, masonry, structural steel and soil subgrade.

Building Condition Assessment NYCSCA/Board of Education, New York, NY

As a Resident Engineer provided guidance and direction to a team of multi-disciplined inspectors to conduct condition surveys and submit comprehensive reports to the New York City School Construction Authority (SCA) regarding the needs assessment for the maintenance of schools and administrative facilities. Work includes physical surveys and preparation of assessment reports on building facades, interior and exterior structural elements, roofs, mechanical and electrical systems, ADA compliance and site improvements. These reports assist the SCA to maintain the current stock of schools and administrative buildings in structurally sound and water tight condition under the Capital Plan. Assessments were undertaken for site areas, building envelope (exterior), interior and transportable/temporary units. Site inspection includes paved and unpaved surfaces, landscape, site drainage, lighting, playgrounds, street furniture, etc. Building inspections include all exterior and interior components such as façade, roof, stairs, structure, doors, windows, finishes, electrical and mechanical systems. Inspections for electrical systems include building site and exterior security lighting; communication & security systems – which includes CCTV system, intrusion alarm system, remote annuciator, panic switches, ultrasonic sensors, etc.; fire alarm & emergency lighting systems.

Construction Inspection and Related Work at Vladeck Houses (Phase II & III), New York, NY

Served as Resident Engineer for the provision of structural inspection and trouble shooting for work at Vladeck Houses (Phases II & III) for NYCHA; work included comprehensive rehabilitation work of 1,600 apartments in 24 occupied housing development buildings. This project was completed with the utmost safety compliance and no disruptions to the facilities tenants. Items of work include architectural modifications; concrete; thru slab reconstruction; beams, columns and foundations; masonry repair; new building roof replacement and new concrete parapet wall.

Local Law 11/98 Facade Inspection for NYC Housing Authority, New York, NY

Work involves the facade inspections of 63 buildings in Manhattan to fulfill the requirements of New York City Local Law 11/98. Project consists of exterior facade inspection (critical examination) by scaffold and by binoculars. The project goal is to indicate the condition of building facades as either safe, or unsafe. Building components inspected include parapet wall, coping stones, windows sills, lintels, brickwork, mortar joints, caulking, awnings, cornices, flagpoles ornaments, A/C window units brackets and all other parts of exterior walls and any accessories.

Building Condition Survey, NYC Housing Authority, New York, NY

Work included condition surveys of approximately 3,500 residential and facility buildings. The overall project objective was to provide NYCHA with a Capital Plan to maintain its building assets in a state of good repair for many years to come. Surveys were undertaken for the site, buildings and facilities (assets). Site inspection included paved and unpaved surfaces, landscape, site drainage, lighting, playgrounds, street furniture, etc. Building and facilities inspections included all exterior and interior components such as facade, roof, stairs, structure, doors, windows, finishes and electrical and mechanical systems.

HARRY FOSTERIS PE, PROJECT MANAGER - ELECTRICAL

Mr. Fosteris is a Professional Engineer with more than 28 years of experience in the construction industry; he has provided various services including Resident Engineering, Construction Inspection, Project Engineering and Project Management for a variety of construction and project settings including railroad facilities and other transportation sector locations. He has experience in elevator work at New York City Transit stations and is knowledgeable in proper construction practices, including safety practices and QA/QC procedures.

EDUCATION

M.E. Engineering, City College City University of New York

B.E., Engineering, City College City University of New York

REGISTRATION

Professional Engineer New York Registration [redacted]

THE RIGHT EXPERIENCE

Vanderbilt Yard Reconstruction, LIRR, Brooklyn, NY

Serving as Resident Engineer to support the Long Island Rail Road's Vanderbilt Yard Reconstruction Project; this project will make land available within the existing Vanderbilt Yard site for private commercial and residential development. Responsibilities include field inspections and daily monitoring of the construction, participating in and expediting shop drawing review, reviewing and making recommendations on contractor submittals, means of construction and standard practices, safety oversight, coordinating Force Account activities, and more.

Various Station Rehabilitation Projects, NYC Transit, NY, NY

Serving as the Resident Engineer for these projects, he supervised the construction of the rehabilitation of numerous stations and new electrical facilities and the installation of new elevators. Electrical work consisted of new conduit and wire, the installation of new transformers, rectifiers, switchgear, and emergency standby generator sets and automatic transfer switches (ATS), etc.

Rehabilitation of Bushwick-Boerum Substation, NYC Transit, Brooklyn, NY

Served as the Resident Engineer for this project where he supervised the installation of new electrical equipment, fire alarm, intrusion alarm and CCTV security systems as well as the testing and placing into service high tension transformers and rectifiers. Coordinated scheduled construction work, monitored the timely completion, prepared field surveys and payment estimates to the contractor.

Department of Capital Program Management, NYC Transit, NY, NY

Directly in charge of three major Tunnel Lighting Rehabilitation projects (over $50 million). Worked under the direction of the Construction Manager with great latitude to exercise independent judgment and was responsible for management of construction, as well as administration of these projects.

HARRY FOSTERIS PE, PROJECT MANAGER - ELECTRICAL

Department of Capital Project Management, NYC Transit, NY, NY

As Administrative Engineer he was in charge of the $12.8 million Rehabilitation of Tunnel Lighting, for NYCT's 8th Avenue Line. Supervised and supported a group of engineers executing this work, helped resolve problems that arose, prepared cost estimates, processed and negotiated change orders, etc.

Electrical Department, Capital Projects, NYC Transit, NY, NY

Served as the Railroad Signal Specialist where he directly supervised subordinates preparing and implementing plans and specifications for new signal equipment being repaired or altered. Responsibilities included reviewing plans, drawings, specifications with reference to safety, standardization and economy in construction, practicality of installation, and efficiency of maintenance and operation of equipment.

Rockaway Signal Modernization Project, NYC Transit, Queens, NY

As the Resident Engineer his responsibilities included supervision of the railroad signal engineering activities with other NYCT projects at the same location. Responsibilities included evaluating circuit and layout drawings, as well as quality of installation. While supervising construction on an operating railroad, was responsible to see that the work was performed in a manner to minimize interference and maximize safety to transit patrons.

Modernization of Signal Blocking at New Lots Line Project, NYC Transit, Brooklyn NY

Responsible for Design Engineering changes (as a result of field conditions); coordinated schedule of work activities for the contractor working in the same vicinity with other projects and monitored the timely completion of the work, preparation of field surveys and payment estimates to the contractor.

New York City School Construction Authority, Queens, NY

As Senior Engineer/Team Leader, he provided baseline building condition assessment survey for all school facilities throughout the city (1,520 buildings including school buildings, administrative buildings, lease facilities, annexes, mini schools and temporary buildings) for the New York City Department of Education's Division of School Facilities (DOE/DSF).

ROBERT MILO, PE, PROJECT MANAGER - MECHANICAL

Mr. Milo is a Professional Engineer in Mechanical Engineering and a LEED Green Associate. He has an in-depth understanding of mechanical systems and equipments, expertise with building systems for residential and commercial construction, solid understanding of mechanical and electrical installations, strong background in computer software and hardware, solid communication skills, strong organizational problem solving and follow-through skills and is able to work independently and as a cooperative team member. He is knowledgeable in proper construction practices, including safety practices and QA/QC procedures.

EDUCATION

BS Degree in Mechanical Engineering
University of Tirana, Tirana, Albania

Certificate in Computer Programming-
Mainframe Globe Institute of Technology, NY

REGISTRATION

Professional Engineer
New Jersey - [redacted]

LEED AP (BD&C), GBCI

OSHA 30 Hours Training - #600230348,

NYCDOB 4-Hour Supported Scaffold

THE RIGHT EXPERIENCE

Harmon Shop Replacement Program, Croton Harmon, NY

Served as Mechanical Inspector for this $300 million program constructing a new shop and maintenance facilities for the Metro North Rail Road; the new facility included a new Wheel Truing Facility, a new Locomotive Shop and a new Coach Shop. Responsible for providing HVAC, plumbing and fire protection (sprinkler) engineering expertise and coordination and inspection of the contractor's work as it pertains to all mechanical equipment and systems as well as all site utilities.

Alley Creek Pump Station Upgrade, Queens, NY

He is serving as Chief Inspector for a scope of work that includes the complete upgrade of the existing Old Douglaston Pump Station with renovation/ rehabilitation of the existing structure and process equipment, and HVAC, plumbing, electrical and associated controls work. Also, the assignment included the demolition, rehabilitation and reconstruction of two existing outfalls, which will involve temporary roadway construction through adjacent wetlands to provide access, start-up testing of mechanical, electrical and plumbing systems, balancing HVAC systems as well as instrumentation and commissioning.

Building Condition Assessment, New York, NY

He served as the Quality Control Engineer for this building assessment project in New York City Public Schools. He trained and mentored staff in assessing building conditions for mechanical discipline; monitored quality of work done by mechanical engineers on-site as well as providing solutions for eliminating or minimizing deficiencies that buildings may have in terms of initial cost and operating costs. Work included physical surveys and preparation of assessment reports on building facades, interior and exterior structural elements, roofs, mechanical and electrical systems, ADA compliance and site improvements. These reports assist the SCA to maintain the current stock of schools and administrative buildings in

ROBERT MILO, PE, PROJECT MANAGER - MECHANICAL

structurally sound and water tight condition under the Capital Plan. Assessments were undertaken for site areas, building envelope (exterior), interior and transportable/temporary units. Site inspection includes paved and unpaved surfaces, landscape, site drainage, lighting, playgrounds, street furniture, etc. Building inspections include all exterior and interior components such as façade, roof, stairs, structure, doors, windows, finishes and electrical and mechanical systems.

Mechanical Project Manager - Oversaw the administration of construction projects encompassing all phases of the construction project cycle. Supervised, provided guidance to, and coordinated efforts of the planning, design and construction management activities. Assigned personnel within construction project environment.

Supervisor - Designer and Field Supervisor for mechanical work (heating and air conditioning) on new commercial and institutional projects (schools, offices and governmental buildings). Supervised installation of heating/cooling equipment, piping, pumps, ductwork, controls and other accessories as well as performing a field survey on a renovation project and prepared observation reports, gave recommendations, prepared the design and supervised the construction work.

HVAC Designer – Mechanical Design Institute, Tirana, AL. Designed HVAC systems for schools, offices and other governmental buildings. Load calculation, fresh air calculations, equipment sizing and selection and participated in coordination meetings with government officials and architects. Reviewed shop drawings.

SAURIN PATHAK, RA, PROJECT CONTROLS MGR.

Mr. Pathak has over 15 years of experience working on rail/transit, educational, environmental/remediation, commercial, infrastructure, housing design and construction projects. He specializes in Project Controls, is trained in Earned Value Management and he specializes in Schedule Development and Control as well as Cost Development and Control. Mr. Pathak is knowledgeable in LEED Green Building Rating systems for various building types and he has successfully coordinated many projects for LEED certifications.

EDUCATION

Bachelor of Architecture, National Architecture Accrediting Board and New York State Education Department

School of Construction Management, New York University (Continuing Education Courses)

School of Construction Management, Pace University (Continuing Education Courses)

REGISTRATION

Registered Architect
New York, [redacted]
New Jersey,
Texas,

LEED Accredited Professional

30-hr OSHA Construction Safety & Health

THE RIGHT EXPERIENCE

New York City Housing Authority Requirements Contract, New York, NY

Serving as Project Controls Manager for this $80 million capital improvement program for the New York City Housing Authority (NYCHA); the work includes:

- Fort Washington Roofing Project, $6 million, requires the removal of existing asbestos-containing roofing materials, asbestos abatement, new roof installation and related work;
- Harlem River Brickwork Project, $7.6 million, entails extensive brickwork, the replacement of steel lintels and incidental roofing;
- Rangel Brickwork and Roofing Project, $8.6 million, calls for replacing roofs on all buildings and the parapets for two buildings, and selective replacement/repair of brickwork and steel lintels.
- Queensbridge Boiler Replacement Project, $20 million, boiler plant replacement project at the fully occupied Queensbridge Houses; the project consists of the removal of 9 existing Boilers/Burners and related control equipment and the replacement of 18 Boilers/ Burners and related control equipment, at 6 Boiler Plants.
- Williams Plaza, $6.1 million project requires replacing all roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.
- Independence Towers, $6.1 million project requires replacing roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.
- Bushwick Houses, $9.3 million project requires replacing all roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.
- Stapleton Houses, $7 million project requires replacing all roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.

Miscellaneous Projects in the Downstate Area, New York

He serves as Project Controls Manager providing Program/Construction Management services in the New York Downstate area; project assignments include:

- Barretto Point, $10 million, remediation project 15,000 cubic yards of contaminated soil were excavated and replaced with clean fill over 3 acres at the site, which in the past housed a paint and varnish making facility.
- Red Hook WPCP, $2.5 million project demolishing the existing system and installing a new state-of-the-art Fire Alarm System (Notifier) in nine designated plant areas.
- Sludge Dewatering Facilities Improvements at New York City Waste Water Treatment Plants, $12 million, upgrade the heating and ventilation system for air changes in chemical areas; installation of emergency eyewash stations and showers; installing chemical and containment piping with heat tracing system; raising chemical containment areas; installing ammonia detection alarm systems; modifications to sludge cake pumps; replacing sump pumps.
- Richmond Chlorination Facility, $2.5 million, modifications and upgrades to the following systems: automated hypo-chlorite, analyzer, liquid chemical feeds system, PLC/ MCC Automation Controls.
- Station 24, $24 million, principal items of work include: new recovery wells; well pumps for both the existing recovery well and the new recovery well; enclosures for well pump motors on both locations; 6 Granular Activated Carbon (GAC) treatment systems.

New Jersey School Construction Corporation, Jersey City, NJ

He served as Senior Project Controls Manager for projects including the design-phase management of a new $30 million elementary school, the reconstruction of elementary school and the $25 million historical renovation of an elementary school. He was responsible for the project controls and pre-design phase management of building evaluations, and site feasibility analysis for the school construction program and health and safety improvements. Responsibilities also included construction phase coordination RFI's and submittals; coordination of projects for the LEED certification. Established construction strategy, budget, phasing and logistics as well as coordinating regulatory compliance, community relations, affirmative action and historic preservation; coordinated for regulatory compliance, community relations, affirmative action and historic preservation. Development and implementation of 5-year master plan schedule for land acquisition, renovation, expansion and construction of 60 school buildings in Jersey City, NJ. Listing of school projects includes:

- PS 3/ MS 4 Frank R. Conwell Elementary and Middle School
- Jersey City Heights Middle School 7
- Jersey City Freshman Academy
- Jersey City PS 14 and PS 35
- Early Childhood Center
- Victor Mravlag School #21
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PATCO Accessibility Improvement Program, South New Jersey and Philadelphia, PA

Served as Project Controls Manager providing construction management and project controls services for the $25 million rehabilitation of 13 railway stations; the scope of work included complete station rehabilitations including exterior improvements, new stairs, ramps, elevators, escalators, parking, signs, platform improvements and track improvements.

- The Port Authority of NY & NJ E-ZPASS plus Parking System Implementation for Newark, LaGuardia & JFK Airports ($30 million)
- The Port Authority of NY & NJ Port Imperial Ferry Terminal at Weehawken ($10 million)

MAGDI F. SIDAROUS, ESTIMATOR

Mr. Sidarous has over 30 years of experience in the field of construction. His background includes resolving complex construction, engineering, and financial issues; assisting clients in contract administration,; reviewing plans and specifications; assisting in the preparation of design changes and modifications and financial analysis of individual construction activities and entire projects.

EDUCATION

Bachelor of Architecture and Urban Planning, Helwan University, Cairo, Egypt

Diploma of Architecture, Leonardo Da Vinci Institute, Cairo, Egypt

THE RIGHT EXPERIENCE

New York City Housing Authority Requirements Contract, New York, NY

Serving as Estimator for this $80 million capital improvement program for the New York City Housing Authority (NYCHA); the work includes:

- Fort Washington Roofing Project, $6 million, requires the removal of existing asbestos-containing roofing materials, asbestos abatement, new roof installation and related work;
- Harlem River Brickwork Project, $7.6 million, entails extensive brickwork, the replacement of steel lintels and incidental roofing;
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- Bushwick Houses, $9.3 million project requires replacing all roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.
- Stapleton Houses, $7 million project requires replacing all roofing at main roofs and bulkhead roofs, including new tapered insulation, fascia, gravel stops, and all other necessary items.

Echelon Resorts Project, Las Vegas, NV

Served as Architectural Estimator in charge of generating scope from schematic design for different parts of the project (Towers, Meeting Center, and Theaters), creating presentation sketches and following up with the scope as construction documents develop.

MAGDI F. SIDAROUS, ESTIMATOR

Brooklyn Courthouse Program, New York, NY

Served as Architectural Estimator and change manager in charge of document review to establish changes to contract, request scope changes from the owner (GSA), assign values to the scope changes and negotiate final values with contractors and owner and their consultant. Prepared modification of documents (change orders) and issued monthly reports of all work; acted as project manager for a segment of the subcontractors and ultimately closing out their contracts by conducting negotiations in favor of the general contractor while maintaining a level of satisfaction between all entities.

AOL Time Warner Center Project, New York, NY

He served as Architectural Estimator for Change Management group; lead team of architectural, electrical and mechanical estimators in preparing actual and conceptual estimates, estimating scope changes from contract documents (ASI's & Bulletins, etc.); Working with project managers and sub-contractors to evaluate and reconcile cost of changes and working with the Owner in negotiating final costs; Change Management responsibilities include assisting project managers in creating total documentation in Prolog. Assisted with change order and scope change preparation; additionally assisted Senior Management to maintain the accuracy of the Prolog database by performing weekly reviews in preparation of the Owners meeting.

Universal Builders Supply Inc. Interiors Millwork division, Mount Vernon, NY

Served as Estimator in charge of client contacts, preparation of detailed quantity and material take-offs, soliciting material prices, preparation of bid documents and cost estimates for various multimillion dollar projects including the Children's Hospital at Montifiore Medical Center in the Bronx, New York Hospital, United States Tennis Association (USTA) new tennis facility in Queens, Butler Library (Columbia University), Prada Stores and Tommy Hilfiger Executive Offices.

Universal Builders Supply Inc. (UBS) Construction Division, Mount Vernon, NY

Served as Construction Engineer in charge of client contact, design, calculation and preparation of construction documents, material and labor lists, cost and duration estimates for hoisting and scaffolding also, on site supervision and inspection for multimillion projects including Barneys, Met Life of NY, Jadwin Gym at Princeton University, The Statue of Liberty, GE Building, Redwood Towers (Baltimore, MD), The State Capitol Building (Harrisburg, PA), Battery Park City (NYC), King Khaled Military Academy (Saudi Arabia).

WILLIAM NILES, SENIOR SCHEDULER

Mr. Niles has over 35 years of experience as a scheduler and cost engineer. He provided project control and site management services for a variety of new construction and refurbishing projects in the tri-state area. Responsibilities included coordinating activities of several subcontractors reviewing subcontractor schedules and preparing detailed schedule from drawings, specs and estimates.

EDUCATION

BS – Business Administration

Cost/Schedule Control Systems

Proposal/Project Management

OSHA Training (LTP)

MS Project/Office Tools

Bentley ProjectWise Course - 2004

Government Contracts & Pricing

Primavera (P3, P3e, P6 and Sure Trak)

Expedition

REGISTRATION

American Association of Cost Engineers

THE RIGHT EXPERIENCE

Miscellaneous Projects in the Downstate Area, New York

He serves as Scheduler providing Program/Construction Management services in the New York Downstate area; project assignments include:

- Barretto Point, $10 million, remediation project 15,000 cubic yards of contaminated soil were excavated and replaced with clean fill over 3 acres at the site, which in the past housed a paint and varnish making facility.
- Red Hook WPCP, $2.5 million project demolishing the existing system and installing a new state-of-the-art Fire Alarm System (Notifier) in nine designated plant areas.
- Sludge Dewatering Facilities Improvements at New York City Waste Water Treatment Plants, $12 million, upgrade the heating and ventilation system for air changes in chemical areas; installation of emergency eyewash stations and showers; installing chemical and containment piping with heat tracing system; raising chemical containment areas; installing ammonia detection alarm systems; modifications to sludge cake pumps; replacing sump pumps.
- Richmond Chlorination Facility, $2.5 million, modifications and upgrades to the following systems: automated hypo-chlorite, analyzer, liquid chemical feeds system, PLC/ MCC Automation Controls.
- Station 24, $24 million, principal items of work include: new recovery wells; well pumps for both the existing recovery well and the new recovery well; enclosures for well pump motors on both locations; 6 Granular Activated Carbon (GAC) treatment systems.

Catenary and Bridge Rehabilitation on the New Haven Main Line Fairfield and Bridgeport, CT

Served as Scheduler for a scope of work that includes installing catenary structures, foundations and associated track, signal and communication upgrades, replacing open deck superstructures with ballasted decks, rehabilitating abutments of five Metro-North bridges, and a careful interweaving of interim and permanent traction power and overhead catenary system configurations in order to keep the railroad running throughout the construction.

WILLIAM NILES, SENIOR SCHEDULER

Croton Aqueduct Rehabilitation and Site Restoration, New York, NY

Serving as Scheduler for a scope of the work which includes opening the aqueduct for access and ventilation; buried shaft work, including removal of buried shaft covers, removal of ladders, shaft wall repairs and grouting of leaks and voids, rehabilitation of the surface structure, blow off chamber, stream raceway and related surface improvements; and rehabilitation of the 7-mile-long pressure tunnel lining, including crack repairs, brick replacement, contact grouting, consolidation grouting and leak repairs.

Alley Park Environmental Restoration, Queens, NY

Serving as Scheduler for this $22 million project to restore 24 acres of wetland and upland area in Alley Park; impacted by the construction of new CSO abatement facilities. The work includes site clearing and grubbing, excavation in wetland area to proposed grades and disposal of excavated regulated and hazardous soil to offsite disposal facilities; placement of sand in wetland area for plantation of salty marsh, placement and grading of topsoil in upland area of trees/shrubs and warm season grasses. Installation of grass blocks paver over the CSO Retention Facility.

Oakland Lake Park Improvement Program, Queens, NY

Serving as Scheduler for this $3 million project to restore Oakland Lake Park; the lake has been negatively impacted by storm water runoff which has resulted in soil erosion and the formation of ravines. The project also addresses removal of debris dumped at these site locations, elimination of invasive trees/shrubs/vines. As part of restoration work contract is required to backfill and stabilize areas where considerable erosion has taken place, native trees/shrubs planting, reconstruct sidewalks undermined due to erosion, modify catch basin for effective drainage and build pathway for park users with railing to prevent loss of vegetation.

Alley Creek Pump Station Upgrade, Queens, NY

Served as Scheduler reviewing, evaluating and preparing comments on the baseline schedule. Conducts periodic schedule review meetings and prepare the minutes. Review and comment on the schedule updates and accompanying narrative.

Redevelopment of Harlem Hospital Center, New York, NY

He served as Scheduler coordinating and consolidating subcontractor's schedules. Prepares and maintains special schedules for hospital facilities management including complicated staff and patient relocations.

Reconstruction of Metropolitan Avenue Bascule Span Bridge over English Kills, Brooklyn, NY

Served as Scheduler reviewing, evaluating and preparing comments on the baseline schedule. Walked the site to determine completion percentages; conducted periodic schedule review meetings and prepared minutes. Reviewed and commented on schedule updates and the accompanying narrative. Conducted special studies and prepared an ad-hoc report for the owner and provided analysis and reports for change orders.

HAMID ERFANI, EIT, DOCUMENT CONTROL

Mr. Erfani has over 11 years of experience in Construction Management. He is knowledgeable in proper construction practices, including safety practices and QA/QC procedures.

EDUCATION

BS – Business Administration

Cost/Schedule Control Systems

Proposal/Project Management

OSHA Training (LTP)

MS Project/Office Tools

Bentley ProjectWise Course - 2004

Government Contracts & Pricing

Primavera (P3, P3e, P6 and Sure Trak)

Expedition

REGISTRATION

American Association of Cost Engineers

THE RIGHT EXPERIENCE

Miscellaneous Projects in the Downstate Area, New York

He serves as Office Engineer/Document Control providing Program/ Construction Management services in the New York Downstate area; project assignments include:

- Barretto Point, $10 million, remediation project 15,000 cubic yards of contaminated soil were excavated and replaced with clean fill over 3 acres at the site, which in the past housed a paint and varnish making facility.
- Red Hook WPCP, $2.5 million project demolishing the existing system and installing a new state-of-the-art Fire Alarm System (Notifier) in nine designated plant areas.
- Sludge Dewatering Facilities Improvements at New York City Waste Water Treatment Plants, $12 million, upgrade the heating and ventilation system for air changes in chemical areas; installation of emergency eyewash stations and showers; installing chemical and containment piping with heat tracing system; raising chemical containment areas; installing ammonia detection alarm systems; modifications to sludge cake pumps; replacing sump pumps.
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- Station 24, $24 million, principal items of work include: new recovery wells; well pumps for both the existing recovery well and the new recovery well; enclosures for well pump motors on both locations; 6 Granular Activated Carbon (GAC) treatment systems.
-
- Alley Creek Pump Station Upgrade, Queens, NY

Served as Office Engineer for the complete upgrading of the existing Old Douglaston Pump Station with renovation/rehabilitation of the existing structure and process equipment, and HVAC, plumbing, electrical and associated controls work, demolition, rehabilitation and reconstruction of two existing outfalls, which will involve temporary roadway construction through adjacent wetlands to provide access, and close monitoring and managing the project, budget and schedule so that major milestones are met and schedule slippages do not occur.

HAMID ERFANI, EIT, DOCUMENT CONTROL

Reconstruction of Hamilton Avenue Movable Bridge, Brooklyn, NY

Responsibilities included the reconstruction of Hamilton Avenue Bascule bridge over the Gowanus Canal, which includes temporary widening of existing west bascule span, fabrication and erection of structural steel, grid deck and span operating machinery of east and west bascule spans, construction new auxiliary generator house and parking area, rehabilitation of control house and gate tender house, pier protection system, reconstruction of north and south bascule piers, perform approach roadway work, sidewalk, water main, sewer, catch basins/connections as well as street lighting, traffic signals, milling and resurfacing of the roadway. Duties include coordinating, reviewing and record keeping, entering daily inspection quantities, monthly estimates, material acceptance entry and quantity estimates, keeping up to date all correspondence files, preparing monthly site progress reports and payments in accordance with MURK standard specification, inspection of various construction activities.

Harriet Tubman Memorial Project, New York, NY

Responsibilities included modifications of subway structure, installation of statue, granite curb, sidewalk, planters, water main, sewer, catch basins/connections, street lighting, traffic signals, landscaping milling and resurfacing of the roadway. Duties include coordinating, reviewing and record keeping entering of daily inspection quantities, monthly estimates, material acceptance entry and quantity estimates, keeping up to date all correspondence files, preparing monthly site progress reports and payments in accordance with MURK Standard Specification, inspection of various construction activities.

Cross Bay Blvd. Bridge over Conduit Avenue, Queens, NY

Duties included coordinating, reviewing and record keeping, entering of daily inspection quantities, monthly estimates, item history, material acceptance entry and quantity estimates. Prepared monthly site progress reports and payments in accordance with MURK Standard Specification; inspected various construction activities including MPT, demolition, erection of temporary pedestrian and utility bridges, construction of abutments and piers and erection of structural steel.

Guy Brewer Blvd. Bridge over the Belt Parkway, Queens, NY

Responsibilities included coordination, reviewing and record keeping, entering of daily inspection quantities, monthly estimates, item history, material acceptance entry and quantity estimates, keeping up to date all correspondence files, preparing monthly site progress reports and payments in accordance with MURK, NYCDOT standard specifications. Inspection of various reconstruction activities including MPT, demolition, erection of temporary pedestrian and utility bridges, construction of abutments and piers, erection of structural steel.

65th Street Bridge over the LIRR, Queens, NY

Served as Resident Engineer for the $20 million schools renovation project; the program consisted of total of eight schools. The scope of work for this construction management assignment included new built-up roofing, brick repair and reconstruction, new reinforced concrete parapet walls, terracotta restoration, and plaster and paint work. The entire renovation program was completed under a fast track and accelerated schedule in order not to interfere with the new school year. He was responsible for overseeing field operations, which included: schedule control, resolution of construction issues, construction phasing, contractors' coordination, and quality assurance.

RAYMOND C. KALLBERG, PE - VICE PRESIDENT

Aviation – Project Manager (Mechanical)

Mr. Kallberg, Vice President of the firm, has over 30 years experience in the design of mechanical systems for institutional facilities, transit stations, transit facilities, commercial, and residential facilities. He will serve as Sr. Mechanical Engineer for this contract and has experience as both a designer and construction manager. He specializes in coordination of disciplines, cost estimates, fieldwork, shop drawing review, client liaison and construction administration for a variety of projects. His mechanical expertise includes design of HVAC, energy management and green design systems, building automation, fire protection and plumbing systems. His responsibilities have included preparing specifications, evaluating vendor bids, checking vendor prints, resolving field problems, supervising junior engineers and detailing layout of equipment such as pumps, compressors, blowers, fans (FD & ID), boilers, cooling towers, condensers, heat exchangers, Flue Gas Desulferization (FGD) equipment, water treatment equipment, piping, valves, etc.

EDUCATION

- BS Mechanical Engineering, New York University

REGISTRATIONS

- Professional Engineer: New York, New Jersey

SELECTED EXPERIENCE

JFK AIRPORT GENERAL AVIATION TERMINAL (GAT), NEW 2-STORY ADDITION – PANYNJ. AG completed work for the renovation and expansion of the General Aviation Terminal at JFK Airport under a Requirements contract with the Port Authority of NY & NJ. This structure houses the V.I.P. terminal and the Operations Control Center for the JFK Airport. Completed in time and within budget, despite the tremendous constraints of the site and complex phasing requirements, Mr. Kallberg was responsible for complete Mechanical engineering design and construction administration services.

LINCOLN TUNNEL- PANYNJ. Replacement of exhaust fans in the ventilation building.

UNITED AIRLINES TERMINAL, LA GUARDIA AIRPORT, JAMAICA, NY-PANYNJ. Redesigned passenger waiting area. Project included upgrade of HVAC and sprinkler systems.

NEW ARCH STREET SHOP & YARD VEHICLE MAINTENANCE FACILITY, LIC, NY, LIRR. The new 90,000 sq. ft. facility, Arch St. Yard and Shop is located on approximately twelve acres in Long Island City, New York. For this Design/Build project Mr. Kallberg was responsible for the design and construction administration services for HVAC systems. The facility included the Maintenance Equipment Shop; Power Substation Building; Engineering Support Building; Extraordinary Interior Cleaning Platform and Storage Building; Trackwork and Third Rail; and extensive site utilities.

NEW MORRIS PARK LOCOMOTIVE REPAIR & OVERHAUL SHOP, JAMAICA, NY-LIRR. LIRR, appreciating the competency of AG awarded our team with the design and construction administration of the new Morris Park Locomotive Repair and Overhaul Shop to replace the aged LIRR Morris Park Facility. The new facility's main function will be component change-out, heavy repairs, life cycle maintenance, and overhauls of locomotives. Mr. Kallberg supervised HVAC systems design and construction administration services including office areas, conference room/lunch room, restrooms and locker facilities.

REHABILITATION OF 12 STATIONS ON THE WEST END LINE, BROOKLYN, NY-NYCT. The West End Line, Subway line in Brooklyn, NY is a branch line from the Broadway (Manhattan)-Fourth Avenue (Brooklyn) subway. Mr. Kallberg is supervising HVAC engineering design services for the upgrade and rehabilitation of these 12 stations, both, underground and above ground stations.

BBT BB-15A CONTROL & MONITORING ENHANCEMENTS/CONTROL ROOM MODERNIZATION, BROOKLYN BATTERY TUNNEL, NY-TBTA. The Brooklyn Battery Tunnel is the longest continuous underwater vehicular tunnel in North America. A.G. Consulting Engineering, PC, as a subconsultant to Jacobs/Edwards and Kelcey, was selected by TBTA to perform design and construction administration services for the updating of the tunnel operating

systems-mechanical and electrical-to increase safety, efficiency, reliability, planning, redundancy and maintenance. Services also include remodeling of the control room and Tunnel Management Center (TMC) while minimizing the impact of construction on life and safety tunnel operations. As Project Manager, Mr. Kallberg supervised staff performing Investigations and Feasibility of Design; Advanced Design with Constructability Review; Final Design, Pre-Construction and Design Support during Construction; and System Programming and Maintenance Requirements. He developed the complete mechanical engineering package which detailed an upgrade to the existing HVAC and ductwork.

BAISLEY PARK BUS DEPOT, JAMAICA, NY-MTA BUS. Under an MTA Bus Company Task Order, A.G. Consulting Engineering, PC is preparing a facility condition survey report and complete mechanical, plumbing and electrical design of the entire facility. Mr. Kallberg provided a complete set of construction documents including plans, specifications, and Engineer's estimate for the design for a complete roofing system, new ventilation system including but not limited to exhaust and supply air, heating elements and controls.

BRONX RIVER GREENWAY HOUSE & STARLITE PARK, BRONX, NY-NYC DPR. The Bronx River Greenway River House is the base of operations for the restoration and operation of the Bronx River Greenway and the adjacent portion of the Bronx River. A LEED Silver Project, Mr. Kallberg provided design of complete HVAC system and geothermal system.

BRONX MENTAL HEALTH REDEVELOPMENT RESIDENTIAL VILLAGE, NY-DASNY. A fully BIM (Revit) project, the project consists of The Transitional Living Residence (TLR), The Studio Apartments (SRO) and the Crisis Center. A LEED Goal of Silver Certification Mr. Kallberg provide Mechanical design for the 3 buildings utilizing vertical FCU (2 pipe heating & cooling) for the perimeter spaces and AHU for the corridor & interior spaces, eliminating as much penthouse mechanical space as possible.

BUSHWICK INLET PARK DISTRICT HQ & COMMUNITY FACILITY, BROOKLYN, NY- NYC DPR. This project is the first phase of a remaking of the Greenpoint-Williamsburg waterfront from a decaying industrial strip to a multifaceted public park. A LEED Silver Project, Mr. Kallberg provided design of complete HVAC system and geothermal system.

THURGOOD MARSHALL US COURTHOUSE, NEW YORK, NY-GSA. The 718,180 gross square foot Thurgood Marshall US Courthouse building consists of 34 stories plus basement. Mr. Kallberg's responsibilities included field inspections/surveys, assessment reports and design. A LEED Silver Project, design included HVAC system replacement and upgrade, building management system upgrade and expansion.

NASSAU COUNTY OFFICE, 1 WEST STREET, MINEOLA, NY, NASSAU COUNTY. Built in the late fifties, Mr. Kallberg's Team performed existing condition inspection of all Mechanical systems, functioning status, compliance with current codes and evaluation of the findings with recommendations for design and construction for this 5 story executive office building. Upon approval of our design recommendations, provided engineering design services for the complete interior renovation of the of the building (approx. 100,000 sq ft), renovation of the basement, including, new HVAC system, sprinklering of the entire building, new fire alarm system, new security system, electrical service upgrade.

KULBINDER SINGH, LEED AP

Rail & Transit Facilities – Project Manager (Electrical)

Mr. Singh has over 12 years experience in the design and construction inspection of electrical and telecommunication systems. He specializes in the design of electrical lighting, security systems including CCTV, card access system, communications, public address system, LAN/WAN system and power distribution. He is also experienced in preparing cost estimates from schematic to 100% construction documents. Through constant vendor contacts, he is able to maintain current material pricing. He acts as a liaison with architects and engineers to obtain all necessary information to provide accurate cost estimates

EDUCATION

- MS, Telecommunications and Electronics, India, 1998
- BS, Power and Telecommunications, India 1995

SELECTED EXPERIENCE

STEWART INTERNATIONAL AIRPORT, NEWBERG, NY-PANY&NJ. Located near Newburgh, N.Y., 55 miles north of the city, Mr. Singh is providing electrical lighting upgrades design at the facility under a Call In Contract

JOHN F. KENNEDY AIRPORT GENERAL AVIATION TERMINAL BUILDING, NY-PANY&NJ. AG completed work for the renovation and expansion of the General Aviation Terminal at JFK Airport under a Requirements contract with the PANY&NJ. This structure houses the V.I.P. terminal and the Operations Control Center for the JFK Airport. There was a 9000 sq. ft. expansion towards the airside for this structure. 8000 sq. ft. of the interior were renovated. The facility remained occupied during construction. Phasing of the construction was critical. This project was completed in time and within budget, despite the tremendous constraints of the site and complex phasing requirements. Mr. Singh provided design for new lighting, power, telephone, and emergency generator. AG also worked on the interior fit out of the space. This project included an upgrade of command center, new office stations, private offices etc., supported by uninterrupted power supplies (UPS) and dedicated diesel emergency generator

PORT AUTHORITY BUS TERMINAL – SOUTH WING COMPREHENSIVE PHYSICAL ASSESSMENT, NY-PANY&NJ. The Port Authority Bus Terminal (PABT) is comprised of two buildings: the South Wing and the North Wing. Mr. Singh's services consists of performing a physical assessment of the existing electrical and electronic infrastructure in the South Wing of the PABT, the Bridge over 41st Street connecting the North and South Wings of the PABT, the 41st Street Bus Underpass, the Bus and Car Ramps, and the Ventilation Building located on the corner of 41st Street and Ninth Avenue (the Area of Work). The objective is evaluating the existing physical conditions, and remaining useful life of the infrastructure and systems, and recommending alterations as appropriate to maintain operations in the South Wing for the next 25 years. Work included providing draft and final reports documenting findings and recommended modifications or replacements, as appropriate, giving reasons therefore, order of magnitude construction cost estimates, and making presentations to Authority staff as required.

PATH JOURNAL SQUARE STATION LIGHTING SYSTEM REHABILITATION, NJ- PANY&NJ. Under a Call In Contract Mr. Singh provided design for the upgrade to the lighting systems at the Garage (Lower Level Parking Deck) and Walkway below the Lower Ramp Area of the Journal Square Transportation Centre.

PATH DUCTBANK REPLACEMENT, NJ-PANY&NJ. The PATH Tunnel Duct Bank System includes approximately 8 miles of tunnel and 16 miles of duct banks. The cables in the duct bank consist of 27 KV cables, 15 KV cables (for emergency ventilation system), DC traction cables, and DC control cables under a Call In Contract we are providing cost estimating services for the duct bank replacement in Tunnels A and B, between Caisson No. 1 and Christopher Street, approximately 15,600 feet of tunnel consisting of 31,200 feet of duct banks.

BBT BB-15A CONTROL & MONITORING ENHANCEMENTS/CONTROL ROOM MODERNIZATION, BROOKLYLN BATTERY TUNNEL, NY-TBTA. The Brooklyn Battery Tunnel is the longest continuous underwater vehicular tunnel in North America. As subconsultant to Jacobs/Edwards and Kelcey, AG was selected by TBTA to perform design and construction administration services for the updating of the tunnel operating systems-mechanical and electrical-to increase safety, efficiency, reliability, planning, redundancy and maintenance. Services also include remodeling of the control room and Tunnel Management Center (TMC) while minimizing the impact of construction on life and safety tunnel operations. Tasks included Investigations and Feasibility of Design; Advanced Design with Constructability Review; Final Design, Pre-Construction and Design Support during Construction; and System Programming and Maintenance Requirements. Due to the critical nature of the tunnel, a complete temporary control room was designed. Mr. Singh provided electrical design including control room power, communication systems and lighting, development of the temporary control room design package including power, UPS and communication wiring.

BAISLEY PARK BUS DEPOT, JAMAICA, NY-MTA BUS. Under an MTA Bus Company Task Order, Mr. Singh prepared a facility condition survey report and a complete set of construction documents including plans, specifications, and Engineer's estimate for the design of complete electrical and fire alarm systems of the entire facility. He is also providing support during pre-construction and construction phases.

BRONX RIVER GREENWAY HOUSE & STARLITE PARK, BRONX, NY-NYC DPR. The Bronx River Greenway River House is the base of operations for the restoration and operation of the Bronx River Greenway and the adjacent portion of the Bronx River. The Bronx River Alliance will occupy the building and includes a boat house, administrative area, and spaces for use by the public and schools. A LEED Silver Project, the building is a living part of the park. The goal for this project is to be a true "Productive" building: generating a surplus of renewable energy, harvesting and using all on site rainwater. Mr. Singh provided design of complete fire alarm system, electrical lighting, PV system, power, telephone, data, and security system.

BUSHWICK INLET PARK DISTRICT HQ & COMMUNITY FACILITY, BROOKLYN, NY- NYC DPR. This project is the first phase of a remaking of the Greenpoint-Williamsburg waterfront from a decaying industrial strip to a multifaceted public park. The design team is integrating a full program of ball fields, cafe, public meeting rooms, classrooms, and Park office and maintenance facilities, into a city-block sized site. Mr. Singh provided design of complete fire alarm system, electrical lighting, PV system, power, telephone, data, and security system.

THURGOOD MARSHALL US COURTHOUSE, NEW YORK, NY. The 718,180 gross square foot Thurgood Marshall US Courthouse building consists of 34 stories plus basement. The tower includes two mechanical floors at the top and contains twenty-three courtrooms, forty-four judges' chambers and court-related office spaces. Mr. Singh's responsibilities include field inspections/surveys, assessment reports and design. A LEED Silver project, design included electrical power distribution/grounding system/lighting systems replacement and upgrade, emergency power system replacement and upgrade, telephone/data systems replacement and upgrade, security screening and security system upgrades

NASSAU COUNTY OFFICE, 1 WEST STREET, MINEOLA, NY, NASSAU COUNTY. Built in the late fifties, A.G. Consulting Engineering, PC is providing existing condition inspection of all MEP systems, functioning status, compliance with current codes and evaluation of the findings with recommendations for design and construction for this 5 story executive office building. Upon approval of design recommendations, Mr. Singh is providing engineering design services for the complete interior renovation of the of the building (approx. 100,000 sq ft), renovation of the basement, new fire alarm system, new security system, electrical service upgrade.

ARDASH MEGUERDICHIAN, CIPE

Rail & Transportation Facilities – Project Manager (Mechanical)

Mr. Meguerdichian has over 29 years of experience in the design and engineering of cold water, hot water, sanitary, medical gases, site utility, sprinkler, dry pipe, and pre-action systems gas lines systems. Mr. Meguerdichian is experienced in planning and design of integrated fire protection systems for various buildings, including healthcare facilities, educational facilities, landmark buildings, research and medical laboratories, corporate facilities, and hotels. His responsibilities include preparation of reports, design, existing condition surveys, budget estimating, coordinating, specification writing, approving shop drawings, troubleshooting and field inspection. He reviewed extensively plumbing design projects from the constructability point of view and improved the final design and specification accordingly. He is a member of the Technical Committee for NYC Building Code 2008, and the American Society of Sanitary Engineers (ASSE).

EDUCATION

- New York University, New York, New York, 1986
- New York Institute of Technology, B.S., New York, 1976
- Queensborough Community College, Queens, New York - AAS, 1972
- NY Certified in Plumbing Engineering

SELECTED EXPERIENCE

BAISLEY PARK BUS DEPOT, JAMAICA, NY, MTA BUS COMPANY. Under an MTA Bus Company Task Order, A.G. Consulting Engineering, PC is preparing a facility condition survey report and complete mechanical, plumbing and electrical design of the entire facility. The report consists of inspection findings and recommendations with the estimated cost of the proposed renovation work. The project design includes a complete set of construction documents including plans, specifications, and Engineer's estimate for the design and sizing of a new gas service. Mr. Meguerdichian is also providing support during pre-construction and construction phases. These include, but are not limited to, responding to written inquiries from prospective bidders, preparing all Addenda to the construction documents, participating in the Pre-Bid Site Tour; review and approve shop drawings, catalog cuts, O&M manuals respond to RFI's, and resolve any field condition that require Designer's input.

BRONX RIVER GREENWAY HOUSE & STARLITE PARK, BRONX, NY, NYC DEPT. OF PARKS & RECREATION AND BRONX RIVER ALLIANCE. The Bronx River Greenway River House is the base of operations for the restoration and operation of the Bronx River Greenway and the adjacent portion of the Bronx River. The Bronx River Alliance will occupy the building and includes a boat house, administrative area, and spaces for use by the public and schools. A LEED Silver Project, the building is a living part of the park. The goal for this project is to be a true "Productive" building: generating a surplus of renewable energy, harvesting and using all on site rainwater. Mr. Meguerdichian provided design of complete fire protection, fire detection, sprinkler system, and standpipe system,.

REHABILITATION OF 12 STATIONS ON THE WEST END LINE (BMT), CM-1330, BROOKLYN, NY, NYCT. The West End Line, Subway line in Brooklyn, NY is a branch line from the Broadway (Manhattan)-Fourth Avenue (Brooklyn) subway, serving the communities of Borough Park, New Utrecht, Bensonhurst, Bath Beach and Coney Island. It is served full time by the D Train, and rush hours by the M Train, which provides direct access to the financial district. Mr. Meguerdichian is providing Plumbing and Fire Protection engineering design services for the upgrade and rehabilitation of 4 stations and component rehabilitation at 8 stations on the West End Line. These include underground and above ground stations.

BUSHWICK INLET PARK DISTRICT HQ & COMMUNITY FACILITY, BROOKLYN, NY, NYC DEPT. OF PARKS & RECREATION. This project is the first phase of a remaking of the Greenpoint-Williamsburg waterfront from a decaying industrial strip to a multifaceted public park. The design team is integrating a full program of ball fields, cafe, public meeting rooms, classrooms, and Park office and maintenance facilities, into a city-block sized site. Mr. Meguerdichian provided design of complete fire protection, fire detection, and sprinkler system.

THURGOOD MARSHALL US COURTHOUSE, NEW YORK, NY. The 718,180 gross square foot Thurgood Marshall US Courthouse building consists of 34 stories plus basement. The tower includes two mechanical floors at the top and contains twenty-three courtrooms, forty-four judges' chambers and court-related office spaces. Mr. Meguerdichian provided assessment reports and design including domestic water/sanitary/storm water systems replacement, fire protection system upgrade and expansion. The entire HVAC system is being designed following LEED Guidelines to achieve Silver Certification.

NASSAU COUNTY OFFICE, 1 WEST STREET, MINEOLA, NY, NASSAU COUNTY. Built in the late fifties, A.G. Consulting Engineering, PC is providing existing condition inspection of all MEP systems, functioning status, compliance with current codes and evaluation of the findings with recommendations for design and construction for this 5 story executive office building. Our findings shows that even though with proper maintenance the life expectancy of the MEP system can be extended, limitations exist due to latest technology, energy conservation, appropriate material, non availability of spare parts of existing equipment and rising labor cost of maintenance of old plant and machinery. Upon approval of our design recommendations, we are providing engineering design services for the complete interior renovation of the building (approx. 100,000 sq ft), renovation of the basement and replacement of all windows. Mr. Meguerdichian is providing design for sprinklering of the entire building.

John E. Burns, PE, LEED® AP
Aviation Project Manager

Education

BS, 1985, Electrical Engineering, Catholic University of America

Registration

Professional Engineer – AZ, NJ, PA, MD, VA, DE, TX, NY, FL, OH, SC

Professional Associations

American Association of Airport Executives
Consulting Engineers Council of PA
American Consulting Engineers Council

For the past 23 years, John has been involved in all aspects of facility planning, design and construction. As a Principal of Burns Engineering, John has led the Burns team in numerous facility and infrastructure improvement projects. John has an explicit and current understanding of facility operations, procedures, special needs and systems. As an engineer, he combines this knowledge with his technical background that results in a very high quality design. John also oversees Burns Engineering's Quality Management System Program which addresses the full breadth of our services including client relationship, proposal development, project execution, project quality, client feedback and client satisfaction. John developed Burns Engineering's quality plan and oversees the QA/QC audit process for the projects.

Port Authority of New York and New Jersey, Call-In Engineering Services, Various Locations. John is the ***Principal-in-Charge*** for Burns Engineering's Call-In agreements for mechanical, electrical and electronics engineering services. He is responsible for Burns' services consisting of preparing engineering studies, conditions surveys, designs and contract documents including drawings, technical specifications and construction cost estimates for a wide variety of electrical installations, for both new construction and rehabilitation projects. Burns has worked on projects at each of the PANYNJ airports and many other PANYNJ facilities under these agreements.

Port Authority of New York and New Jersey, John F. Kennedy International Airport, Runway 13R-31L Reconstruction, Queens, NY. John is the ***Engineer of Record*** for all electrical work for this $200 million reconstruction and widening of JFK's primary runway. The 14,572-foot-long runway was reconstructed with 18" of portland concrete cement on top of the existing asphalt pavement. This required the complete replacement of all electrical infrastructure and lighting systems. John oversaw the electrical design and led the electrical construction phasing development which included extensive night work, 120 day runway closure and over 12 discreet construction phases. The project also included extensive pre-purchasing of lights, cable, conduit, signs and other electrical equipment to assure that adequate supply was on hand during this rapidly constructed project. The electrical construction value of this project was $40,000,000.

Port Authority of New York and New Jersey, Newark Liberty International Airport, Terminal A Redevelopment, Newark, NJ. John was ***Principal-in-Charge*** for Burns' involvement in this terminal redevelopment project which is focusing on the construction of a new 2 million sf terminal building adjacent to the existing Terminal A at Newark Airport. John provided technical leadership in developing conceptual solutions for sustainable design and M-E-P systems. Burns developed concepts and schematic design for the mechanical, electrical, plumbing, fire protection, security, telecommunications and special systems. Burns has developed systems concepts, load analysis, energy profile and conceptual design for the new terminal.

Port Authority of New York and New Jersey, John F. Kennedy International Airport, Runway Safety Area Improvement Program, Queens, NY. John is the ***Engineer of Record*** for the NAVAIDS, lighting and electrical components of the rehabilitation for the runway safety areas at Kennedy Airport. John led the electrical engineering efforts to rehabilitate the RSAs for runways: 4L-22R, 4R-22L, 13L end and 13R end. His responsibilities included supervising a team of design professionals, technical leadership for Instrument Landing System changes, underground electrical distribution relocations, approach lighting system modifications and changes to other electrical systems resulting from grade changed and runway threshold and declared distance changes.

Port Authority of New York and New Jersey, Newark Liberty International Airport, Runway 4L – Replacement of NAVAIDS, Newark, NJ. John is the ***Engineer of Record*** to upgrade the visual and electronic navigational aids on Runway 4L from CAT-I to CAT-III. The design includes a new instrument landing system (glide slope, localizer and marker beacons), ALSF-2 high intensity approach lighting system, RVR, PAPI, electrical vaults and other systems. The work also included an obstruction study to determine if the threshold could be partially or completely un-displaced.

Metropolitan Washington Airports Authority (MWAA), On-Call Contract, Washington Dulles International and Ronald Reagan Washington National Airports. John is the ***Principal-in-Charge*** for Burns' On-Call Task Order Contract with MWAA. Burns is managing multiple tasks at both Ronald Reagan Washington National Airport (DCA) and Washington Dulles International Airport (IAD). The contract value is $900,000 fee annually. Task orders include: DCA Utilities Physical Enhancements; DCA Perimeter Fence / Intrusion Detection; IAD Utilities Physical Enhancements; IAD Access Control Improvements; and IAD HVAC Improvements.

Denver International Airport, South Terminal Redevelopment Program, Denver, CO. John is Burns' ***Principal-In-Charge*** for this $650 million project which includes an extension of the existing Jeppesen Terminal, a new 500 room three star hotel, a new train station and platform configuration for the City of Denver Rail System (RTD) and an extension of the Airports Automated Guideway Transit System (AGTS). Burns is leading the mechanical, electrical and systems/electronics engineering effort for the Parsons-led Program Management Team.

Brian Phillips, PE, LEED® AP
Aviation – Project Manager

Education

BS, 1992, Mechanical Engineering, Penn State University

Registration

Professional Engineer – PA, VA
LEED Accredited Professional

Professional Associations

American Society of Heating, Refrigerating & Air Conditioning Engineers
Association of Energy Engineers
National Fire Protection Association

A Vice President and Principal with Burns, Brian has extensive experience in the design and management of various systems engineering projects, particularly for airport terminals and other transportation facilities. He has developed a broad understanding of airport infrastructure, operations and regulatory issues. He has been involved in all phases of project execution from aviation planning, budgeting, and analyses through design and construction management. He is particularly adept in the management and oversight of task order type contracts which represent a significant portion of Burns' overall workload.

Port Authority of New York and New Jersey, Electronics Engineering Call-In Contract 2005-2007, Newark, NJ. Brian was the ***Principal-In-Charge*** for this contract with the PANYNJ. As such, Brian communicated regularly with the PANYNJ Electronics Group, and worked diligently to ensure customer satisfaction and a high level of QA/QC. Projects successfully completed by Burns through this contract include the following:

- On-Site Electronics Engineering Support
- Holland Tunnel Administrative Building Modifications HT-454
- Bayonne Bridge CCTV Relocation

Port Authority of New York and New Jersey, Newark Liberty International Airport, Terminal A Redevelopment, Newark, NJ. Brian was the ***Project Engineer*** for the planning and conceptual design phase for this $3 billion project, which is considering a new 2.0 million square foot, 45-gate terminal adjacent to existing Terminal A. Brian also established preliminary sizes for central plant equipment which included five 1,500 ton chillers and three 800 HP boilers, developed conceptual central heating and cooling plant configurations, identified mechanical space needs and coordinated air distribution concepts with the project architect, evaluated multiple LEED and sustainable design concepts, and established a basis of design for all mechanical systems.

Metropolitan Washington Airports Authority (MWAA), Security Consulting Task Order Contract, Washington, DC. Brian has played a key role for this security task order contract with MWAA. In particular he has worked with the Authority and the Burns technical team to assess the airports security needs, evaluate available and emerging technology, and recommending viable solutions to protect the airport and its infrastructure. His assessments and recommendations have led to the following projects:

- DCA Waterside and Landside Perimeter Security Enhancements
- DCA Camera Core Systems Upgrade
- DCA Chem/Bio/Radiation Detection System Design
- IAD Concourse C/D HVAC Unit Replacement
- IAD Fuel Farm Security Improvement
- IAD Secure Portal Project
- IAD Airside Inner-Perimeter Security Enhancement
- IAD Cargo Line Security Enhancements

Metropolitan Washington Airports Authority (MWAA), On-Call A/E Services for COMIP, Washington Dulles International and Ronald Reagan Washington National Airports, VA. Brian is the ***Project Manager*** for this Task Order Contract with MWAA. Burns is managing multiple tasks at both Ronald Reagan Washington National Airport (DCA) and Washington Dulles International Airport (IAD). Tasks include a variety of facilities and infrastructure upgrades including perimeter security, utilities, central plant and airfield navigation systems. Tasks include:

- DCA Waterside and Landside Perimeter Security Enhancements
- DCA Camera Core Systems Upgrade
- DCA Chem/Bio/Radiation Detection System Design
- IAD Concourse C/D HVAC Unit Replacement
- IAD Fuel Farm Security Improvement
- IAD Secure Portal Project
- IAD Airside Inner-Perimeter Security Enhancement
- IAD Cargo Line Security Enhancements

Denver International Airport, South Terminal Redevelopment Program, Denver, CO. Brian is Burns' ***Project Manager*** for this $650 million project which includes an extension of the existing Jeppesen Terminal, a new 500-room, three-star hotel, a new train station and platform configuration for the City of Denver Rail System (RTD) and an extension of the Airports Automated Guideway Transit System (AGTS). Burns is providing electronics and special systems engineering as part of the Parsons-led Program Management Team (PMT). Burns' scope includes program criteria and preliminary design for systems including access control and video surveillance, inside and outside plant cable systems, wired and wireless network systems, 450 and 800Mhz radio systems, audio and video paging and wayfinding, digital television distribution and fire alarm systems.

David Ciervo, PE, LEED® AP
Aviation – Project Manager

Education

BS, 1990, Mechanical Engineering, Temple University

Registration

Professional Engineer – PA

Professional Associations

American Society of Heating, Refrigeration, and Air Conditioning Engineers
National Fire Protection Association

Years of Professional Experience: 20

A Senior Mechanical Engineer with Burns Engineering, Inc., Dave has 20 years of experience in mechanical engineering design and analysis including the design of plumbing, fire protection, HVAC, and other mechanical systems, particularly for airport infrastructure and facilities. Dave also provides specification writing, report writing, cost estimating, building surveying, and computer data analysis. He is an active member of both ASHRAE and NFPA and continuously stays abreast of trends in the mechanical engineering industry. Relevant project experience includes:

Philadelphia Airport System, General Engineering Services Contract, Philadelphia, PA for the City of Philadelphia, Division of Aviation. Dave has been involved with a multitude of mechanical engineering projects on this contract for his entire 20-year career at Burns. His work under this contract has included preliminary studies, investigation of multiple engineering concepts, engineering research and analysis, calculations, preparation of contract drawings, specifications, cost estimating and construction administration. He has become thoroughly familiar with the mechanical systems at PHL including airport design standards, central heating and cooling plants, chilled and hot water piping network, pumping systems, indoor and outdoor air handling equipment, plumbing and fire protection systems, and the building automation system. Representative projects include:

- Mechanical Room Rehabilitation Projects
- Ventilation and Fire Suppression for Electrical Substations
- Ventilation and Fire Suppression for Airfield Lighting Vaults
- Terminal A East Addition of Pre-Conditioned Air Units
- Development of Tenant Design Standards Manual
- ARFF Facility Mechanical Improvements
- Tenant Reviews
- Terminal E Computer Room HVAC Upgrades
- Terminal Complex Fire Protection Expansion
- Concourses B, C and D Expansion
- Baggage Claim D Expansion

Metropolitan Washington Airports Authority (MWAA), On-Call A/E Services for COMIP, Washington Dulles International and Ronald Reagan Washington National Airports. Dave has been ***Lead Mechanical Engineer*** on numerous tasks as part of Burns' On-Call A/E Services for COMIP prime consulting contract with MWAA. He has become familiar with the personnel, facilities, operations and systems at both airports (DCA and IAD). As a result of his experience on multiple tasks, Dave has developed a thorough understanding and knowledge of the Authority code requirements and Design Manual. Dave recently led the mechanical engineering effort on the following tasks:

- IAD Concourse C/D Rooftop HVAC Unit Replacement
- IAD Shop 2 Boiler Replacement
- DCA Hangar 11 HTHW Generator
- DCA Terminal A Operations Computer Room Expansion

Philadelphia International Airport, Terminal A West, Philadelphia, PA for the City of Philadelphia Division of Aviation. As ***Mechanical Engineer,*** Dave supported the mechanical design for the new 800,000 sf, 12-gate world class International Terminal. He designed piping systems, air handling units, ductwork and mechanical room layouts. Dave also provided field support during the four-year-long construction phase. He was the lead mechanical designer during the construction phase to supplement the new terminal with additional post-9/11 security measures.

Metropolitan Washington Airports Authority (MWAA), Washington-Dulles International Airport, International Arrivals Building (IAB) Expansion, Dulles, VA. Dave is ***Lead Mechanical Engineer*** for the IAB expansion which is needed to address deficiencies in the size and configuration of the existing facility and to increase passenger processing capacity to accommodate a forecasted future flight schedule. The mechanical work included conditioning the 215,000 s.f. facility with built-up air handlers and extending the airport's existing low temperature chilled water and high temperature hot water systems. The air handlers utilize both constant volume as well as variable air volume distribution systems. A new 70,000 cfm ventilation system will be provided to serve the basement baggage make-up area, baggage vehicle entrance and connecting tunnel. The system will be controlled by a CO/NO_2 detection system. A Plate-and-Frame heat exchanger is being provided to exchange heat to a glycol heating system which will feed pre-heat coils.

Susquehanna Area Regional Airport Authority (SARAA), Harrisburg International Airport, Multimodal Transportation Facility, Harrisburg, PA. Dave was ***Lead Mechanical Engineer*** for this transportation facility which houses several rental car agencies and supplements the expansion of the terminal building by providing 2,500 parking spaces. Dave led the design of the HVAC, Plumbing and Fire Protection. The $52 million facility utilizes 200 tons of cooling and self-contained HVAC equipment for the rental car facility as well as the enclosed pedestrian walk-ways. The complex also utilizes gas fired snow melters, a 40,000 cfm smoke exhaust system and a deck wash-down system. The complex provided for a bridge between the new terminal building and the Amtrak station.

Chuck Reed
Aviation – Project Manager

Education

B.S.A.S., 1997, Electrical Engineering, Thomas Edison State College

Credentials

ATAB Certified Anti Terrorism Specialist (CAS)

Chuck has over 13 years of security and technology system evaluation, design and implementation experience. Chuck has specific experience with: inside and outside plant communications cabling systems, Voice Over IP networks, call center/dispatch operations, cable plant management systems and design, LAN and WAN network planning, digital network equipment layouts, video surveillance and behavior analytic systems, access control and asset management systems, fire and life safety systems, CBR detection systems, sallyport sayouts, supporting electrical power requirements and any necessary supporting technologies and systems. Chuck is also knowledgeable of other airport specific systems, including FIDS, CUTE/CUPPS, etc.

Port Authority of New York and New Jersey, On-Site Electronics Systems Support, Newark, NJ. Chuck is providing on-site support for the Port Authority's electronics engineering group. Chuck assists with the design, evaluation and review of electronics components of multiple PANYNJ projects. Specific systems included in Burns' scope include synchronous optical network (SONET) hardware, access control and video surveillance systems, fiber optic fence intrusion detection systems, audio / video paging systems, and revenue control systems. Representative projects include: Trans Hudson Rail System – Traction Power Substation #7, Trans Hudson Rail System – Traction Power Substation #9, Port Authority Bus Terminal Renovations, and Harrison Passenger Station Revenue Control.

Metropolitan Washington Airports Authority, On-Call A/E Services for COMIP, Washington Dulles International and Ronald Reagan Washington National Airports, Northern Virginia. Chuck has been the ***Special Systems Designer*** for dozens of special systems tasks as part of Burns' on-call A/E services for COMIP contract at both Ronald Reagan Washington National Airport (DCA) and Washington Dulles International Airport (IAD). He has developed a thorough knowledge of the infrastructure and systems in place at both airport facilities. The scope of work covers multiple task orders, including: DCA Camera Core Systems Upgrade, DCA Terminal A Paging System Upgrade, DCA TSA Camera System Expansion, and DCA/IAD Perimeter Enhancements.

Denver International Airport, South Terminal Redevelopment Program, Denver, CO. Chuck is Burns' ***Lead Special Systems Designer*** for this $650 million project. Burns is providing electronics and special systems engineering as part of the Parsons-led Program Management Team (PMT). Chuck is leading the design effort associated with access control and video surveillance, inside and outside plant cable systems, wired and wireless network systems, 450 and 800Mhz radio systems, audio and video paging and wayfinding, digital

television distribution and fire alarm systems. The program includes an extension of the existing Jeppesen Terminal, a new 500 room three star hotel, a new train station for the City of Denver Rail System (RTD) and extension of the Airports Automated Guideway Transit System (AGTS).

Miami-Dade County, MIC-MIA Mover Automated People Mover at Miami International Airport, Miami, FL. Chuck, as ***Lead Special Systems Designer,*** is currently involved in the design of wayside communications and security systems for the 1.5 mile automated people mover being constructed as a design-build project with Parsons Odebrecht Joint Venture. Chuck's scope of design includes wayside fiber communications, emergency blue light stations, guideway and platform video surveillance and audio and visual passenger communications.

El Dorado International Airport, New Terminal and Concourses, Bogota, Columbia. Chuck is the ***Lead Special Systems Designer*** for Burns, who is part of the Program Management Team supporting the expansion of El Dorado International Airport in Columbia. The program will expand the airport by over 30 gates and include tenant and passenger processing spaces. Chuck is providing oversight and design guidance on a variety of systems including control and video surveillance, inside and outside plant cable systems, audio and video paging and wayfinding, digital television distribution and fire alarm systems.

Susquehanna Area Regional Airport Authority, Harrisburg International Airport, New Terminal and Multimodal Transportation Facility, Harrisburg, PA. Chuck, as ***Lead Special Systems Designer***, developed and designed a complete information, security, and life safety infrastructure for the new terminal building and its associated multimodal transportation facility. The design included a variety of systems including: complete fiber and copper telecommunication infrastructure, including all facility plant cabling and utility service connections; complete video surveillance and access control system; fully addressable fire detection and alarm system; public address/terminal announcement system; flight and baggage information display system; operations control station for Authority security personnel; and building management system to control and monitor typical building functions such as lighting controls and HVAC settings. Chuck also designed to provide complete system integration of all packages and a Flight and Baggage Information Display System with integrated Audio Paging.

Phoenix Sky Harbor International Airport, Perimeter Intrusion Detection System, Phoenix, AZ. Chuck has worked on a design to provide the City of Phoenix with a $15,000,000 plan to procure a multi-technology complete electronic perimeter surveillance system for the airport's more than 14 miles of concentric perimeter. The plan will include General Video Surveillance and Content Analytic Systems using both traditional Day/Night Cameras and Thermal Imagers. The system will also include Fiber Optic Fence Detection Systems, Infra-Red Beam Sensors and Microwave Detection Links to provide redundant detection methods which will help reduce false alarm rates. The design provides reporting integration and supporting connections to existing Access Control and Video Recording Systems.

Peter Harrison, B.Sc., MBA, C.Eng. MIET, MIEEE

Rail & Transportation Facilities – Project Manager

Education

Bachelor of Science, 1977
University of Manchester Institute of Science and Technology, Manchester. UK

Master of Business Administration, 1989
University of Loughborough, Loughborough. Leicestershire UK

Professional Associations

Institute of Engineering and Technology (IET), Member, 1978-date

Institute of Electrical and Electronic Engineers (IEEE), Member, 2000-date

Association of MBAs, Member, 1987-date

Employment History

May 2007 – July 2009
Parsons Transportation Group, New York
Senior Technical Consultant

Sept. 1999 – May 2007
Booz Allen Hamilton, Newark
Associate

Aug. 1996 – Aug. 1999
The Land Transport Authority, Singapore
Senior Systems Engineer

Aug. 1994 – Aug. 1996
Hartgain Limited,

Profile

Mr. Harrison is a Chartered Electrical Engineer with 30 years of worldwide experience of engineering and project management in the transit industry with consultants, agencies and contractors. His experience is focused on rail vehicles, automatic train control and integration of rail transit systems. He has experience with all types of rail transit vehicles, including commuter rail and mass transit electric multiple units, diesel multiple units, light rail, locomotives. Recently Mr. Harrison has been specializing in Communication Based Train Control (CBTC) and Automatic Tran Control (ATC) projects. He is also experienced with: rubber tired people mover vehicles, solid state drive and power electronic conversions systems. Mr. Harrison is experienced with all aspects of project implementation including developing initial concepts, producing specifications, engineering and design, manufacturing support, system testing and maintenance.

Projects

Port Authority of New York and New Jersey EWR Monorail Extension
Mr. Harrison was project engineering responsible for vehicles, control, Supervisory Control and Data Acquisition (SCADA), platform screen door and power distribution systems for the Newark Airport Monorail People Mover North East Corridor extension link. He was managing the resolution of technical issues, supporting and overseeing inspection, test, commissioning and acceptance of the systems. He was also managing the compliance of the system and vehicles with the technical specification.

Port Authority of New York and New Jersey - PATH Railcar and Signal Program - *Mr. Harrison supported the procurement of CBTC systems. Mr. Harrison's role included review and modification of technical specifications, and review and evaluation of proposals principally for the car mounted equipment.*

Delcan Corporation, New York, NY. Project Manager, August 2009 – Present
Metropolitan Transit Authority (MTA), New York
Independent Engineering Consultant (IEC) – Mr. Harrison is leading the IEC oversight of all vehicle procurements projects (rail vehicle and bus), for New York City Transit (NYCT), Metro North Railroad (MNR) and Long Island Railroad (LIRR). He is also leading the oversight of CBTC and PTC projects. The IEC monitors the operating agencies (NYCT, MNR, and LIRR) with respect to planning, execution and management of their respective capital programs. Mr. Harrison has also led review tasks including: Review of CBTC procurement

Warwickshire, UK
Director

April 1992 – May 1994
Thorn Automation Limited,
Rugeley, UK
Manager

Nov. 1988 – April 1992
Brush Traction Limited,
Loughborough, UK
Senior Engineer

June 1984 – Oct. 1988
Brush Electrical Machines Limited,
Loughborough, UK
Senior Design Engineer

1983 – 1984
GEC Industrial Controls Ltd.
Rugby, UK

1981 – 1983
Thorn EMI Automation Ltd.,
Rugeley, UK
Development Engineer

1979 – 1981
Chloride Legg Ltd.,
Wolverhampton, UK
Development Engineer

1977 – 1979
GEC Traction Ltd.,
Manchester, UK
Graduate Engineer

specifications, Review of rail vehicle early retirement proposals, Review of Bus procurement strategy.

JFK AirTrain - Mr. Harrison was Lead Vehicle Engineer for the JFK Airport Access project and was responsible for all aspects of the procurement of 32 light rail vehicles. He was responsible for and was managing the design, integration, inspection, testing and commissioning processes for the vehicles. Mr. Harrison also supported the JFK Airport Access project as a subsystem specialist, focusing on Auxiliary Power, Propulsion, Passenger Information Systems, and electrical systems reviewing contractor design submittals including review of contractor submittals, for designs, reliability analysis, FTA and FMECA, First Article inspections and test witnessing.

Parsons Transportation Group, New York, NY. Senior Technical Consultant, May 2007 – July 2009 New York City Transit Authority (NYCT)
Canarsie CBTC Procurement – Mr. Harrison led the consultant support team to NYCT installing CBTC system to the Canarsie line. The project included installing CBTC equipment on R160 cars to augment the existing R143 cars in CBTC operation for the Canarsie line. The team provides technical oversight of the contractor including managing resolution of technical issues for the CBTC system, supporting the safety certification process, monitoring CBTC system performance and equipment reliability and managing close out of issues with the existing CBTC deployment. Mr. Harrison was chairperson of the Passenger Cars Integration and the Track Geometry Car working groups reviewing contractor submittals and resolving technical issues. Mr. Harrison also supported NYCT during the bid process including review, production and evaluation of specifications, scope of work, contractual terms and conditions, and bidder proposals. He also participated in the bid negotiations.

New Jersey Transit (NJ TRANSIT) New Diesel Multiple Unit Procurement - Mr. Harrison was leading the engineering support team for the procurement of diesel multiple unit vehicles for NJ TRANSIT. Mr. Harrison's team was responsible for providing technical support to the client for the procurement of the vehicles including development of the technical specification, design concepts and review of proposals.

New York City Transit Authority (NYCT) Fushing CBTC Procurement – Mr. Harrison was supporting the procurement of Communication Based Train Control (CBTC) equipment for the Flushing and Second Avenue lines of the New York Subway system. Mr. Harrison was supporting the implementation of the train borne control equipment and is responsible for producing procurement specifications for the train board CBTC equipment and associated information including drawings and specifications. He was also responsible for producing concept designs for implementation of the CBTC train borne equipment on existing NYCT EMU vehicles.

Education
B.S., Civil Engineering, University of British Columbia, 1988

M.B.A., Simon Fraser University, British Columbia, 2003

QMI-ISO 9000 Quality Documentation and Quality Auditing

Business Certificate in Quality Management

Ashbrook ISO 9000:2000 Lead Auditor Course

Professional Associations
Professional Engineer (PE), Colorado Certified Project

Management Professional (PMP)

Certified Quality Manager (CQM)

Certified Quality Engineer (CQE)

Certified Quality Auditor (CQA)

Employment History
1998 Delcan Corporation

1995-1998 H.A. Simons Ltd.

1988-1995 Various Engineering Firms

Timothy P. Stokes, MBA, P.E.

Rail & Transportation Facilities – Project Manager

Profile

Timothy Stokes is an experienced Project Manager with a background in, construction management, civil and structural design/engineering, quality management, management system auditing and requirements management. Tim has specialized expertise in the development, maintenance and implementation of project management systems, especially: quality systems for companies seeking ISO 9001 registration. Tim has substantial experience in auditing of project management systems (i.e. quality, environmental, safety, incident management, and other project management systems). Tim has made significant contributions to the development and implementation of Delcan's specialized Compliance Audit Services (CAS) and Requirements Management Services (RMS) - project management services that are unique to industry, particularly Design-Build projects.

Projects

Denver RTD, FasTracks Program 2005-Present. Leading Delcan's consultant team to assist RTD (serving as the Quality Management Consultant (QMC)) and working as an extension of the RTD staff to develop program and contract requirements, verify requirements during program implementation, assist in developing a "quality of life within the region" metrics program and manage final acceptance of the overall program. This invokes the tailoring of a Delcan's requirements management database application to support the processes for overseeing consultant/contractor management and work products. FasTracks Program Cost $4.6 billion

Colorado Department of Transportation (CDOT), Transportation Expansion Project (T-REX), Denver RTD, 2001-2005. Assisted CDOT & RTD in the development, management and implementation of the T-REX (CAS) Audit Program. Directly managing a consultant team of four, the scope of the T-REX Audit Program consists of auditing methods to monitor and report upon the contractor's product, process, and management activities to verify, on a sampling basis, the implementation of the governing T-REX project contractual requirements. Tim led the effort to register the Audit Program to ISO 9001:2000 in 2003. The program comprises the use of a custom designed database, developed under Tim's direction, to collect, report, and track trends relevant to the Audit Program.
Performing audits to verify ISO 9001 compliance of various design, subcontractor, and supplier organizations, including other Design Builder management systems: safety, environmental, traffic management, public information plans. Project Cost: $1.7B.

Colorado Department of Transportation (CDOT), Colorado Springs I-25 Design Build Project (COSMIX),2004-2005 Assisted in the development of the Acceptance Management Program (AMP) for CDOT to be implemented on their $150 million design-build project, which commenced construction February 2005. Acceptance Management is a systematic methodology of assessing Work completed by the contractor prior to acceptance based on formal quality auditing techniques. The approach is used to monitor a design-build contractor's product, process or procedural, and management activities and verify on a sampling basis, the implementation of the governing contractual requirements.

Oregon Department of Transportation, OTIA III State Bridge Delivery Program, 2004. Assisted in the preparation of a report titled "Study Plan Options to Apply Compliance Auditing to the OTIA III State Bridge Delivery Program." The report contains specific recommendations and options about how best to use audit functions to provide quality oversight for the OTIA III program as a whole and for OTIA III Bridge projects in general. This report also discusses how macro performance measures related to environmental, economic, social, sustainability and infrastructure finance could be derived, trended, reported and used to support continuous improvement of the Program.

Minnesota Department of Transportation (MnDOT), Program Management Services, 2002-2003. Providing advice to an on-site team developing a Requirements Management System (RMS) which is a process of collecting, organizing, maintaining, and tracking Owner and stakeholder requirements for the purpose of communicating them to a design-builder and for future confirmation of fulfillment. The process is being developed as part of Program Management for Mn/DOT Design-Build program.

407ETR concession Company Limited, Highway 407 ETR – East and West Extension, Ontario, Canada, 1999-2001. Responsible for detailed development and implementation of a Compliance Audit Program for the East and West extensions to the Highway 407, which was designed and constructed by a concessionaire. Performed management system audits to verify ISO 9001 conformance of various design, subcontractor and supplier organizations. Developed training programs and trained staff on ISO 9001 principles and application. He also performed audits on 407 ETR's environmental, operational and maintenance operations.

Department of National Defence of Canada, WATC Third Party Audit Services Wainwright, AB, Canada, 1998. Responsible for managing the implementation of Compliance Audit Services performed on three buildings for the Department of National Defence (DND). Developed an ISO 9001:1994 conforming quality system manual for the Department of National Defence.

Education
BS, Computer Science, Point Park College, 1985

Employment History
2009–Present, Delcan Corporation, Systems Engineering Manager – Rail/Transit

1997-2009, Parsons Corporation, Systems Manager

1985–1997, Union Switch and Signal, Pittsburgh Pennsylvania, Software Manager/Software Engineer

Professional Affiliations
International Council on Systems Engineering (INCOSE)

Intelligent Transportation and Transit Systems (ITTS) Steering Committee Member

Member of APTA Systems Engineering Subcommittee

Lori Colangelo

Rail & Transportation Facilities – Project Manager

Profile

Ms. Colangelo has over 24 years of systems engineering experience in the design and implementation of complex software-based projects in the rail transit industry. She spent the first 12 years of her career as a software developer and software project manager, implementing rail transit Operations Control Center (OCC) systems. This experience gave her the appreciation of the implementation issues that Contractor's face when interpreting and implementing contract requirements. She is able to take a practical approach to implementing systems engineering best practices on complex rail transit projects. As a member of the International Council on Systems Engineering (INCOSE) she has worked with international systems engineering experts to better define Systems Engineering processes and best practices. Her expertise with the design and implementation of OCC systems includes extensive experience in designing Automatic Train Supervision (ATS) systems for both fixed block operation and Communications Based Train Control (CBTC) systems.

Rail Car and Signal Program, Port Authority Trans Hudson (PATH), NY, NY: Systems Engineer responsible for developing Technical Specification requirements for software-based systems and ATS systems, ensuring that best practices for communications-based train control systems were incorporated into the ATS design package for PATH, and working with designers and PATH to ensure that software requirements and ATS requirements were integrated amongst all sections of the specification.

Automatic Train Supervision System for Subdivision B (ATS-B), MTA New York City Transit (NYCT), New York, New York: Project Manager responsible for the financial aspects of the project including budget and schedule management, cost reporting, subcontractor invoices, change order negotiations, and status reporting and overall design and development of the Technical Specifications for the procurement of the ATS-B System. Lead Engineer responsible for the development of the Technical Specifications for the ATS-B System and integration with other Capital Program projects within NYCT. The scope of the ATS-B project includes a Monitoring and Scheduling System for the existing fixed block operation which can then be expanded to integrate with future Communications Based Train Control systems. The system also includes a Voice Communications system, Projection Systems and interfaces to Decision Support Systems, Public Address/Customer Information Systems, and NYCT Reporting Systems. Signaling, communications and fiber optic systems will be upgraded in support of the Monitoring and Scheduling System.

Flushing and Second Avenue Communications-Based Train Control Project, MTA New York City Transit, New York, New York: Systems Engineer responsible for ensuring consistency of requirements between the Flushing Specifications and the design of the ATS-B System and for defining all software process requirements.

Software Status Review for the Jubilee Line Upgrade Project, London, England: Member of a 3-person Expert Review Team responsible for assessing the status of the software development effort by Thales on the Jubilee Line Resignaling Program. Thales is contracted to replace the existing signaling system on the Jubilee Line with a Communications-Based Train Control (CBTC) system. The scope of work includes CBTC equipment on 37 route-km, 27 stations and 63 trains. The Expert Review Team was contracted by the CEO of Tube lines to provide an independent assessment of the status of the software development effort in order to validate the commissioning schedule. As a member of the Review Team, Ms. Colangelo was responsible for reviewing software development and software testing metrics at the Thales office in Toronto and at the Tubelines office in London, United Kingdom. She met with key project staff and produced a Software Status Report that was commissioned by the CEO of Tube lines. The Expert Review Team will continue to assess the status of the Thales software development effort throughout 2010.

Radio-Based Automatic Train Control-Communications Based Train Control (ATC-CBTC) for the Yonge, University, Spadina (YUS) Subway, Toronto Ontario, Canada, 2007-2009: Systems Engineer and a member of the consultant team which developed the Technical Specifications for the ATC-CBTC system for the YUS Line. As the Systems Engineer, she was responsible for the design and development of the Technical Specifications for the ATS portion of the ATC-CBTC system. As a member of the Proposal Review Team, she was responsible for assisting the Toronto Transit Commission in deciding on whether to procure a new ATS system for the YUS line or revise the existing Central Office Signal System (CSS).

MTA Long Island Rail Road - East Side Access (ESA), Metropolitan Transit Authority, New York, New York: Control Center Lead Engineer responsible for development of the ESA Control System design, including specifications, drawings and cost estimates. Her primary responsibilities included customer interface and interface to other discipline leads. The ESA Control System includes typical Train Control functions, as well as Supervisory Control and Data Acquisition (SCADA) and Building Management functions.

Education
B. Eng (Honours), Electronics, Liverpool University, England, 1984

Employment History
2009–Present, Parker and Associates (Division of Delcan Corporation), Kingston, Ontario; Chief Engineer

2008 -2009, York Region, Rapid Transit Corporation, Markham, Ontario; Chief Engineer

1994–2008, Bombardier Transportation, Total Transit Systems, Kingston, Ontario; Director, Engineering

Professional Affiliations
Professional Engineer, Ontario, (Electrical)

Formerly P.Eng APEGBC Chartered Engineer (UK)

European Engineer (EurIng)

Member of Institution of Engineering and Technology (UK)

Member of APTA Systems Engineering Subcommittee

Papers
Pacific Asia Rail Conference Singapore 2003: Automated Transportation Systems
APTA Rail Conference

Toronto 2007: Integration of Automation into Urban Transit

Jonathan Hulse

Rail & Transportation Facilities – Project Manager

Profile

Mr. Hulse is a Professional Engineer with over 25 years experience in technical and engineering management. He has extensive experience in the Rail Transit Sectors and a broad background in system engineering within the Military, Industrial and Nuclear sectors.

Chief Engineer, Parker and Associates Inc. (Division of Delcan):
Reporting to the President, responsibilities include:

- Ensure technical integrity of the Rail Transportation projects, processes and procedures;
- Recruitment, supervision and technical guidance to engineering staff and Associates;
- Provide as necessary technical input and advice to support varying client and project needs;
- Preparation of special reports and technical studies;
- Participation in business development, including client development, development of proposals, client interviews and negotiations;
- Development of system engineering processes and procedures.
- Clients and examples include:
- Expert witness in automatic train control litigation case (client confidential);
- Review of Thales software readiness for London Tubelines Jubilee line resignalling project;
- Technology assessment and recommendations on transit technology, including capital and lifecycle cost comparisons to City of Ottawa in order to meet Transportation Master Plan;
- Studies on Signalling, Platform Screen Door and Guideway Intrusion Detection options for Amsterdam Metro;
- Studies on vehicle communication networks and door systems (client confidential);
- Preparation of System Engineering Plans for Siemens for Toronto's Union Station Railway Corridor resignalling contract.

Chief Engineer, York Region Rapid Transit Corporation:
Reporting to the Vice President, responsible for planning and directing large infrastructure projects in support of York Region's Official Plan, and Regional Transportation Plan for the implementation of rapid transit.
Coordinated a variety of different phases of the projects including the preliminary engineering and the environmental assessments (EA), implementation of design build contracts with integration into revenue service.

Led a project team of engineering professionals, consultants, and technical and support staff for the design, construction, procurement, and the development

References
Mary-Frances Turner, VP, York Region Rapid Transit [redacted]
Dan Braund, Bombardier Transportation [redacted]

of budgets, work programmes and schedules for the rapid transit network program. Reviewed pricing proposals from main contractors and vendors for compliance with scope definitions and reviewed comparative pricing of multiple vendors for best value for York Region.

Worked with Infrastructure Ontario and Metrolinx to develop funding and delivery strategies with the necessary benefits case analyses, and sat on the Metrolinx technical working groups for the Scarborough Rapid Transit system and the Transit City projects.

Projects included:
The implementation of a $1.7Bn bus rapid transit system with approx 70km of segregated rapidways along the Yonge St and Highway #7 corridors within York Region, including terminal facilities, an operations, maintenance and storage facility and significant vehicle procurement.

Toronto York Spadina Subway Extension Project: working closely with the TTC and City of Toronto on an extension of the subway into York Region from Downsview to the Vaughan Corporate Centre. As a 40% funding partner York Region remained responsible for the surface project management and transit oriented development for the facilities within York Region.

Planning for the Yonge Subway Extension from Finch Station to the Richmond Hill Centre – work entailed the development and submission of the Environmental Project Report, and the associated analyses to support provincial funding.

Director Engineering, Bombardier Transportation, Total Transit Systems
Responsible for all System Engineering activities for the Yong-In Rapid Transit project in South Korea. This was a full turn-key, design build, operate and maintain project providing a fully automated rapid transit system. Responsible for engineering activities in both the design and project offices. Scope of supply included unmanned vehicles using linear induction motor technology, communication based Automatic Train Control (ATC), Communication subsystems, and the provision of the complete operations and maintenance capabilities (manpower and equipment) to operate for 30 years. System engineering activities included design, and requirements management, RAMS, EMC, as well system integration and safety certification of the complete Transit System, including the Civil and E&M partners (providing trackwork, power supply and distribution, and AFC) to ensure a fully integrated automated Transit System that would meet the 30 year performance requirements of the System.

This project was the first to integrate the latest Bombardier *Cityflo* 650 ATC technology with Bombardier's Advanced Rapid Transit (ART) MKII Vehicle for unmanned train operation.

EXPERIENCE SUMMARY

Henry Chin, Senior Project Cost Manager, has more than 25 years of experience in architectural design and construction cost estimating, specializing in conceptual project budgeting and detailed cost estimating at various stages of design and construction. Mr. Chin has a unique combination of estimating knowledge and sensitivity to architectural design and costs. Prior to joining ELLANA, he was the lead estimator with a major construction management firm for many high-profile New York City and national projects. His project experience includes construction cost estimating and master planning of high-rise office buildings, hospitals, museums, research facilities, airports, schools, residential developments, hotels, and alteration and renovation of existing buildings for adaptive reuse.

EDUCATION

BS in Architecture, New York Institute of Technology, 1985

LICENSES/CERTIFICATIONS

Licensed Architect in the State of New York, [redacted]

RELEVANT PROJECT EXPERIENCE

PANYNJ, World Trade Center Tower One, New York, NY – Senior Project Cost Manager responsible for cost estimating and project cost control services for the 3-million square-foot Tower One at the World Trade Center site. Services include assisting the Project Program Manager with independent estimate preparation for trade bid packages; bid reviews; estimate preparation for bulletins, addenda, and change orders; and tracking and updating budget costs.

PANYNJ, Architectural, Engineering, and Interior Design Services for Offices at 4 World Trade Center, New York, NY – Senior Project Cost Manager responsible for cost estimating and scheduling services for the new corporate offices of the Port Authority of NY & NJ, consolidating about 1,700 Port Authority staff from multiple buildings in Manhattan and New Jersey in one central location at 150 Greenwich Street in Manhattan. The offices will cover approximately 15 to 20 contiguous floors, 1 podium floor (approximately 35,000 square feet located on the retail level to include a cafeteria, conference center, and an emergency command post), and 1/3 of the subgrade space in the new World Trade Center - Tower 4 Building. In compliance with current PANYNJ sustainability objectives all office buildings will comply with the World Trade Center Sustainable Guidelines, leading to a LEED gold rating.

PANYNJ, Redevelopment of jetBlue Terminals 5 & 6 at JFK International Airport, Queens, NY - Senior Project Cost Manager responsible for assisting the design team with the cost estimating of various design options for the proposed new terminal and roadways. These studies include design options for the terminal exterior walls, and roofs, drop-off area, and new canopy.

PANYNJ, TWA Building 60 Interior Adaptive Reuse / Exterior Improvements JFK International Airport, Queens, NY – Senior Project Cost Manager responsible for providing initial planning, design development, and construction-document cost estimating services to the design team throughout the interior/exterior renovations of this iconic TWA Terminal (Building 60), designed by Eero Saarinen, at JFK.

PANYNJ, World Trade Center Vehicle Security Center and Tour Bus Parking Facility, New York, NY – Senior Project Cost Manager responsible for providing construction cost estimating services for the 4 story 295,700 sf vehicle and tour bus parking and screening facility.

PANYNJ, USAir Terminal at LaGuardia Airport, Queens, NY - Lead Estimator responsible for the cost estimates for this $200-million, 300,000-square-foot, two-story airline terminal with a total of 12 gates. The project also included managing the construction of the taxiway realignment and access roads.

PANYNJ, New International Arrivals Building/Terminal Four at JFK International Airport, Queens, NY - Lead Estimator responsible for providing cost estimates from the schematic level of design to GMP for the new $400-million International Arrivals Building. The total terminal and concourses area is 1.4 million sf.

PANYNJ, Terminal One at JFK International Airport, Queens, NY – Lead Estimator for this two-level structure with a partial third level, totaling 660,000 sf. The new terminal was constructed on the site of the former Eastern Airlines Terminal, which was demolished as part of this project. Also included in the project are a retail and food gallery; new boarding lounges; and an airline club level on the airside of the security checkpoint. Construction value - $205 million.

National September 11 Memorial & Museum at the World Trade Center, New York, NY – Senior Project Cost Manager responsible for schematic and design development estimates for the WTC memorial and museum complex. Services include various cost studies of proposed design options, structural systems, and slurry wall supports.

NYSOGS, Life Safety Services Term Contract, State of New York (S3014) – Senior Project Cost Manager will be responsible for providing cost estimating services as-needed on this statewide life-safety term contract.

NYC School Construction Authority Cost Estimating Services On-Call Contract, New York, NY – Senior Project Cost Manager responsible for cost estimates at all stages of design for this on-call cost estimating prime contract, including new school construction projects, renovations, mechanical system upgrades, construction of new, 5-story, 97,000-square-foot intermediate school, feasibility study for 4-story, 49,000 sf. high school, and 4-story, 72,000-sf K-5th grade school. Domestic piping, flood elimination, low-voltage electrical system, boiler and climate-control upgrades, and mini-school roof upgrades, boiler and climate-control upgrades, heating plant and climate-control upgrades, boiler conversion and climate control upgrades, upgrades to roof, windows; interior restoration/replacement, exterior masonry restoration/replacement and related interior work, and exterior façade restoration; exterior masonry restoration/replacement

New York City Housing Authority Term Contract, New York, NY - Senior Project Cost Manager responsible for providing cost estimating services for this requirements contract for various buildings throughout the New York City Area. Projects generally include exterior restoration of the existing facades, mechanical and plumbing upgrade, interior kitchens and finishes replacement, and site/landscape/playground development

Public Safety Answering Center II, (PSAC II), Bronx, NY – Senior Project Cost Manager responsible for preparing cost estimates for the new, 525,000-sf Public Safety Answering Center being constructed in The Bronx, NY. This project will provide a new call center and improve the City's emergency communication systems, including responses to 911 calls. PSAC II was designed to withstand the effects of a major disaster, both natural and man-made, and to operate without interruption. The building also complies with all applicable laws and ordinances, including the Green Buildings Law (Local Law 86 of 2005) governing sustainable design. The scope of services include cost estimates preparation at all design milestones, value engineering estimates, and cost studies of various design options.

MTA, Design and Technical Services for Security Capital Program On "Task Order" Basis, New York, NY – Senior Project Cost Manager responsible for the provision of cost estimating services for engineering design and technical services for the MTA security improvement capital program. Services include risk and vulnerability assessments, development of a security program and security design guidelines, engineered solutions for threat mitigation, cost/benefit analyses of alternative mitigations, conceptual design, design development, final design, contract document preparation including drawings and specifications, preparation of project phasing plan and cost estimates, value engineering, and pre- and post-construction contract award services for a variety of security projects.

PATH/Christopher Street-9th Street Station Entrances, Jersey City, NJ – Senior Project Cost Manager responsible for cost estimating services to the design team at the conceptual design stage for the preparation of an analysis report for both stations and conceptual design for a new station entrance at the 9th Street Station through the Fontana Center building. The logistically-challenging proposed new 9th Street Station entrance includes an underground mezzanine tunnel over the existing PATH lower-level platform tunnel. The scope involved extensive utility relocation; maintenance and protection of traffic; Fontana Building substructure and structural work; as well as vertical ingress/egress elements.

EXPERIENCE SUMMARY
Walter A. Fitzer, Chief MEP Estimator, has more than 30 years of experience in mechanical/electrical design, field supervision, and cost budgeting and estimating. He has a wide range of project experience and is responsible for MEP estimate preparation from the conceptual through construction document phases, as well as coordination of MEP scopes and costs with the architectural trades. He is fully involved in value engineering sessions and project cost analyses, estimates, presentations, cost reconciliations, and negotiations.

Mr. Fitzer's project experience encompasses educational facilities for such public institutions/agencies as the New York City School Construction Authority (NYCSCA), State University of NY (SUNY), and City University of NY (CUNY), as well as private schools; transportation projects for MTA NYCT, MTA Metro-North, MTA LIRR, NJ Transit, and Port Authority of NY & NJ (PANYNJ). He has also provided his expertise for healthcare, hospital, and R&D facilities; commercial construction and office buildings including NYC's World Financial Center and World Trade Center; courthouses and correctional facilities; as well as alterations and renovations for a variety of clients.

EDUCATION
AAS, HVAC and Refrigeration, State University of Agricultural and Technical Institute at Farmingdale, NY

LICENSES/CERTIFICATIONS
Certified Specialist in HVAC - American Society of Heating, Refrigeration and Air Conditioning Engineers, Inc.

RELEVANT PROJECT EXPERIENCE
PANYNJ, Architectural, Engineering, and Interior Design Services for Offices at 4 World Trade Center, New York, NY – Chief MEP Estimator responsible for cost estimating and scheduling services for the new corporate offices of the Port Authority of NY & NJ, consolidating about 1,700 Port Authority staff from multiple buildings in Manhattan and New Jersey in one central location at 150 Greenwich Street in Manhattan. The offices will cover approximately 15 to 20 contiguous floors, 1 podium floor (approximately 35,000 square feet located on the retail level to include a cafeteria, conference center, and an emergency command post), and 1/3 of the subgrade space in the new World Trade Center - Tower 4 Building. In compliance with current PANYNJ sustainability objectives all office buildings will comply with the World Trade Center Sustainable Guidelines, leading to a LEED gold rating.

PANYNJ, Path Christopher Street and 9th Street Station Entrances, Jersey City, NJ - Chief MEP Estimator responsible for cost estimating services to the design team at the conceptual design stage for the preparation of an analysis report for both stations and conceptual design for a new station entrance at the 9th Street Station through the Fontana Center building. The logistically-challenging proposed new 9th Street Station entrance includes an underground mezzanine tunnel over the existing PATH lower-level platform tunnel. The scope involved extensive utility relocation; maintenance and protection of traffic; Fontana Building substructure and structural work; as well as vertical ingress/egress elements.

PANYNJ, World Trade Center Final Streets and Surfaces, New York, NY – Chief MEP Estimator responsible for providing design-development cost estimating services for the construction the Final Streetscape for the entire World Trade Center Site.

PANYNJ Architectural Call in Services for 2007-2010, New York, NY – Chief MEP Estimator responsible for providing cost estimating and scheduling services for the fit-out of Authority offices located at 115 Broadway and 116 Nassau Street in Manhattan.

MTA/Design and Technical Services for Security Capital Program On "Task Order" Basis, New York, NY- Chief MEP Estimator responsible for cost estimating services for engineering design and technical services for the MTA security improvement capital program. Services include risk and vulnerability assessments, development of a security program and security design guidelines, engineered solutions for threat mitigation, cost/benefit analyses of alternative mitigations, conceptual design, design development, final design, contract document preparation including drawings and specifications, preparation of project phasing plan and cost estimates, value engineering, and pre- and post-construction contract award services for a variety of security projects.

PANYNJ, World Trade Center Tower One, New York, NY – Chief MEP Estimator responsible for cost estimating and project cost control services for the 3-million square-foot Tower One at the World Trade Center site. Services include assisting the Project Program Manager with independent estimate preparation for trade bid packages; bid reviews; estimate preparation for bulletins, addenda, and change orders; and tracking and updating budget costs.

PANYNJ Architectural Call-In Services, NY/NJ – Chief MEP Estimator responsible for providing cost estimating services on an on-call basis for this "call-in" contract for PANYNJ. Tasks included the renovation of the Goethals Bridge Administration Building for which existing documents and assessment report were reviewed; assisted in determination of initial SF cost for alternatives; reviewed 50% and 100% drawings and prepared construction cost estimates, including list of unit price items with estimated quantities.

PANYNJ, World Trade Center Towers 1 and 2, New York, NY – Chief Mechanical/Electrical Estimator responsible for change-orders for MEP tenant work and lobby finishes.

PANYNJ, 7 World Trade Center, New York, NY - Chief Mechanical/Electrical Estimator responsible for provision of present-day replacement costs of HVAC, plumbing, and fire protection work for core and shell and tenant fit-out for insurance purposes.

PANYNJ, JFK International Airport, Queens, NY - Chief Mechanical/Electrical Estimator responsible for complete MEP requirements at new arrival gates at Terminals 1 and 4, including all conveyor systems.

NYSOGS, Life Safety Services Term Contract, State of New York (S3014) - Chief MEP Estimator responsible for providing cost estimating services as-needed on this statewide life-safety term contract.

NYC Metropolitan Transportation Authority, Amtrak, and NJ Transit Rail Transit Experience, NY and NJ – Chief Mechanical/Electrical Estimator responsible for cost estimates for the following:

- MTA LIRR, Air Conditioning Upgrades
- MTA LIRR, Ventilation Studies, Track Level
- MTA NYCT, 72nd Street Subway Station - Site Utilities and Interior Upgrades
- MTA Metro-North, Grand Central Terminal Building Modifications - Interior and Track Work
- NJ Transit, Montclair Connection, New Light Rail
- Amtrak, James A. Farley Post Office Building/Penn Station Redevelopment, NYC

NYC School Construction Authority Cost Estimating Services On-Call Contract, New York, NY – Chief MEP Estimator responsible for cost estimates at all stages of design for this on-call cost estimating prime contract, including new school construction projects, renovations, mechanical system upgrades, construction of new, 5-story, 97,000-square-foot intermediate school, feasibility study for 4-story, 49,000 sf. high school, and 4-story, 72,000-sf K-5th grade school. Domestic piping, flood elimination, low-voltage electrical system, boiler and climate-control upgrades, and mini-school roof upgrades, boiler and climate-control upgrades, heating plant and climate-control upgrades, boiler conversion and climate control upgrades, upgrades to roof, windows; interior restoration/replacement, exterior masonry restoration/replacement and related interior work, and exterior façade restoration; exterior masonry restoration/replacement

New York City Housing Authority Term Contract, New York, NY - Chief MEP Estimator responsible for providing cost estimating services for this requirements contract for various buildings throughout the New York City Area. Projects generally include exterior restoration of the existing facades, mechanical and plumbing upgrade, interior kitchens and finishes replacement, and site/landscape/playground development

Public Safety Answering Center II, (PSAC II), Bronx, NY – Chief MEP Estimator responsible for preparing cost estimates for the new, 525,000-sf Public Safety Answering Center being constructed in The Bronx, NY. This project will provide a new call center and improve the City's emergency communication systems, including responses to 911 calls. PSAC II was designed to withstand the effects of a major disaster, both natural and man-made, and to operate without interruption. The building also complies with all applicable laws and ordinances, including the Green Buildings Law (Local Law 86 of 2005) governing sustainable design. The scope of services include cost estimates preparation at all design milestones, value engineering estimates, and cost studies of various design options.

Jonathan Goldstick, PE

Marine – Deputy Program Manager

Specialization

Ocean engineering

Registration/ Certifications

PE: NY [redacted] 1985);
[redacted]
(2009)

Year Joined

1995

Years with other Firms

15

Education

BSc, 1980, Ocean Engineering, Massachusetts Institute of Technology

1976-1978, Ocean Engineering studies, US Coast Guard Academy (No Degree)

Professional Affiliations

American Society of Civil Engineers (ASCE), Member

Society of American Military Engineers (SAME), Member

Society of Naval Architects and Marine Engineers (SNAME), Member

Key Qualifications

Jonathan Goldstick has 30 years of domestic and international experience in waterfront engineering and project management. He has been involved in the design, analysis, construction, rehabilitation, and installation of a wide variety of waterfront structures worldwide. His expertise also includes project management and engineering support for urban waterfronts.

Jonathan is a senior vice president at Halcrow. He has served as principal-in-charge of "on-call" contracts with the Port Authority of New York & New Jersey for the design of waterfront structures and the inspection of waterfront structures, as well as with the New York City Economic Development Corporation and the Hudson River Park Trust for marine engineering services.

Relevant Experience

"On-Call" Waterfront Condition Surveys, Port Authority of New York & New Jersey (PANYNJ), NY and NJ

Principal-in-charge of "on-call" engineering services for condition surveys of waterfront facilities. Jonathan oversaw the regular maintenance work and emergency response inspections for waterfront facilities of various types and constructions. Typically, these projects entailed 100 percent visual inspection of all structural elements and ten percent detailed inspection of select elements. Detailed inspections included cleaning of the structural elements, ultrasonic thickness measurement of steel, sounding of concrete, and evaluation of timber elements with regard to the presence of marine borers. Fees: $1M/year, 1995-2010

"On-Call" Marine Structural Engineering Services, Engineering Division of the PANYNJ, New York, NY

Principal-in-charge and project manager for "on-call" professional engineering design services for waterfront structures in New York Harbor. Services provided include assessments and repairs to existing structures and the design of new structures including bulkheads, and low and high level piers. Projects were generally part of an on-going maintenance program, but there have been numerous emergency response projects often resulting from vessel collision. Fees: $750 K/year, 2000-2010

Regional Private Ferry Study, PANYNJ, New York and New Jersey Harbor, NY and NJ

Project director for the Halcrow-led review and market analysis of existing and potential private ferry services in the greater NY and NJ Harbor. The study examined how ferry service is currently funded, what role ferry service plays in the regional transportation network, the public and private sector roles in ferry transportation, and what funding and financing options are available. The potential for new routes was explored. Study findings helped guide strategies to better integrate ferries into the regional transportation network and enhance the financial stability of the privately-operated ferry services. Fee $475 K, 2009-2010

Publications

"Developing the Mina Raysut Container Terminal", Society of Naval Architects and Marine Engine[redacted]E) Operati[redacted]ent and E[redacted] Symp[redacted]caucus, NJ, May 1997.

"69th Street Pier Composite Pier Design in Brooklyn, NY", American Society of Civil Engineers (ASCE) Ports '98, Long Beach, CA, March 1998.

"Pier 79 West Midtown Ferry Terminal Development, NY, NY", American Society of Civil Engineers (ASCE) Ports '01, Norfolk, VA, May 2001.

"Irvington, NY Brownfield Waterfront Remediation", American Society of Civil Engineers (ASCE) Ports '01, Norfolk, VA, May 2001.

"Fixed Wave Screen Designs", American Society of Civil Engineers (ASCE) Ports '04, Houston, TX, May 2004.

Brooklyn Navy Yard Rehabilitation, Brooklyn Navy Yard Development Corporation, Brooklyn, NY

Project manager for the rehabilitation of Berths 1A, 8, 8A, 8B, 9, 9A, 10, 10A and structures at the small boat basin. The majority of the structures are timber relieving platforms between and at the entrances to the dry docks. The timber had deteriorated from rot and marine borer attack. Various repair scenarios were developed, and detailed designs were prepared for repairs that included the removal of all fill, encasement of piles, and re-filling with lightweight concrete to seal the relieving platform floors. The project began with detailed underwater inspections of the 19 structures for which only limited documentation existed. $21 M, 2009-2012

Hudson River Park Parkwide "On-Call", Hudson River Park Trust, New York, NY

Principal-in-charge of the inspection, engineering, design, and construction administration services for the marine structures throughout the full length of the Hudson River Park, a five-mile park stretching along the Hudson River. Jonathan had final authority for all work performed, including condition surveys to monitor structures that were scheduled for replacement, inspection and rehabilitation design of structures that were to remain in use by the park, inspection and design of demolition plans for structures that were to be removed, and monitoring of pile fields for previously demolished piers. Structures inspected included timber and steel pile supported piers, granite block seawalls, and timber pile fields. Fees: $1.8 M, 2002-2010

Battery Park Pier A, National Parks Service, New York, NY

Project director for ferry transportation issues at Pier A. This included developing layouts for secure docking of passenger ferries using a floating barge option, as well as examining the transition of passengers from the National Parks Service's security screening facility within Pier A onto the ferries to Liberty and Ellis Islands. Halcrow conducted extensive research to determine key stakeholder interactions as well as to obtain ferry sizes and preferred layout options, likely and projected passenger volumes, structural information related to securing the docking barge and the ferry, ferry operations schedules (numbers of ferries, frequency, timing and staggering of ferry arrivals), and other related information to develop a circulation strategy. Fees: $100 K, 2008-2009

"On-Call" Marine Engineering Services, New York City Economic Development Corporation, New York, NY

Principal-in-charge for comprehensive "on-call" marine engineering services for waterfront sites in all five New York City boroughs. Jonathan ensured that all services were performed including above and underwater inspections; condition evaluations; recommendations for maintenance; preparation of designs, drawings, and specifications for repairs; cost estimating; and inspection of construction. Fees: $1 M/year, 1995-2000

Bill Paparis, PE

Marine - Project Manager

Specialization

Structural engineering

Registration/ Certific

PE: NY [redacted]

PADI Sc [redacted]

Certif [redacted] 82)

Year Joined Halcrow

1984

Years with other Firms

8

Education

MS, 1976, Civil Engineering, Columbia University

BS, 1975, Civil Engineering, Columbia University

Professional Affiliations

None

Publications

"Modernizing a Three Decade Old Wharf Structure for the Next Generation of Containerships", Proceedings of Port '2004, Houston, May 2004.

"Joint Effort Rapid Response Minimizes Downtime during Fuel-oil Dock Replacement", Proceedings of Port '2004, Houston, May 2004.

Key Qualifications

Bill Paparis has more than 33 years of experience on many marine related projects involving structural inspection, rehabilitation, upgrades and new construction design, planning, cost estimating, and construction management. His background includes inspection diving, as a certified diver, and on-site construction management for marine and waterfront projects.

Bill has served as manager of the inspection department and is currently manager of Maritime Structures Group.

Relevant Experience

New York Marine Terminal Piers 6, 7, 8 and Bulkhead 9B, Port Authority of New York & New Jersey (PANYNJ), Brooklyn, NY

Project director for inspection and design of repairs to Piers 6, 7, 8 and Bulkhead 9B. The work included repair of concrete extension on timber piles, plating repairs to steel sheet piling, and installation of a new steel sheet pile bulkhead. $2M, 2008-2009

Norfolk Naval Shipyard, Pier 3 and Berth 25, US Navy, Norfolk, VA

Lead structural engineer for design of Pier 3 and Berth 25 for the Atlantic Division of the US Navy. The pier is to accommodate aircraft carriers, submarines, and all other classes of Navy vessels. The work included the evaluation of numerous alternatives, including platform structures and bulkheads. The options of replacement and building outboard of the existing structures were evaluated. $70 M, 2004-2011

Naval Weapons Station Earle Pier Replacement, US Navy, Colts Neck, NJ

Assistant project manager for the replacement of an ammunition loading pier. Work involved steel pipe piles, precast concrete caps, a composite prestressed/cast-in-place concrete deck, fender systems, mooring fittings, dredging, mechanical and electrical works, and buildings. $134 M. 2005-2009

Port Elizabeth Marine Terminal Upgrade, APM Terminals North America, Elizabeth, NJ

Project manager and lead structural engineer responsible for improvement of 6,000 LF of wharves. The work included the strengthening and deepening of the wharves by provision of a sheet pile cut off wall and new crane foundations to accommodate 152,000 LT container vessels, and super-post-Panamax container cranes. $30 M, 2003-2008

Publications

"Expansion of Middle Eastern Port Overcomes Difficult Ground Conditions", Proceedin[redacted] '2004, Houst[redacted]

and Wate[redacted]" Struc[redacted]ine, August 2004.

Author of chapter "*Port Related Marine Structures*", Handbook of Port Engineering, John Wiley & Sons, 2004.

"*Weapons Station Trestle Features Unique Elements*", Proceedings of Ports '95, Tampa, March 1995.

"Port Terminal Design in a Region of Moderate Seismicity: Engineering and Economic Considerations".

Global Container Terminal Extension, Weeks Marine, Bayonne/Jersey City, NJ

Project director and project manager for a 900 ft extension to Global Container Terminal. The major challenge of the project is spanning over an existing storm water sewer outfall which runs at an acute angle to the length of the wharf. In order to accomplish this, a 190-ft-long by ca. 30-ft-deep steel truss was designed to span over the outfall pipe and support the waterside crane rail. Resilient high energy absorption rubber fenders and 150 ton capacity bollards were provided along the face of the wharf. The scope of work also included electrical and mechanical utilities and pavement design. $60 M, 2007-2008

Choctaw Point Container Terminal Development, APM Terminals North America, Mobile, AL

Project director/project manager for planning, design, engineering, and construction supervision for a new container terminal. The work includes final planning and layout of the terminal and gate, considering future expansions. Detailed design was performed for an administration building, maintenance building, longshoremen's shelter, and several smaller buildings and gate. In addition, design of the container yard, including grading, paving, storm drainage, fire water, domestic water, sewage, electrical, and communications, was carried out. The work also included full time resident engineering and construction support services. $50 M, 2006-2008

Passenger Ship Terminal Redevelopment, New York City Economic Development Corporation (NYCEDC), New York, NY

Project director for redevelopment design including pile repairs and structural upgrades to existing Piers 88 and 90, and the addition of new pile supported concrete decks with fendering along each side of the existing piers. Master planning included development of construction alternatives, phasing concepts, and project costs. The terminal was designed to berth a variety of cruise ships including the QM2. $80 M, 2006-2007

Cruise Ship Terminal, NYCEDC, Brooklyn, NY

Project director for design of upgrades to Pier 12 to convert the facility from a general cargo pier to a cruise terminal. $10 M, 2005

Howland Hook Container Terminal, PANYNJ, Staten Island, NY

Project manager for detailed design to expand and upgrade the Howland Hook Container Terminal. The major elements of the project included strengthening of the northernmost 945 ft of the existing wharf to permit future dredging, a 300 ft extension of the wharf to the north and a 175 ft extension to the south. The design relied on the installation of new high capacity steel pipe piles to resist sufficient vertical load so as to make it unnecessary for the existing outboard row of piles to resist any load. Steel sheet piling was to be driven and supported by these new pipe piles, to stabilize the dike below the wharf. $38 M, 2002-2005

Alan Waller, PE

Marine - Project Manager

Specialization

Structural engineering, project management

Registration/ Certifications

[redacted]
(1988); [redacted]
(1988[redacted]

Year Joined Halcrow

1997

Years with other Firms

18

Education

BS, 1979, Civil Engineering, Manhattan College

Professional Affiliations

American Society of Civil Engineers (ASCE), Member

Awards

American Council of Engineering Companies, NY, Project Excellence Awards

Diamond, Intrepid Pier 86

Diamond, Pier 79 Midtown Ferry Terminal

Gold, Hudson River Park Piers & Esplanade

Gold, Staten Island Yankees Ballpark Esplanade

Key Qualifications

Alan Waller is an expert professional engineer with more than 31 years domestic and international experience in the areas of project and construction management, engineering design, and field supervision specializing in waterfront and land based projects. His experience includes new and retrofit construction of piers, bulkheads, petrochemical plants, fossil and nuclear power plants. Specific areas of expertise include the analysis and design of marine structures, value engineering, design project supervision, construction planning, and construction management.

Al is the recipient of numerous awards from the American Council of Engineering Companies, New York including the Diamond award for design of the ferry landing and enclosed pedestrian ramps for the Pier 79 West Midtown Ferry on the Hudson River; Diamond award for the Reconstruction of Pier 86 on the Hudson River which required the replacement of the entire pier where the Sea Air and Space Museum's Aircraft Carrier "Intrepid" is berthed. He has also been awarded the Gold award for the Hudson River Park Piers & Esplanade and the Staten Island Yankees Esplanade projects.

Currently, Al is project manager for the Glen Cove Ferry Terminal Design, project director for the Norfolk Shipyard Berth Rehabilitation, as well as project manager for "on-call" services contract providing waterfront engineering services to the New York City Economic Development Corporation.

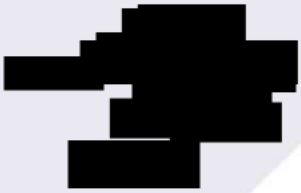
Relevant Experience

Intermodal Ferry Terminal, Hempstead Harbor, City of Glen Cove & State of New York, Long Island, NY

Project manager for the construction of a new terminal, accommodating two ferries and many recreational boats, and is designed to act as a transportation center. Responsibilities included a ferry terminal building, new marine waterfront structures and esplanade, a parking area, associated infrastructure appurtenances, as well as access improvements along local roads. Construction documents were prepared and all construction phase services and waterfront aspects of the terminal will be provided. $16 M, 2012

Liberty State Park Ferry Terminal Fender Rack 2 Reconstruction, NJ Department of the Treasury, NJ

Project manager for the reconstruction of the badly deteriorated timber fender rack No.2 with a new modern pipe pile supported reinforced concrete fender platform with timber panel facing. Project included design bidding, shop drawing review, and construction supervision. $4 M, 2010



Intrepid Pier 86 Reconstruction, Intrepid Sea Air Space Museum, New York, NY

Project director for the home of the Sea Air Space Museum's Aircraft Carrier "Intrepid." Deterioration of the substructure requires replacement of the outer 782 ft of the 1,000-ft-long by 150-ft-wide pier at which the 27 K ton, 872-ft-long Intrepid is berthed. The design meets the latest seismic criteria and includes fenders and mooring hardware for the Intrepid and other transient military vessels. The pier also functions as a park. $35 M, 2009

Naval Weapons Station Earle Pier Reconstruction, US Navy, Colts Neck, NJ

Project manager during final mechanical, electrical, and rail construction of Pier 3 and steam plant replacement on Pier 4. Responsibilities included installation of three new package steam boilers, water treatment system and all new high pressure steam supply system piping and controls, as well as punch out of all pier fire protection, rail tracks and building structures on pier 3. $134 M, 2009

Queens West Waterfront Development Stage 2, Queens West Development Corporation, Queens, NY

Project manager for preparation of the engineering design for replacement of approximately 1,900 lin ft of the East River bulkhead. The previous shoreline consisted of various structures including relieving platforms, timber cribs, and riprap slopes. The new waterfront includes a wetlands area, high level platforms, and new tied back steel sheeting outboard of the timber crib structures. Responsibilities included performing condition surveys, bathymetry, permitting, and detail design. $12 M, 2008

Pier 4 Reconstruction, United States Coast Guard, Cape May, NJ

Project director for this design-build project which included the partial demolition and reconstruction of Pier 4, a severely deteriorated timber pile-supported pier at the United States Coast Guard Training Center. The reconstructed pier is a steel pipe pile-supported pier with precast concrete caps, prestressed precast concrete deck planks, and a reinforced concrete deck. Additional features included precast concrete utility trenches and provisions for mechanical and electrical services for berthing vessels. $4.5 M, 2008

Pier 79 West Midtown Ferry Hudson River, New York City Economic Development Corporation (NYCEDC), New York, NY

Project manager for a floating ferry landing that accommodates seven ferries of various dimensions and configurations (side loading and end loading). The terminal building is supported on a rehabilitated pier. Work included inspection and design of repairs to existing waterfront structures and the design of a 314 ft x 30 ft floating ferry landing and enclosed pedestrian ramps linking the building with the landing. $23 M, 2004

Sean O'Neil, PhD

Coastal Engineer

Specialization

Coastal engineering. numerical hydrodynamic, wave and sediment transport modeling and met-ocean [redacted] uisition

[redacted]

Year Joined Halcrow

2005

Years with other Firms

11

Education

PhD, 2002, Civil Engineering, Ohio State University

MS, 1993, Coastal Engineering, Ohio State University

BS, 1987, Physics, University of Minnesota

Professional Affiliations

American Society of Civil Engineers (ASCE), Member

American Geophysical Union (AGU), Member

American Meteorological Society (AMS), Member

Publications

O'Neil, S., Goshow, C. and Hosseini, S. 2008. "*Waterfront Development in the Gulf Region: A Review and Examination of Flushing and its Relevance to Water Quality*", presented at COPEDIC VII, 24-28 February 2008.

Key Qualifications

Dr. Sean O'Neil has more than 15 years experience managing technical aspects of the Halcrow New York Coastal Group and leading the business development efforts as well. Formerly, he was the technical lead for the data acquisition and numerical modeling group in the Middle East offices, including quality control and quality assurance management. He is knowledgeable in water resources and environmental engineering experience using one-, two- and three-dimensional numerical models in lakes, rivers, estuaries and the coastal ocean.

Sean is familiar with the theory, development and application of a wide variety of numerical modeling tools including commercial packages such as the DHI and DELFT suites of tools, as well as state-of-the-science freeware and shareware codes. Applications include examining the impacts of waste heat and brine discharges, freshwater withdrawal, basin flushing time and contaminated sediment fate and transport in support of coastal and waterfront development projects and environmental impact assessments.

In addition, he is also responsible for design and participation of infield physical data acquisition campaigns and data analysis in support of numerical model calibration and validation.

Relevant Experience

LaGuardia Airport Runway Safety Improvements, Port Authority of New York & New Jersey (PANYNJ), New York, NY

Modeling manager who developed a numerical hydrodynamic and sediment transport model in support of an assessment of environmental aspects of lengthening the runways at LaGuardia Airport. The model covers the NY Harbor and utilized public and private data sources The model investigated varying deck pile diameters and spatial densities. Fees: $250 K, 2010

Marine Container Terminal, Israel Ports Development and Asset Company, Ltd, Haifa, Israel

Project manager responsible for several marine elements related to sediment dredging and reclamation, environmental impact assessment, numerical wave modeling (extreme waves for design, wave agitation), major offshore breakwater design, revetment design, quaywall design, berth availability, shoreline protection design. $13 M, 2009-2011

Qatar-Bahrain Causeway, Qatar-Bahrain Causeway Foundation, KBR, Doha, Qatar

Marine engineering technical leader for the management consortium. Review of the contractor's design and environmental impact assessment related numerical modeling. Wave modeling, hydrodynamic circulation modeling, sediment transport modeling related to dredging impacts. Dredged spoil placement and beneficial uses. Fees: $14 M, 2009-2010

Publications (cont'd)

O'Neil, S., Yang, Z. and Lewis, T. 2008. *"Marine Data Collection and Modeling Study near Abu Dhabi."* Presented [redacted] DIC VII, 24[redacted]08. Blumberg[redacted]Neil and B. N[redacted]*ing the Ph[redacted]ts of a Desalination Facility."* J. Mar. Environ. Eng.,7,1, 2003.

Al-Ruzouq, R., R. Ma, T. Ali, K-C. Cheng, C-Y. Kuo, S. O'Neil, X. Xu, K. Di, R. Li, K. W. Bedford, C. K. Shum, J. R. Ramirez, and A. Zhang. "*Demonstration: Digitalization of Coastal Management and Decision Making. National Conference for Digital Government Research* dg.o 2002, Los Angeles, CA, pp. 391-394, May 20-22, 2002

Wai, O. W.-H., Y. S. Xiong, S. O'Neil and K. W. Bedford, "*Parameter estimation for suspended sediment transport processes under random waves."* The Science of the Total Environment, 226, 49-59, 2001.

S. Zhang, D. J. S. Welsh, K. W. Bedford, P. Sadayappan and S. O'Neil, *"Coupling of Circulation, Wave and Sediment Models,"* Technical Report CEWES MSRC/PET TR, 1998.

Numerical modeling, DP World, Dubai, UAE

Principal modeler who developed and extended a three-dimensional regional flow, temperature and salinity hydrodynamic circulation and transport model in support of the Jebel Ali New Container Terminal mega-port project and the Shell LNG terminal. The modeling examined far-field and near-field impacts from power and desalination plant expansion, dredging and reclamation impacts and development footprint impacts. The model was calibrated to an extensive set of field measurements taken locally near the intake and outfall channels. The model currents at key locations were used to inform the design of the offshore structure toe protection and ultimately used to provide input to the mooring analysis for the LNG berth. Construction value $1.6 B, 2009

Numerical Modeling, KBR and ALDAR, Abu Dhabi, UAE

Principal coastal modeler who extended a two-dimensional hydrodynamic circulation model in the waters off the east for the main island of Abu Dhabi. The domain was enlarged to include additional extensive tidal channels, flats, and mangroves near Yas Island, and other islands along the Shahama-Saadiyat Freeway and along the island to support waterfront developments including South Marina and Formula 1 racetrack marina. The modeling included flushing and water quality studies to support an EIA, and the development of an extensive marina as well as current studies to support the placement of bridge abutments and other structures along the waterfront. Fees: $3.4 M, 2008

Brooklyn Bridge Park Numerical Modeling Study, Brooklyn Bridge Park Development Corporation, New York, NY

Project manager and engineer who managed and constructed a three dimensional numerical modeling study in support of an environmental impact assessment (EIA) for the proposed Brooklyn Bridge Park. The study included modeling the hydrodynamics and sedimentation in the East River and the Brooklyn Piers, and also included a marina flushing analysis. Fees: $80 K, 2005

Pre-FEED LNG Terminal Site Study for Proposed LNG Terminal Siting, Hong Kong, China

Project engineer responsible for a pre-FEED LNG terminal site study. A spectral and near shore wave modeling study was conducted to bring offshore waves into possible LNG terminal site locations in Hong Kong. Fees: $1.4 M, 2005

Douglas Friend, PE

Dive Team Leader and Engineer-Diver

Specialization

Engineer-diver

Registration/ Certifications

PE: MA [redacted]

Santa Barbar[redacted] College, Co[redacted] Diving [redacted] (2000)

Professional Association of Diving Instructors, Open Water Diver (1998)

Scuba Schools International, Stress and Rescue Diver (2004)

Eastern Mountain Sports, Specialized Climbing and Rappelling Training (1999)

Year Joined Halcrow

1997

Years with other Firms

1

Education

MS, 2005, Civil Engineering, Columbia University

BS, 1994, Civil Engineering, Manhattan College

Professional Affiliations

American Society of Civil Engineers (ASCE), Member

Publications

None

Key Qualifications

Douglas Friend has more than 13 years of experience in inspection, evaluation, analysis and construction supervision of marine and waterfront facilities. His project experience includes piers, offshore platforms, bulkheads, wharves, bridges, dams, and marine terminals. Doug's specific areas of competence are condition structural evaluation, construction supervision and inspection, rehabilitation design, and analysis of marine structures.

Doug served as resident engineer on major marine construction projects and is currently serving as project manager for various underwater inspection projects and for the US Army Corps of Engineers "on-call" contract.

Relevant Experience

Waterfront Structures Evaluation, New York City Office of Management and Budget (NYCOMB) Asset Management System, New York, NY

Project manager/team leader for the evaluation of waterfront structures throughout the five boroughs of the New York City. Halcrow has performed work under 13 project task orders. The projects have involved the evaluation of more than 300 assets along the shorelines of Manhattan, Brooklyn, Queens, Staten Island and the Bronx. Work involved rapid above water inspection, capture of date in NYCOMB database, and approval of developed cost reports. The work was performed for Gannett Fleming on behalf of the NYCOMB. Fees: $150 K/year, 2006-2010

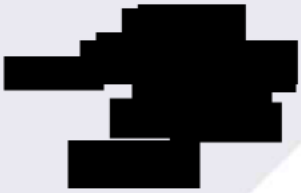
Pier & Bulkhead Inspection at South Brooklyn Marine Terminal, New York City Economic Development Corporation, Brooklyn, NY

Project engineer for the underwater and above water inspection of the 39th Street Pier and bulkhead. The inspection included approximately 3100 lin ft of steel sheet pile bulkhead, 324 lin ft of timber pile supported relieving platform, 215 lin ft of concrete and granite block seawall, and approximately 820,000 SF of concrete floor and apron slabs. A comprehensive report on the above water and underwater inspections was provided. This included observed conditions, structural condition assessments, recommendations for priority and maintenance repair programs, and cost estimates for repairs for the structures. Fees: $65 K, 2006

Piers 35 & 36 Inspection, New York City Economic Development Corporation, Manhattan, NY

Project engineer for the underwater and above water inspection of Piers 35 and 36 on the East River. The inspection included approximately 1,800 steel H-Piles, 1400 lin ft of granite block seawall and timber platforms, and approximately 220,000 SF of concrete deck. A comprehensive report on the above water and underwater inspections was provided which included observed conditions, structural condition assessments, recommendations

for priority and maintenance repair programs, and cost estimates for repairs for both structures. Fees: $100 K, 2005



Norfolk Naval Shipyard Pier 13 Inspection, US Navy, Portsmouth, VA

Project engineer for the underwater and above water inspection of Pier 13, at St Helena Annex. The inspection involved a general condition survey of a 57,300 SF timber pile supported pier. Underwater photographs were taken and a comprehensive report was provided. The report included observed conditions, structural condition assessments, repair recommendations, and cost estimates for repairs for the pier. The work was performed as part of an "on-call" marine engineering services contract. Fees: $130 K, 2005

Inspection of US Coast Guard ANT Saugerties Facility, Saugerties, NY

Project manager for the underwater and above water inspection of the USCG ANT Saugerties facility. The project included inspection of approximately 200 lin ft of rip-rap revetment, 140 lin ft of timber and concrete crib retaining structure, 200 lin ft of timber pile retaining wall, and two steel pipe pile supported concrete wharves. Fees: $40 K, 2005

Waterfront Rehabilitation, Battery Waterfront, New York, NY

Project manager for the evaluation and conceptual design for waterfront improvements at the USCG Battery Building. The project involved the development of conceptual designs and cost estimates for seven alternatives for expansion of operations at the facility. Proposed structures included a new steel sheet pile bulkhead, a steel and timber wave screen, new aluminum and concrete floating docks to service USCG Utility Boats, and berthing facilities for USCG Patrol Boats and Medium Endurance Cutters. Additionally, a review of potential permitting issues and a preliminary wave climate study were performed. Fees: $85 K, 2005

Marine Engineering "On-Call" Services, US Coast Guard-Civil Engineering Unit (USCG CEU), Providence, RI

Project manager/lead engineer-diver for the provision of "on-call" marine engineering services including underwater inspections, condition assessments, and design services for the First US Coast Guard District. The facilities investigated under this contract vary by type and construction and have included timber, steel, and concrete structures. The contract has included the performance of design and conceptual design for waterfront structures and facilities. The work was performed under a contract for the US Coast Guard Civil Engineering Unit, Providence, RI. Fees: $100 K, 2004

Brett Sposito, PE
Engineer-Diver

Specialization
Project management, maritime development design and planning

Registration/ Certifications
PE: NY [redacted]1); OR [redacted]2010)

Association of Diving Contractors Commercial Diver Certification, Entry Level Tender/Diver

National Oceanic and Atmospheric Administration (NOAA) Divemaster (2004), Contaminated Water Diving Seminar

Professional Scuba Inspectors, Visual High Pressure Cylinder Inspector (2004)

Professional Association of Diving Instructors, Advanced Open Water SCUBA Certification (1999)

High Pressure-related HAZMAT Training

CPR/First Aid and DAN Oxygen First Aid Training

Federal Highway Administration (FHWA) National Highway Institute Training:

Bridge Inspection Refresher Training (2009)

Safety Inspection of In-Service Bridges (2003)

Key Qualifications

Brett Sposito has more than 13 years experience as an engineer-diver performing approximately 920 underwater structure inspections over 650 days for Halcrow and the Oregon Department of Transportation (ODOT). He has three years of experience as a fathometer surveyor performing 60 fathometer surveys of bridges over major waterways. In addition, he has one year of experience as a bridge designer performing design and providing construction support, concurrent with underwater bridge inspection experience. His projects have included bridges, piers, wharves, bulkheads, dams, culverts, tidegates, and fender/pier protection systems. Specific areas of expertise include underwater inspection, structural condition evaluation of bridges, non-destructive and destructive underwater testing, underwater repair, underwater still photography, technical report preparation, and fathometer surveying.

Relevant Experience

Waterfront Inspection Services "On-Call" Contract, Port Authority of New York & New Jersey, New York, NY

Project manager overseeing a call-in contract to provide waterfront inspection services. Tasks under this agreement consist of above and underwater cyclical condition surveys of the Authority's waterfront structures in the five boroughs of New York City and New Jersey as summarized in formal condition reports. Recent condition surveys performed in 2009/2010 include Port Newark Berths 3-25 in Elizabeth, NJ; Port Elizabeth in Elizabeth, NJ; the Auto Marine Terminal in Bayonne, NJ; and selected bridge and culvert structures at the Newark Liberty International Airport in Newark, NJ. Fees: $1 M/year, 2009-2011

Port Newark Marine Terminal Inspection, Port Newark, Newark, NJ

Team leader and project engineer-diver for an underwater and above water condition survey of the odd-numbered Berths 3 through 25, including the bulkheads at Berth 19 and east of Berth 25. The purpose of the inspection was to determine the overall condition of the structures and to identify structural and non-structural deficiencies. The project included inspection of timber, concrete, and steel pile supported wharves, and timber and steel sheet pile bulkheads. Fees: ca. $200 K, 2009

Pier 54 Inspection, Hudson River Park Trust, Manhattan, NY

Team leader and project engineer-diver for a partial underwater and a full above water inspection of Pier 54. The purpose of the inspection was to identify structural and non-structural deficiencies and provide recommendations for repair and rehabilitation actions required to maintain the condition of the pier for its current usage. Pier 54 is 770-ft-long by 100-ft-wide and consists of timber piles and bracing, timber pile caps, concrete pedestals, underside of the concrete deck and asphalt deck surface. Fees: $23 K, 2010

Year Joined Halcrow
2007

Years with other Firms
10

Education
BS, Civil Engineering, University of Washington

Professional Affiliations
Chi Epsilon, National Civil Engineering Honor Society (1991)

Port Newark Marine Terminal Inspection, Port Newark, Newark, NJ

Team leader and project engineer-diver for an underwater and above water condition survey of the odd-numbered Berths 3 through 25, including the bulkheads at Berth 19 and east of Berth 25. The purpose of the inspection was to determine the overall condition of the structures and to identify structural and non-structural deficiencies. The project included inspection of timber, concrete, and steel pile supported wharves, and timber and steel sheet pile bulkheads. Fees: ca. $200 K, 2009

74th Street Station Intake Tunnel Inspection, Consolidated Edison, Manhattan, NY

Team leader and project engineer-diver for an underwater condition survey of the intake tunnel. The purpose of the inspection was to provide a condition assessment, to identify and quantify existing defects, to analyze and evaluate the defects, and to recommend repair actions with associated cost estimates. The project included inspection of 100 ft of reinforced concrete tunnel. Fees: $65 K, 2010

Battery Maritime Building to the South Side of Pier 16 Inspection, New York City Economic Development Corporation, Manhattan, NY

Team leader and project engineer-diver for an underwater and above water investigation of the gravity wall bulkhead from the Battery Maritime Building to the south side of Pier 16. The purpose of the routine level investigation was to assess the general overall condition of the structure, estimate the remaining useful life, and determine recommended actions with associated costs. The secondary purpose of this inspection was to identify potential sources of fill loss to address historical problems with settlement in the area. Ground Penetrating Radar (GPR) was also employed upland to identify voided areas due to fill migration. The project included evaluation of over 2,500 lin ft of gravity wall bulkhead, a timber pile supported low level relieving platform, manholes, and concrete and asphalt surface up to 35 ft behind the offshore face. Fees: ca. $100 K, 2009

Pier 60 Inspection, Hudson River Park Trust, Manhattan, NY

Team leader and project engineer-diver for an underwater water inspection of Pier 60. The purpose of the repair inspection was to determine if there were items of non-conformance with repair design documents. This project included the inspection of 85 posted timber piles. Fees: ca. $10 K, 2008

Domenica Stasiak, EIT

Structural Engineer

Specialization
Structures, marine structures

Registration/ Certifications
[redacted]

Year Joined Halcrow
2007

Years with other Firms
6

Education
BS, 2002, Civil Engineering, Villanova University, PA

Professional Affiliations
None

Publications
None

Key Qualifications

Domenica Stasiak has three years experience on marine related projects involving structural design, structural inspection and rehabilitation analysis, resident engineering, and construction inspection/management.

Prior to joining Halcrow, Domenica has six years experience in the structural design of buildings.

Relevant Experience

East River Esplanade, New York City Economic Development Corporation, Manhattan, NY

Resident engineer for the construction phase of the esplanade approximately 1,000 ft in length. The esplanade is constructed of pipe piles installation, rock drilling for sock socket production, installation of precast pile caps and planks, and concrete topping. The esplanade will tie in to the existing concrete walkway and create a bike way lane. The construction includes installation of steel pipe piles, drilled rock sockets, pile caps and planks. The project consists of the redevelopment of the waterfront from the Staten Island Ferry to the Brooklyn Bridge. Fees: $1.5 M, 2009-2010

South Bronx Greenway, Hunts Point Landing Shoreline, Bronx, NY

Project manager for the design and production of contract documents including drawings and specifications, and construction assistance of this shoreline package. The package consisted of a fishing pier, kayak launch and tie up station, along with a retaining wall and wave dissipating rip rap section for a recreational park. 2008-2010

Berth Upgrade, Valero Refining Company, Paulsboro, NJ

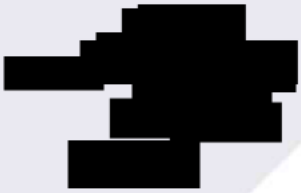
Temporary resident engineer. Phased reconstruction of berthing and petroleum handling facilities at Valero Refining Company. Fast track project to demolish and rebuild two berths for ocean-going vessels in sequence. $35M, 2007-2009

Port Newark Fender Study, Port Newark, Newark, NJ

Structural engineer for analysis of the existing port authority fender system and suggestions for upgrade. 2008

Norfolk Naval Ship Yard Berths 3 and 4 Rehabilitation, US Navy, Portsmouth, VA

Structural engineer who performed analysis and design of bulkhead, aided in the construction phase with suggestions and re-analysis for unexpected on-site situations, and reviewed submittals and RFIs. This project was a design-build contract, requiring a cooperative design effort with the builder to ensure cost efficient design and construction techniques. Berths 3 and 4 rehabilitation represented over 800 lin ft of waterfront facilities and included all civil, structural, mechanical and electrical disciplines. $24 M, 2007-2008



Freeport Container Port Expansion Phase V (Automated Yard), Freeport Container Port Ltd (part of Hutchison Port Holdings Group), Bahamas

Structural engineer for the expansion comprising 500m of additional quay deck, yard equipped with automatic stacking cranes, and electrical services for six additional super-post-Panamax cranes. Tasks included detailed design project delivery of civil works, project scheduling and interface with other disciplines. $250 M, 2007-2008

Container Terminal Expansion/Upgrade, APM Terminals North America, Elizabeth, NJ

Temporary resident engineer for Phase 5 container terminal expansion at Port Elizabeth. The project involved upgrade of 1200 ft of wharf to accommodate rail mounted container cranes. Scope included site demolition, installation of new waterside and landside piling and crane beams and all associated utilities and stowage/tie-down equipment, installation of new cut-off wall, fendering, mooring hardware and paving. Domenica provided temporary on-site engineering supervision during complete wharf container terminal reconstruction project. She was responsible for all aspects of contract administration progress reporting, quality control and client/contractor liaison. $14M, 2007

FIRM EXPERIENCE

DESIGN OF EMERGENCY REPAIRS AND INTERIM DECK REPLACEMENT, GOWANUS EXPRESSWAY, BROOKLYN, NY

HAKS provided design engineering services for rehabilitating the Gowanus Expressway, an elevated structure that carries heavy traffic in each direction in four general use lanes including one high occupancy vehicle (HOV) lane. This contract addressed emergency structural repairs to a 1.5-mile section of the main line Expressway, widening a connector ramp to the Brooklyn-Queens Expressway (BQE), drainage improvements, lighting, signage upgrades and safety improvements. Our responsibilities included the design of new sign structures to accommodate ramp widening, and lighting design for the mainline Gowanus (above and below the viaduct) and BQE Ramp.
Highlights of the designs that we carried out include:

Lighting Design

- New lighting for upper and lower roadways including high-pressure sodium luminaries with pole mounts, new electrical distribution system and design details for new feeders, underdeck conduit supports, junction boxes and connections to foundations.
- Temporary lighting system for proposed work zones during construction including mounting details and lighting levels.
- Evaluation and modification design of lighting controllers including voltage drop calculations.
- Luminaire design for proper lux values at roadways and underdeck areas in accordance with photometric requirements of NYCDOT Division of Street Lighting using Visual Professional software.

Sign Structure Design

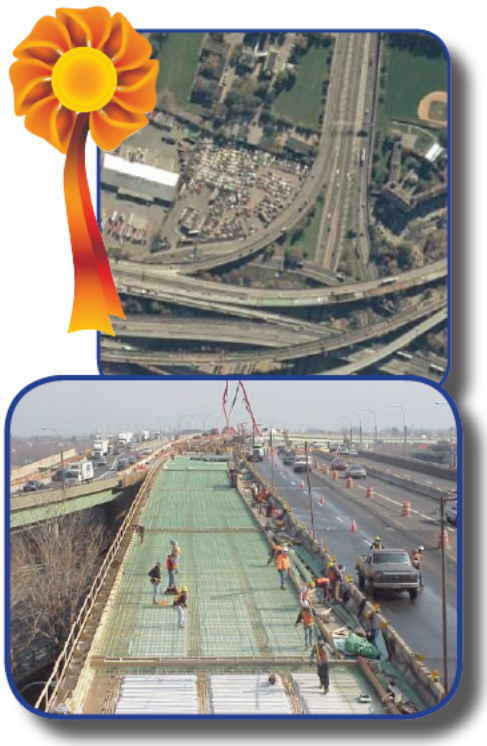
- Span, cantilever and combination-type sign structures including new at-grade foundations.
- New double-girder structural support system for bridge-mounted sign structures.
- In-depth field inspection of existing sign structures including hands-on investigation of all structural members and structural load ratings.
- Preparation of detailed plans for the demolition and removal of the existing sign structures.
- Development of sign panel designs and sign data sheets in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

Designs included development of all contract drawings, special specifications and construction cost estimates associated with HAKS' design responsibilities. Significant coordination with NYSDOT, NYCDOT and consultant team members was required.

FIRM NAME: New York State DOT
START & END DATE: 2006 - 2009
TOTAL COST: $152 Million
CLIENT CONTACT:
Michael Eugene
PHON [redacted]
EMAIL [redacted]

FIRM EXPERIENCE

CONSTRUCTION COORDINATION AND MANAGEMENT SERVICES, CROSS BRONX EXPWY/BRUCKNER EXPWY INTERCHANGE REHABILITATION, NY



HAKS provided these services for the interchange rehabilitation under a contract with the New York State Department of Transportation. The $204 million project involved extensive bridge and viaduct rehabilitation work and highway improvements. It was completed in May 2002, one year ahead of schedule, due in great part to the partnering atmosphere created among the construction team members, and the incentive/disincentive provisions in the contract. The project received numerous awards as a result, including the CMAA 2003 Project of the Year (Over $60 Million) Award; NYACE 2003 Platinum Award for Engineering Excellence; New York Construction News 2001 Award of Merit: Bridge Project; ARTBA Pride Awards Honorable Mention; NYSDOT Deputy Chief Engineer's Citation; and The ASCE Construction Achievement Project of the Year Award.

The interchange is a major link between the Cross Bronx Expressway, the Bruckner Expressway, the Bronx-Whitestone Bridge, the Throgs Neck Bridge, and the New England Thruway. It runs from Havermayer Avenue to Huntington Avenue on the Bruckner Expressway and from Castle Hill Avenue to Lafayette Avenue on the Cross Bronx Expressway. Serving as a gateway to the northern part of Queens, Bronx County and the State of Connecticut, it is considered one of the most complex interchanges in New York State and as such, required construction to be undertaken in four stages.

The scope of work included reconstruction of major portions of the interchange viaduct including 14 ramps and bridge structures. In effect, several projects were combined into one, thereby substantially reducing the time and impact of the work on motorists and the surrounding communities. The project also called for roadway improvements including paving, resurfacing and installation of an Intelligent Transportation System (ITS) along the Cross Bronx, Throgs Neck, Bruckner and Hutchinson River Expressways. The ITS provides a comprehensive system for improving vehicular flow in the corridor through traffic monitoring and information gathering.

The ITS scope of work included:

- Installation of new communication conduit and pull boxes
- Installation of seven CCTV cameras, three Highway Advisory Radio transmitters, one permanent variable message sign and temporary advisory signs along highways approaching the interchange

One of the project's biggest challenges was the construction of a temporary crossover needed to maintain two lanes of traffic from the westbound Cross Bronx Expressway to the southbound Bruckner Expressway. This temporary steel structure, approximately 50 feet above ground and nearly 1,000 feet long, bridged the roadways for about six months. Paul Cavota, P.E. was the Construction Manager on this project.

FIRM NAME: New York State DOT
START & END DATE: 1999 - 2002
TOTAL COST: $204 million
CLIENT CONTACT:
John Elias, P.E.
PHONE [redacted]
EMAIL [redacted]

FIRM EXPERIENCE

RECONSTRUCTION OF BQE BETWEEN BROADWAY AND 25TH AVENUE, QUEENS, NY

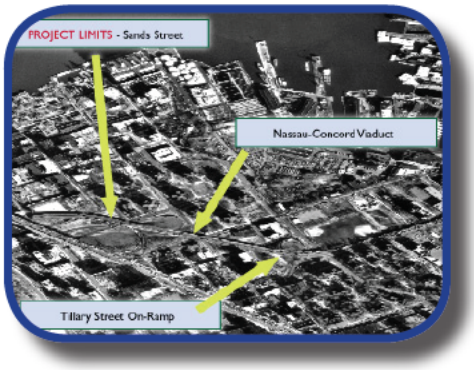
On March 14, 2000, the New York State Department of Transportation awarded contract D258272 to Slattery Skanska, Inc. to reconstruct the Brooklyn-Queens Expressway between Broadway and 25th Avenue in Queens. The original contract amount, $215,800,000, indicated that this was the largest contract ever awarded by NYSDOT. It was scheduled for completion in the spring of 2004, but major items of work later added to the contract brought the contract total to about $254,000,000 and the scheduled contract completion to the fall of 2004.

The project called for total replacement of the existing roadway pavement, drainage system and highway lighting system. Both the horizontal and vertical alignments were changed to increase sight distance. Wider shoulders were added at most locations to accommodate vehicle breakdowns. Bridgework included replacement of four CSX Freight Rail Bridges that run adjacent to or over the BQE, 12 highway bridges and one city street bridge that spans the BQE.

FIRM NAME: New York State DOT
START & END DATE: 2000 - 20004
TOTAL COST: $254 Million
CLIENT CONTACT:
Craig Ruyle, P.E.
PHONE: [redacted]
EMAI [redacted]

FIRM EXPERIENCE

CONSTRUCTION INSPECTION SERVICES, REHABILITATION OF BQE-PARK AVENUE AND NASSAU-CONCORD VIADUCTS, BROOKLYN, NY



HAKS is inspecting the reconstruction of this $146 million project for the New York State Department of Transportation on the Brooklyn-Queens Expressway (BQE) from Flushing Avenue to Sands Street, which includes rehabilitating the Park Avenue and Nassau-Concord Viaducts and six connecting ramps.

The viaducts are integral parts of the BQE, which is a major travel corridor of New York City. But age, weather, heavier trucking and higher traffic volumes have all played their part in steadily deteriorating the structures. Rehabilitation will thus halt the decline, rebuild the structures and improve them to current roadway and bridge safety standards. Completion of the project, set for December, 2009, will amount to full reconstruction of this section of the BQE, and assure continued service of the roadway and viaducts for the community, motorists, commercial traffic and the City in general for years to come.

Viaduct deck replacement is being done in stages, five stages for Park Avenue and six for Nassau-Concord. This allows the number of BQE travel lanes to be maintained throughout construction. However, nighttime lane closures are required on the mainline and local streets along with ramp closures, which included full closure of the Tillary Street off-ramp for about a year. Pedestrian access is maintained at all times. Because of NYSDOT's commitment to minimize impacts on the community, various measures are taken to deal with the closures, protect safety and reduce environmental effects.

Construction work being performed includes:

- Replace existing deck with new and improved concrete bridge deck;
- Replace structural steel members and bearings;
- Install new joints;
- Install a new Intelligent Transportation System (ITS) to inform motorist of real time traffic conditions;
- Install new lighting systems including under deck lighting;
- Install new drainage systems;
- Install new sign structures and panels;
- Paint structural steel inside of sealed containments for environmental protection; Landscaping.

The project is the first in NYSDOT Region 11 to wirelessly download plans, specifications and manuals, monitor information and manage costs and documents including inspector reports, etc. Communication between field and office is in real time, with all information accessed from portable tablet computers.

FIRM NAME: New York State DOT
START & END DATE: 2005-2009
TOTAL COST: $146 Million
CLIENT CONTACT:
Sokwon Im, P.E.
PHONE: [redacted]
EMAIL: [redacted]

FIRM EXPERIENCE

CONSTRUCTION INSPECTION SERVICES
EMERGENCY REPAIR AND INTERIM DECK REPLACEMENT
GOWANUS EXPRESSWAY, BROOKLYN, NY

The project has been recognized with industry awards that include 2010 Project of the Year, American Society of Civil Engineers, Met Section; 2010 ACEC Gold Award for Engineering Excellence; and 2009 Concrete Industry Board Award of Merit in the Roger H. Corbetta Awards Program.

HAKS was the lead joint venture partner providing construction inspection services for the $152 million emergency repair and interim deck replacement project on the Gowanus Expressway in Brooklyn, NY. Work extended from the Verrazano-Narrows Bridge to the Brooklyn Battery Tunnel, and on the Prospect Expressway from Church Avenue to the Gowanus/Prospect Expressway Interchange.

Major reconstruction items were deck replacement, superstructure repairs and emergency repairs to the Gowanus Viaduct; widening/replacement of the BQE Connector; and pavement rehabilitation on the Prospect Expressway/Lower Gowanus. Initial work focused on priority deck and steel repairs to ready the structure for the staged reconstruction to follow, and to assure the structural integrity of the viaduct as work progressed.

The work also involved seismic improvements, fatigue upgrades and bearing replacements. Construction also took place on the approaches and ramps, new lighting was installed, and the steel structures were painted, with lead abatement procedures put in place during steel cleaning. Construction operations on the BQE Connector included excavation, pile foundations, new footings and columns, and a new superstructure to support the widened ramps.

HAKS and its joint venture partner evaluated traffic management strategies such as construction phasing, lane closure restrictions, night and weekend work. Critical Path Method scheduling was employed, which was essential to assuring on-time project delivery. In addition, we were involved extensively with local communities and their representatives, and coordinated regularly with many New York City agencies.

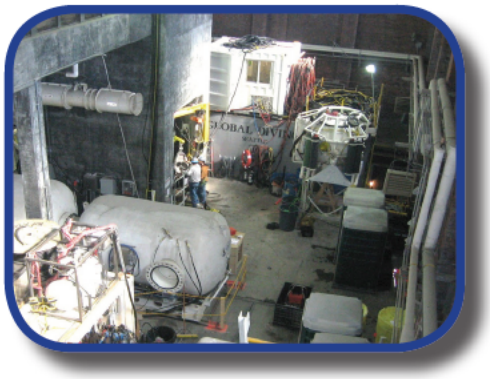
The Joint Venture Team addressed a number of critical issues to assure construction quality, minimal community impact, timely completion and project cost control. These issues included scheduling, emergency repairs, maintenance and protection of traffic, safety, modifications and repair of viaduct structures, and community relations.

This project was the second in NYSDOT Region 11 to employ a wireless system to download plans and specifications, manage costs and documents and monitor information. Communication between the field and office was in real time. All information, including inspector reports, forms, specifications, manuals, etc., was accessed from portable tablet computers.

FIRM NAME: New York State DOT
START & END DATE: 2006 - 2009
TOTAL COST: $152 Million
CLIENT CONTACT:
Albert Wong., P.E.
PHONE [redacted]
EMAI [redacted]

FIRM EXPERIENCE

CONSTRUCTION MANAGEMENT SERVICES, RONDOUT WEST BRANCH TUNNELS AND SHAFTS, WAPPINGER, NY



HAKS is providing inspection services as a subconsultant to the joint venture managing this $239 million tunnel and shaft rehabilitation project for the New York City Department of Environmental Protection.

The project is advancing under NYCDEP Contract DEL-185 and involves preliminary work required to repair leaks at two distinct locations in the Rondout-West Branch (RWB) Tunnel; repairs will be made at some time in the future. RWB Tunnel is a major part of the Delaware Water System, one of three systems that supply water to New York City. The others are the Croton and Catskill Water Systems, and together the three supply water to more than 8 million people in the City and to communities in Orange, Putnam, Ulster and Westchester Counties. The Delaware Water System, with its four separate reservoirs, supplies some 50% of the City's annual water demand. Its water flows through the 45-mile-long RWB Tunnel, a concrete lined, 13.5-foot-diameter, pressurized conduit in rock 400 to 1,500 feet underground that connects the Rondout and West Branch Reservoirs.

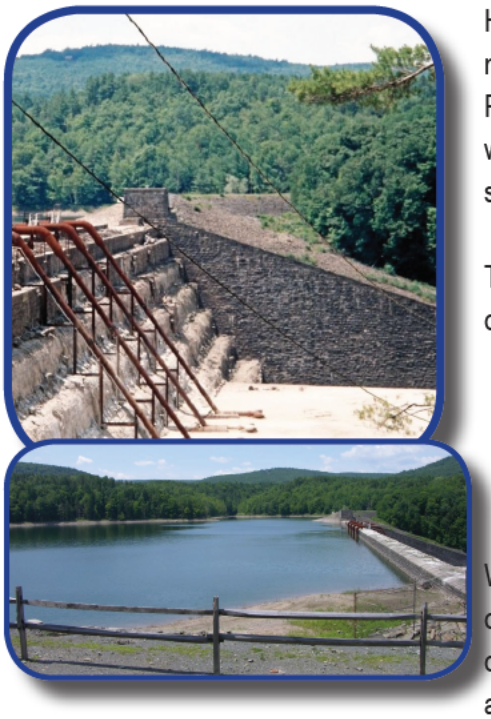
RWB Tunnel was constructed between 1937 and 1944 with a series of vertical shafts along the route. One of these, Shaft No. 6, is a dewatering shaft and contains the original pumping equipment. The shaft was last dewatered in 1957 for maintenance work and flooded again when the work ended 2 years later. The current contract provides for installing an updated pump station in the shaft to dewater the Delaware Aqueduct so that the tunnel repairs may be made, and for improved access to other shafts that are still maintained for ventilation and access, also to facilitate the future repair work.

Initial and follow up diving operations were completed in Shaft 6 to access the bottom of the shaft, inspect the existing mechanical and structural components and make measurements for new equipment and structural components to be installed. Divers utilized a diving bell and a saturation system to work under about 700 feet of water, the equivalent of 20 atmospheres. Divers worked in the shaft and lived in a special habitat at the surface that maintained these pressures. They carried helmet cameras that transmitted video images to the surface where inspectors monitored their work, captured and recorded the transmitted data and communicated with the divers.

FIRM NAME: New York State DEP
START & END DATE:
2010 - Ongoing
TOTAL COST: $239 Million
CLIENT CONTACT:
Pat Sheehan, P.E.
PHON [redacted]
EMAI [redacted]

FIRM EXPERIENCE

CONSTRUCTION MANAGEMENT SERVICES FOR GILBOA DAM RECONSTRUCTION, SCHOHARIE COUNTY, NY



HAKS is managing partner of the joint venture team providing construction management services for reconstructing Gilboa Dam in Schoharie County, NY. Project goals are to rehabilitate and permanently stabilize the facility, which fall within NYCDEP's commitment to maintain and improve the New York City water supply.

The $600 million project is being done under three component contracts that cover:

- Site preparation,
- General reconstruction,
- Intake improvements, to be done simultaneously with general reconstruction.

Work started in June 2009 and will be completed 8 years later. Among the major contract items are construction of an access road, utilities, outlet works, spillway control, side channel and stilling basin, dikes, dam embankment repairs, rock anchors, abutment stabilization and more.

On completion the project will provide:

- A new RCC outlet structure and tunnel to enhance the operation of the dam and allow for better flood control downstream.
- Stabilization of the west bank that reduces the potential for landslides.
- Rehabilitation of the spillway, side channel and stilling basin to mitigate future downstream erosion by dissipating the energy of water overflows.

For the duration of the project, our community liaison will regularly disseminate information on the project schedule, the work being performed and its impact on the community.

FIRM NAME: New York State DEP
START & END DATE:
2009 - Ongoing
TOTAL COST: $600 Million
CLIENT CONTACT:
Manny Madu, DPS
PHONE: [redacted]
EMAIL [redacted]

FIRM EXPERIENCE

EXPERT PROFESSIONAL SERVICES – PERFORMANCE OF CONSTRUCTION MANAGEMENT SERVICES FOR PROJECTS ON A "CALL-IN" BASIS DURING 2007, 2008, 2009

HAKS is providing Office Engineering, Construction Inspection and Fire Protection Engineering services to the Port Authority of New York and New Jersey on a "Call-In" basis, at the New Jersey and New York marine terminals, airports, tunnels and Operations Unit.

Some of the duties at the New Jersey Marine Terminals and the Hoboken South Waterfront Development involve Tenant Alteration Application (TAA) projects. Duties include monitoring all construction activities, daily contract paper work, auditing architects/engineers of record, special inspections, conducting preconstruction and monthly progress meetings, reviewing closeout packages, conducting and coordinating all life and safety testing and inspections before a Permit to Occupy or Use is issued. The major TAA project at present is the $100 million "W Hotel" on the Hoboken waterfront.

OE services are also provided for the construction management/general contracting services capital security program at Bayonne Bridge, George Washington Bridge, Newark, JFK and LaGuardia Airports, PATH, Journal Square, Teterboro, Holland Tunnel, and Lincoln Tunnel.

Individual construction contracts cover a wide range of site/facility construction as well as marine construction. We are providing Construction Inspectors to monitor pile installation, pile repairs, wrapping, jacking, relieving platforms rehabilitation, underwater and above-water pier repairs, bulkhead repairs and new construction, fender systems, buildings, digital video monitoring systems, paving, concrete, asphalt and other site work.

At the Port Authority Technical Center, HAKS' Fire Protection Engineers focus on maintaining a fire safe environment at Authority facilities for employees, tenants and patrons and on an effective HPR- (highly protected risk) based property loss prevention program. They conduct and witness annual and acceptance tests of fixed fire protection systems and equipment; review and comment on plans for fire code compliance, and participate in special technical investigations. Post-9/11 their assignment grew to include risk assessment for survivability of certain Authority structures in the event of another terrorist attack or other disaster.

For the Engineering Department/Quality Assurance Division/Construction Standards Unit, our fire protection engineering services include inspection and plan review at various facilities for Authority contract and Tenant Alteration projects. We are also involved in a new program of fire inspections at all Authority properties ("Post-Construction Inspections) under which initial fire protection inspections were conducted at Stewart International Airport in Newburgh, NY. Other Engineering Department assignments involve reviewing drawings for TAA and major Authority projects, which currently include the Freedom Tower, Towers 2, 3 and 4 and the Memorial at the World Trade Center site.

FIRM NAME: PANYNJ
START & END DATE:
2007 - 2009
COST: $5 Million (FEE ONLY)
CLIENT CONTACT:
William Kehoe, P.E.
PHONE: (212) 435 - 7000
EMAIL: wkehoe@panynj.gov

MANAGEMENT APPROACH

PROPOSED APPROACH

Ask any group of top decision makers to describe program management and you will hear many different answers—Program Management is:

- "hiring consultants as an extension of staff"
- "providing high level organization and management for a comprehensive long term effort"
- "filling technical goals when we cannot hire the talent"
- "bringing in personnel who can help us figure out and do the different types of work that needs to be done over several years"
- "having a team that can expand or contract with the expertise to respond to the program's changing needs.

This range of responses does not illustrate confusion about program management, but rather highlights how it works for individual clients with specific capital programs that must be completed. However, for many of these same clients for their next program management assignment the effort may be completely different. HAKS take a contemporary and responsive view of program management, developing program-specific teams to meet the unique needs of each client and project type. HAKS program management teams have significant variations in—size, areas of expertise, specific types of work, levels of authority and responsibility and the physical location of the team members.

Despite these client sensitive distinctions several common characteristics differentiate program management from other consulting services such as construction management or owner's representative. Program management teams develop decision making and communications structures that infuse accountability into the program's structure. Responsibilities and lines of authority are clear, facilitating higher quality and greater efficiency. Since most programs are multi-year engagements HAKS can develop strong and stable relationships and high levels of trust amongst all team members. Additionally, the program develops a level of integration with the client and consultant staffs to create synergy, efficiency and responsiveness.

TASK A. PROJECT INITIATION SERVICES

1. Develop and implement program/project management plans (to include project scope, schedule and budget) for projects consistent with the Agency's project management methodology to be defined as projects are identified.

The HAKS team will prepare a comprehensive Program/Project Management Plan (PMP) for the project. We recommend that the PMP be prepared in accordance with the FTA's "Project and Construction Management Guidelines. The PMP will contain comprehensive information to help control, direct, coordinate, and evaluate cost, time, and quality in the administration and contractual agreements relating to each aspect of the program. The plan will include a definition of the program, the individual projects, project objectives, work statements, organization, duties, staffing, and written procedures. The PMP will establish the rules and procedures for program and project administration, identify organizational and reporting relationships between responsible parties, and provide guidelines for orderly interaction. Finally, the PMP will define control mechanisms, decision-making processes, and systems for measuring.

MANAGEMENT APPROACH

Organization of the PMP as a roadmap to project information, organization, processes and procedures helps insure the longevity of the information. We have found that a short description of program elements with reference to the source documents is an efficient way to assure the latest revision of program elements is implemented. This also serves to facilitate maintenance of the documents and limits the need for updates.

The PMP will be placed under version control in the project's configuration management system. The plan will include a general overview of the project's purpose and need, clear milestones and deliverables, and proven project controls that will track performance against established baselines. The PMP outline below was recently used on a PMP for a similar program:

- Purpose
- Project Background and Description
- Organization and Staffing
- Safety and Security
- Project Management Controls
- Risk Management and Insurance
- Procurement
- Design Program
- Right of Way and Real Estate Acquisition
- Community Relations
- Construction Program
- Interagency Coordination and Third Party Agreements
- Claims Mitigation, Changes, and Conflict Resolution
- System Testing and Start up
- Quality Assurance and Quality Control
- Construction Safety and Health

The project PMP outline will be created to conform to FTA requirements and to fit the requirements of this unique project. The HAKS team recognizes the importance of timely and definitive decision making in keeping on-call projects on pace. We will include an element in the Organization and Staffing section of the PMP that describes decision rights and identifies the types of decisions that will need to be made. The PMP will assign the authority and responsibility for those decisions to the appropriate organizational element. This process will assure that decisions are made at the lowest appropriate level, and that they are enduring.

Procedures will be developed to define and control project management activities. Procedures will be developed in accordance with existing Authority Project Management guidelines. In recognition of the importance of maintaining project momentum, procedures will be designed for speed while maintaining control. Only process-essential tasks will be on the primary (critical) path. Control, audit, and failure tasks will be performed on a parallel path and will not lengthen the primary processing time. All procedures will be designed and analyzed to assure that they enhance rather than impede performance.

2. Provide business analysis services, as required to identify owner's project requirements and define/document project scope.

During the course of the program we will identify and discuss the fundamental principles and innovative techniques that are available to efficiently manage capital projects and programs. These techniques include but are not limited to: capital program management procedures, business case analysis components and methods, and cost-effective capital project execution methodologies. This methodology will also identify techniques for the planning and implementing capital projects and programs. Program development and management, as well as individual project implementation should be studied in accordance with the following management components:

Building a Program—identifies best practice fundamentals for ascertaining projects and assembling a prioritized program to meet the Authority's requirements, including the appropriate components of a business case for capital investments.

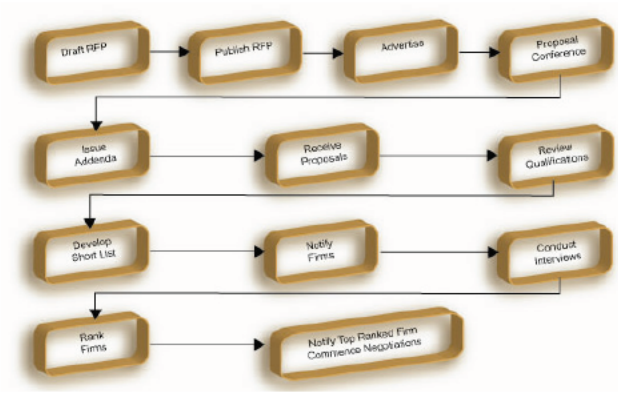
Implementing Projects—recommend best practice fundamentals for delivering individual and coordinated projects. Recommend innovative techniques for planning and implementing projects. Recommend and evaluate alternative delivery methods and consider the merits of each.

Managing a Program—identifies the best practice fundamentals for management and implementation of a program.

3. Coordinate project team alignment and team-building activities.

HAKS will strive to develop a partnering atmosphere with all stakeholders involved in the project. Communication is the key to this effort. Through this partnership we will work to develop project teams that are only focused on the project at hand and working cooperatively with each other. HAKS emphasizes and promotes the principles of partnering throughout the construction phase by implementing a formal process of feedback, evaluation, and improvement. We will organize, coordinate, and participate in partnering workshops with key representatives from the Authority, contractors, utility companies, and other key stakeholders, if required. Initial activities are critical so that the entire project team is brought together and establishes a cooperative approach to attaining project objectives.

4. Assist in the preparation of Requests for Proposals (RFP's) for the performance of expert professional architectural and engineering services. (It is important to note that any firm preparing such documents will be precluded from participating as a proposer in response to said RFP.)



One of the HAKS team's efforts will be to assist the Authority with the development of the necessary procurement documentation, i.e. Request for Qualifications (RFQ); Request for Proposals (RFP), addenda and the subsequent identification and selection for the "best qualified" architectural and/or engineering firms that will be required for the project. We will assist the Authority with identifying and preparing scopes of services, legal requirements; the scope of services will delineate the type, amount, and detail of work to be accomplished as well as interface and coordination requirements, length of services, and scheduling.

Develop the RFQ/RFP

- Define Scope of Services
- Define Contractual Terms
- Define RFQ/RFP Requirements
- Define Selection Criteria
  - Technical abilities and competencies
  - Prior experience with similar programs type, size, complexity
  - Size of firm and resources of team
  - M/WBE participation
  - References

Advertise, Communicate and Issue the RFQ/RFP

- Advertise – Scope, services and RFQ/RFP requirements
  - References
  - Newspaper – website – local industry associations
  - Vendor registration
- Define Procurement Milestones
- Establish method for submittal and responding to questions
- Issue required addenda
- Receive and Distribute Issue the RFQ/RFPs to the Selection Committee
- Confirm issuance of short list and interview dates

Evaluation and Award

- Conduct selection committee review
  - Evaluate on qualifications, not proposed fee
  - Carefully evaluate qualifications and references
  - Rank and develop the short list
- Publish short list and schedule interviews
  - Require project team members to be present
  - Get a feel for their style and best fit
  - Tabulate ranking and publish final recommendation
- Obtain authority to negotiate

Negotiations and Contract

- Start negotiations with No.1 ranked
  - If negotiations are not successful within a reasonable time, formally conclude and move on to the next ranked
- Refine scope of services with selected firm
  - Reconcile fees, scope, budget and schedule
- Keep the contract as direct and simple as possible
  - Consider using industry acceptable templates
  - Identify key PM staff and contacts
  - Protect the Authority's interests
- Execute the contract

5. Coordinate project related risk analysis and management activities.

The purpose of risk management is to identify threats to project success and to mitigate or eliminate negative impacts to the project. Analysis of the risks also identifies opportunities that should be pursued to provide additional benefit to the project or the organization as a whole. The scope of risks to be considered includes technical, management, solicitation and contracting, performance, budget, resources, political, natural disasters, security, etc. Not all risks can be eliminated, but mitigation and contingency plans can be developed to lessen their impact if they occur. Risk management is an integral part of program management on any project. Risk management processes are utilized from project initiation through development, maintenance and operations, and end only when the project/system is shutdown or retired.

MANAGEMENT APPROACH

Risk is the combination of likelihood and magnitude of undesirable outcomes; the corollary to risk is opportunity, which is the combination of likelihood and magnitude of desirable outcomes. The HAKS team will develop a systematic process to manage such risks and opportunities, hereafter collectively termed risks and discussed in risk terms (although opportunities are also implied). Our approach to developing a systematic risk management process for the project and its component projects is to identify, characterize, evaluate, and manage risks in each stage of design, construction, and operation. Our approach to managing risk essentially involves addressing the following five basic questions.

What Could Go Wrong?

Things that could go wrong may be defined in terms of various scenarios. Major causes of things going wrong include for example significant deviations from assumed baseline conditions, equipment failure/malfunction, operator error that causes an accident, and the occurrence of extreme events ("hazards") not considered in the design/planning stages. It is important to identify a relatively comprehensive and non-overlapping set of such potential problems. Typically we do this in a structured way through facilitated interviews / workshops, after first establishing the relevant project performance measures and the process for completing the project (planning, construction and subsequent operation). Typical performance measures include worker and public safety, environmental impact, property damage to existing facilities, and impact to program cost and schedule.

How Badly Can it Go Wrong?

The magnitude of the consequences (vis-à-vis the performance measures) if the problem occurs defines that problem's severity. These consequences may be uncertain, ranging from minor to catastrophic. We assess these "conditional" consequences (including significant uncertainties) for each potential problem in a structured way through facilitated interviews / workshops, based on data and expert opinion, correcting for any assessment biases. It will be necessary to recognize and appropriately consider possible dependencies among outcomes, either among different types of outcomes for one problem or among different problems.

What Are the Chances of it Going Wrong?

The likelihood of each potential problem, as defined by its severity, will also be assessed in a structured way through facilitated interviews/workshops, based on data and expert opinion, correcting for any assessment biases. Obviously, the likelihood of more severe events is typically less than for less severe events. Again, it will be necessary to recognize and appropriately consider possible dependencies among the occurrences of different problems.

How Significant Are the Risks?

The significance of the various potential problems can be evaluated in terms of their "expected value" outcome or the product of the likelihood of the problem occurrence and the expected value of consequences if it does occur. For example, potential problems that are unlikely to occur and only have minor consequences if they do occur are clearly insignificant, whereas potential problems that are likely to occur and have major consequences if they do occur are significant. When

different types of outcomes are considered, then "tradeoffs" among those various outcomes must be established in order to combine them into a single measure. Such tradeoffs are policy rather than technical issues and must be established by management, for example by facilitated interviews / workshops. The potential problems can be categorized and ranked in terms of their expected values. For planning and budgeting purposes, probability distributions can also be developed to display the uncertainty in various project performance measures (e.g., program schedule and costs) due to all potential problems.

What Should We Do About the Risks?

Risks can be reduced, generally at some cost, in various ways, which can be categorized as some combination of the following:

Prevention: Reduce the probability of a potential problem occurring. Examples: additional geotechnical investigations regarding subsurface conditions (to reduce the chance of surprises), increased margin of design safety (to reduce the chance of failure), use of more reliable equipment (to reduce the chance of breakdowns), and expanded personnel training (to reduce operator errors).

Mitigation: Reduce the severity of consequences of a problem if it does occur. Examples: improved emergency response planning (to reduce health impacts), additional protection to existing facilities (to reduce vulnerability to subsidence), and buying additional insurance (to transfer the risk to another party).

The cost effectiveness of each feasible risk reduction option (including no action) can be assessed and used to objectively determine which option should be adopted. The cost of implementing each measure, and its impacts on risk (reducing the likelihood and/or consequences of particular potential problems) if it is implemented, will be assessed in a structured way through facilitated interviews / workshops, based on data and expert opinion, correcting for any assessment biases. It will be necessary to recognize and consider how combinations of risk reduction measures will perform, e.g., typically two measures that address the same risk will not have the same benefit as the sum of the benefits of either acting alone. For planning and budgetary purposes, the residual risks (for a particular risk reduction program) can be assessed in the same way as before. In order to facilitate the risk management process, a Risk Register will be developed and maintained throughout the project. The Risk Register will:

- Document the various risks (i.e., the potential problem) and keep the risk characteristics (i.e., likelihood and consequences of occurrence) up-to-date, based on current information (including the results of risk reduction activities)
- Present a current evaluation of the significance of each potential problem and the associated ranking of each potential problem
- Present plans for managing each risk (which may be simply acceptance for relatively insignificant risks) and the current status of those plans
- Present a current prioritization of all remaining risk management activities (based on the significance of the risks they address and how well they address them).

Risk Identification

HAKS will hold structured, facilitated workshops periodically throughout the project (typically at key design and construction milestones) in which risks will be identified and quantified. Optionally, probability distributions for ultimate project cost and schedule, as well as other performance measures, can be developed. The results of these workshops will be documented in a Risk Register, and will generate prioritized risk lists.

Risk Management Plan

A risk management plan will be developed, consistent with the approach described in this proposal, defining roles and responsibilities and a detailed procedure for identifying and managing project risks.

Risk Mitigation

Risk mitigation strategies will be developed to address each of the most significant risks identified. HAKS will document these strategies in the Risk Register and regularly monitor and report on progress implementing these strategies.

6. Prepare presentations, documents and conduct presentation.

HAKS will prepare presentations and documents and conduct presentations to assist the Authority with Project Initiation services for this assignment.

TASK B. PROJECT IMPLEMENTATION SERVICES

1. Manage the implementation of the project management plans and the work performed by all of the program and/or project members.

One of the crucial lessons HAKS has learned in starting up major programs is that the first months are the most critical time-frame for maximizing program success. During this period, all of the management procedures and systems must be put in place to establish a design and construction process that runs smoothly. It is also during this time that the master program schedule will be finalized, and estimates and budgets are validated. HAKS will manage the implementation of its project management plan so that it is used as an effective tool to help guide the program. HAKS will coordinate and monitor the work performed by all its team members and that the work is performed in accordance with the drawings, specifications and contract documents.

2. Conduct meetings (including project kick-off and progress meetings) with the project team, record all minutes, distribute for review and revise as necessary.

In order to enhance communications among the project team members we will, during the course of the project, schedule regular meetings to review progress and to report on the estimated cost status of the project. We will prepare agendas and minutes of these meetings. We will highlight areas where information is lacking and advise on the completeness of the information received to date. Meetings will be held weekly. Project progress meetings will continue throughout the duration of the project, so that all parties will be informed of job progress costs issues, information missing and decisions required.

3. Manage preparation of study reports, construction cost estimates and preliminary and final contract documents.

HAKS will manage and prepare various reports, estimates and preliminary and final contract documents for this contract. We will review the preliminary planning cost estimates and the basis for any assumptions that were utilized in the preparation of those estimates. We will then proceed with developing an independent estimate, comparing it to previous estimates, reconciling any variations. This effort will then be reviewed with the Authority, with the outcome being a validated cost estimate that will be the basis for the formal program and project budgets.

4. Establish, through meetings with facility personnel, staging restrictions/requirements based upon operational and maintenance constraints.

Construction planning must take place on several levels: the program level by the program manager and the project level by designers and contractors. Development of a construction-phasing/staging plan is the primary element in the overall construction planning effort. This plan will be developed interactively with the master schedule and will be based on the concept of vertical and horizontal area zoning. Through this method, we have been successful in identifying, early in the planning stages, potential conflicts between program elements. From day one we will have a prototype construction plan that will enable us to proceed with gathering information for preparation for the implementation of your program. The construction phasing/staging and logistics plan must be frequently updated during the course of the program. We will hold frequent coordination information exchange meetings with team participants in which all parties will provide updated information, express concerns, and suggest viable alternatives to resolve sequencing and scheduling issues before they become major problems affecting program completion.

5. Review studies, preliminary designs and contract documents for conformance to approved scope and budget.

HAKS will gather all of the previously prepared documentation associated with the program, review the planning basis for the execution of the program, and assess whether any adjustments may be warranted. A resource library will be created in which these and other critical documents will be stored. The outcome of this review will be presented to the Authority's staff for input and concurrence relative to any possible changes that will benefit the program's goals.

6. Prepare project documentation, correspondence and maintain project file.

The establishment of a proficient record keeping system for any project is essential to the proper management of the project. Current information must be easily retrieved and documented to support all project activities, decisions and actions must be developed. This will be accomplished through the Information Management System and the utilization of a computerized Document Tracking and Retrieval System which will provide document control.

This information will be automatically stored in electronic file repositories located in either the minicomputer or the remote servers, with daily automated tape back-up which will prevent the information from being unintentionally lost.

MANAGEMENT APPROACH

The project records will be maintained through a document imaging system which will enable the project team members to access, retrieve, and display and output documents from a variety of sources including archives, current files or special work in process databases. Every document stored in the system can be listed and selected for retrieval within the security parameters established for the users. The retrieval system will provide for optical reading, distributed printing or facsimile importation with seamless integration with the other LAN based applications and utilities on the project. Project records will include, but will not be limited to:

- Correspondence
- Contracts
- Contract Documents
- Estimates
- Budgets
- Change Orders
- Subcontracting Plan
- Surveys
- Special Studies
- Directives
- General Ledger Accounts
- Anticipated Cost Reports
- Procedures Manual
- Safety Manual
- Phasing Plans
- Logistics Plans
- Constructability Reviews
- Maintainability Reviews
- Operability Reviews
- Value Engineering Reports
- Shop Drawings & Samples
- Market Analyses
- Contract Document Control Logs
- Shop Drawing Control Log
- Change Order Control Log
- Procurement Status Reports
- Daily Reports
- EEO Reports
- Compliance Inspection Reports
- Test Reports
- Safety Reports
- Non Conformance Reports
- Progress Reports
- Progress Payment Requests
- Payrolls
- Claim Case Files
- Punch Lists
- Meeting Minutes

7. Coordinate bidding and award of construction contracts including:

- recommending procurement options
- coordinating preparation of Addenda, as required
- evaluating bids
- preparing award authorization documents and briefing materials for executive staff

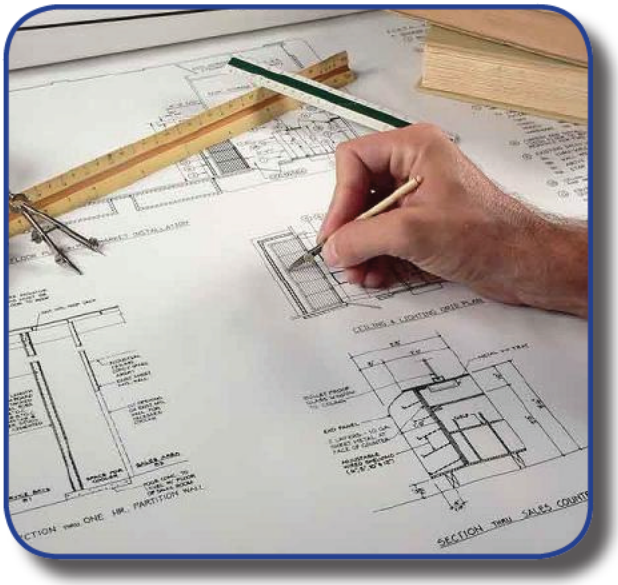
ELECTRONIC PUNCHLIST

MANAGEMENT APPROACH

The HAKS team will receive and analyze the bids. We will analyze the scope of work, exclusion and qualifications that may be listed and conduct meetings with each contractor to assure scope compliance and knowledge of the job and obtain the contractor's commitment to complete the project on time. During the evaluation process, we will provide the Authority with current pricing information, trade contractor proposals, unit and alternate price lists, and the status of contractor negotiations. Pre-award comparison sheets will analyze the following:

- Completeness of scope
- Adherence to the overall schedule of the project
- Elimination of ambiguities in defining the bid package, and clarification of confusing areas
- Base and unit pricing
- Acceptability of any proposed alternates and how these should be structured
- Compliance with financial requirements of both the project and the proposed construction
- Negotiation with bidders to verify that all involved parties have a complete and thorough understanding of their performance, quality and financial responsibilities

8. Coordinate and monitor shop drawing review process and respond to contractor's Request for Information (RFI's).



HAKS will establish and implement procedures and coordinate and review shop drawing submittals, Requests for Information, samples, product data, change orders, payment requests, material delivery dates and other procedures; and maintain logs, files and other necessary documentation. We will log in all submittals with the date received, the number of copies received, distribution list, the return date from reviewers, and the status (such as approved, approved with comments, resubmit, or rejected). The appropriate design consultant will have the responsibility for approval.

We will expedite any question raised by the contractor in connection with the contract drawings, maintaining continuous communication, and acting as liaison with the contractor, architects/engineers, and the Authority. Our work will coordinate, expedite, and distribute the preparation of composite and/or coordination drawings by others and resolve disputes, inconsistencies or conflict among various trades performing the work. As per the construction documents provided, we will coordinate and direct information to the architects/engineers when unexpected field conditions are encountered. We will assist the architects/engineers with technical clarification as needed and issuing construction change directives, change orders, etc. We will review and approve CPM schedules, staging plans, erection plans, and related project matters.

An aggressive submittal program for this project will be an important part of the success of each project. HAKS recognizes the significance that the submittal process can have on the overall project. Its importance to the contractor, design team, owner and construction manager has been clearly demonstrated on other projects. The submittal process invariably is identified by more than one party as a top issue of concern.

Most project management software allows the creation of a submittal log with relative ease. We intend to take advantage of an electronic process to create the most efficient submittal process possible. In it, submittals and submittal packages can be added as needed. HAKS will be thoroughly familiar with the Authority's contract documents as they relate to submittals. They will be reviewed against the plans and specifications and any corrections will be recorded and reported appropriately. A submittal schedule will be incorporated into the Master Schedule so that all design professionals can predict when submittal reviews will be required and therefore any periods of high volume can be mitigated in advance. The submittal log will be established during the start-up phase of the project. All submittals and shop drawings will be reviewed by HAKS prior to being transmitted to the design team and will bear a written statement by HAKS that the submittals and shop drawings are consistent with the Contract Documents. Any submittals or shop drawings submitted without this approval will be returned. Additionally, HAKS proposes that a weekly meeting occur to work through all critical submittals so that they are resolved by the meeting's end.

HAKS will include with each submittal and shop drawing, a letter indicating all deviations from the design team's drawings and specifications. It will be HAKS's obligation and responsibility to check all of its submittals and shop drawings and to be fully responsible for them and for coordination with connecting work. By reviewing or transmitting submittals and/or shop drawings, HAKS represents that it has determined and verified material and product availability, field measurements, field construction criteria, catalog numbers and similar data, or will do so, and that it has checked and coordinated each submittal and/or shop drawing with the requirements of the work and of the Construction Documents. If any specified material item or part is not available, HAKS will so indicate to the design team. The design team will review and approve submittals and shop drawings and return them to HAKS within a previously agreed to timeframe. If the review and approval are delayed beyond the agreed to timeframe, the design team will notify HAKS and the Authority in writing stating the reason for the delay.

If the design team returns a submittal or shop drawing to HAKS with the notation "rejected", "revise and retransmit", or "approved as noted", HAKS so as not to delay the work, will promptly transmit a submittal or shop drawing conforming to the requirements of the Construction Documents and indicating in writing on the submittal or shop drawing and on the transmittal what portions have been altered to meet with the approval of the design team. Any other differences between the resubmittal and the prior submittal will also be indicated on the shop drawing and on the resubmittal as a special note.

Fabrication of work will not commence until HAKS has received written approval. HAKS will furnish prints of approved submittals and shop drawings to all the contractors whose work is in any way related to the work. It should be emphasized that it is everyone's responsibility to review each and every submittal for conformance to the contract design documents. The contractor must provide a quality submittal or it should be immediately returned indicating that any further delay may result in a delay of schedule. The Construction Manager should provide a thorough review of each submittal color coding their comments on the submittal so the design team knows that this process is a team effort. The design team should also color code their comments and return the submittal within the agreed upon maximum time which should never exceed a ten working day period. This team effort will provide the contractor with a coordinated effort that will expedite the final completion of the submittal, and in turn, maintain the schedule.

9. Coordinate preparation of Post Award Contract Changes (PACC's).

Contract changes that occur during construction are inevitable. These changes may be caused by a variety of factors such as design changes, additional work elements, or field changes due to unforeseen site conditions, encountering

previously unidentified utility conflicts and/or hazardous materials. Our approach to managing the schedule and the changes and avoiding impacts to the project budget involves close cooperation with the Authority and application of the following elements:

Early notification and communication. Continuous communication between the Authority and HAKS enables pending changes and unforeseen conditions to be known immediately by all parties allowing for the resolution and mitigation process to begin expeditiously.

Cooperative planning. Contract changes must be addressed in the spirit of partnering. The Authority and HAKS will work cohesively to determine the best method of implementing contract changes to minimize project costs.

Reviewing for potential design changes that minimize project impacts. Often, changes associated with encountering unforeseen site conditions can be mitigated or eliminated through design modifications. HAKS will examine potential change situations for this opportunity.

Schedule accommodation. Each change will be assessed for schedule impact and provisions will be made to accommodate the change within the original project schedule, if at all possible.

Fair and open negotiations. A successful partnering relationship will enable the Authority to negotiate contract changes fairly and openly. We are committed to providing the Authority with all documentation required to evaluate change pricing.

Additionally, if the Authority uses a change control database to manage the paperwork and the approval process of contract changes, we would expect to adopt this same system. If not, we will propose a system that utilizes a database application for data management, process control and reporting. We would also strongly recommend the use of a Change Control Board (CCB) in the event that the number and magnitude of contract changes becomes significant. A by-product of the change control process is documentation of any changes to scope, time or cost. We will implement a process designed to communicate these changes to all affected parties and to trigger the modification of current configuration data (drawings, specifications, data systems) in a controlled manner such that the most current information is available to all parties at all times.

10. Attend construction progress meetings and coordinate facility force account work, as required.

HAKS will conduct and document weekly project meetings with the contractors, subcontractors and the Authority. These meetings will typically cover such items as submittals, progress of work, scheduling milestones, critical issues, nonconforming work, safety, material and equipment testing, and start-up. We will consecutively number the weekly minutes, thereby providing a tracking device for outstanding items. Responsibilities and deadlines will be established for completing these items. Monitoring and follow-up will occur at subsequent meetings, ensuring a rapid response to each item. HAKS will prepare and distribute detailed meeting minutes to all meeting attendees.

Force Account

In order to efficiently and effectively plan and coordinate force account work elements the schedule must accurately depict those work elements that will be supported (flagging or other protection) and/or performed directly by the Authority force account labor. HAKS experience working for many local railroads and transit agencies in this region provides a working knowledge of force account operations and a keen understanding of work elements that would normally and customarily be performed by railroad force account labor. To ascertain an accurate understanding of current labor agreements and standard practices. We will closely coordinate with the Authority's craft labor disciplines to review current labor agreements and standard practices as well as to gain an in-depth understanding of all contractual elements such as overtime, headquarter requirements, per diem requirements, hours of service requirements, etc. As force account construction scopes are defined, we will work closely with the Authority to proactively develop typical craft labor crew compositions, establish standard crew sizes, costs and production rates and formulate a Crew Cost Library necessary for resource planning. We will use the Crew Cost Library to assure the consistent application of standard and typical crew consists for each force account labor element by discipline for integration into the schedule. Railroad resource projections by trade/craft discipline will be identified by the Authority confirming whether it can readily support the projected force account workload in conjunction with other capital construction commitments, and if not, for developing alternate force account negotiations and/or agreements.

HAKS will proactively work with the Authority's management personnel to monitor that unions provide formal labor clearances for all work scopes to be performed by railroad force account personnel. During the development of contract documents, language will be introduced into the contract that identifies the responsibility for coordinating force account activities with the contractor, and require the inclusion of force account activities within the contractor's CPM schedule. To assure efficient force account integration, HAKS will proactively assist the various contractors with coordination of all force account operations. Weekly coordination meetings will be held with the contractor(s), the Authority project representatives for reviewing work scopes, constraints on activities and the overall schedule to avert impacts to critical activities. A clear understanding of force account activities will give contractors a comfort level during bidding, which will ultimately reduce costs.

Constraints to the construction process must be clearly identified within contract documents. Windows for allowable work periods will be limited and of minimal duration.

TASK C. PROJECT MONITORING AND REPORTING SERVICES

1. Monitor and report on the actual consultant/contractor/staff performance, comparing the approved management plan versus the recommended corrective action, when required.

HAKS will monitor and report on consultant, contractor and staff performance and will make recommendations for corrective action when it observes a deficiency.

2. Update and review monthly actual and forecasted project costs and schedule(s) on an earned value basis in a manner consistent with the Authority's project management methodology.

This task will define the linkage between project costs and schedule and the financial plan. We will track these linkages to highlight specific problems in time to take corrective action. Success in satisfying this plan will depend on a project that remains within budget, on schedule, and meets the specific requirements for individual financial components. It is also important to track likely receipts and forecasts for any dedicated taxes and funds that may be used to support the project.

Any shortfall in any individual item may place the overall program at risk. We will define the linkages among each element at the beginning—a "logic diagram" that shows the connections between the project itself and individual sources of funds. Once the linkages are defined, we will track them and identify any potential shortcomings in time to make adjustments—we will also identify additional potential sources of funding.

A key part of this effort will be to provide regular and systematic reports on the specific risks to the financial plan. These reports will vary in time and level of detail based on the degree to which any problems have been identified. They will begin with quarterly reports that cover all dimensions of the financial plan equally and then shift emphasis as needed.

The HAKS team recognizes the importance of its responsibility to provide up to date and accurate information condensed into timely financial reports. Our experience has shown us that using the schedule in conjunction with the project budget and the change management tracking system we can provide the most accurate forecasting for the project. By assigning budgeted cost values to the individual schedule activities, we forecast the anticipated installed value of the project across the duration of the construction effort. This "cash flow" projection will be utilized not only to plan anticipated expenditures, but by evaluation of the overall project requirements, certain components of the work may be deferrable until later in the project, without impact to the overall completion schedule. With this information available, we can then provide accurate and timely information on reports that can be utilized for:

- Budget controls
- Cash flow management
- Payment verification
- Construction schedule and sequence control
- Control of trade contractor submissions
- Anticipated Cost Control

Anticipated Cost reports will be prepared on a trade by trade basis that documents the Original Budget information, budget adjustments and the amount of the adjusted budget, Committed Contract Costs, Change Orders, Adjusted Contracted Amount, the value of Work Completed, forecast of the cost to complete the work, the percentage of completed work and the variance of the anticipated cost to complete the work from the adjusted budget amount.

The Anticipated Cost Report is presented in complete detail which lists each contract and each change order. A summary sheet accompanies the Anticipated Cost Report to provide for Executive Overview of the Financial Status of the Project. The Anticipated Cost report is kept current on a continuous basis as entries are made daily.

The HAKS team understands that cost tracking and forecasting are critical to the success of any project.

3. Monitor progress of construction, including review of actual and forecasted construction in place (CIP) and schedule versus authorized contract budget and schedule.

Our management staff will continuously monitor each contractor's performance to ensure all contractors perform per the dictates of the technical and commercial provisions of their contracts. Deviations from contract requirements will be immediately identified and rapidly resolved and protracted breaches of contract requirements will not be tolerated. HAKS will review construction progress, based on progress and a previously agreed to schedule of values. We will also maintain accounting records in accordance with the Authority procedures and prepare monthly reports detailing budgets, committed costs, and anticipated costs to complete, and program cash flow reports.

4. Prepare monthly status reports addressing accomplishments, issues, and schedule and budget status, including corrective actions, if required.

The HAKS team will produce reports at various levels of detail to provide an organized and timely basis for directing the project. A monthly executive summary, focusing on schedule, cost status, proposed changes, and problem areas for each project will be provided. This report will address as a minimum:

- Overall project status
- Areas of concern and corrective measures
- Analysis of any actual or potential schedule slippage
- Change Orders
- A list of potential claims and mitigation strategies
- A report of actual versus planned construction expenditures.

5. Evaluate design consultant invoices for earned value and recommend payment.

The HAKS team will review and approve design consultant's schedule of values for each of the activities included in their schedule of events. The HAKS team will develop and maintain a master schedule of values and will develop and implement procedures for the review and processing of applications by design consultant(s) for progress and final payments. The HAKS team will review then and make recommendations to the Authority pertaining to design consultant payments.

6. Evaluate impact of changes on approved scope, schedule and budget and obtain approval for the change.

HAKS will explicitly execute the Authority's procedure for change orders including defining responsibilities and authorities for contract price and/or time modifications. In support of these procedures we will implement timely, efficient and effective means of recording, tracking, and reporting change orders. Actively identifying, managing and mitigating change is the essence of a successful program/project manager. We take advantage of its depth and breadth of our construction experience to anticipate and identify potential changes so that the program/project management staff can aid in averting potential cost or time impacts. Each potential or proposed change is thoroughly investigated and evaluated to determine any potential undisclosed issues that could affect a timely, cost and time efficient, resolution, and to determine if alternate resolutions are available. We will perform these duties in a way that is auditable, verifiable, and transparent to the Authority. From the moment a proposed change is identified HAKS will be fact finders, prepare the preliminary estimate, and perform a preliminary schedule impact analysis. During these steps we will also evaluate the merit and contractual validity, perform labor productivity, material, and equipment comparisons, assess constructability, and evaluates life-cycle-costs so that related potential cost or time impacts can be assessed in the context of the project. HAKS will prepare recommendations for each Proposed Contract Modification and, in cooperation with the Authority, aid in negotiations with the contractor(s). We will appropriately group approved PC's into packages for final approval by the Authority. HAKS approach to change management mirrors the Authority's procedures with the added advantage of including the proactive approach to anticipating potential changes, identifying roadblocks to resolution, and early identification of alternate solutions to minimize project cost or schedule impacts. This enhanced approach will empower the Authority to make sound, informed, cost effective, and timely business decisions at each step of the process.

7. Schedule and organize briefings for executive staff on status of projects, as required.

In order to enhance communications among the project team members we will, during the course of the project, organize and schedule regular briefings for the executive staff to review the status and progress of the projects. We will prepare agendas and minutes of these meetings and we will highlight areas where information is lacking and advise on the

completeness of the information received to date. Briefings will continue throughout the duration of the project so that all parties will be informed of job progress, schedule, costs and decisions required.

TASK D. PROGRAM LEVEL MANAGEMENT SERVICES

1. Assist Authority staff in the scheduling and implementation of selected programs and/or group of projects including coordinating and managing the activities of subordinate Project Managers.

HAKS understands that the Authority continues to strive for an aggressive and ambitious schedule for completion of the projects within this program. We are fully prepared to integrate the various projects into one functional master schedule. We will work efficiently with the Authority to evaluate and develop a project/program control system that utilizes best practices, lessons learned and proven technology to best fit the needs of this program. We believe that schedule component of the overall system is the backbone for the program and the tool that allows the team to drive it to successful completion.

We will review what has already been developed by the Authority and quickly enhance it appropriately for overall system integration. Our approach will be in full coordination with the Authority to ensure consensus with all parties involved for the tools, methodology, reporting requirements and other factors. We are well-versed in the most current schedule software and will suggest the full integration of Primavera's Enterprise Suite for schedule, cost and document control. We will utilize the schedule for:

- Improving Efficiency—by coordinating activity on the project site to verify that the proper work sequence is observed, while maximizing the activities being accomplished in all available areas.
- Logistics Planning—by assigning both manpower and material values to all scheduled activities, we will forecast manpower loading levels, material storage and staging area requirements throughout the duration of the project, and establish an appropriate plan to manage the workforce on the project site.
- Financial Planning—by assigning budgeted cost values to the individual schedule activities, we forecast the anticipated installed value of the project across the duration of the construction effort. This "cash flow" projection will be utilized not only to plan anticipated expenditures, but by evaluation of the overall project requirements, certain components of the work may be deferrable until later in the project, without impact on the overall completion schedule. The cash flow will form the basis of other analyses.
- Progress Monitoring & Contingency Plan—by continuous monitoring of the actual progress of the project against the planned schedule, variances is identified early when corrective action can be implemented. Where especially aggressive approaches are planned in the project schedule, back-up or contingency plans and schedules will be prepared for implementation, if required. The schedule will be developed as an all inclusive document which addresses the activities of all the members and participants involved in the program. It is not solely a construction schedule but rather an integrated network of responsibilities and actions required to fully achieve the program requirements through all phases. The design team(s) will establish the activities, durations and interrelated logic required for design preparation, evaluation of alternatives, obtaining approvals and development of the final drawings. These network components will be evaluated and compared to the time parameters established when setting the objectives program-wide.

2. Establish annual and/or program level resources requirements.

HAKS will establish annual and/or program resource requirements for the duration of the program based upon the Authority's capital plan.

3. Ensure that selected projects and/or programs are staffed and started as planned.

The HAKS team will maintain a competent full-time staff at each project site for the purpose of coordinating and providing general direction for the work and progress of the contractors. We will observe that the materials and equipment being incorporated into the work are handled, stored and installed properly and adequately and are in compliance with the contract documents for each project. The HAKS team will report to the Authority regarding the status of such activity. We will endeavor to guard against defects and deficiencies and will advise the Authority of any deviations, defects or deficiencies the HAKS observes in the work. HAKS observation duties will include reasonable diligence to discover work that is not in compliance with the contract documents. We will review contractor's recommendations for corrective action on observed nonconforming work. The HAKS team will make recommendations to the Authority in instances where we observe work that, in our opinion, is defective or not in conformance with the contract documents. The HAKS team will observe the contractor's work to verify that all authorized changes are properly incorporated in the project and we will report to the Authority regarding the status of such activity and provide a written record of the same. The HAKS team will keep a daily log containing a record of weather, the contractors working on the site, number of workers, work accomplished, problems encountered, and other relevant data or such additional data as the Authority may require.

4. Update program level schedules.

The HAKS team will develop and implement the Master Schedule and will regularly update and maintain the Master Schedule incorporating the activities of contractors on each project, including activity sequences and durations, allocation of labor and materials, processing of shop drawings, product data and samples, and delivery of products requiring long lead time procurement. The Master Schedule will include the Authority's occupancy requirements showing portions of a project having occupancy priority. The HAKS team will update, reissue and distribute the Master Schedule as required to show current conditions and revisions required by the actual experience. We will prepare and distribute the updates to the Master Schedule on a monthly basis to maintain the Master Schedule. After an evaluation of the actual progress as observed by the HAKS team, scheduled activities will be assigned percentage-complete values. The report will reflect actual progress as compared to scheduled progress and note any variances. We will identify problems encountered in accomplishing the work and recommend appropriate action to the Authority to resolve these problems with a minimum effect on the timely completion of the program.

5. Evaluate and recommend appropriate M/WBE sub-contractor goals.

The Authority requires an M/WBE participation program to encourage, promote, and advance the growth of minority and woman-owned businesses, ensuring a vital and thriving business community for the future. Its program is dynamic and comprehensive. HAKS will attempt to maximize participation through all phases of the project. We have an established, successful practice of partnering with our clients, the local community, and allied professionals to implement creative M/WBE programs and establish technology transfer initiatives. HAKS will bring an innovative, proactive approach and experience leveraging community skills and resources to maximize the participation of M/WBEs through all phases of the program.

TASK E. PROGRAM MANAGEMENT SERVICES

1. Provide ancillary program management support services.

The HAKS team understands that our program management role on the Authority project will be to solely represent the needs and interests of the Authority by acting as your representative through all stages of the project. Our expertise and creativity will allow us to monitor the program's adherence to schedule, cost and quality. The skills of our team will enable

us to anticipate the many technical, logistical and administrative issues the project will pose and to develop and assess alternative solutions to address those issues creatively and effectively. The HAKS team brings not only the technical expertise necessary to provide Program Management Services but also a thorough knowledge and familiarity providing ancillary program management support services.

2. Coordinate biddability and/or constructability reviews with the Authority's in-house or externally retained technical staff.

The HAKS team will perform constructability reviews, operational analyses, value engineering reviews, and design reviews geared to minimize costs and ultimately develop construction documents that avert adverse impacts to the Authority. Constraints to the construction process must be clearly identified within contract documents. Additionally, designs must be developed in a manner that permits construction operations to proceed within those constraints.

The HAKS team will mobilize immediately upon receipt of NTP and focus on a thorough review of the project documents prepared to-date for constructability, maintainability and claims avoidance. The Construction Industry Institute (CII) defines constructability as "the optimum use of construction knowledge and experience in planning, design, and procurement and field operations to achieve the overall project objectives." The basis of this concept is that experienced construction personnel need to be involved with the project from the earliest stages to check that the construction focus and their experience can properly influence the owners, planners, and designer, as well as material suppliers. Constructability input is intended to supplement and enhance the design effort to check the final design is the most complete, cost-effective and constructible product possible.

The HAKS team's goal is to produce high-quality, cost-effective design documents that can be reasonably constructed in the field without unnecessary cost or project delays, and without sacrificing quality. We will develop a partnering atmosphere with the design team, the Authority and all other players involved in the project. Communication is the key to this effort. Through this partnership we will work with the design team to develop clearly defined constructible documents. Reviews will be performed by a team of individuals with extensive field experience, as well as a clear understanding of the project's goals, the constraints of the project site, and the concerns of the surrounding communities and the various regulatory agencies involved in the project.

The HAKS team will advise the Authority on a variety of issues, such as construction feasibility and practicality, selection and availability of materials, availability of required labor, time requirements for procurement and construction activities, construction procedures, selection of systems and components, site use and claims avoidance. These reviews will include an assessment of drawings, specifications and engineering calculations that enable us to provide advice on construction methods, materials and equipment requirements and availability, subcontractor availability, cost schedule, claims avoidance and safety. Constructability reviews will assess how each project can be built economically within given site constraints and market conditions in addition to ensuring efficient contract sequencing and the preparation of biddable construction packages. This will be particularly important when complicated staging and phasing of construction is required. Since most construction claims emerge from incomplete, ambiguous or unworkable contract documents, early constructability reviews and technical coordination help to clarify ambiguities, and help protect the Authority's interests.

3. Maintain records for and preparation of Record Drawings.

We will use our computerized document control system to manage the design, procurement, and construction activities of the project. All drawings, documents, correspondence, reports, and invoices produced or received will be identified according to an established index. Each document received will be date-stamped and logged. The document control system will store and protect the following documents:

- RFI logs
- Change order logs
- Document (general contract correspondence) log
- Directive or bulletin log
- Inspector's daily diary
- Inspection reports
- Meeting minutes
- Noncompliance notice log
- Progress payment (verification)
- Punchlist

The Office Engineer will be responsible for maintaining the project correspondence files in accordance with the Uniform Filling System and other approved document control procedures. This procedure provides for the assignment of documents to locations in the document management system, retention periods, and the retention period for each document. Project files are subject to audit for compliance with procedures by Quality Assurance surveillance.

4. Provide support services for the following:

- Updating of the Agency's project management manual of standards and procedures including development of new modules and/or procedures, as requested.
- Document control including, tracking and expediting shop drawing process through the use of Oracle's Primavera Contract Manager software currently used by the Authority.
- Coordinate project control functions through the use of Oracle's Primavera project portfolio management software currently used by the Authority and as assisted by the PMO's Project Control staff.
- Prepare technical presentations and assist in responding to inquiries from outside entities and the public, as requested.

HAKS will provide all necessary support services to the Authority as required. We will:

- Update the Authority project management manual of standards and procedures and will develop new modules and/or procedures as requested.
- Use the Authority's current software, Oracle's Primavera Contract Manager, for document control and tracking and expediting the shop drawing process.
- Use the Authority's current software Oracle's Primavera project portfolio management software to coordinate the project control functions on this assignment
- Prepare technical presentations and assist in responding to inquiries from outside entities and the public, as requested.

5. Provide Project Management training/workshop sessions, as requested.

HAKS will provide project management training workshop sessions as requested. For the New York City Department of Environmental Protection (NYCDEP) HAKS has established a series of in-house training sessions for our construction management and resident engineering professionals, to gain increased familiarity with NYCDEP operations, procedures, protocols and culture in order to be sensitive to and knowledgeable about the Agency's goals and establishing a partnership with NYCDEP's staff. The sessions are coordinated by Farhan Syed, P.E. under the auspices of Jeffrey

MANAGEMENT APPROACH

Terzakis, Senior Vice President of Construction Management. Seminar topics include improving contract management techniques, regulatory changes and new agency standard operating procedures, water conservation approaches, critical path method (CPM) scheduling, new change order protocols and health and safety procedures. HAKS obtains credit for Professional Development Hours in conducting these sessions for attending licensed professional engineers.

Training will be a critical component of the provision of our services. We will develop and staff a training program to fully inform and educate our employees regarding the specifics of working with the Authority. Our training often starts with young engineers and continues through management with seminars covering specific technical topics as well as general issues. Utilizing our internal knowledge management systems we will employ training specific to the issues required for a quick ramp up based on programs we have pioneered with success in the past.

Based on our cumulative project experience and industry history, we will outline an engaging, informative and interactive template as the framework and foundation of any successful construction professionals' technical education and expertise. A pragmatic approach to research and application of case study learning will be the basis of communication on learned strategies and skills for all program participants. A sample course is outlined below:

Session 1: Concepts of Project Management

- Defining Project Management Framework and Terminology
- Pre-Construction/Post Construction Applications
- Differentiation Between Operations and Projects
- Design Elements for Setting Up and Conducting Projects
- Project Planning and Site Logistics
- Working in Occupied Environments

Session 2: The Project Officer in an Organization

- Role, Responsibilities & Agency Hierarchy
- Working effectively on Cross Functional Teams
- Negotiation Skills for Project Officers
- Understanding Agency Documents, Regulations and Practices

Session 3: The Project Team

- Establishing Team Goals
- Reporting Structure of the Team
- Identifying Relevant Skills, Qualifications and Experience Needed
- Key Performance Criteria

Session 4: The Project Management Life Cycle

- Project Initiation & Scoping
- Schematic Layout & Design Development
- Construction Readiness- Bid/Award & Constructability
- Project Monitoring & Field Operations Management
- Orchestrating Substantial Completion Contract Closeout
- Post Completion Reporting, Financial Turnover & Maintenance

Session 5: Project Controls and Reporting

- Techniques for Optimal Control
- Providing Status Reports, Project Baselines and Identifying Variances
- Monitoring Budget, Quality and Cost

Session 6: Change Orders

- Identifying the Requirements for Change Orders
- Understanding the Process for Submitting Change Orders
- Determining the Feasibility of Change Order Request
- Change Order Review and Approval Process

Session 7: Field Training

- OSHA
- Management of Subcontractors & Vendors
- Utilizing Project Documentation for Success
- Safety
- Scaffold

Session 8: Computer Support and Options

- Establishing a repository for project information and documentation
- Field Tabulation and markup notes for field conditions and approvals on handheld/mobile devices

HOURLY RATES

The HAKS Team has aggressively priced our hourly rate to be competive. All of the rates (except for Halcrow, Inc.) in this section are subject to a 4% annual increase for each progressive year starting from 2011 and ending at 2014.

HAKS' HOURLY RATES		
Name	Title	Hourly Rates (2011 - 2014)
JEFFREY TERZAKIS	PRINCIPAL-IN-CHARGE	$91.30 - $102.70
KHALED HUSEIN	OVERARCHING PROGRAM MANAGER	$77.00 - $86.61
FARHAN SYED	DEPUTY PROGRAM MANAGER	$77.00 - $86.61
HENRY HESSING	AVIATION - DEPUTY PROGRAM MANAGER	$83.50 - $93.93
KAMAL KISHORE	BRIDGE & TUNNELS - DEP. PROGRAM MANAGER	$84.13 - $94.63
LAWRENCE KING	QA/QC OFFICER	$84.13 - $94.63
RAYMOND RIBEIRO	TECHNICAL ADVISOR	$108.17 - $121.68
ANTHONY PAPPAGALLO	PROGRAM MANAGER	$67.00 - $75.37
NILESH SHAH	AVIATION - PROJECT MANAGER	$56.00 - $63.00
JEFFREY WRIGHT	BRIDGES & TUNNEL - PROJECT MANAGER	$75.00 - $84.36
FRANK VERDARAME	BRIDGES & TUNNEL - PROJECT MANAGER	$63.00 - $70.86
ASHRAFF ABDALLA	RAIL & TRANSPORTATION - PROJECT MANAGER	$60.00 - $67.49
HARRY LEWIS	TRANSPORTATION FACILITIES - PROJECT MANAGER	$68.00 - $76.50
MOUSTAFA REZK	TRANSPORTATION FACILITIES - PROJECT MANAGER	$57.00 - $64.11
HARRY FOSTERIS	RAIL & TRANSPORTATION - PROJECT MANAGER - ELECTRICAL	$56.75 - $63.84
ROBERT MILO	RAIL & TRANSPORTATION - PROJECT MANAGER - MECHANICAL	$46.50 - $52.31

HOURLY RATES

HAKS' HOURLY RATES		
Name	Title	Hourly Rates (2011 - 2014)
MAGDI SIDAROUS	ESTIMATOR	$52.89 - $60.00
WILLIAM NILES	SENIOR SCHEDULER	$59.50 - 67.00
HAMID ERFANI	DOCUMENT CONTROL	$45.68 - $51.38

SUBCONSULTANTS

AG CONSULTING'S HOURLY RATES		
Name	Title	Hourly Rates (2011 - 2014)
KULBINDER SINGH	RAIL & TRANSPORTATION FACILITIES - PROJECT MANAGER - ELECTRICAL	$46.00 - $51.74
RAYMOND C. KALLBERG	AVIATION - PROJECT MANAGER - MECHANICAL	$60.00 - $68.00
ARDASH MEGUERDICHIAN	RAIL & TRANSPORTATION FACILITIES - PROJECT MANAGER - MECHANICAL	$62.00 - $70.00

BURNS GROUP'S HOURLY RATES		
Name	Title	Hourly Rates (2011 - 2014)
JOHN BURNS	AVIATION - PROJECT MANAGER	$240.00 - $270.00
BRIAN PHILLIPS	AVIATION - PROJECT MANAGER	$192.50 - $216.00
DAVID CIERVO	AVIATION - PROJECT MANAGER	$121.00 - $136.11
CHUCK REED	AVIATION - PROJECT MANAGER	$107.30 - $120.36

ELLANA'S HOURLY RATES		
Name	Title	Hourly Rates (2011 - 2014)
HENRY CHIN	SENIOR PROJECT COST MANAGER	$72.11 - $81.11
WALTER FITZER	CHIEF MEP ESTIMATOR	$69.71 - $78.41

HOURLY RATES

DELCAN CORPORATION'S HOURLY RATES		
Name	Title	Hourly Rates
KENT HAGGAS	RAIL & TRANSPORTATION FACILITIES - DEPUTY PROGRAM MANAGER	$96.20 - $108.21
PETER HARRISON	RAIL & TRANSPORTATION FACILITIES - PROJECT MANAGER	$83.68 - $94.13
TIMOTHY STOKES	RAIL & TRANSPORTATION FACILITIES - PROJECT MANAGER	$68.80 - $77.40
LORI COLANGELO	RAIL & TRANSPORTATION FACILITIES - PROJECT MANAGER	$79.60 - $89.54
JONATHAN HULSE	RAIL & TRANSPORTATION FACILITIES - PROJECT MANAGER	$74.67 - $84.00

HALCROW'S HOURLY RATES		
Name	Title	Hourly Rates
JONATHAN GOLDSTICK	MARINE - DEPUTY PROGRAM MANAGER	$105.00 - $155.00
BILL PAPARIS	MARINE - PROJECT MANAGER	$105.00 - $155.00
ALAN WALLER	MARINE - PROJECT MANAGER	$82.00 - $107.00
SEAN O'NEIL	COASTAL ENGINEER	$82.00 - $107.00
DOUGLAS FRIEND	MARINE ENGINEERING - DIVE TEAM LEADER	$45.00 - $73.00
BRETT SPOSITO	MARINE ENGINEERING - DIVER	$45.00 - $73.00
DOMENICA STASIAK	MARINE - STRUCTURAL ENGINEER	$29.00 - $43.00

MULTIPLIER

HAKS 2.1
AG CONSULTING 2.1
BURNS GROUP 2.1
DELCAN 2.1
ELLANA, INC. 2.1
HALCROW, INC. 2.1

BREAKDOWN OF MULTIPLIER

% Direct Labor

		Field
A.	**Direct Labor**	**100%**
B.	**Department Overhead**	
	Fringe Costs	46%
	Officer's Salary	3.90%
	Indirect Salary	37.4%
	Insurance	3.31%
	Workman's Comp. Ins	0.49%
	Travel & Entertainment	1.39%
	Rent	3.97%
	Office Supplies	1.06%
	Depreciation	0.91%
	Telephone & Utilities	1.19%
	Temporary Staffing	0.05%
	Professional Fees	0.99%
	Bid & Proposal Costs	0.01%
	Consultants	1.35%
	Dues & Publications	0.24%
	Auto Expense	0.83%
	Equipment Rental	0.43%
	Furn, Fixt & Equipment Under 2500	0.08%
	Taxes	0.36%
	Relocation	0.03%
	Recruitment	0.49%
	Printing & Xerox	0.19%
	Repairs & Maintenance	0.22%
	Community Service	0.03%
	Seminars & Education	1.12%
	Security	0.00%
	Postage	0.16%
	Overhead Recovery	-0.15%
C.	**Total Departmental Overhead**	**106%**
D.	**Profit**	**2%**
	Total	**2.1**

M/WBE PARTICIPATION

ACHIEVING M/WBE GOAL ON NEW YORK STATE CONTRACTS

HAKS started in business in 1991 as a two-person partnership that carried DBE/MBE certification. This proved to be of great advantage to the firm in teaming with other consultants and in developing additional business. We found the State's MBE/WBE/DBE certification program to be most beneficial to HAKS during our early years, which resulted in increasingly higher annual billings that allowed us to advance beyond the DBE designation. Under the program we grew to where, today, we are a professional corporation with more than 400 employees, and we carry out 90% of our contracts as a prime consultant.

Based on our background and experience, therefore, we are in total accord with, and sensitive to, Minority, Women and Disadvantaged Business Enterprise goals on every contract that we participate in. The program provided HAKS the opportunity to successfully fulfill many types of assignments and to establish the kind of performance record that eventually enabled us to compete as a prime consultant. We believe in the MWBE program, and we encourage and assist other minority, women and disadvantaged business firms to grow and benefit from it as we have.

In all of the New York State contracts that have been awarded to HAKS as prime consultant or as a joint venture partner, we assign the highest priority to meeting or exceeding the MWBE goals of the contract. We focus on achieving this through approaches that include:

- Selecting sub-consultants to team with based on the expertise, qualifications and experience that they would provide to meet the contract requirements;
- Developing a Consultant Utilization Plan before the work begins that establishes or provides, for each minority or women sub-consultant firm
  - manning table,
  - specific individuals and resumes,
  - titles that these individuals will fill,
  - total hours to be worked;
- Obtaining approval of the plan from New York State;
- Making assignments, once the work begins, of MWBE personnel based on the Consultant Utilization Plan (i.e., implementing what we said we would do in the plan);
- Assigning sub-consultant personnel with titles approved in the Consultant Utilization Plan to tasks based on the qualifications and experience required for the task, for example
  - Resident Engineer, Assistant Resident Engineer
  - Office Engineer
  - Various Levels of Construction Inspectors
  - Constructability Reviewer
  - Scheduler
  - Other Specialty Titles
- Working continually toward goal achievement through hands-on involvement of the Project Manager and Project Executive in
  - monitoring total MWBE sub-consultant contract amounts, payments for the month, previous payments and total payments to date;
  - comparing total payments to date against sub-consultants' total share;
  - assessing progress being made toward MWBE goals;
  - making adjustments as needed in sub-consultant assignments throughout the life of the project to assure that MWBE goals will be met by or before the end of the contract.

HAKS LIST OF AFFILIATES

Entity: HAKS Engineers, P.C. (CT)
Address: 306 Industrial Park Road
Suite 201
Middletown, CT 06457 **EIN/TIN:** [redacted]

Entity: HAKS Engineers, Architects and Land Surveyors, P.C. (NJ)
Address: 570 Broad Street
Suite 401
Newark, NJ 07102 **EIN/TIN:** [redacted]

Entity: HAKS Stone & Webster (JV)
Address: 40 Wall Street
11th Floor
New York, NY 10005 **EIN/TIN:** [redacted]

Entity: HAKS/DMJM + Harris (JV)
Address: 605 Third Avenue
New York, NY 10158 **EIN/TIN:** [redacted]

Entity: HAKS/Earth Tech (JV)
Address: 40 Wall Street
11th Floor
New York, NY 10005 **EIN/TIN:** [redacted]

Entity: HASA Construction, LLC
Address: 40 Wall Street
11th Floor
New York, NY 10005 **EIN/TIN:** [redacted]

Entity: HASA Realty, LLC
Address: 22 Central Drive
Farmingdale, NY 11735 **EIN/TIN:** [redacted]

Entity: SIMCO Engineering, P.C.
Address: 80 Maiden Lane
Suite 501
New York, NY 10038 **EIN/TIN:** [redacted]

Entity: Washington Group/HAKS (JV)
Address: One Penn Plaza
32nd Floor
New York, NY 10119-2901 **EIN/TIN:** [redacted]

CONFLICT OF INTEREST

October 21, 2010

HAKS has no conflict of interest in performing services for the Port Authority of New York and New Jersey.

Jeffrey Terzakis, Senior Vice President

EXCEPTIONS

October 21, 2010

HAKS has no exceptions with the standard agreement and its terms and conditions.

Jeffrey Terzakis, Senior Vice President

THE PORT AUTHORITY OF NY & NJ

Anthony R. Coscia
Chairman

Christopher O. Ward
Executive Director

Certified

By

Office of Business & Job Opportunity

HAKS Engineers, Architects and Land Surveyors, P.C.

Certificate PA-27372

This certificate acknowledges that the above named firm is certified as a **Minority Business Enterprise**. This company has met the criteria for ownership and control as established by the Port Authority Policy for Revised Minority, Woman and Small Business Enterprise (M/W/SBE) Programs, dated June 10, 1993.

This certification will remain in effect for five years from the date of notice and may be extended only upon submission by you, and acceptance by the Port Authority of a recertification application attesting that the ownership and control of the business, on which this certificate is granted, has not changed. This office must be notified within 30 days of any material changes in the business which affect ownership and control. Failure to do so may result in the revocation of this certification and/or imposition of other sanctions.

Lash Green
Director
Certified: March 15, 2010

Rosemary Jenkins-Varela
Manager, Certification
Scheduled Re-evaluation: March 5, 2015

Form: 6/10/93

THE PORT AUTHORITY OF NY & NJ

March 5, 2010

RECEIVED
MAR 18 2010
HAKS Engineers, Architect and Land Surveyors, P.C.

Mr. Husam Ahmad
President
HAKS Engineers, Architects and Land Surveyors, P.C.
40 Wall Street, 11th Floor
New York, NY 10005

RE: **MBE CERTIFICATION**
TYPE: **Architectural & Engineering**

Dear Mr. Ahmad:

This is to acknowledge receipt of the Uniform Certification Application which your firm submitted **HAKS Engineers, Architects and Land Surveyors, P.C.** has been included on our roster of eligible **Minority Business Enterprise (MBEs)** for contracts with the Port Authority of New York and New Jersey.

Please be advised that the Port Authority's Office of Business & Job Opportunity periodically reviews all certifications and reserves the right to decertify any previously certified firm that no longer meets the Port Authority's guidelines for **MBE** designation.

Additionally, any **MBE** whose business incurs changes in any substantial manner must notify the Office of Business & Job Opportunity within thirty days of that change. These changes include, but are not limited to, a change of officers, directors, location, corporate name, or financial condition. Failure to advise of these changes may result in our removing the firm from our roster of eligible **MBEs.**

If you have any questions regarding your certification, please feel free to contact Marvin Morency at (212) 435-7807.

Sincerely,

Lash Green
Director
Office of Business & Job Opportunity

LG/MM

Enclosures: Certificate
Registration Notice

233 Park Avenue South
New York, NY 10003
T: 212 435 7000

THE PORT AUTHORITY OF NY & NJ

Anthony R. Coscia
Chairman

Christopher O. Ward
Executive Director

Certified

By

Office of Business & Job Opportunity

Ellana, Inc.

Certificate PA-24746

This certificate acknowledges that the above named firm is certified as a **Women-owned Business Enterprise**. This company has met the criteria for ownership and control as established by the Port Authority Policy for Revised Minority, Woman and Small Business Enterprise (M/W/SBE) Programs, dated June 10, 1993.

This certification will remain in effect for five years from the date of notice and may be extended only upon submission by you, and acceptance by the Port Authority of a recertification application attesting that the ownership and control of the business, on which this certificate is granted, has not changed. This office must be notified within 30 days of any material changes in the business which affect ownership and control. Failure to do so may result in the revocation of this certification and/or imposition of other sanctions.

Lash Green
Director
Certified: April 7, 2010

Rosemary Jenkins-Varela
Manager, Certification
Scheduled Re-evaluation: April 7, 2015

Form: 6/10/93

THE PORT AUTHORITY OF NY & NJ

Anthony R. Coscia
Chairman

Kenneth J. Ringler, Jr.
Executive Director

Certified

by

Small Business Programs

A.G. Consulting Engineering, P.C.

Certificate PA-17754

This certificate acknowledges that the above named firm is certified as a **Minority Business Enterprise**. This company has met the criteria for ownership and control as established by the Port Authority Policy for Revised Minority, Woman and Small Business Enterprise (M/W/SBE) Programs, dated June 10, 1993.

This certification will remain in effect for five years from the date of notice and may be extended only upon submission by you, and acceptance by the Port Authority of a recertification application attesting that the ownership and control of the business, on which this certificate is granted, has not changed. This office must be notified within 30 days of any material changes in the business which affect ownership and control. Failure to do so may result in the revocation of this certification and/or imposition of other sanctions.

Lash Green
General Manager
Certified: November 4, 2005

Rosemary Jenkins-Varela
Manager, Certification
Scheduled Re-evaluation: November 3, 2010

Form: 6/10/93

THE UNIVERSITY OF THE STATE OF NEW YORK
EDUCATION DEPARTMENT

THIS IS TO CERTIFY THAT HAVING MET THE REQUIREMENTS OF SECTION 7210 OF THE EDUCATION LAW AND IN ACCORDANCE THEREWITH THIS CERTIFICATE OF AUTHORIZATION IS GRANTED WHICH ENTITLES

HAKS ENGINEERS ARCHITECTS AND LAND SURVEYORS PC
40 WALL STREET
11TH FLOOR
NEW YORK, NY 10005-0000

TO PROVIDE PROFESSIONAL ENGINEERING SERVICES IN THE STATE OF NEW YORK FOR THE PERIOD 01/01/2009 TO 12/31/2011.

FRANK MUNOZ
ASSOCIATE COMMISSIONER
OFFICE OF THE PROFESSIONS

CERTIFICATE NUMBER
0005960

RICHARD P. MILLS
PRESIDENT OF THE UNIVERSITY
AND COMMISSIONER OF EDUCATION

Construction Management Association of America

Certificate of Appreciation

The Construction Management Association of America
Presents this certificate to

Khaled T. Husein, CCM

For Conducting 2-Hours CCM Workshop Seminar for HAKS In-house Staff

The Mission of CMAA is to promote and enhance leadership, professionalism, and excellence in managing the development and construction of projects and programs.

July 16, 2009

PACE UNIVERSITY

CERTIFICATE OF COMPLETION

CONSTRUCTION MANAGEMENT

22.5 HOURS OF CONTINUING EDUCATION

To all persons be known that

Khaled Hussein

Has satisfactorily met all of the requirements and completed a course of study in Real Estate continuing education a subject approved by the Secretary of State in accordance with the provisions of Chapter 868 of the Laws of 1977 and the attendance was satisfactory and in conformity with the law and that such above referenced course was completed on October 9, 2010.

Earle J. Walker, Executive Director
Regional Alliance for Small Contractors

Lash Green, Director, Office of Business & Job Opportunity
Port Authority of NY & NJ

Cathy Pagano, Director, Continuing & Professional Education
Pace University

Facilitated and Coordinated by

THE Regional Alliance FOR Small Contractors
Building Tomorrow's Partnerships Today!

Sponsored By

THE PORT AUTHORITY OF NY & NJ

Pace University Official School Seal
Continuing Ed. Code # C-1420

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/15/2010

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies)must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER

Willis of New York, Inc.
26 Century Blvd.
P. O. Box 305191
Nashville, TN 37230-5191

CONTACT NAME:
PHONE (A/C, NO, EXT): 877-945-7378 FAX (A/C, NO): 888-467-2378
E-MAIL ADDRESS: certificates@willis.com

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A:	National Fire Insurance Company of Hartfo	20478-001
INSURER B:	Valley Forge Insurance Company	20508-001
INSURER C:	Transportation Insurance Company	20494-002
INSURER D:		
INSURER E:		
INSURER F:		

INSURED

HAKS Engineers, Architects, and Land Surveyors, P.C.
40 Wall Street
11th Floor
New York, NY 10005

COVERAGES **CERTIFICATE NUMBER: 14899526** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADD'L INSRD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY	Y	N	2091435469	12/11/2009	12/11/2010	EACH OCCURRENCE	$ 1,000,000
	X COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurence)	$ 1,000,000
	CLAIMS-MADE X OCCUR						MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$ 2,000,000
	POLICY X PRO-JECT X LOC							$
B	AUTOMOBILE LIABILITY	N	N	2091436010	12/11/2009	12/11/2010	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	ALL OWNED AUTOS / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS / X NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
								$
C	UMBRELLA LIAB X OCCUR	N	N	2091436055	12/11/2009	12/11/2010	EACH OCCURRENCE	$ 10,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$ 10,000,000
	DED RETENTION $							$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N	N/A	N	2091435973	12/11/2009	12/11/2010	X WC STATUTORY LIMITS / OTHER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. EACH ACCIDENT	$ 1,000,000
							E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach Acord 101, Additonal Remarks Schedule, if more space is required)

Re: Request for Proposals for Performance of Expert Professional Project Management Services on a "Call-in" Basis for 2011, 2012 & 2013 & 2014 (RFP #22388).

The insurance carrier shall not, without obtaining the express advance permission from the General of the Port Authority, raise any defense involving in any way the jurisdiction of the tribunal over the person of the Port Authority, the immunity of the Port Authority, its Commissioners, Officers, agents or employees, the governmental nature of the Port Authority, or the provisions of any statutes respecting suits against the Port Authority.

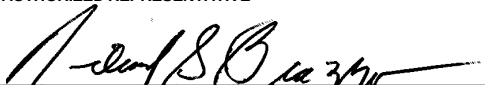
CERTIFICATE HOLDER

Port Authority of New York & New Jersey
Attn: RFP Custodian
One Madison Avenue, 7th Floor
New York, NY 10010

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



Coll:3157065 Tpl:1015777 Cert:14899526

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AGENCY CUSTOMER ID: 631055

LOC#:

ADDITIONAL REMARKS SCHEDULE

AGENCY	NAMED INSURED
Willis of New York, Inc.	HAKS Engineers, Architects, and Land Surveyors, P. 40 Wall Street 11th Floor New York, NY 10005
POLICY NUMBER See First Page	
CARRIER: See First Page / NAIC CODE	EFFECTIVE DATE: See First Page

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: 25 FORM TITLE: CERTIFICATE OF LIABILITY INSURANCE

It is agreed that the Port Authority of New York and New Jersey are included as Additional Insureds as respects to General Liability, but solely in regards to work being performed by or on behalf of the Named Insured in connection with the job described herein.

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ACORD CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 10/15/2010

PRODUCER
WHITEHORN FINANCIAL GROUP, INC
44 Main Street, Suite 3
Millburn, NJ 07041
(973) 564-9330

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
HAKS Engineers, Architects and Land Surveyors, PC; HAKS Engineers, PC
40 Wall Street, 11th Floor
New York, NY 10005

INSURERS AFFORDING COVERAGE	NAIC#
INSURER A: CNA	20443
INSURER B:	
INSURER C:	
INSURER D:	
INSURER E:	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
		GENERAL LIABILITY				EACH OCCURRENCE	$
		COMMERCIAL GENERAL LIABILITY				DAMAGE TO RENTED PREMISES (Ea occurence)	$
		CLAIMS MADE ☐ OCCUR ☐				MED EXP (Any one person)	$
						PERSONAL & ADV INJURY	$
		GEN'L AGGREGATE LIMIT APPLIES PER:				GENERAL AGGREGATE	$
		POLICY ☐ PRO-JECT ☐ LOC ☐				PRODUCTS - COMP/OP AGG	$
		AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT (Ea accident)	$
		ANY AUTO				BODILY INJURY (Per person)	$
		ALL OWNED AUTOS				BODILY INJURY (Per accident)	$
		SCHEDULED AUTOS				PROPERTY DAMAGE (Per accident)	$
		HIRED AUTOS					
		NON-OWNED AUTOS					
		GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
		ANY AUTO				OTHER THAN AUTO ONLY: EA ACC	$
						AGG	$
		EXCESS/UMBRELLA LIABILITY				EACH OCCURRENCE	$
		OCCUR ☐ CLAIMS MADE ☐				AGGREGATE	$
							$
		DEDUCTIBLE					$
		RETENTION $					$
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY				WC STATU-TORY LIMITS ☐ OTH-ER ☐	
		ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?				E.L. EACH ACCIDENT	$
		If yes, describe under SPECIAL PROVISIONS below				E.L. DISEASE - EA EMPLOYEE	$
						E.L. DISEASE - POLICY LIMIT	$
		OTHER Professional Liability	AEH 28-823-70-85	03/30/10	03/30/11	$5,000,000 Per Claim and Aggregate	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

Request for Proposals for Performance of Expert Professional Project Management Services on a "Call-in" Basis for 2011, 2012, 2013 & 2014 (RFP #22388)

CERTIFICATE HOLDER

Port Authority of New York & New Jersey
One Madison Avenue, 7th Floor
New York, NY 10010
Attn: RFP Custodian

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE
Maureen Andrews

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October 13, 2010

SUBJECT: REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388 – ADDENDUM #1)

Dear Sir or Madam:

The Port Authority of New York & New Jersey hereby amends the subject Request for Proposal (RFP) letter, dated September 30, 2010, as follows:

The following questions were received from an RFP recipient(s). The Authority provided the corresponding answers:

1. Please clarify what is required for III.C.3 "table that provides a summary of project experience for key personnel on this project with respect to number of projects and project costs."

It is anticipated that the table shall provide a summary of the information presented in the resumes including project costs.

2. In light of the fact that this is an on-call proposal to provide Project Management Services, is it necessary to have a license to practice Architecture or Engineering services in the State of New York and New Jersey?

Yes.

The due date for receipt of proposals remains 2:00 p.m. on October 21, 2010.

If you have any questions, please contact Ms. Tracy Tiernan at ttiernan@panynj.gov.

Sincerely yours,

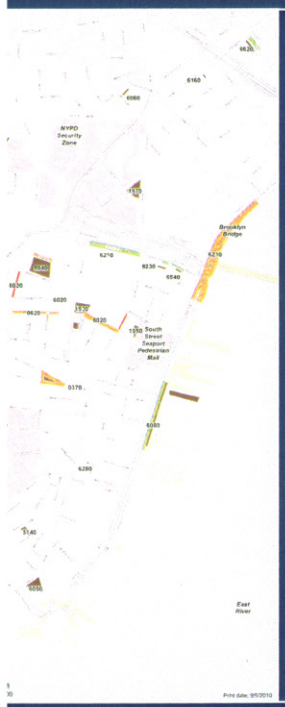
Tim Volonakis
Manager
Professional, Technical & Advisory Services Division
Procurement Department

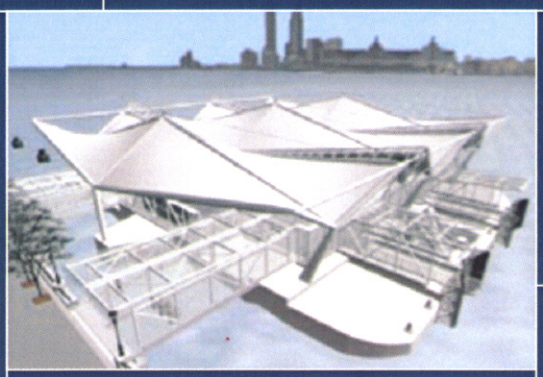
Acknowledged by Jeffrey Terzakis, Senior Vice President

m and
n Management, P.C.
ompany

fessional
nagement

Call-in Basis
014





L | RFP # 22388 | OCTOBER 21, 2010

THE PORT AUTHORITY
OF NEW YORK & NEW JERSEY

LiRo Program and Construction Management, P.C.
A LiRo Group Company
Three Aerial Way, Syosset, NY 11791 Telephone 516.938.5476 Facsimile 516.938.5491

October 21, 2010

Port Authority of NY & NJ
One Madison Avenue, 7th Floor
New York, NY 10010
Attention: RFP Custodian

Re: RFP Number 22388

Dear Sir or Madam:

It is our pleasure to submit one original and six copies, and one CD of our proposal for the Performance of Expert Professional project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2103 and 2014 to the Port Authority of New York and New Jersey (Authority). The LiRo team's qualifications and experience are uniquely matched to the Authority's requirements. We offer primary strengths in Professional Project/Program Management and On Site Inspection, Construction Staffing, Scheduling, Cost Estimating, Design/Constructability Review, and Value Engineering augmented by a full service architectural, engineering and environmental staff.

We are currently performing work for the Authority on a number of Call-In contracts for 2006-2010 and have demonstrated ***LiRo's ability to be immediately responsive and provide the depth of resources to address all staffing needs placed upon us by the Authority***. Ranked #3 by New York Construction magazine among the region's Top Government Service Buildings Contractors and nationally among the Top 30 Construction Managers by Engineering News-Record, LiRo has one of the largest management resource pool in the New York and Northern New Jersey region.

LiRo specializes in serving as an extension of staff geared to delivering successful projects in the Metro Area for both infrastructure and building programs.

Our commitment to meeting the needs of public clients is unequivocal and backed by our **Project Executive, Luis Tormenta, P.E.** As a former Commissioner for the New York City Department of Design and Construction, Mr. Tormenta has successfully managed a diverse range of complex, critical construction involving buildings, institutional facilities and infrastructure within the Metropolitan area. In that role, he was also a client utilizing on-call contracts and has the unique experience with these types of services both as client and provider.

LiRo's proposed **Program Manager, Michael Burton, P.E.,** is a recognized industry leader who has managed some of the nation's largest public and private capital program portfolios. One of his significant public sector accomplishments was his management of the World Trade Center 9/11 Recovery, the largest peacetime mobilization of the design and construction industries in U.S. history, for which he received the Engineering News-Record's Award of Excellence, the industry's highest award.

Supplementing our significant resources are construction professionals from the following firms: **McLaren Engineering, PMA Consultants, LLC, (MBE), Works-In-Progress Associates, LLC (WBE), and DY Consultants (MBE).**

We believe that the LiRo team members have demonstrated our capabilities to deliver quality professional services for the Authority in a cost-effective manner. If selected, LiRo will continue to prove our value to the Authority including our experience as:

- A major New York/New Jersey based firm presently managing capital construction projects associated with over $10B of investment in transportation, infrastructure and public buildings.
- A firm successfully serving PANYNJ for over 15 years.
- A firm with extensive experience in all five of the Authority lines business outlined in the RFP – Aviation, Tunnel, Bridges and Terminals, Port Commerce, PATH and World Trade Center.
- A firm with well versed in cutting edge technology applying BIM and Risk Analysis to all of our major projects.
- A firm intent on continuing its commitment to the Authority to provide high-quality, cost-effective services.

We acknowledge the receipt of Addendum 1, dated October 13, 2010. We look forward to continuing our work for the Authority in the years ahead under this contract. I can be reached at 516.214.8186 should you wish to discuss our proposal in more detail or require additional information.

Very truly yours,

Harvey S Sands

Harvey S. Sands
Executive Vice President and Vice Chairman

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D. Specific Relevant Experience

E. Proposed Management Approach

F. Hourly Rates

G. M/WBE Participation

H. Firm's Affiliates

I. Conflict of Interest

J. Terms and Conditions

ATTACHMENT B

PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014

AGREEMENT ON TERMS OF DISCUSSION

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority's Freedom of Information Policy and Procedure adopted by the Port Authority's Board of Commissioners on November 20, 2008, which may be found on the Port Authority website at: *http://www.panynj.gov/corporate-information/pdf/Freedom-of-Information-Policy-and-Procedure.pdf*, not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

LiRo Program and Construction Management, P.C.

(Company)

Harvey G Sands

(Signature)

Executive Vice President/Vice Chariman

(Title)

10/11/10

(Date)

ORIGINAL AND PHOTOCOPIES OF THIS PAGE ONLY.
DO NOT RETYPE.

ATTACHMENT C

COMPANY PROFILE

REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

1. Company Name (print or type):
   LiRo Program and Construction Management, P.C.

2. Business Address (to receive mail for this RFP):
   3 Aerial Way, Syosset, NY 11791

3. Business Telephone Number: (516) 214-8186

4. Business Fax Number: (516) 938-5492

5. Firm website: www.liro.com

6. Federal Employer Identification Number (EIN): [redacted]

7. Date (MM/DD/YYYY) Firm was Established: 03 / 01 / 94

8. Name, Address and EIN of Affiliates or Subsidiaries (use a separate sheet if necessary):
   See attached Affiliate Firms

9. Officer or Principal of Firm and Title:
   Mr. Harvey S. Sands, Executive Vice President & Vice Chairman

10. Name, telephone number, and email address of contact for questions:
    Mr. Harvey S. Sands, 516.214.8186 , sandsh@liro.com

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? ☐ Yes ☒ No

    If yes, please attach **Port Authority** certification as a part of this profile.

    If your firm is an M/WBE not currently certified by the Authority, see the Authority's web site – http://www.panynj.gov/business-opportunities/supplier-diversity.html, to receive information and apply for certification.

List of Firm's Affiliates

LiRo Engineers, Inc.
EIN [redacted]
Type of Business: For profit
3 Aerial Way
Syosset, NY 11791
Telephone: 516-938-5476
Fax: 516-938-5491

LiRo Architects + Planners, P.C.
EIN: [redacted]
Type of Business: For profit
111 Broadway – Suite 501
New York, NY 10006
Telephone: 212-563-0280
Fax: 212-563-1841

LiRo Program and Construction Management, P.C.
EIN: [redacted]
Type of Business: For profit
3 Aerial Way
Syosset, NY 11791
Telephone: 516-938-5476
Fax: 516-938-5491

LiRo Consulting Engineer, P.C.
EIN: [redacted]
Type of Business: For profit
3 Aerial Way
Syosset, NY 11791
Telephone: 516-938-5476
Fax: 516-938-5491

LiRo Contractors, Inc.
EIN: [redacted]
Type of Business: For profit
3 Aerial Way
Syosset, NY 11791
Telephone: 516-938-5476
Fax: 516-938-5491

LiRo Architects & Engineers West, P.C.
(New Jersey)
EIN: [redacted]
Type of Business: For profit
111 Broadway, Suite 501
New York, NY 10006
Telephone: 212-563-0280
Fax: 212-563-1841

LiRo Architects & Engineers, P.C.
(Connecticut)
EIN: [redacted]
Type of Business: For profit
111 Broadway, Suite 501
New York, NY 10006
Telephone: 212-563-0280
Fax: 212-563-1841

LiRo Architects + Engineers, P.C
(Pennsylvania)
EIN: [redacted]
Type of Business: For profit
111 Broadway, Suite 501
New York, NY 10006
Telephone: 212-563-0280
Fax: 212-563-1841

LiRo Program and Construction Management, Inc. (California)
EIN: [redacted]
Type of Business: For profit
3 Aerial Way
Syosset, NY 11791
Telephone: 516-938-5476
Fax: 516-938-5491

Qualification and Experience of Staff

C

1. Key Personnel Assigned

The LiRo team is uniquely qualified to provide project management services to support the Authority. We offer The Authority unmatched project management experience for multi-billion dollar capital programs. Brief highlights of the Executive Management experience are provided below followed by a key personnel experience matrix.

1. Entities – Similar Services
2. Specific Relevant Experience

Luis Tormenta, P.E., Project Executive – Mr. Tormenta has over 25 years experience in successfully managing a diverse range of complex, critical, public construction programs and projects involving buildings, institutional facilities and infrastructure in the New York Metropolitan area. A former Commissioner of NYC's Department of Design and Construction under Mayor Guliani for four years prior to joining LiRo in 2000, Mr. Tormenta was responsible for New York City's buildings and infrastructure capital improvement program, with an annual budget in excess of $3B. Since joining LiRo, he has served as CEO, Chief Operating Officer and Group Leader of LiRo's Program and Construction Management projects. A particularly noteworthy assignment awarded to LiRo and led by Luis Tormenta, P.E. in June 2008 involved an assessment of the schedule, budget and challenges for the overall World Trade Center Construction Program (Program). The report identified the key challenges confronting the project and then presented a risk assessment of the Program schedule and budget. The report was provided to the Executive Director of the Port Authority in six weeks and was the basis of a report provided to Governor Patterson in the Fall of 2008.

For this project, Mr. Tormenta will be responsible for the overall coordination and management of LiRo's work at the executive level and for ensuring appropriate delivery of construction management personnel.

Michael Burton, P.E., Project/Contract Manager – Mr. Burton is a recognized industry leader who has managed some of the nation's largest public and private capital program portfolios. He has served as Senior Vice President and National Operations Manager responsible for $100B of design and construction work in aviation, bridge, highway, transit and infrastructure programs. As Executive Deputy Commissioner at the NYC Department of Design and Construction (DDC), he was responsible for the capital programs for the majority of New York City's agencies. At DDC, Mr. Burton was responsible for a capital construction portfolio of $4.1B, consisting of over 900 buildings, roadway, water and sewer mains projects managed by 1,300 employees spanning the Giuliani and Bloomberg administrations. One of his significant public sector accomplishments was

his management of the World Trade Center 9/11 Recovery, the largest peacetime mobilization of the design and construction industries in U.S. history, for which he received the Engineering News-Record's Award of Excellence, the industry's highest award.

His New York City project portfolio totals approximately $10B in the following sectors:

- Infrastructure $6.2B
  - Dept. of Environmental Protection (Sewers) $995M
  - Transportation/Highways $1.5B
  - Education $954M
  - Underground Storage Tanks $174M
  - Transit $6.5B

2. Organizational Chart

Program/Project Managers/Project Control Staff

THE PORT AUTHORITY OF NEW YORK & NEW JERSEY

Project Executive
Luis Tormenta, PE

Program/Project Contract Manager
Michael Burton, PE

Senior Program/ Project Managers

M. Turton, PE*	R. Kruezer*	J. Cohen, AIA	M. Mascaro
J. Ahrens, PE*	R. Wesolowski, PE*	A. Dolce, AIA	G. Psillos
G . Althoff*	R. Wilson, PE*	B. Fogel	B. Radafshar
V. Valdemira*	C. Zanoni*	J. Fox	R. Tilleli
M. Rafat, PE*	B. Aidikoff, PE	F. Franco, AIA	V. Wagh, PE*
R. Busch, PE*	M. Bailey, PE	D. Hall	D. Yap, P.E.
D. Bornkamp, PE*	G. Balog, AIA	K. Holmstrom, PE	J. Green, PE
B. Markowitz, PE*	M. Bendetti, PE	J. Hurley, PE	B. Moody, PE
D. Owen, PE*	E. Bifulco, PE	A. Johansen	
L. Deprima, PE*	L. Blond, PE	M. Levi, AIA	

Schedulers

R. Barsky*	A. Chattaway
A. Carrion*	J. Apostolou
G. Graceffa*	P. Patel
G. Gifford	S. Janjua
P. Kalmus	D. McBaine
	Z. Walters

Cost Engineers/Estimators

E. Frysztacki, PE*	W. Curran
A. Paladino, PE*	P. Daulatini
M. Yong*	W. Egbert
	S. Pagani

Program/Project Managers

R. Abdo	T. Colabella	M. Iannuzzi, PE	S. Smolenski, P.E.
A. Achouri, PE	E. Comilloni	E. Sartoris	L. Mastropieri
M. Albergo, PE	L. Comunelli, PE	N. Silver, RA	S. Hun Cho
A. Ansari, PE	J. Eckoff, PE	P. Singh	P. Hakimian
S. Asquith	J. Enang	M. Swanson	M. Daniels, PE
M. Belling, PE	J. Eskridge	L. Venechanos	C. Mase, PE
M. Byrnes	J. Gaspari	W. Wall	
A. Caggiano	T. Gibbons, RLA		

LiRo DY Consultants
PMA Consultants McClaren A1 Works-In-Progress

Key Personnel Experience Matrix

EXECUTIVE MANAGEMENT	***PROJECT EXPERIENCE/PROJECT COSTS***
Luis Tormenta, P.E.	PANYNJ CM Call-In Contract, 2006-2010 ($900M) NYCDDC Lower Manhattan Infrastructure Recovery ($20M) NYCDDC Buildings/Infrastructure ($500M)
Michael Burton, P.E.	NYCDDC World Trade Center 9/11 Recovery ($550M) New York City Bridge/Highways ($1.1B) Logan International Airport ($1B)
SR. PROJECT/ PROGRAM MANAGERS	**PROJECT EXPERIENCE/PROJECT COSTS**
Peter Turton, P.E.	#7 Line Extension ($2B) Jamaica Station Intermodal Terminal Complex ($316M) Tubelines Project, London ($100M)
James Ahrens, P.E.	PANYNJ JetBlue Airlines Term 5 & Parking Garage at JFK Airport ($900M) Renovation of MTA/NYCT Bus Depots ($7M) Improvements to Yankee Stadium and Shea Stadium ($6M)
Gordon Althoff	LMDC Lower Manhattan Construction Command Center ($15M) Fiterman Hall, Borough of Manhattan Community College ($54M) Queens Family Court ($104M)
Vincent Valdemira	Metro-North Hudson Line Stations Rehabilitation ($70M) Yankee Stadium Redevelopment/Rail Transportation Coordination ($144M) Reactivation of Staten Island Railroad ($40M)
Mike Rafat, P.E.	#7 Line Extension ($2.3B) Lower Manhattan Construction Command Center ($9M) Yankee Stadium Redevelopment ($90M)
Raymond Busch, P.E.	MTA East Side Access, LIRR Connection to Grand Central Terminal ($6.3B) MTA East Side Access, CM Services for Arch Street Yard ($77M) Nassau County Government Operations Center ($36M)
Donald Bornkamp, P.E.	MTA NY City Transit ($2B) Rikers Island – Facilities Upgrades and Renovations ($86M) NYCDOS Queens Garage and Salt Shed ($33M)
Bernard Markowitz, P.E.	NYCDOT W158th Street Maintenance and Repair Facility ($28M) NYCDOS Requirements Contract ($8.5M) NYCDOS Incinerators Abatement and Demolition ($10M)
Douglas Owen, P.E.	CM and Inspection Services Throgs Neck Bridge ($50M) CM and Inspection Services Whitestone Bridge ($41M) MTA-Bridge and Tunnel On-Call Construction Inspection Services ($1.5M)
Leonard Deprima, P.E.	NYCDDC Lower Manhattan/WTC Program Management ($9M) Erie County Department of Public Works Program Management ($50M) ECIDA GM Access Road ($2M)

Robert Kreuzer	JetBlue Warehouse Demolition/Terminal 5 Remediation ($900M) New York City Transit Asbestos Consultant Services ($20M)
Martin Wesolowski, P.E.	JetBlue Phase I/II Assessments and Geotechnical Studies ($25M) DSNY Incinerator/Garage Demolition Projects ($6.2M) TBTA Environmental Management and Analysis ($450K fee)
Ronald Wilson, P.E.	NYCHA Requirements Contract ($60M) NJ School Construction Corporation Program Management ($500M) Rockaway Sewage Treatment Plant ($20M)
Christopher Zanoni	JetBlue Warehouse Demolition/Remediation ($25M) PANYNJ Asbestos and Lead Paint Consulting Services ($200K fee) PANYNJ CM Call-In Contract, 2006-2010 ($900M)
PROGRAM/PROJECT MANAGERS	**PROJECT EXPERIENCE/PROJECT COSTS**
A. Achouri, P.E.	Port Newark Comprehensive Traffic Study ($1M) Intelligent Transportation System in Lower Manhattan ($6M) Rehabilitation of Bridge Joints on the Brooklyn-Queens Expressway Triple Cantilever Structure($2M)
Michael Albergo, P.E.	Lower Manhattan Construction Command Center Coordination ($9M) East 180th Street Station Rehabilitation ($20M)
A. Ansari, P.E.	Port Newark/Elizabeth Marine Terminal ($1M) Continental Airlines Terminal C Redevelopment ($1M) George Washington Bridge Bus Station ($1M)
L. Communelli, P.E.	Traffic Engineering Services for JFK, EWR, and LGA airports ($78M) Reconstruction of Gun Hill Road Bridge ($8M) Replacement of Steinway St. Bridge over Grand Central Pkwy ($18M)
James Eckoff, P.E.	Traffic Engineering Services for JFK, EWR, and LGA Airports ($78M) Long Island Rail Road – Rehabilitation of Suffolk County Bridges ($2M) Staten Island Ferry, Pier 1 Maintenance Facility ($1.4M)
PROJECT CONTROLS	**PROJECT EXPERIENCE/PROJECT COSTS**
Robert Barsky	New York City Transit Authority On-Call Technical Inspections ($5M) NYCHA CM/Build Requirements Contracts ($250M)
Anthony Carrion	MTA – Long Island Rail Road East Side Access ($6.3B) NYSDOT Bridge Reconstruction on Staten Island Expressway ($5M)
Edward Frysztacki, P.E., CCE	NYCDOT W158th Street Maintenance and Repair Facility ($28M) NYCHA CM/Build Requirements Contracts ($250M)
Giovanni Graceffa	Continental Airlines Interim Regional Jet Operations ($1M) MTA – NY City Transit East 180th Street Maintenance Facility ($46M)
Alfio Paladino, P.E.	NYCSCA Emergency Response ($263M) Brookhaven National Laboratory ($195M)
Mireya Yong	Amboy Neighborhood Center ($44M) Rikers Island GRVC Addition ($90M)

Subcontractors

McLaren Engineering Group

McLaren distinguishes itself as one of the nation's leading experts in managing the design and development of port and all types of waterfront structures. As a recognized leader in the waterfront facilities development industry, McLaren has provided management, design, engineering, and inspection services for many of these type projects nationwide. Waterfront / shoreline development projects are particularly geared for McLaren as they can cover many of the work elements and aspects of such a project given they are a multidiscipline consulting firm. Their depth of experience and expertise encompass all aspects of port and marine design and construction.

McLaren's professional staff includes specialists in coastal engineering, who are expert in wave analysis, wave attenuation, sediment transport, environmental loading, and structural coastal interaction. McLaren provides port and waterfront facility master planning, development/design, and design build RFP document preparation services. Port terminals and marine layout planning, dry bulk handing/conveying, container terminal feasibility studies/design, TEU loading/unloading analyses, RO-RO and LO-LO planning/design, liquid bulk transshipment planning and design, cruise ship terminal design, all are within the realm of expertise offered by McLaren's Marine Division. Through their extensive experience in this rather specialized field, they can offer expertise in cost estimating, life cycle analysis, and construction supervision. Their underwater inspection capabilities provide assurance that construction is carried out in conformance with plans

PMA Consultants LLC (MBE)

PMA, a 100% minority-owned firm, was first awarded an on-call consulting contract with the Port Authority Engineering Department in 1998. Since then, they have performed many different functions under that contract, including:

- Implementation of Project management Systems for Engineering and the Chief Operating Officer
- Development of custom software applications
- Reporting for project management, Capital Budget management and data integrity verifications
- Schedule reviews for the Goethals Bridge Program
- Estimating for the $2.2B World Trade Center Transportation Hub
- Value Engineering for the $2.2B World Trade Center Transportation Hub

PMA was so successful in its implementation of these new customized systems that they continued as the administrators of these systems with PMA staff working for the Port Authority central project controls. They also continue to bring in new systems and upgrade and enhance the existing systems.

Due to its successful system implementation for Engineering, PMA was hired by the Chief Operating Officer of the Agency to replace their Capital Program Management System (Captrak) with a Primavera P3e/MyPrimavera system that is fully integrated with Engineering's project controls system.

As part of this assignment, PMA brought many other innovations to the Port Authority, including:

- Complex, custom-designed, graphical performance reports seamlessly accessed from the Primavera toolbar.
- Automation of cost and schedule data into a monthly progress report previously done by project managers in Microsoft Word.
- Creation of a new cost-update cycle that made actual cost data available in Primavera within two weeks of month end closing, six weeks earlier.
- Creation of a new schedule-update cycle that provided project managers with a variance report after they provided update info to the scheduler. This control measure dramatically improved the accuracy of the schedule data.
- Recommendations on ways to identify and reconcile data inconsistencies between various Port Authority legacy databases.

The Port Authority asked PMA to review complex construction bid packages to help expedite their multi-billion dollar three-year capital program. PMA served on several committees, including a Design Quality Committee charged with improving and documenting design quality procedures in accordance with ISO 9000 standards and best practices. PMA used the lessons learned from their bid document review efforts to recommend several innovative solutions that are currently under consideration. PMA drafted special conditions contract language related to schedule and submittal management, incorporating best practices customized to the Port Authority's business processes.

Works-In-Progress Associates, LLC (WBE)

WPA works closely with clients in a comprehensive team and strives to build consensus among all stakeholders to create a solid structure for effective decision making and project execution. Services include strategic planning, community outreach, agency liaison, project team assembly, contract negotiation and administration, procurement, design evaluation, design and technical review, construction supervision, project phasing, inspections, project close-out and quality assurance/quality control. WPA is a certified Woman Owned Business with New York State Department of Economic Development, The Port Authority of New York & New Jersey, Dormitory Authority State of New York, New York City School Construction Authority, and NYC Department of Small Business Services.

DY Consultants (M/DBE)

DY Consultants are specialists in aviation planning and engineering. Relevant experience with the Port Authority includes as a subconsultant for on-call assignments at LGA and JFK airports. DY Consultants, a certified M/DBE firm, provides a broad spectrum of airport design, engineering services, and planning ranging from grant procurement, master planning, airport layout plan development, and environmental review to the final design, construction management, inspection, program management and final closeout. DY utilizes its expertise by providing consulting support to airports in operations and management issues. The majority of their work involves projects funded with Federal AIP grants and State transportation grants. Their background in administering and implementing Capital Improvement Programs has aided Airport Sponsors in procuring much needed funds for maintenance, improvements and expansion.

3. Resumes

Executive Management

Luis Tormenta, P.E.

PROJECT EXECUTIVE

EDUCATION	B.S., Civil Engineering, Manhattan College, 1982
REGISTRATION / CERTIFICATIONS	Board Member - ACE Mentor Program Professional Engineer, NY Chi Epsilon (Civil Engineer Honor Society) Professional Engineer, NY
YEARS WITH THIS FIRM	10
YEARS WITH OTHER FIRMS	20

A highly accomplished leader in the region's design and construction industry, Mr. Tormenta has over 30 years experience and has lead many of New York City's complex construction projects and the administration of several public capital programs. The founding Commissioner of the New York City Department of Design and Construction (DDC), Mr. Tormenta was appointed by Mayor Rudolph W. Giuliani to create and manage the "super construction agency." As Commissioner of DDC, he was responsible for New York City's building and infrastructure capital improvement program valued at $4B.

As LiRo's current CEO, Mr. Tormenta is responsible for the overall strategic direction and management of The LiRo Group, with a focus on maintaining high quality service standards while increasing market share and expanding services regionally. Mr. Tormenta prides himself as a skilled hands-on manager and, on selective projects, is directly involved in the management and oversight of LiRo's work. He has led many successful CM project teams responsible for large-scale, high-profile and emergency public projects. His knowledge of the New York Metropolitan design and construction market has been invaluable to many of LiRo's clients.

With more than 23 years of experience managing a diverse range of public facility and infrastructure projects, Mr. Tormenta shares his knowledge teaching graduate level construction management for the Executive 21 Graduate Program at Brooklyn Polytechnic Institute as an adjunct professor. Representative projects include:

PANYNJ CM Call-In Contract 2006-2010, Project Executive: Oversight responsibilities for various projects under this call-in contract. Significant projects under this contract included Terminal 5 at JFK Airport, an elevated connector to the AirTrain, and a new 1500 space, 6-level parking garage. The project also involves the construction of an elevated Arrivals Roadway, new Hydrant Fuel System, Baggage Handling System, 15"-17" concrete apron pavement, and connection to the historic Saarinen Terminal. (PANYNJ, $900M, 2007-2009)

Lower Manhattan Infrastructure Recovery Coordinator, Project Executive: After the events of 9/11 in New York City, LiRo was assigned to the coordination of the extensive amount of electric, telecommunications, steam, gas and subway work that was being performed 24/7 in the vicinity of the WTC. LiRo's responsibility had been expanded since July 2002 to include the coordination of all infrastructure work in Manhattan below Canal Street. LiRo coordinated construction activities in the region with all utilities, public agencies and private owners. (NYCDDC)

New York City Housing Authority, Project Executive: This project was a $265M construction program to rehabilitate and construct new facilities in the New York City region. All construction contracts were bid and negotiated by LiRo. (2004-present)

New York City Department of Design and Construction, Project Executive: $500 million dollars of construction work where construction contracts were directly held by LiRo:

- GRVC Jail Addition ($110M)
- NYC Fire Training Academy ($55M)
- EMS Station Program ($75M)

- Yankee and Shea Stadium Reconstruction ($15M)
- Transportation Facilities ($15M)

(2000-Present)

Dormitory Authority State of New York, Project Executive: $150M in construction projects including:

- City College of Architecture ($55M)
- Office of Chief Medical Examiner ($15M)
- Bernard Fineson Hospital ($50M)
- NYS Civil Court ($22M)
- Bronx Psychiatric Center ($50M)

(2000 - Present)

Broadway Street Improvement Project, Project Executive: This project was a $10M reconstruction and beautification of Broadway from Park Place to Water Street. (Alliance for Downtown New York, 2003-2005)

Commissioner, NYC Department of Design and Construction (DDC): Mr. Tormenta was appointed by Mayor Rudolph W. Giuliani to create and manage the "super construction agency" with an annual operating budget of over $86M and a capital budget in excess of $3B, representing over 1,200 projects and 1,400 employees. He was charged with the delivery of New York City's buildings and infrastructure capital programs, including facilities for city government and public functions, roadways, sewers, water mains and schools. He was also responsible for developing the organizational structure and operating methodology for the agency. Some key achievements included:

- Integrated the design and construction operations of three independent agencies into a cohesive operating organization – DGS, DEP, and DOT.
- Reduced project delivery time frames and increased annual productivity.
- Automated the majority of the business practices and established a computerized project management and geographical information system.
- Created a comprehensive training program for agency staff.
- Instituted agency performance measurement standards.
- Established and nurtured a client service philosophy.
- Implemented new project delivery system focused on schedule, quality and budget.

Assistant Commissioner, NYC Department of General Services: Mr. Tormenta was responsible for managing the Bureau of Construction and Program Management with a capital portfolio of over 700 projects valued in excess of $2.7B, an annual operating budget over $25M, and a staff of 300+. Some key achievements included recasting the Division into a program management client service organization and reducing project backlog through "bundling," Design/Build and CM/Build project delivery methods.

Employment History:

The LiRo Group (2000 to Present)
Chief Executive Officer/ Vice Chairman
New York City Department of Design and Construction (1995-1999)
Commissioner
New York City Department of General Services (1992-1995)
Assistant Commissioner

Michael Burton, P.E.

PROGRAM/PROJECT CONTRACT MANAGER

Mr. Burton is a recognized industry leader who has managed some of the nation's largest public and private capital program portfolios. He has served as Senior Vice President and National Operations Manager responsible for $100B of design and construction work in aviation, bridge, highway, transit and infrastructure programs. As Executive Deputy Commissioner at the NYC Department of Design and Construction (DDC), he was responsible for the capital programs for the majority of New York City's agencies. At DDC, Mr. Burton was responsible for a capital construction portfolio of $4.1B, consisting of over 900 buildings, roadway, water and sewer mains projects managed by 1,300 employees spanning the Giuliani and Bloomberg administrations. One of his significant public sector accomplishments was his management of the World Trade Center 9/11 Recovery, the largest peacetime mobilization of the design and construction industries in U.S. history, for which he received the Engineering News-Record's Award of Excellence, the industry's highest award.

EDUCATION	Ph.D., honoris causa, Manhattan College, M.B.A., Fordham University BE, Manhattan College
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY
YEARS WITH THIS FIRM	1
YEARS WITH OTHER FIRMS	19

His New York City project portfolio totals approximately $10B in the following sectors:

- Infrastructure $6.2B
- Dept. of Environmental Protection (Sewers) $995M
- Transportation/Highways $1.5B
- Education $954M
- Underground Storage Tanks $174M
- Transit $6.5B

Representative project experience includes:

Senior Vice President and National Operations Manager, The LiRo Group: Responsible for high-profile projects on East Coast and West Coast including serving as *Senior Management Consultant* to Los Angeles Unified School District's $12B K-12 Capital Program, and *Project Executive* for CUNY Baruch College's $170M Field Building renovation and Southern Connecticut University's new $50M Laboratory Building.

Senior Vice President and CM/PM National Operations Manager: Responsible for the operations of a national 1,400-person construction division with a portfolio valued at more than $100B of design and construction projects. Additionally, Mr. Burton managed the firm's New York engineering and architectural operations. Significant projects include: UCLA Westwood Replacement Hospital ($1B), Harvard University Laboratory ($1B), Harvard University Cultural Program ($350M), McGill University Health Center ($1.8B), Atlanta-Hartsfield Airport ($6.7B), GSA Brooklyn Courthouse ($750M), and Los Angeles Unified School District ($1.5B).

Executive Deputy Commissioner, New York City Department of Design and Construction: Responsible for the day-to-day operations of agency that designs and builds the majority of New York City's public buildings, roads, water and sewer projects with annual budget exceeding $1.1B in 2002. Managed a staff of 1,300 design and construction professionals who executed a portfolio of design and construction projects valued at over $4.1B. Planned and implemented initiatives to execute Mayor Giuliani's mandate to create a more efficient capital construction program. Acted as project executive and on-site project manager for several high-profile emergency projects, including management of the World Trade Center Recovery, starting on 9/11 ($550M). Other significant projects include: Mayor/City Council Schools Program ($644M), Rikers Island Facilities ($420M) and Safe Streets Program ($177M). Infrastructure accomplishments resulted in 2,708 lane miles milled, 537 lane miles of roadway, 638 miles of water mains, 440 miles of reconstructed sewers, and 8,500 new sewer connections ($1.6B).

Projects (Selected)

Notable New York City Projects:

· Columbia University Capital Program, $1.4B
· Mayor/Council Schools Program, $750M
· Rikers Island New Buildings & Fire/Life Safety Upgrades, $320M

Aviation Projects:

· Hartsfield-Jackson Atlanta Int'l Airport, $6.7B
· Fort Lauderdale Airport, $1.5B
· Logan International Airport, $1B
· O'Hare International Airport, $495M
· Baton Rouge Airport, $205M

Bridges/Roadway Projects:

· Biloxi Bay Bridge, $338M
· Bay St. Louis Bridge, $267M
· Robert Moses Causeway, $38M

Rail/Port Projects:

· TransBay Transit Center, $4.1B
· NJ Transit East End Concourse, $110M
· Port Imperial Ferry Terminal, $35M
· NYC Transit 74th Street/Roosevelt Avenue Station, $115M

World Trade Center: World Trade Center 9/11 Recovery, $550M

Awards

Engineering News-Record - Award of Excellence
New York Building Congress - George A. Fox Award for Public Service
American Council of Engineering Companies (ACEC) - President's Award
American Society of Civil Engineers - Construction Management Award

Boards/Memberships

Member of Mayor Bloomberg's Construction Cost Panel
Board of Directors, NY Building Congress 2003 - 2008
Chairman, Public Buildings Committee, NY Building Congress, 2003 - 2007
Chairman, Infrastructure Committee, NY Building Congress, 2007 - 2008

Media Recognition

CNN, Public Broadcasting Service (PBS), The New York Times, Engineering News-Record, New York Construction Magazine, Atlantic Monthly, Great Projects Film Company, *American Ground: Unbuilding the World Trade Center* by William Langewiesche

Employment History:

The LiRo Group (2009 to Present)
Senior Vice President and National Operations Manager
URS (2002 – 2008)
Senior Vice President and CM/PM National Operations Manager
NYC Department of Design and Construction (1996 – 2002)
Executive Deputy Commissioner
O'Brien Kreitzberg (1989 -1996)
Project Executive/Project Manager

Senior Program/ Project Managers

Peter Turton

SENIOR PROGRAM/ PROJECT MANAGER

Peter Turton is a registered professional engineer and a chartered engineer in the UK with more than 40 years of experience. He is skilled in all aspects of project management implementation with a particular focus on transportation projects both in the United States and abroad, including 14 years in New York City. His experience has been entirely on large-scale complex projects in the $100M to $500M range, either stand-alone or sections of multi-billion dollar programs. He is very familiar and experienced in the delivery of multi-billion dollar projects, including the complexities of working in an operating environment. Through these complex projects he has extensive experience interacting with federal, state and local agencies. Relevant project experience includes:

EDUCATION	M.S., Civil Engineering Soil Mechanics and Foundation Engineering, University of Birmingham, UK B.S., Civil Engineering with honors, University of Birmingham, UK
REGISTRATION / CERTIFICATIONS	30hr STS Curriculum Standard Work Process Procedures Confined Space Training, NY Chartered Engineer, UK Civil Engineering Society, CA Effective Contract Management MTA NYCT Track Safety, NY OSHA 10 Hour Training Course
YEARS WITH THIS FIRM	3
YEARS WITH OTHER FIRMS	39

Port Authority of NY & NJ, World Trade Center Value Engineering Study - Participated in the Washington Group-led value planning services for design, construction and utilization of the permanent PATH Terminal at the World Trade Center. Facilitated melding the common interests of stakeholders and resolving differences to arrive at a series of project improvement alternatives. Washington Group identified and assessed three fundamental concepts of value engineering, namely function, cost and worth. Helped develop alternative ways to achieve the equal function of various elements within the permanent PATH Terminal. Also helped develop a weighted matrix analysis to determine which alternative is the best blend of performance, cost and schedule. Participated in the development of alternatives through sketches, cost estimates, schedule narratives, the substantiation of test data and the development life cycle costs.

No. 7 Subway Line Extension, Program and Construction Management, Project Director -The redevelopment of the West Side Yards is a New York City priority envisioned to result in new high-density neighborhoods, landmark public facilities and more additional floor space within the Manhattan Central Business District (CBD) than all of the plans for Lower Manhattan. Key to the West Side redevelopment is the initiative for accessibility to transit by extending the Number 7 Subway Line from its present terminus at Times Square. New York City's Number 7 Subway Line, known as the Flushing Line, is the system's busiest, linking Queens to Times Square. The planned new 7,000-foot-long tunnel will stretch west and south from Times Square to the Jacob J. Javits Convention Center on West 34th Street and 11th Avenue. (MTA-NYCT, $2.1B)

Work Previous to Joining LiRo includes:

Metropolitan Transportation Authority, Capital Security Program, Project Manager - Task Order-25, a confidential security project under a contract to provide design of security solutions and related technical and construction services for MTA facilities throughout New York City. MTA facilities

include rail transit, commuter rail, bridges, buses, stations/terminals, maintenance facilities, and office buildings.

Tubelines Project, London, Project Manager - Tube (subway) extension to Heathrow Terminal 5. Managed a 65-person team responsible for design and construction. Established the project team, set up the procedures for managing the project and managed development of the $100M GMP. Interfaced closely with British Airports Authority, who were responsible for construction of Heathrow Terminal 5 and London Underground and who inherited the assets of the completed project. Derived the complex staging to permit the rail extension to Terminal 5 while maintaining rail operations to Terminals 3 and 4.

Jamaica Station Intermodal Terminal Complex, Queens, New York - Construction Manager. Mr. Turton integrated the CM effort with the Port Authority Management and Engineering Department and played an instrumental role in developing the $316M Jamaica Station Intermodal terminal complex, which integrates JFK's automated light rail system with the Long Island Rail Road (LIRR) and the New York City Transit (NYCT) subway. During the pre-construction stage, he was responsible for construction strategy, construction staging and scheduling, estimating, constructability reviews and for the formation of special contract conditions to accommodate the ongoing operations. He worked closely with MTA, LIRR and NYCT managements to capture the operational issues for inclusion in the contract documents. He evaluated contractor proposals and played a key role in the award of the contract. Subsequently managed the construction of this complex project, supervising a construction management team of 35, working the project 24/7 for 44 weeks a year over a three-year period. The project was successfully delivered while maintaining railroad and transit operations. Received the Port Authority James G. Helimuth Citation Award.

John F. Kennedy International Airport Redevelopment Program, New York - Construction Manager. Mr. Turton integrated the CM effort with the Port Authority Management and Engineering Department. He served for several years, involved at all stages of the multi-billion dollar redevelopment of JFK and was responsible for construction strategy, construction staging, planning and scheduling of contracts, contract formation and all aspects of constructability at the pre-award stage for the major contracts. He established the interface programs for the new terminal's construction with the landside redevelopment including the light rail. He played an instrumental role as a key member of the team, developing the criteria and subsequently evaluating the contractors' proposals for the $1B light rail.

King Fahd International Airport, Dammam, Saudi Arabia, Construction Manager - Managed the construction, from start to finish, of the $500M passenger terminal and concourse buildings. The complex was comprised of three million square feet of architecturally intensive high specification building work with a multitude of interfaces and its own chiller plant. Major components such as structural steel, marble, bronze, window wall, loading bridges and docking system were procured offshore. He led the procurement operation for these items and made periodic visits to the fabricators to ensure adherence to the contract requirements. Mr. Turton supervised a construction management team of 50, managed the change control process, negotiated changes and provided oversight for the A/E efforts, reviewing the shop drawings and submittals.

Employment History:

The LiRo Group (2007 to Present)
Vice President
Washington Group International (2005-2007)
Senior Project Director
Bechtel (1972-2005)
Project Manager
Gibbs & Hill (1971-1972)
Engineering Supervisor
De Leuw Cather (1967-1971)
Geotechnical Engineer

James Ahrens, P.E.

SENIOR PROGRAM/ PROJECT MANAGER

Mr. Ahrens has been providing engineering design and construction management services since 1973. He is currently Vice President of the firm and involved in providing Resident Engineering and Construction Management Services. His diverse responsibilities include oversight of all Quality Assurance/Quality Control as well as Project Safety aspects for the firm's projects. Mr. Ahrens has been Project Manager and Resident Engineer for a wide variety of civil/structural projects related to highways, roadways, and bridges; sewer and water main replacement; pump stations; airport terminals; parking garage; pipelines and petroleum storage tanks; parking facilities; power generation plants; golf courses; high rise building and other various types of facilities.

Mr. Ahrens has also been responsible for coordinating OSHA seminars related to construction industry standards, and lead abatement for LiRo personnel. He is also certified as a NYC Site Safety Manager and is well versed in the safety requirements of the NYC Building Code, specifically Article 19 related to the protection of the public and property. His commitment to quality construction management and site safety is just one of the reasons that LiRo has maintained a solid reputation over the years with our clients. Representative project experience includes:

EDUCATION	Graduate Studies, Polytechnic Institute of New York, 1976 B.C.E., Structural Engineering, Villanova University, 1973
REGISTRATION/ CERTIFICATIONS	Professional Engineer, NY Past President NYSSPE, Nassau Chapter 2001-2003 NYC Site Safety Manager Certification OSHA Safety and Health Training - 30-hour 29 CFR/OSHA Safety OSHA 10 Hour Safety Course
YEARS WITH THIS FIRM	20
YEARS WITH OTHER FIRMS	17

Construction of JetBlue Airlines Terminal 5 & Parking Garage at JFK Airport, Resident Engineer - Project involves resident engineering and quality assurance oversight for a 625,000 sf passenger terminal building with 26 gates, an elevated connector to the AirTrain, and a new 1500 space, 6-level parking garage. The project also involves the construction of an elevated Arrivals Roadway, new Hydrant Fuel System, Baggage Handling System, 15"-17" concrete apron pavement, and connection to the historic Saarinen Terminal. (PANYNJ, $900M, 2006-2009)

Renovation of MTA/NYCT Bus Depots, Queens and Bronx, Project Manager – These projects involve the renovation of roofing and ventilation systems at 2 NYCT Bus Depots. In addition, the Queens Bus Depot also requires the raising/jacking of over 16,000 sf of roof to provide additional clearance for bus maintenance operations. The major challenge associated with these projects is to perform the renovations in facilities the operate 24 hours a day/ 7 days a week. Construction costs are approximately $4m and $7m. (MTA/NYCT, 2010-present)

Improvements to Yankee Stadium and Shea Stadium, Site Safety Manager- Project involves multiple contracts related to structural improvements to concrete walls throughout both stadium, escalator repairs and rehabilitation, HVAC upgrades, cooling tower support modifications, parking garage structural repairs and fire sprinkler upgrades, stairway replacement in Parking Garages 3 & 8 at Yankee Stadium, and painting of steel superstructure. (NYCDDC, 2006)

Modernization of the Oceanside/Bayside Apartments, Far Rockaway, Site Safety Manager, 11/2005 to Present - This project involved the upgrade and improvements to over 30 high-rise apartment buildings. Work included façade rehabilitation, parapet wall reconstruction, electrical distribution improvements, construction of new Day Care Center, and renovation of Senior Citizens Center. (NYCHA, $50M, 2006-2007)

Improvements to the MacArthur Resource Recovery Facility, Project Manager, 4/2003 to 1/2006 - Construction management and engineering support services related to the $15 million Plant Upgrade Project at the MacArthur Resource Recovery Facility to comply with the new USEPA Emissions Guidelines. Work included installation of new scrubbers, construction of Lime Prep Building, Compressor Building, Electrical Distribution Building, and all associated equipment and appurtenances within these structures. Work also included replacement of the Forced Draft Fans, Induced Draft Fans, and Reverse Air Fans. New phase includes roadway design for access to plant back end. (Islip Resource Recovery Agency, 2003-2006)

Rehabilitation of the Central Heating Plant, Grasslands Reservation, Valhalla, NY, Quality Assurance Engineer - This project involved the upgrade of boilers which heat the offices, courthouses and prison, as well as the construction of a new steel framed building addition to house them. This multi-prime contract also involved asbestos removal in connection with steam pipes and installation of those pipes, all within the prison. (Westchester DPW)

Reconstruction of Taconic State Parkway Phase IV, Westchester, NY, Project Director - This project involved the construction of two concrete arch bridges over the Parkway and Route 9A. Approximately 1.2 miles of road was widened and realigned. Drainage and safety improvements were also performed. (NYSDOT, $12M, EIC: J. Lambertini, 1994-1996)

Reconstruction of Van Wyck Expressway and Four Bridges of the Long Island Expressway, Queens, NY, Project Manager - Full and partial depth repairs were made with calcium concrete. The roadway was overlaid with a HD asphalt wearing course. Work included the rehabilitation of four steel bridges over the Long Island Expressway. All bearings were replaced; repairs were made to the piers, abutments, girders, and stringers. A new deck was then overlaid. All work was done at night. This was Region 11 first A & B contract. (NYSDOT, $15M, EIC: Robert Carbone, 1994-1995)

Reconstruction of Jericho Turnpike (Route 25), Syosset, NY, Project Manager - This project involved the widening and realignment of three miles of Route 25, from Route 106/107 to Route 135. The existing pavement required full and partial depth repairs. Eight large concrete retaining walls were constructed. The highlight of the project was the replacement of an active Long Island Rail Road Bridge. A new 180-foot long, 800-ton bridge was constructed alongside the existing bridge. In one weekend, the existing bridge was demolished and the new bridge was rolled in place. Extensive CPM scheduling was required. (NYSDOT, $35M, EIC: Byron Alford, P.E., 1993-1995)

Employment History:

The LiRo Group (1990 to Present)
Vice President
Lockwood, Kessler & Bartlett, Inc. (1985-1990)
Project Manager
Impell Corporation (1977-1985)
Supervising Engineer
Ebasco Services Inc. (1973-1977)
Associate Engineer

Gordon Althoff

SENIOR PROGRAM/PROJECT MANAGER

Mr. Althoff is a construction executive with solid track record of completing challenging and complex projects. He is proficient in pre-construction, negotiations, budgeting, cost control, proposals, contracts, risk-management and on-time delivery and constantly strives to satisfy clients' needs and deliver added value. Mr. Althoff is well-versed in all project delivery systems including construction management, real estate development and facilities management. He is an expert in program implementation and the collaboration of entire process of conceptualization-preconstruction-construction-occupancy. Representative project experience includes:

EDUCATION	M.B.A., Finance and Operations, New York University, 1975 B.S., Construction Management, University of Washington, 1971
REGISTRATION / CERTIFICATIONS	United States Army - Captain, Corps of Engineers Licensed Real Estate Broker OSHA 10 Hour Occupational Safety & Health Training, NY
YEARS WITH THIS FIRM	4
YEARS WITH OTHER FIRMS	34

Lower Manhattan Construction Command Center, Senior Project Manager: Mr. Althoff oversees the construction projects below Canal Street, primarily focusing on the reconstruction of the World Trade Center. He is responsible for:

- Managing coordination with stakeholders, utilities and various government agencies.
- Attending weekly coordination meetings with the PANYNJ and the contractors.
- Tracking the progress of construction at the WTC and maintaining database of the development and construction various planned project in catchment area.
- Reviewing the progress of the construction documents at various stages.
- Analyzing the progress of scheduled work and preparing reports for the LMCCC.
- Checking the construction logic and site logistics feasibility.
- Organizing value planning workshops, with renowned experts, for the World Trade Center.
- Preparing risk-based financial cost modeling for the World Trade Center on behalf of the PANYNJ.

(Lower Manhattan Development, $9M)

Fiterman Hall, Borough of Manhattan Community College, New York, NY, Project Executive, Major core and shell upgrade and tenant fit-out program of conversion of a former commercial 15-story office building into an educational facility. This $54M project included the renovation of 350,000 sf, including installation of new elevators, M/E/P systems, cleaning and restoration of the masonry facade, complete replacement of all windows and build-out of spaces for a variety of educational uses. The facility was occupied for educational activities during the entire construction process.

Stewart International Airport, Newburgh, NY, Project Executive - A 92,000 sf terminal expansion. Six construction phases were utilized to ensure no disruption of airport operations. The airplane runways were too close to the existing buildings with insufficient space to perform the new construction. Working with the FAA, we were able to temporarily restripe the runways, locate all the aircrafts further away and use temporary enclosed walkways to provide secure access for the passengers.

Queens Family Courthouse and Agency Building, Jamaica, NY, Project Executive - High profile court complex consisting of three buildings totaling $104M, 300,000 sf with 16 new courtrooms, separate structure for legal support services and a high-rise parking garage. Near the end of project completion, the entire shipment of special UV filtered insulated glass for the curtainwall was discovered to be defective. To ensure project completion on time, a command decision was made to temporally install all the defective glass so that finish trades could be completed and to install the correct glass at a later date; in the end, the project was delivered for occupancy on schedule.

New York City Department of Homeless Services, Brooklyn and Bronx, NY, Project Executive, $44M design/build program for the New York City Department of Homeless Services consisted of the restoration of three armories and the Seneca House, owned by New York City, to house the homeless in the Bronx and Brooklyn. All of the armories are official historic landmarks, which required special filings and restoration methodology. The goal of the program was to stabilize and repair the exterior of these enormous structures where the roof, brick, stone and terracotta had deteriorated over the last 100 years. *Designated 2005 Lucy G. Moses Preservation Award by New York Landmarks.*

Bronx Criminal Court Complex, Bronx, NY: On this project, Mr. Althoff was responsible for coordinating the preconstruction activities for a new 750,000 sf complex and managing the environmental cleanup, condemnations and demolition for a two city-block assemblage near Yankee Stadium. The demolition of existing structures was performed in a phased manner so that, as parcels became available, portions of the excavation/foundations proceeded before the entire site had been acquired, resulting in a construction jump-start of eight months.

New York City School Construction Authority, Capital Improvement Program II, Bronx, NY: Renovation of 14 public schools in the Bronx. Work was done concurrently at 13 locations with a staff of 22 professionals. Construction included exterior restoration, mechanical/electrical upgrades, boiler conversions and window replacements. Due to overcrowding at most of these schools, during the preconstruction phase the implementation was carefully planned with the principals and custodians to ensure minimum relocations and disruption to the ongoing educational activities. ($31M)

Kingsboro Psychiatric Center, Brooklyn, NY: This 168,000 sf project involved the complete exterior and interior renovation of an existing structure to provide a completely new interior layout, including patient rooms, isolation rooms, recreation rooms, dining rooms offices, treatment rooms, exam rooms and exterior activity areas. Included were state of the art life-safety systems, security systems and patient tamper-proof devices. The building also has two new four-story additions at the center of the building and a new one-story entrance addition. Also included was a new center power plant located nearby. ($35M)

Employment History:

The LiRo Group (2006 to Present)
Senior Project Manager
Gleman Construction Corp., (2004 – 2005)
Operations Manager
Apple Builders and Renovators, Inc., (2003 – 2004)
Vice President
Bovis Lend Lease, (2000 – 2003)
Project Executive
Skanska USA Builders, Inc., (1994 – 2000)
Executive Vice President

Vincent N. Valdemira, Sr.

SENIOR PROGRAM/ PROJECT MANAGER

EDUCATION	Bachelor of Professional Studies, Transportation Finance, SUNY Empire State College, 1986 Certificate, Management of Federal Transit Projects, Rutgers State University
YEARS WITH THIS FIRM	10
YEARS WITH OTHER FIRMS	32

Mr. Valdemira has diversified experience in managing more than $500M in capital improvement projects. He has been responsible for a broad range of projects from the planning phase through construction closeout. He has developed scope and budget for the past four Long Island Rail Road (LIRR) capital improvement programs, supporting strategies and business plans. Mr. Valdemira was responsible for more than $100M in shops and yards improvements, which included five diesel yards, two electric yards and a repair facility. These improvements were carefully coordinated with the LIRR, Transportation, and Maintenance of Equipment & Engineering Divisions. Representative projects include:

Metro-North Hudson Line Stations Rehabilitation and Restoration of Historic Yonkers Station, Project Manager - This project is a $70M design/build effort that includes complete station facility replacements. Included were station buildings, passenger platforms, canopies, stairways, overpasses, parking facilities and retaining walls. In addition, all stations needed to be brought into ADA compliance. LiRo provided construction management services at several Metro North stations including Greystone, Glenwood, Ludlow, Riverdale, Spuyten Duyvil, Marble Hill, University Heights and Morris Heights. The scope of work and service included:

- Platforms were demolished and replaced.
- Overpasses were constructed, incorporating ADA compliant elevators, ramps and stairways.
- New canopies, enclosures and windbreak were constructed.
- Retaining walls were repaired and rehabilitated.
- In addition to the work being performed at the aforementioned stations, LiRo managed the restoration of the historic Yonkers Station. Work at this station included:
- Demolition of 30-year-old high-level platforms and supporting members due to sever water damage of station facilities and replacement
- Height differential between the train and the platform caused by settling of platforms
- Significant ADA improvements
- Waterproofing
- Complete rehabilitation to abutments and viaduct retaining walls of four bridges due to corrosion damage
- Development and installation of a pigeon proofing system
- Rehabilitation and restoration of station building
- Extensive improvements of existing retaining wall
- Installation of new Right-of-Way fence

(MTA-Metro North, 2001-2005, $70M)

Yankee Stadium Redevelopment, Project Manager / Rail Transportation Coordinator - Mr. Valdemira is responsible for coordinating the activities of the construction contractors with Metro North Railroad's (MNR) operations personnel. In addition, he will coordinate the activities of this

contract with those project activities scheduled for the construction of the new Metro North Passenger Station at Yankee Stadium. Where construction may impede train operations, it is the primary focus of Mr. Valdemira to communicate with MNR ensuring that any impacts are minimal and properly coordinated as part of scheduled track outages or for the usage of flag personnel provided by MNR. (NYCEDC, $144M)

Reactivation of the Staten Island Railroad, NYC EDC, Project Manager - The project entailed the re-construction of Arlington Rail Yard and Cut-East, replacement of track along the seven-mile North Line and Travis Branch and construction of a new WYE connector between the North Line and the Travis Branch. The Travis Branch was extended 6,500 feet to the south. The branch provides a connection to the new Department of Sanitation transfer facility at Fresh Kills. A major component of this project was the replacement of two existing timber trestles with new bridges. In addition, a new twin arch culvert was installed near the project's southern terminus. Three existing bridges required extensive underpinning due to the installation of new retaining walls. These structures, as well as the structural underpinning, were the project's most challenging components and required the most expertise. (NYCEDC, $40M, 2005)

New York City Transit - Asbestos, Lead and Environmental Services for CM-1027, CM-1079 and CM-1183, Quality Manager - LiRo has established a standard approach for providing asbestos survey services to ensure that projects are completed on time and within the budget allocated for each site. The asbestos survey phase is initiated with a review of facility building records and a site walk-through by our certified (by USEPA and state agencies) inspectors to accurately identify the scope of the subsequent survey. The certified inspectors then map the location of all suspected asbestos containing material (ACM) at the site; classify the materials into homogeneous groups as appropriate and collect representative samples at a frequency compliant with all regulatory requirements for analysis at an accredited laboratory. Laboratory results are received within 24 hours of field sampling and summarized by LiRo in a survey report which details the location and results of all sample points, the location of all ACM present at the subject property, an estimate of the quantity of each ACM identified and a preliminary cost estimate for asbestos abatement at the subject property. (NYCT, $17.5M, 2004)

QM-80 Exhaust Fan Replacement at the Queens Midtown Tunnel, Project Manager - LiRo provided construction management services for the replacement of 23 tunnel ventilation exhaust fans in both the Queens Ventilation Building and the Manhattan Ventilation Building. This 54-month assignment included the relocation of programmable motor protectors, supervision and inspection of lead/asbestos abatement and extensive structural improvements. The project required meticulous coordination of construction while allowing for 24-hour continuous operation. The security of the facility was of the utmost concern. LiRo coordinated the entry of contractor and CM personnel into the facilities with the Bridge and Tunnel officers. (MTA-TBTA, $20M, 2003-2008)

Employment History:
The LiRo Group (2001 to Present)
Vice President
MTA - LIRR (1977–2001)
Director, Capital Program Management

Mike L. Rafat, P.E.

SENIOR PROGRAM/ PROJECT MANAGER

Mr. Rafat has over 25 years of experience with a strong background in business development, construction management, engineering, estimating, cost control and scheduling. He has had hands-on experience in virtually every project stage from development to final completion. Representative projects include:

EDUCATION	B.S. Civil Engineering, Civil/Structural Engineering, Alexandria University, Egypt, 1983
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY Professional Engineer, NJ Professional Engineer, PA OSHA 10 Hour Occupational Safety & Health Training
YEARS WITH THIS FIRM	4
YEARS WITH OTHER FIRMS	22

No. 7 Subway Line Extension, Program and Construction Management, Project Director -The redevelopment of the West Side Yards is a New York City priority envisioned to result in new high-density neighborhoods, landmark public facilities and more additional floor space within the Manhattan Central Business District (CBD) than all of the plans for Lower Manhattan. Key to the West Side redevelopment is the initiative for accessibility to transit by extending the Number 7 Subway Line from its present terminus at Times Square. New York City's Number 7 Subway Line, known as the Flushing Line, is the system's busiest, linking Queens to Times Square. The planned new 7,000-foot-long tunnel will stretch west and south from Times Square to the Jacob J. Javits Convention Center on West 34th Street and 11th Avenue. (MTA-NYCT, $2B)

Lower Manhattan Construction Command Center, New York, NY, Program Coordinator - This contract provides program coordination services supporting the operations of the LMCCC in the coordination and oversight of Lower Manhattan construction projects. Primary day-to-day coordinator of the Lower Manhattan construction projects, coordinating and organizing logistics, scheduling and other actions relating to the various construction projects, in addition to taking all appropriate steps to ensure all construction proceeds in a coordinated manner, maintaining the overall agreed-to schedule and implementing measures to minimize disruption to the Lower Manhattan residential and business community. (LMCCC, $9M)

Neptune Aquatic Center, Neptune, NJ, Project Executive - Mr. Rafat is the project executive on this new Olympic-size seven lane enclosed pool. ($11M, NJSDA, on-going)

Yankee Stadium Redevelopment, Bronx, NY, Project Executive - LiRo is responsible for providing construction management services for the design and construction work that is required of the City of New York as part of the Yankee Stadium Agreement. Specifically, Mr. Rafat is responsible for managing the reconstruction of the Bronx Terminal Park, demolition of the existing Yankee Stadium ball fields and infrastructure upgrades on the new stadium. ($90M, NYCEDC, on-going)

Previous Experience includes:

New Jersey Schools Construction Corporation, Trenton, NJ - Regional Director. Mr. Rafat was in charge of the Hudson regional office, managing over $2B of school design and construction. The work included master planning, business development, land acquisition, feasibility studies and the hiring of architects, engineers and contractors. He supervised the design and construction activities while managing over 20 staff members and 100 consultant staff members. Project experience included:

- Led a large team of professionals to perform immediate repairs (health and safety related work) worth $450M, covering 300 schools. The work was done over two summers and every single school opened on time.
- Completed the design and started the construction of 30 new schools worth $500M.
- Started the design of 70 new schools that involved community input, land acquisition, Department of Education approval and coordination with several stakeholders.
- Worked with several school superintendents, school boards and local and state politicians on addressing community concerns, updating them on the progress and answering any questions from the legislators.
- Set up internal policies for the Hudson region on design, construction, change orders and claims. The policies ensured consistent approach and improved productivity.
- Worked with diversity groups and consultants on the best ways to encourage contractors to hire local workers, minorities and women. The efforts caused a sharp increase in the hiring of these groups.
- Led the effort in procuring, manufacturing and installing 300 temporary early childhood classroom units under fast-track schedule.
- Outstanding safety record on all of the projects - no fatalities and no serious injuries.

GCM Metal Industries, Brooklyn, NY - Vice President. Mr. Rafat's responsibilities for this structural steel fabricator and installer included business development, project planning, interacting with clients and A/E, supervising engineering and shop drawing preparations and preparing and negotiating change orders.

Nab Construction Corporation, College Point, NY - Project Manager. As project manager at one of the largest construction companies in New York City, Mr. Rafat's project assignments dealt with complex and critical projects, including:

> **Union Square Subway Renovations, NYC, Project Manager.** Major renovation of one of the largest Transit Authority subway stations in New York City. The work included structural steel, excavation, sheeting rock demolition, the construction of a temporary bridge along 14th Street to minimize traffic delays and to allow major construction activities to continue, concrete work, structural repairs, new underground passageway, new crew quarters, new elevators, floor tiles, underground duct supplies and HVAC, art work, asbestos abatement, chemical grouting, park rehabilitation, power and light fixtures, communication system, water and sewage work, track wall panels and several other activities. Prepared and negotiated over 130 change orders and held an excellent safety record. (NYCT, $46M)
>
> **Brighton Line Subway Renovations, NYC, Project Manager.** This project involved a four-subway rehabilitation project in Brooklyn, NY. ($20M)

Employment History:
The LiRo Group (2006 to Present)
Senior Vice President
NJSDC (2001 – 2006)
Regional Director
GCM Metal Industries (1999-2001)
Vice President
Nab Construction (1990-1999)
Project Manager

Raymond Busch III, P.E.

SENIOR PROGRAM/ PROJECT MANAGER

EDUCATION	B.S., Mechanical Engineering, New York Institute of Technology, 1987 A.A.S., Engineering, Suffolk Community College, 1984
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY OSHA 10 Hour Occupational Safety & Health Training OSHA 10 Hour Safety Training Course OSHA Competent Person for Excavation LIRR Roadway Worker Protection
YEARS WITH THIS FIRM	23
YEARS WITH OTHER FIRMS	3

Since 1984, Mr. Busch has worked in the construction field. He has extensive experience as a Resident Engineer on large-scale municipal construction projects. These include rail yards and sewage treatment plants. Mr. Busch has overseen all phases of construction including the civil, structural, mechanical, electrical and architectural disciplines. He has been responsible for supervision of field personnel, implementation of specifications in accordance with contract documents, review and submittal of payment requisitions and change orders, permit review and documentation, project scheduling, as well as documentation and quality control. Some of his projects have been accomplished under NYSDEC consent orders. He has extensive experience on Wick's Law multi-prime contracts. Representative projects include:

MTA East Side Access - LIRR Connection to Grand Central Terminal, Resident Engineer. The East Side Access project will connect the Long Island Rail Road's (LIRR) Main and Port Washington lines in Queens to a new LIRR terminal beneath Grand Central Terminal in Manhattan. East Side Access has awarded two major contracts in December 2007 and February 2008: Manhattan Structures I contract and the Harold Structures I contract which are scheduled for completion in 2015. (MTA-LIRR-ESA, $6.3B)

MTA East Side Access - Construction Management Services for Arch Street Yard and Shop, Resident Engineer, 2002-2004. The Arch St. Yard and Shop is located on approximately twelve acres in Long Island City, New York. This Design/Build project included the design and construction of the following major elements:

- Maintenance Equipment Shop (64,000 SF Shop w/15,000 SF office space)
- 27 KVA Power Substation Building; Engineering Support Building
- 1200' long covered Extraordinary Interior Cleaning Platform and Storage Building;
- Track work and Third Rail
- Extensive site utilities

The shop and yard was initially used as a testing and acceptance facility for the LIRR's new M-7 train cars and will service as an inspection, maintenance and cleaning facility upon commencement of ESA revenue service in 2010. The Design Build contract was awarded for $77M with contract duration of 810 CCD's for completion. A unique aspect of this project lies within the Design/Build delivery system. In order to facilitate project completion within the required time frame, the building was built, in effect, from the outside in. An example can be found in the underground conduit sizing. During the initial design phase as well as during the installation of the steel H-piles, pile caps, grade beams and structural steel, the exact types of internal machinery, i.e. power requirements, was not known. Conduits could not be sized. Upon acceptance of the machinery, final sizing was determined. This caused the conduit and

floor slabs to be installed after the building shell was constructed, contrary to standard construction methodology. (MTA, $77M)

Nassau County Government Operations Center, Project Manager- LiRo in a Joint Venture with Bovis Lend Lease is providing comprehensive construction management services for the Theodore Roosevelt Government Operations Building. The Theodore Roosevelt Executive and Legislature Building at 1550 Franklin Ave in Garden City, NY will be completely renovated. The original building was constructed in 1916 and was the first public building to be constructed using reinforced concrete. The building is listed on the State Register of Historic Places and is currently approximately 135,000 gsf. Later additions to the building will be demolished so the final footprint will house approximately 85,000 gsf of space. In addition, a 28,000 gsf annex will be connected to the Old Courthouse building to house the new mechanical plant and Legislature chamber. The $36 million project is the result of an extensive evaluation of the County's requirements and the building's condition. (NCDPW, $36M)

Bay Park WPCP, Main Building Renovation, Resident Engineer- Improvements involved the phased expansion and renovation of the existing main building into a new administration building which would contain shop and crew facilities. Renovation of the existing facility was sequenced to follow construction of the main building extension and relocation of services into the new space. Included in the work was the replacement of face brick on the main building, construction of a new Unit Substation No. 5, an 80 ft tower/weather station, asbestos removal, dewatering, and the installation of auger grout injected piles. The interfacing and phasing of the new construction work with both the existing plant and other on-going construction projects was paramount towards the project's success. (NCDPW, $15M)

Bay Park Sewage Treatment Plant, Sludge Dewatering Facility, Resident Engineer- This project was accomplished ahead of schedule under DEC Consent Order. Completion of this facility involved the installation of wood foundation piles and concrete pile caps; the construction of a reinforced concrete and concrete encased structural steel building; the installation of precast concrete roof panels and built-up roofing system; the installation of HVAC units and odor control equipment, the installation of 12 sludge dewatering presses, pumps, conveyors and various mechanical equipment; and the installation of roads, parking lots and various site improvements. (NCDPW, $30M)

Resident Engineer for the LIRR Ronkonkoma Yard Train Wash Facility - This facility consists of a 200 ft by 50 ft single building structure containing a Wash Bay and two-story Wash System Support Bays. The footing, foundation, lower level support bay and train wash slab are constructed of reinforced cast in place concrete. Coordination was required with the LIRR Force Account Departments and the Local Utility Company's prior to and during the construction of the Train Wash Facility. Coordination with Key Span Energy was required to relocate gas lines while the design and relocation of 13.8 KVA underground feeders was required with the Long Island Power Authority. Coordination with the F/A Signal and Communication departments was required to reroute existing signal and communication systems that were within the footprint of the new car wash structure. (LIRR, $4.7M)

Employment History:
The LiRo Group (1987 to Present)
Associate Vice President

Donald Bornkamp, Jr., P.E.

SENIOR PROGRAM / PROJECT MANAGER

EDUCATION	B.E., Civil/Environmental, Manhattan College, 1985
REGISTRATION / CERTIFICATIONS	Professional Engineer, VA Professional Engineer, NY Certified Code Enforcement Official, NY OSHA 10 Hour Occupational Safety & Health Training
YEARS WITH THIS FIRM	12
YEARS WITH OTHER FIRMS	12

Mr. Bornkamp has been providing engineering and operations management services since 1985 in the areas of construction management and project management. His experience includes NYCT bus depot construction, vehicle repair shop construction, general facilities construction, track construction, bridge & elevated subway inspection, underground storage tank replacement, retaining wall and bulkhead construction, utility installation, facility demolition, environmental remediation, productivity improvements, safety improvements, and organizational development.

Representative project experience includes:

Construction of the Queens 14 Garage & Salt Shed, Project Manager - Responsible for design review, preconstruction planning and construction management for the $33 million, 72,000 sf service and storage building, accessory support structure (salt storage shed) and all utility services (sanitary & storm sewer, domestic water and fire mains, gas service and electric). Project required the coordination of four (4) prime contractors under Wick's Law requirements for the ground up construction of the storage & repair garage, locker facilities and office facilities.

Environmental Remediation and Demolition of the South West Brooklyn, Greenpoint and Hamilton Avenue Incinerators, Project Manager - Responsible for preconstruction planning and construction oversight for the environmental abatement and demolition of three decommissioned incinerator facilities. Tasks included environmental monitoring, waste tracking, permitting, utility coordination, compliance with Federal, State and local regulation and health & safety regulations governing hazardous and contaminated waste.

Renovation of James A. Thomas Center, Rikers Island, Project Manager - Responsible for design review, preconstruction planning and construction oversight for the $30 million structural renovation of the of an historic correctional facility (constructed 1933). Scope of work required the upgrade of the facility to present fire/life safety codes and existing court mandates for inmate occupancy. Tasks included demolition and replacement of several rooms requiring pile foundations, structural steel framing, replacement of HVAC systems, domestic hot and cold water systems, and installation and energizing for a new 5 kv feeder loop with three (3) new substations and emergency generators. Work required the removal of ACM following NYCDEP regulations and abatement and monitoring of lead contaminated areas.

Construction of Locker Facility at Rikers Island, Project Manager - Responsible for design review preconstruction planning and construction oversight for the $6M, 16,200 sf locker facility to resolve a union grievance between the Department of Correction and the Officers Union. Work required the installation of pile foundations, structural steel framing, installation of new gas, water and electrical services, installation of a 130' connecting corridor, men's and women's locker and shower facilities.

Randall's Island Fire Training Academy, Assistant Project Manager - LiRo provided complete construction management and inspection services for the New York City Fire Department's Fire Academy. This $35M project involved the construction of three new buildings, renovation of a fourth and construction of an outdoor training area at the Department's Fire Training Academy on Randall's Island. Building 11 involved the new construction of a four-story building containing classrooms, gymnasium, locker rooms, and cafeteria. This building featured a facade with brick, insulated metal panels and a curtain wall system and houses a boiler room. It also featured state-of-the-art audio-visual systems. Building 12 involved the new construction of a six-story training building. This building featured insulated metal panels and brick facade on the outside, and an indoor atrium configured to represent several different types of City buildings: brownstone, storefront, and commercial building. Building 5 consisted of a new multi-level training facility. This building featured an advanced computerized fire training system providing firefighters with realistic theatrical flames, intense heat, and obscured visibility. The building featured a brick facade, fire resistant interior spaces, and exterior features to enable access training such as cutting station and mock-up skylights. Building 2 involved the reconstruction of the existing multi-level live fire training burn facility. This facility was renovated to a smoke generator training facility.

System-Wide Kitchen Renovations at Rikers Island, Resident Engineer - Under the Cook-Serve Program, all kitchens, pantries, and serveries at correctional facilities throughout the City were reconstructed to allow food to be prepared and served on-site in accordance with court mandates. To accommodate the new equipment required for the program, the electrical and mechanical infrastructure of the kitchens (62,000 sf), pantries (7,500 sf), and related areas were expanded, and additional utility services were provided. The work was phased so that while some facilities undergo construction, they were provided food from nearby facilities. (NYCDDC, $50M)

MTA-New York City Transit, Department of Buses, Assistant Chief Facilities Officer - Managed a staff of 14 engineers and architects to support 20 facilities with a value of more than $2 billion. Responsible for project scope development and coordination for all capital and operating contracts impacting facilities. Responsibilities included:

- Planned, designed and implemented $3 million in fast track projects (6 month period) to accommodate the increased bus storage needs at Dept. of Buses facilities.
- Designed and implemented temporary connection and transfer station for subway to bus transfers for the Williamsburg Bridge shutdown. Project coordinated between NYCTA and NYCDOT.
- Developed TA Labor (Force Accounts) for all capital projects at Dept. of Buses facilities.
- Developed and implemented policies and procedures related to environmental compliance and NYS building code compliance.
- Improved efficiency of maintenance procedures for in-house maintenance staff.
- Prepared bus depot design guidelines for the construction of new facilities and renovation of existing facilities.
- Implemented new regulatory requirements for the USEPA AND NYSDEC as they apply to Department of Buses facilities.

Employment History:

The LiRo Group (1998 to Present)
Associate
MTA – New York City Transit (1984-1998)
Assistant Chief Facilities Officer

Bernard Markowitz, P.E.

SENIOR PROGRAM / PROJECT MANAGER

Mr. Markowitz has been providing construction management services since 1970. He has provided project management services for major capital improvement projects for various public agencies. Representative projects include:

EDUCATION	M.S.C.E., Civil Engineering (Environmental), City College of New York, 1976 B.C.E., Civil Engineering, City College of New York, 1970
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY Professional Engineer, NJ
YEARS WITH THIS FIRM	11
YEARS WITH OTHER FIRMS	29

New York City Department of Sanitation Requirements Contract, Project Manager - Three DSNY projects included the following:

- New Manhattan 5 Garage - Pile foundation, steel frame, metal exterior building of 15,000 sf building to house a partial sanitation district, including mechanical building maintenance and operating personnel. ($6M)
- New warehouse on Kingsland Avenue - Pile foundation, steel frame, metal exterior of 12,000 sf building to house a new warehouse facility for DSNY. ($2M)
- Roof replacement at Gansvoort Incinerator - Removal of existing asbestos roof and replacement with a new membrane roofing system. ($0.5M)

Supervised engineering and inspection staff at all projects. Responsible for monitoring contractor's performance, pavements and work schedules. Coordination work between four prime contractors (Wicks Law). Reviewed contractor's safety program, shop drawings/submittals, correspondence. (DSNY, $8.5M)

E73rd, Gansvoort and Greenpoint Incinerators Abatement and Demolition - Project Manager for four separate DSNY incinerators Abatement and Demolition projects as follows:

- Southwest Brooklyn - Interior abatement and demolition of entire structure including abatement equipment and furnaces. ($5.4M)
- E73rd Street - Interior abatement and Demolition of all equipment inside structure. ($2.18M)
- Greenpoint - Abatement and Demolition of expansion chambers, gas conditioning towers, precipitators, and exhaust stacks. ($2.0M)
- Gansvoort - Abatement and Demolition of expansion chamber and exhaust stacks. ($0.69M)

Supervised environmental and engineering staff at all projects. Responsible for monitoring contractors, performance for environmental and demolition work. Monitored compliance with regulatory requirements for all abatement work. Monitored contractor's safety procedures for abatement and demolition phases. Prepared/ Reviewed contractors payment and submittals. Provided direction and interpretation of contract documents. Reviewed and approval contractors schedule. (DSNY)

W. 158th Street Maintenance and Repair Facility - Responsible for construction Management of four prime contractors under Wicks Law totaling $23.8M. Supervised multidiscipline staff for construction project. Reviewed and interpreted contract drawings and specifications. Reviewed/ prepared contractors payments, shop drawings, submittals, request for information and responded to

correspondence. Provided monthly project schedule. Coordinated work between all prime contractors and subcontractors to avoid delays and claims against owners. Prepared necessary change orders. Provided documentation/reports to owners. (NYCDOT)

Police Firing Range, VCP Corrections Requirements Contract - For this CM/Build project, Mr. Markowitz was responsible for project management and construction contracts. (NYCDDC, $1.1M, 1999 - 2002)

Employment History:

The LiRo Group (1999 to Present)
Associate
MTA-New York City Transit, Department of Buses (1998-1999)
Chief Officer Environmental and Industrial Safety
MTA-New York City Transit, Department of Buses (1990-1998)
Chief Facilities Officer

Douglas Owen, P.E.

SENIOR PROGRAM / PROJECT MANAGER

EDUCATION	B.S., Mechanical/Civil Engineering, Temple University, 1982
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY OSHA 10 Hour Occupational Safety & Health Training CPM Scheduling Class Formal MPT Training - NYSDOT
YEARS WITH THIS FIRM	16
YEARS WITH OTHER FIRMS	12

Mr. Owen has acquired considerable field construction experience as an Assistant Project Manager, Resident Engineer, Assistant Resident Engineer, Office Engineer and an Inspector on a wide variety of highway and bridge construction projects since the early 1980's. He has been responsible for construction inspection and documentation, office management and record keeping, field staff management and consultant contract budget monitoring. Mr. Owen's duties have also included project change order evaluation, value engineering reviews, construction CPM schedule monitoring and final contract computations along with the management of progress meetings. In addition, he has been responsible for preparation of orders-on-contracts and cost estimates for proposed changes. Representative projects include:

Construction Inspection Services on an As-Needed Basis, New York, NY, Resident Engineer. This project involved on-call construction inspection services and included associated services at various MTA B&T facilities throughout New York City. Mr. Owen's assignments were located at the Henry Hudson Bridge which spans the Harlem River. Specific projects included: *Upper Level Deck Bearing Replacement.* This project included structural steel repairs and bearing replacements for the Upper Level. Mr. Owen inspected the existing conditions, and made recommendations for additional element replacement or modification of repairs in conjunction with the designer based on conditions found. He also reviewed contractor shop drawings for content and prepared as-built drawings. ($400K)

Dyckman Street Bridge Steel Access Platforms at the Henry Hudson Bridge. This project included the fabrication and installation of steel access platforms and ladders for the Dyckman St Br north and south vaults. He worked with the designer to resolve design issues when field conditions did not coincide with the original design. He worked with the contractor to resolve fabrication issues and he reviewed the contractor shop drawings for content and prepared as-built drawings. ($500K)

Concrete Repairs at Skewbacks. This work involved concrete repairs to the bridge's skewback anchorages at water's edge. Mr. Owen performed verification inspection from bi-annual inspection reports to establish limits of the repairs. He assured compliance with the water protection system and coordinated work from small tug boats and barges, assuring compliance with MTA B&T and USCG security regulations. ($750K)

(MTA-TBTA, 2005)

Construction Management and Inspection Services for Structural Retrofits at the Bronx-Whitestone Bridge, Mr. Owen served as Resident Engineer for the construction of retrofits to the towers, main cables, suspender ropes, and anchorages of this major suspension bridge. The scope of this project included: Strengthening the exterior and interior of the bridge towers; Relocating and installing new electrical elements; Installing protective armor for the main cables; Installing protective

armor for the suspender ropes; Installing new structures and security barriers within and around the anchorages; extensive maintenance and protection of traffic was required to minimize delays to the travelling public. (MTA Bridges & Tunnels, $41M)

Construction Management and Inspection Services for Structural Retrofits at the Throgs Neck Bridge, New York, NY, Mr. Owen served as Resident Engineer for the construction of retrofits to the towers, main cables, suspender ropes, and anchorages of this major suspension bridge. The scope of this project included: Strengthening the exterior and interior of the bridge towers; Relocating and installing new electrical elements; Installing protective armor for the main cables; Installing protective armor for the suspender ropes; Installing new structures and security barriers within and around the anchorages; extensive maintenance and protection of traffic was required to minimize delays to the travelling public. (MTA Bridges & Tunnels, $50M)

Replacement of Steinway Street Bridge over the Grand Central Parkway, Resident Engineer. This project for NYCDOT - Division of Roadway Bridges involved construction inspection for the reconstruction of two rigid frame arch structures over the Grand Central Parkway in Astoria, NY. The project included the demolition of the existing concrete rigid frame arch structures; erection of new steel frame posts and arches, structural steel painting; pouring of encasement abutments and new poured-in-place concrete deck slabs and sidewalks; galvanized steel bridge railing & fencing; permanent soldier pile and lagging sheeting with grouted tie-back anchors; the installation and removal of two temporary ACROW truss bridges; and extensive MPT detour scenarios. To replicate as closely as possible the original rigid frame arch, the new structures consist of three section steel frames which sit upon the original foundations and at a skew of 29° to the roadway alignment. The foundations were modified to accept the new anchor bolts. Because of the very limited site, Mr. Owen worked with the contractor and NYCDOT to devise erection schemes which utilized nighttime operations requiring full one-way shutdowns of the GCP to maximize nightly production and minimize community disruption. The demolition of the existing structures was performed utilizing traffic crossovers east and west of Steinway Street on the Grand Central Parkway. During each stage of the contract the GCP traffic was diverted over two weekends to the opposite side and a structure was removed by dropping the bridge onto the parkway. Prior to weekend demolition operations, extensive coordination with NYCDOT Office of Construction Management Coordination (OCMC) was required. (NYCDOT, $18.4M)

Interchange 17, NYS Thruway, and I-84/Route 300 Interchange Reconstruction, Contract No. 1, Resident Engineer - This $8.2 M New York State Thruway Authority project was Phase 1 of the four phase interchange reconstruction. It included the reconstruction of existing eastbound on and off ramps in the I-84 & Route 300 Interchange and lengthening and widening of the northbound I-87 off-ramp to Exit 17 (Newburgh) to allow for an additional lane of traffic. The second major aspect to this project was the excavation, screening and testing, then stockpiling and/or disposing of 73,000 cm of potentially contaminated soils from an abandoned dumpsite within the future interchange footprint. The abandoned dump cleanup required the close monitoring of contractor operations of excavation and testing of potentially contaminated soils and the documentation of disposal manifests and assuring NYS DEC and US EPA regulation compliance. Mr. Owen prepared the landfill remediation closure report for NYSTA to be submitted to NYS DEC. Mr. Owen took numerous actions to expedite the intersection reconstruction that resulted in significant saving to the NYSTA in both time and money. (NYSTA, $8.2 M, 2003-2004).

Employment History:
The LiRo Group (1994 to Present)
Associate Vice President

RBA- (1991-1992)
Office Engineer
Boswell Engineers (1988-1991)
Office Engineer

Leonard J. DePrima, P.E.

SENIOR PROGRAM/ PROJECT MANAGER

EDUCATION	M.B.A., Business Management, Canisius College, 1981 B.S.C.E., Civil Engineering, SUNY at Buffalo, 1969
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY
YEARS WITH THIS FIRM	11
YEARS WITH OTHER FIRMS	32

Mr. DePrima has over 36 years of professional experience in engineering, planning, design, construction, and program management. As Vice President for Infrastructure Programs, he leads the LiRo team in support of our public and private clients' efforts to maintain and improve their assets and physical plants. Mr. DePrima was previously employed by the NYS Thruway Authority, where his professional growth in a 20 year career demonstrates his ability to develop, lead, and manage multi-million dollar operating and capital programs. He has gained extensive experience in the innovative financing of projects, contract and project management, and dispute resolution. He has also had considerable private municipal experience in the design of subdivisions and commercial developments, including drainage studies, design reports, and the design of water and sanitary systems. Representative project experience includes:

NYCDDC Lower Manhattan/WTC Program Management Services, NY: Project Engineer responsible for coordination of all assigned projects. Mr. Deprima worked closely with the Director of Program Management & Planning, as well as with the designated NYCDDC and NYCDOT representatives. In the effort to rebuild lower Manhattan after 9/11 recovery, duties include selecting and leading work teams based on needs of specific projects, project planning and design coordination, schedule review, progress meetings, development and implementation of MPT schemes for vehicles, bicycles, and pedestrians, quality oversight, and community outreach services. Special emphasis is placed on supporting NYC agencies relative to their interface with NYSDOT, FHWA, and other State Authorities.

Erie County DPW Program Management Services, NY: Program Manager for $50 million accelerated 2003/2004 capital program to plan, design, and construct multiple culvert, highway, and bridge restoration projects throughout the County. As Program Manager, directed LiRo staff and more than 17 diverse professional consultant firms in delivering 30 plus projects on an accelerated schedule, including over 60 individual culverts, 10 bridges, and 50 miles of highway. The goal of this program was to allow the individual consultant teams to function effectively, focusing on their specific projects, while the overall program proceeded in a fast-moving, well-coordinated effort. Interagency coordination, community outreach, and construction management were key components of the program.

Erie County Highways Consultant, NY: Project Manager for general highway engineering contracts with Erie County. Services include highway design and construction management services. Current projects include Maple St. reconstruction in East Aurora and the North French Road reconstruction in Amherst.

ECIDA GM Access Road (2001-2002): Project Manager for design and construction management services for a $2 million access road planned to facilitate construction of the new General Motors $500 million in-line 4/5 engine plant expansion, in the Town of Tonawanda, NY. In addition to general highway engineering, work included; site demolition, soil/water remediation and disposal, and construction management services to insure that the project was constructed as per plans and specifications, on schedule, and within budget.

Tonawanda Incinerator Demolition/ Remediation, NY (2001): Project Manager for the site investigation and engineering services for the demolition of a municipal incinerator structure in the Town of Tonawanda, NY. LiRo provided identification of hazardous materials to be abated prior to demolition and detailed design plans for remediation and demolition of the structure. LiRo also provided construction management and quality assurance services, enabling the Town to plan the future re-development of the cleared site.

Town of Amherst Renovation and Expansion of the Amherst Town Hall (2000): Project Manager for the completion of a feasibility study to expand the Amherst Town Hall at its current location. The LiRo team developed several alternate proposals, including detailed estimates that addressed the architectural and structural modifications necessary to expand the useable space needed for government operations at the existing Amherst Town Hall

Como Lake Park Dam Retaining Wall Rehabilitation, NY: Project Manager responsible for bank stabilization adjacent to the historic Como Park Lake Dam in Lancaster, NY. The project included the design of a reinforced concrete retaining wall with related drainage and civil engineering details. In addition, a historic masonry wall was restored. Subsequent to design, LiRo also provided construction management services.

NYSDOT Term CI, Buffalo, NY: Project Manager responsible for overall management and execution of term contract that provided construction inspection activities at several sites in western NY including:

- Route 240 truss bridge over Cazenovia Creek
- I-190 Virginia Street Ramp
- I-190 Niagara Street Ramp
- Route 430/Route 17 stringer bridge in Mina
- Armenian Road/Route 17 stringer bridge in Sherman
- Day Road truss bridge over Erie Canal

Project includes field inspection of construction activities including the preparation and painting of structural steel, as well as enforcement of the Health and Safety procedures and Maintenance and Protection of Traffic.

Employment History:

The LiRo Group (1999 to Present)
Vice President
New York State Thruway Authority (1978-1999)
Deputy Executive Director (1996-1999)
Chief Engineer (1995-1996)
Division Director (1983-1994)
Asst Superintendent of Maintenance (1981-1983)
Assistant Division Engineer (1978-1981)

Robert Kreuzer

SENIOR PROGRAM/PROJECT MANAGER

Mr. Kreuzer has over 20 years of environmental and hazardous waste consulting experience involving subsurface investigation and remediation of commercial and industrial properties for public and private sector clients. In addition, he has extensive experience in the areas of asbestos and hazardous materials investigation, design and abatement to support large scale demolition, renovation and rehabilitation projects.

He has been involved with numerous projects involving Federal agency remedial efforts (USEPA, USACE, AFCEE) and New York State/Superfund site characterization and remediation in accordance with CERCLA requirements. His project experience encompasses a wide range of settings including spill sites, industrial facilities, military facilities and landfills. His recent project experience includes several brownfield investigations and remedial designs under the NYSDEC and USEPA programs.

During his career, he has demonstrated an exceptional ability to manage and coordinate a wide range of environmental projects including numerous programs under on-call or task order based contracts. Representative projects include:

EDUCATION	B.S., Geological Science, State University College of New York at Buffalo, 1988 Post-Baccalaureate Studies, Hydrogeology
REGISTRATION / CERTIFICATIONS	OSHA, HAZWOPER 40 hour training OSHA, Construction Safety and Health Training NYSDOL Asbestos Supervisor NYSDOL Asbestos Project Monitor OSHA Confined Space Entry Training OSHA 8 Hour Supervisory Training NJDEP UST Certification-Closure, NJ NJDEP UST Certification-Subsurface Evaluation, NJ OSHA 40 Hour Site Worker Protection Training NJDEP UST Cert-Tank Testing, Closure, Subsurface Evaluation, NJ
YEARS WITH THIS FIRM	12
YEARS WITH OTHER FIRMS	9

NYCT Asbestos Consultant Services Contract, NY: Project Manager responsible for four consecutive indefinite quantity Asbestos Consultant Services Contracts. Services included asbestos investigations and reports, development of abatement work plans, cost estimating, project coordination and interfacing with site representatives, and project management with oversight of the abatement contractors. Other responsibilities included project cost tracking and invoicing. Project sites included operating substations, subway stations, office buildings, mechanical rooms, rail yards, bus depots, tunnels, bridges, and various other structures throughout many of NYC Transit's three thousand facilities located throughout the five boroughs of New York City.

DNSY 4, 4, 7a, 6, 8, and 8a Incinerator/ Garage Demolition Projects, NY: Project Manager for environmental aspects of this $6.2 million program involving detailed site investigations at two former municipal waste incinerators for asbestos and other hazardous materials and a structural evaluation in preparation of demolition design documents and specifications. Responsible for coordinating the field effort and for preparing drawings and specifications for: environmental issues; USTs/ASTs (bulk storage); soil and water contamination; RCRA wastes; residual ash/refractory brick; PCBs; lead paint; and drum waste.

DSNY Gansevoort and Greenpoint Incinerator Equipment Decommissioning Investigation and Design, NY: Project Manager for environmental aspects of this $2.8 million project involving the

decommissioning of incinerator and pollution control equipment at two former municipal waste incinerators. Conducted surveys and investigations to address the decontamination/dismantlement /demolition of 200 foot stacks, duct work, air scrubbers, precipitator units, and expansion chambers. Prepared specifications and drawings for the dismantlement/ demolition of structures, removal of asbestos containing materials (ACM), RCRA wastes-ash/residue brick, and deteriorated lead based paint. Provided inspection services and support to the Construction Manager during the cleanup/ dismantlement phase.

NYCDDC Requirements Contract for Environmental Services: Project Manager for work-order based contract to perform Phase I/Phase II Environmental Site Assessments (ESAs) and corridor studies in support of NYCDDC property acquisition and corridor rehabilitation projects. More than 60 task orders have been issued and completed. Mr. Kreuzer is the project manager responsible for the coordination of field activities and implementation of Phase I ESAs in accordance with ASTM standards. Responsible for the development and implementation of Phase II/Corridor Investigation work plans for all the project sites. He is responsible for the review and management of all aspects of the program including records reviews, data acquisition, work plan development, oversight of subsurface investigation work, data review and report preparation. Mr. Kreuzer has also performed all administrative functions for project tracking and invoicing.

NJSCC Site Feasibility Studies-South Region, NJ: Project Manager for environmental services performed for various school renovation and replacement projects for NJSCC. Assignments have included providing site investigations at a swing space school. Services include asbestos survey, lead inspection, mold and indoor air quality. Also, for three school buildings that will be demolished for new facilities, provided Phase I/II and remedial investigation services, asbestos and lead based paint investigations, abatement and demolition design, underground storage tank removal, and cost estimates.

JetBlue Airways Warehouse Demolition/ Terminal 5 Remediation, NY: Project Manager for the site investigation and design for the demolition of four large warehouse and maintenance facilities at JFK International Airport. Responsible for coordinating the field effort and preparing site investigation reports for the remediation of hazardous materials and asbestos. Prepared drawings and specifications for the removal of asbestos, USTs, drummed wastes, PCBs, and CFCs. For Terminal 5 project, responsible for developing a remediation Health and Safety Plan, Soil Management Plan and Spill Prevention and Control Plan for the project. In addition, LiRo prepared asbestos abatement design documents for the fueling line and existing buildings in the project area.

New York Power Authority, NY: Program Manager for environmental services at various facilities in connection with building systems upgrades to promote energy efficiency; maintain project budgets staffing assignments for upstate and downstate sites; projects sites included White Plains Courthouse, Valhalla Penitentiary, and 18 other associated sites for Westchester County Department of Public Works.

Employment History:
The LiRo Group (1997 to Present)
Vice President
URS Corporation (1989 to 1997)
Project Manager
Recra Environmental, Inc. (1987-1988)
Laboratory Analyst

Martin J. Wesolowski, P.E.

SENIOR PROGRAM/ PROJECT MANAGER

Mr. Wesolowski is a Professional Engineer licensed in the State of New York with over 13 years experience in the civil/environmental field. Mr. Wesolowski has been assigned to various highway and bridge reconstruction, building construction, and utility design and construction projects. Additionally, Mr. Wesolowski has been involved in hazardous and non-hazardous waste remediation projects involving design, inspection and cost estimating. Responsibilities have included oversight and coordination of engineering staff, liaison with agencies, and providing a wide range of design services, various construction support services including coordinating permit requirements with state and local agencies, review of shop drawings and providing technical assistance to inspectors.

EDUCATION	B.S., Civil Engineering, SUNY at Buffalo, 1991
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY Hazardous Waste Operations & Emergency Response NJDEP UST Certification-Closure, NJ NJDEP UST Certification-Installation, Entire System, NJ NJDEP UST Certification-Testing, NJ NYSDEC UST Certification, NJ NYSDOL Asbestos Project Designer, NY OSHA 40 Hour Hazardous Waste Site Worker Protection Training OSHA Confined Space Safety Training OSHA, Construction Safety and Health Training OSHA, HAZWOPER 40 hour training SSPC C-3 Training
YEARS WITH THIS FIRM	13
YEARS WITH OTHER FIRMS	7

Representative projects include:

Jet Blue Phase I/II Assessments and Geotechnical Studies, NY: Project Engineer for a large scale geotechnical and environmental investigation in support of JetBlue Airways Corporation's New Technical Support Operations Campus at John F. Kennedy International Airport. The project involved assessing geotechnical and environmental requirements for the construction of a 63,000 square foot hangar and a 16,000 square foot technical operations building. The project boring program involved the advancement of 75 borings ranging in depth from 15 to 80 feet. Geotechnical analyses included grain size, moisture content, Atterberg limits, moisture-density relationship, and bearing capacity ratios of laboratory compression tests. Based on the results of the investigation, provided recommendations for foundation construction in accordance with New York City Building Code. Responsible for QA of specifications for addressing the disposal of contaminated soils and treatment of groundwater during construction dewatering activities.

SUCF UST Replacement for SUNY at Buffalo, North (1999-2002): Project Manager for the replacement of 20 emergency generator tank systems at SUNYAB North campus. Responsible for the development of project initiation documents and the development of construction documents. Coordinated between SUCF and SUNYAB personnel. Provided construction management services during construction.

NYSDOT Construction Inspection Services, Region 5: Assistant Project Manager responsible for coordinating construction inspection staff for the term contract to NYSDOT in Region 5 for various bridge and highway projects.

TBTA Environmental Management and Analysis, NY: Project Manager for an indefinite delivery general environmental services contract for TBTA. Project work, to date, has included permitting evaluations for compliance with NYSDEC/USEPA Small Municipal Separate Storm Sewer Systems (MS4) storm water discharge requirements, NYSDEC Part 201 Air permitting requirements, and NYS Waste Reduction Program requirements.

NYCT Asbestos Consultant Services Contracts, NY: Project Designer for two indefinite quantity asbestos consulting contracts. Services included the development of asbestos abatement designs for operating substations, subway stations, office buildings and various other NYCT facilities throughout the five boroughs of New York. Additional services included submittal review and cost estimating.

New York Bus Service, NY: Project manager responsible for the design of a 1,000 cfm multi phase extraction system for the removal and treatment of free product, soil vapor and groundwater contamination. The system utilizes a medium vacuum liquid ring pump manifolded to seventy four recovery wells to recover the free product, groundwater and soil vapor. The free product and groundwater is then treated through a series of separation tanks and an oil/water separator to remove the free product. The groundwater is then treated through an air stripper and discharged to the river. Other services included preparation of the stipulation agreement, and construction support. Additional services included the design of a new fleet fueling facility consisting of three - ten thousand gallon above ground storage tanks. The tanks were double wall steel UL- 2085 protected tanks manifolded to 12 fuel dispensers. Other services included the preparation of NYFD variance for above ground motor fuel tank installation and construction support services.

NYCHA Fuel Oil Tank Replacement, NY: Project Engineer responsible for the supervision of the preparation of design plans and specifications for the replacement of fuel oil tanks at Astoria Houses, White Houses and Breukelen Houses. Design included the installation of double wall fiberglass coated steel USTs and replacement of boiler piping systems in accordance with the NYCHA standard metric specification and guidelines. Project involved inspections for potential ACM along tank system piping.

DSNY Incinerator/Garage Demolition Projects, NY: Project Engineer for this $6.2 million program involving detailed site investigations at two former municipal waste incinerators for a structural evaluation in preparation of demolition design documents and specifications. Responsible for preparation of demolition drawings and specifications. He also performed review of geotechnical report in support of the new building design work for various sites. Geotechnical services included the advancement of borings to assess geotechnical conditions as well as soil and groundwater contamination.

NYCDDC Remediation Program, NY: Senior Engineer for the NYCDDC remediation program. Responsible for the design of groundwater/soil treatment and product recovery systems at 50 facilities in all 5 boroughs of New York City. Other activities included supervision of contractors during construction and on-site supervision during startup and testing.

Employment History:
The LiRo Group (1997 to Present)
Associate
URS Consultants, Inc, Buffalo, NY (1991-1997)
Project Engineer

Ronald Wilson, P.E.

SENIOR PROGRAM / PROJECT MANAGER

EDUCATION	M.B.A., Executive Management, St. John's University, 1988 B.S., Civil Engineering, Polytechnic Institute of New York, 1971
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY Professional Engineer, NJ Professional Engineer, CT
YEARS WITH THIS FIRM	14
YEARS WITH OTHER FIRMS	26

Mr. Wilson has 34 years of construction administration and design management experience for a wide range of diversified, multi-million dollar projects. These include a major water tunnel project; water pollution control plants throughout the New York City and Long Island docking facilities for the U.S. Navy; and buildings such as schools, prisons, airport terminals, and railroad stations. As a Construction Manager with LiRo, Mr. Wilson has managed all aspects of projects, from initial development through staff management, day-to-day administration, and close out. His responsibilities include value engineering, constructibility review, estimating, bid packaging, claims control, and supervision of construction inspection. Relevant project experience includes:

CM/Build Requirements Contract for NYC Housing Authority, Senior Project Manager. LiRo performed work on a task order basis for this project involving interior and exterior renovation of 31 high-rise buildings for the Ocean Bay Complex in Rockaway, NY. These properties all required that LiRo perform preconstruction and construction phase services LiRo was responsible for prequalifying potential construction contractors, bidding the work and ultimately entering into contract with the construction contractors. Work for this project included: exterior renovations, full repointing, replacement of windows, window lintels, window sills, parapets, roof, lobby extensions and renovations, construction of stair towers as a second means of egress, landscaping, additions to daycare center and senior center, full electrical distribution upgrade, brick replacement and interior renovation. Of particular importance was that these projects required careful coordination with community residents so interruptions of utilities, housing access, etc. was kept to an absolute minimum. In addition, a community liaison was necessary to keep local residents well informed as to the progress and new developments on the project. (NYCHA, $265M)

New Jersey School Construction Corporation Program Management for Professional Staffing, Associate Project Manager - Assisted NJSCC in program management of a NJ State Supreme Court mandated statewide school design and construction initiative. Assigned for the Jersey City School District under Hudson County with a construction budget allocated at $500 Million. Major responsibilities included overseeing the design consultants and the program Management Firm (PMF) ensuring that the program goals were met both in design and construction phases. (NJSCC, $25M)

Brooklyn House of Detention for Men, Project Manager - These NYCDDC projects were performed in a high security correctional facility. Coordination was critical since there could be no interruption of operations or security. The work involved all elements of construction including piles, structural steel, masonry, HVAC, electrical and security systems, as well as interior finishes for administrative offices. Projects included under this contract:

- New Additions and Renovations ($20M)

- Second Means of Egress ($5M)
- Fire, Life and Safety Improvements ($12M)

P.S. 98 Reconstruction, Manhattan, NY, Project Manager - This project involved phased construction with continuous operations of the school which contains over 1000 students. Coordinating the administration, staff, students, UFT, parents and contractors was crucial to the success the project. Construction included asbestos removal throughout the building, modernization of the HVAC, plumbing and electrical systems, kitchen, elevators, roofs, and the restoration of the entire masonry facade. (New York City School Construction Authority, 1994-1998, $13M)

P.S. 176 and I.S. 52, Manhattan, NY - As Project Manager, Mr. Wilson provided administrative and technical management for the complete renovation of a 1200-student intermediate school and the construction of a new 600-student public school. The renovation required the complete overhaul of the HVAC, electrical, and plumbing systems; complete interior remodeling and refinishing; and extensive asbestos insulation and lead paint abatement and disposal. Concurrent with the renovation was the construction of the new facility at a different location. (SCA, $40M)

Newark International Airport - Mr. Wilson was Project Manager for the renovation of the International Departure and Arrivals Terminals (A, B, and C), and the construction of a monorail system at one of the largest airports in the metro area. All construction was accomplished while maintaining the operations of both ground and air side facilities.

Babylon School District, Babylon, NY - Interior renovations and upgrades of mechanical, electrical and HVAC systems for a grade school, elementary and junior high school. (BUFSD, $5M)

Home Port, Staten Island, NY - Construction of docking facilities for the U.S. Navy's Home Port fleet including enlisted men's quarters, maintenance facilities, personnel housing and recreational facilities. (U.S. Navy)

Construction Management for Town of Oyster Bay Golf Course and Clubhouse - This project involved the complete overhaul of the building's HVAC, electrical, and plumbing systems as well as complete interior redesign. (TOBDPW)

White Plains Railroad Station - This project involved the construction of a new railroad station and elevated platform for the Metro-North Commuter Railroad. (MetroNorth)

North River, Manhattan Sewer Treatment Plant - Inspection of concrete foundations included installing concrete caissons and grade beam network for the plant superstructure out over the Hudson River. Also performed concrete testing during placement. (NYCDEP, $15M)

Hunts Point Sewer Treatment Plant, Bronx, NY - Construction inspection of primary settling tanks involving concrete, piping valves and related equipment. (NYCDEP, $12M)

Employment History:
The LiRo Group (1996 to Present)
Associate

Christopher Zanoni

SENIOR PROGRAM/ PROJECT MANAGER

Mr. Zanoni has over 18 years experience in the environmental field, with extensive asbestos and lead based paint project experience. Mr. Zanoni is responsible for the management, planning and staging of all aspects of asbestos and lead based paint projects from the initial building survey through design and preparation of bidding documents. Mr. Zanoni is also experienced in all areas of abatement related services including: submittal review, project abatement monitoring and project close-out requirements. Representative projects include:

EDUCATION	Ph.D. (pending), Civil Engineering, Polytechnic University M.S., Environmental Engineering, Polytechnic University, 1994 M.E., Civil Engineering, Cooper Union School of Engineering, 1993 B.E., Civil Engineering, Cooper Union School of Engineering, 1992
REGISTRATION / CERTIFICATIONS	NJ Asbestos Safety Technician, NJ CTDOPH Asbestos Project Designer, CT NYSDOL Asbestos Inspector, NY NYSDOL Asbestos Project Designer OSHA 10 Hour Occupational Safety & Health Training
YEARS WITH THIS FIRM	11
YEARS WITH OTHER FIRMS	7

PA of NY&NJ Asbestos and Lead Paint Consulting Services, Project Manager- Responsible for asbestos air and project monitoring services at various PA facilities. Project includes surveying, bulk sampling, reporting, tracking of materials/quantities, compliance monitoring, daily record-keeping of all contractor activities, and report preparation. Prepared Phase I Environmental Site Assessments for use by Port Authority of New York and New Jersey in negotiating lease agreements with air carriers and other tenants. A total of six Phase I assessments were performed in accordance with ASTM guidelines over a one month period of time and included special consideration of existing asbestos-containing materials and lead-based paint. Project sites included plane hangars, warehouses, administrative buildings, and Port Authority maintenance shops.

MTA New York City Transit Comprehensive Environmental Services Contract, New York, NY, Project Manager- Responsible for several continuous indefinite quantity environmental On-Call services contracts. Services included development of lead based paint and asbestos abatement work plans, cost estimating, project coordination and interfacing with site representatives, and project management of inspections and oversight of abatement activities. Supervised over 50,000 hours of field operations including abrasive blasting, needle gun scaling, chemical striping wet scraping at various NYCT facilities ranging from elevated structures on the Flushing IRT line and pedestrian bridges at Corona Park, to active bus depots and station platforms; he has prepared work plans for field operations and managed the hazardous waste storage maintenance program for NYCT. Additional responsibilities included preparation and enforcement of site specific Health and Safety Plans. Project sites included operating substations, subway stations, office buildings, mechanical rooms, rail yards, bus depots, tunnels, bridges, and various other structures throughout many of NYCT's three thousand facilities located throughout the five boroughs of New York City.

MTA Bridges and Tunnels (Tri-borough Bridge and Tunnel Authority)- Worked in coordination with TBTA Safety and Health manager Steve Kozak; functioned as Project Manager for all asbestos and lead based paint project consultation and daily contractor oversight enforcing all applicable EPA, NYSDOL, Local Laws for the renovation and modernizing/restoration of vents shafts, security devices upgrades in the Manhattan, Queens, Staten Island ventilation facilities as well as Brooklyn Battery

Tunnel and Verrazano Bridge. The general scope consists of interpretation and implementation of MTA/TBTA regulations and site specific procedures, surveys, designs, oversight of construction phases. This contract is similar to activities and functions noted for the MTA/NYCT system contract.

Recreation and Historic Preservation - Bear Mountain Inn Lead and Asbestos Remediation Services, Senior Project Manager- During emergency lead based paint assessment, remediation planning and oversight at the historic Palisades, New York recreation facility. Performed scoping, coordination, and quality control during field assessment activities aimed at the Identification and mapping of lead based paints and areas with visible dust accumulations presumed to be contaminated with lead paint; reviewed proposed abatement contractor work plans and matched those locations where large areas of LBP coatings were likely to be disturbed verses areas of "incidental" disturbance; accurately identified to the restoration contractors the surfaces that may be coated with lead paint. Remediation phase work included (a) Inspection of lead paint removal operations to ensure that the work was performed in accordance with specifications issued by NYS Parks as well as applicable regulations; (b) collection of surface wipe samples/air samples for testing subsequent to the completion of decontamination activities to establish that re-occupancy levels have been met; (c) inspection of lead waste storage areas to confirm proper labeling, waste stream separation, waste testing (TCLP) and waste manifesting procedures; (d) inspection and evaluation of suspect asbestos-containing materials and subsequent collection and analysis of representative bulk samples from materials that may be impacted by the renovation; (d) project monitoring during asbestos removal activities and reporting of observation of regulatory non-compliance to NYS Parks; (e) preparation of asbestos and lead based paint project close out reports and/or monthly reports during phased abatements.

Highline Reconstruction Rehabilitation, Task Manager- Provided direct assistance to the Resident Engineer for implementation and enforcement of SSPC, NYSDOT, EPA, OSHA, NYS, and relevant Local laws and guidelines for the abatement of ACM and the removal, treatment, disposal and handling of lead based paint during abrasive blasting of lead based paint from over 2 miles of elevated structural steel. Conducted QC inspections of blasting containments and waste storage areas. Provided management support and technical guidance during excavation of contaminated soil and demolition of ancillary structures below the Highline. Defined the scope and procedures for abatement of asbestos containing track bed expansion joint tar, rail connector rust inhibitor, and miscellaneous ACM encountered during the project.

New York City Department of Environmental Protection – Legacy Program Remediation of Contaminated Paint, NY, NY: Performed Project Management during program aimed at removing coatings contaminated with lead, PCB, and mercury. A total of 16 sites consisting of effluent chambers, intake chambers, shaft-ways, maintenance facilities, were targeted throughout the Hudson Valley watershed area. Management tasks included field reconnaissance to confirm inspection data and site conditions, interviews with local DEP personnel to obtain information on individual facility operations and potential constraints to the pending remediation effort, specification drafting, and construction management during the abatement phase.

Employment History:

The LiRo Group (1999 to Present)
Associate Vice President
Professional Services Industries, Inc (1997-1999)
Project Manager
Warren & Panzer Engineers, Inc. (1992-1995)
Design Engineer

Brant Aidikoff, P.E.

SENIOR PROGRAM/ PROJECT MANAGER

EDUCATION	M.Eng., Nuclear Engineering, Cornell University, 1976 B.S., Engineering, Cornell University, 1975
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY Professional Engineer, NJ ASTM Course - E1739-RBCA PETCON Course - UST Installation Confined Space Entry Certification Lieutenant, US. Navy - Aircraft Carrier, 1976-1979
YEARS WITH THIS FIRM	15
YEARS WITH OTHER FIRMS	16

Mr. Aidikoff has been providing project management for environmental and power plant projects since 1975. Recently, Mr. Aidikoff has been providing infrastructure coordination support for the WTC recovery. He has provided support to nuclear, oil, gas, industrial and utility clients and assisted them with complying with the Code of Federal Regulations, including Titles 10 (Energy), 33 (Navigation), 46 (Shipping) and 49 (Transportation). He has provided six years of intensive litigation support for environmental hearings before administrative law courts. Responsibilities included discovery, depositions, writing prefilled testimony, expert testimony and review of decisions of appeal. Mr. Aidikoff was president for ten years of an eight-person firm that worked for utilities and governmental agencies in New York and other states. Projects included preparation of plans and documents to assist clients respond to the requirements of the CERCLA (Comprehensive Environmental and Liability Act), EPRCA (Emergency Planning and Community Right to Know Act) and RCRA (Resource Conservation and Recovery Act.). He worked with FEMA on the development of an environmental hazard exercise which involved over 1200 participants and with utilities in the development of environmental hazard response plans and large scale drills. Representative projects include:

Lower Manhattan Construction Command Center, New York, NY Program Coordinator: In October 2005, Mr. Aidikoff continued his role in Lower Manhattan as the Program Coordinator, leading the LiRo team, at the LMCCC. In addition to the weekly project status meetings that Mr. Aidikoff had been coordinating since 9/11, Mr. Aidikoff's responsibilities again expanded to include logistical coordination for both infrastructure and structures in Lower Manhattan. The LiRo team has developed state of the art program management tools that interface project schedules with geographical information systems so that construction impacts on roads and thoroughfares can be assessed. This was the first part of a massive logistical assessment that has analyzed steel, concrete, equipment and labor demand vs. supply in entire NYC metropolitan region. Meetings were held with City agencies and every major NYC construction organization. Task forces were formed to deal with the logistical issues that had been identified as a part of the assessment process. (LMCCC, $9M, 2005 - Present)

WTC Program Assessment, New York, NY, Project Coordinator: In June 2008, the Port Authority requested that LiRo facilitate an assessment of the schedule, budget and challenges for the World Trade Center construction program. Mr. Aidikoff led a team of both LiRo employees and sub consultants that worked with Port Authority and other stakeholders. The report identified the key challenges confronting the project and then risked the program schedule and budget. The report was provided to the executive

director of the Port Authority and was the basis of a report provided to Governor Patterson in July 2008. (PANYNJ, $240K, June 2008)

Lower Manhattan Infrastructure Recovery Coordinator: After the events of 9/11 in New York, Mr. Aidikoff was tasked with the coordination of the intensive amount of electric, telecommunications, steam, gas and subway work that was happening around the clock in the vicinity of the World Trade Center. The responsibility was expanded after July 2002 to include all infrastructure work in Manhattan below Canal Street - involving two dozen projects going on simultaneously. Mr. Aidikoff held weekly meetings with the utilities companies, agencies and construction companies who have projects in the downtown area and later held an executive status meeting for City commissioners to provide an update of ongoing projects. (NYCDDC, $9M, 2002 - 2005)

WTC Infrastructure Recovery Coordinator: In this position, Mr. Aidikoff coordinated the infrastructure recovery of utilities throughout the WTC vicinity, including the reconstruction of West Street (Rector and Chambers) and Liberty (West and Liberty). After 9/11, Mr. Aidikoff also worked with NYC OEM in providing the Bank of New York with information concerning the utility reconstruction in the vicinity. Mr. Aidikoff has focused on the Vesey Street alignment and the construction phasing for the WTC 7 vicinity, where a new Con Edison substation is being built. Mr. Aidikoff held weekly meetings with the utilities companies, agencies, and construction companies who have projects in the downtown area. In addition, he provided a weekly status report of infrastructure activities for City and FEMA personnel. This report also provided a funding tracking chart that details the funding source for the City's sewer and water main projects in the downtown area. (NYCDDC/Bovis, 2001-2002)

Remediation at 60 Sites for the NYCDDC, Soil and Groundwater Remediation: Projects included the design and construction of remediation systems, which includes the installation of ground water and soil vapor extraction wells that are piped through a series of excavation trenches to multi-phase, soil vapor or pump and treat systems. The multi-phase systems included liquid ring pumps, phase separators, oil water separators, carbon filters, air strippers, transfer pumps, blowers and a host of sensors connected to a remote communication device for system monitoring. Bioremediation installations included geoprobe borings and the injection of a bioslurry with oxygen releasing compounds or a bio mix with active hydrocarbon digesting bacteria. (NYCDDC $23M, 1998-2001)

Employment History:
The LiRo Group (1995 to Present)
Vice President
Aidikoff Associates, Inc., 1984 -1995
President
Stone and Webster Engineering Corporation, 1979 -1984
Project Engineer

Michael Bailey, P.E.

SENIOR PROGRAM / PROJECT MANAGER

Mr. Bailey has over 20 years of experience managing infrastructure and building projects. He holds a BS in Civil Engineering from Lehigh University and presently manages LiRo's Resident Engineering Inspection group. He is responsible for all of the firm's roadway, bridge, rail and utility projects. In addition, he has managed large building and MEP projects for selected clients. Mr. Bailey has managed projects valued up to $2.5B in construction. He has also developed one of the region's most successful "on-call" construction management groups.

In addition to the management of the REI division, he is responsible for proposal preparation and resource allocation within his division. A testament to his management capabilities can be seen in the number of repeat contracts he has generated in the past fifteen years. Prior to joining LiRo, Mr. Bailey served as a design engineer, resident engineer and construction superintendent where he was responsible for bridge designs, storm/sanitary sewer and water distribution system designs, highway/ roadway designs, as well as several large development site plans. Representative projects include:

EDUCATION	B.S.C.E., Civil Engineering, Lehigh University, 1984
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY OSHA Safety Trained Confined Space Entry Certification Troubleshooting Exterior Masonry Walls Certification, NY Brick Veneer and Metal Stud Backup Exterior Wall Cert., NY Brick Masonry-Inspections and Quality Control Certification, NY
YEARS WITH THIS FIRM	20
YEARS WITH OTHER FIRMS	6

Projects in which Mr. Bailey serves or has served as Project Executive or Project Manager include:

- Triborough Bridge Deck Replacement on the Wards and Randall's Island Viaduct (TB-64B) Project Manager. (MTA-TBTA, $272M)
- Whitestone Expressway Bridge Replacement, Long Island City, NY, Project Executive (NYSDOT, $180M)
- High Line Reconstruction, New York, NY, Project Executive (NYCEDC, $125M)
- Specialty CM Services - Route 25A over Hempstead Harbor (Roslyn Viaduct), Hauppauge, NY, Project Executive (NYSDOT, $120M)
- As-Needed Construction Management Services, 2006-2009, Triborough Bridge and Tunnel Authority Facilities, New York, NY, Project Manager. (MTA-TBTA, $25M)
- As-Needed Construction Management Services, 2004 - 2007, Triborough Bridge and Tunnel Authority Facilities, New York, NY, Project Manager. (MTA-TBTA, $30M)
- As-Needed Construction Management Services 2001-2004, Triborough Bridge and Tunnel Authority Facilities, New York, NY, Project Manager. (MTA-TBTA, $25M)
- As-Needed Construction Management Services, 1998 - 2001, Triborough Bridge and Tunnel Authority Facilities, New York, NY, Project Manager. (MTA-TBTA, $20M)

- As-Needed Construction Management Services 1995 - 1998, Triborough Bridge and Tunnel Authority Facilities, New York, NY, Project Manager. (MTA-TBTA, $10M)
- Tappan Zee Bridge - Removal and Replacement of East and West Deck, Construction Inspection and Scheduling, and Rehabilitation of Substructure, Project Manager. (NYSTA, $81M)
- NYCDOT Contract No. HBCY093, Marine Structural Repairs, Resident Engineer. (NYCDOT, $10M)
- MTA-TBTA Projects AW-32, AW-34, AW-36 and AW-80A/B, Various Locations, NY. 2003 - 2006. Project Manager. (MTA-TBTA, $60M)
- NYCDOT Contract No. HBE1023, Emergency Installation of Center Median New Guide Rails on the Mill Basin Bridge, Brooklyn, Resident Engineer. (NYCDOT, $3M)
- Triborough Bridge Redecking and Cabling (TB-64A), Project Manager. (MTA -TBTA, $150M)
- Queens Midtown Tunnel - Construction Administration and Inspection Services for the Rehabilitation of the Roadway Drainage System (QM-10), Project Manager. (MTA -TBTA, $6M)
- Brooklyn Battery Tunnel - Construction Administration and Inspection Services for the Rehabilitation of the Roadway Drainage System and Related Work (BB-24), Project Manager. (MTA-TBTA, $4M)
- On-Call Construction Management Services, 1998 - 2001, Triborough Bridge and Tunnel Authority Facilities, New York, NY, Project Manager. (TBTA, $20M)
- On-Call Construction Management Services 1995 - 1998, Triborough Bridge and Tunnel Authority Facilities, New York, NY, Project Manager. (TBTA, $10M)
- Construction Management for Indefinite Quantity-Security Program CM-1308/1309/1310, Project Director. (MTA-NYCT)
- NYSDOT, Region 11 Construction Inspection Term Agreement, Project Manager. (D015297, PIN S117.21). (NYSDOT, $170M, 2003-2005)
- NYCDOT, Engineering Services Agreement for Resident Engineering Inspection and Design Services, Project Manager. Projects under this agreement included Replacement of Steinway Street Bridge over the Grand Central Parkway, Project Manager. (NYCDOT, $18.4M)

Employment History:
The LiRo Group (1990 to Present)
Senior Vice President

Gilbert E. Balog, AIA

SENIOR PROGRAM / PROJECT MANAGER

In his 40 years of professional experience, Mr. Balog has administered a variety of renovation and rehabilitation projects with a cumulative value of more than $1 billion. He is also an expert in providing feasibility studies, project management and organization, adhering to building codes, and developing design/build and fast-track construction programs for governmental facilities. Most of the projects he has worked have been designed to maintain facility operations during construction.

Mr. Balog has been the recipient of the New York Society of Architects' Citation for Excellence in Design, Planning and Construction. He also has received numerous fellowships and scholarships.

EDUCATION	M.S., Urban Planning, Columbia University, 1968 Bachelor of Architecture, Cornell University, 1966
REGISTRATION / CERTIFICATIONS	Registered Architect, NJ Registered Architect, NY Registered Architect, CT Registered Architect, PA International Code Council American Institute of Architects NCARB Certified
YEARS WITH THIS FIRM	39
YEARS WITH OTHER FIRMS	3

Mr. Balog is a member of the National Fire Protection Association, The International Code Council and The American Institute of Architects. Representative projects include:

World Trade Center, Feasibility Study, Life Safety, and Building Code Analysis for the Expansion of the Concourse Level of the World Trade Center - Completed a building code analysis of the entire Concourse Level of the World Trade Center (approximately 470,000 sf of public passageways and retail facilities). Mr. Balog directed a review of the existing complex and advised the Port Authority of code deficiencies regarding future expansion relative to New York City Building code. Alternative solutions were proposed with estimates of construction cost to mitigate the deficiencies. (Port Authority of NY& NJ)

Mr. Balog also directed the creation and development of a computer generated, life safety analysis model for the evacuation of the existing 20-year old complex. The program was used to provide visual displays of various scenarios regarding the availability or lack thereof of different exits and passageways during emergency situation. (Port Authority of NY/NJ)

Americans with Disabilities Act (ADA) Surveys, World Trade Center - Performed ADA Title III Public Accommodations Facility Surveys of the entire World Trade Center Complex. Under Mr. Balog's direction, LiRo completed an ADA survey report, conceptual designs, transition plan, construction cost estimates, and proposed mitigation measures for the public areas of 1, 2, 4, and 5 World Trade Center (concourse level, plaza level, PATH mezzanine, elevators, parking levels, public toilets and loading dock), sky lobbies of 1 and 2 World Trade Center, the multi-level *Windows on the World* restaurant and banquet facilities on the entire 106th and 107th floors of 1 World Trade Center, and exterior public plaza and fountain (over one million square feet). (Port Authority of NY/NJ)

Call-In Contracts, Feasibility Studies, Code Analysis - Mr. Balog programmed, scoped, planned, and budgeted over 50 individual projects including replacement of doors and roofs, lobby, interior and

new-building designs, feasibility studies, and code and ADA analysis. These projects were developed for various departments of the Port Authority of NY & NJ, including their Engineering, Maintenance, Aviation, and World Trade Departments. (Port Authority of NY & NJ)

Call-In Contract for Architecture - Mr. Balog developed, programmed, planned and budgeted over 30 projects for the client's downstate facilities including a myriad of building system repairs, rehabilitation, upgrading and additions to their aging buildings. (New York State Facilities Development Corporation)

CUNY School of Architecture - Swing Space Relocation, New York, NY - Principal Architect - Responsibilities included programming, design, construction documents and construction administration for the relocation of approximately 60,000 sf of City College's administrative facilities (over 14 departments) previously housed in the "Y" Building to other buildings on the City College campus in order to allow the "Y" Building to be converted into the new home for the School of Architecture. (DASNY, $7M)

Rehabilitation of the 8th Avenue Station and Retaining Walls, Sea Beach Line, Brooklyn, NY - Mr. Balog is the Principal Architect in charge of the design of the 8th Avenue Station renovation. The scope of work for the rehabilitation of this station, which is located in an open cut embankment, includes the rehabilitation of the full-time control house, station platforms, and the Transit Authority's Automatic Fare Control building. The design will bring the entire station to a "state of good repair", provide requisite customer and employee amenities, and enhance customer and employee safety. (NYCT, $1M)

Rehabilitation of the 77th Street and 86th Street Stations, Lexington Avenue Line, Project Manager - Mr. Balog coordinated, managed and planned the complex renovation and rehabilitation of these two subway stations. The scope of work involved numerous upgrades of existing building systems and structures in multiple locations throughout both stations. (NYCT, $30M)

Pennsylvania Station Historic Restoration, Newark, NJ - Provided design services and supervision of multi-contract construction for this project. Scope included historic restoration, renovation, and rehabilitation of the commuter and AMTRAK passenger train and bus terminal including the renovation of all street entrances, the modernization of platform areas, the addition of platform elevators for elderly and disabled access, upgrade of mechanical systems, installation of new security and CCTV systems, track signalization, roof rehabilitation, and reconfiguration of traffic and parking facilities. The project was designed for the phasing and staging of construction to maintain the uninterrupted operation of the terminal during rehabilitation.

Delta Airlines Building Code Study Terminal A & B, JFK international Airport - When Delta Airlines took over Pan Am's International and Domestic Terminal at JFK, it inherited facilities that had been renovated many times and did not meet current building code. Under Mr. Balog's direction, LiRo performed a forensic building-code analysis using the original construction documents to establish initial code compliance and provide Delta with cost-effective mitigation measures for the modification of the existing facilities to meet current code.

Employment History:
The LiRo Group (1971 to Present)
Senior Vice President/Principal Architect
Emery Roth & Son (1968-1971)
Detailer

Michael Bendetti, P.E.

SENIOR PROGRAM / PROJECT MANAGER

Mr. Bendetti has over 19 years of construction management and design experience for major public works projects in the New York area. His experience includes courts, correctional facilities, maintenance facilities, buildings, pump stations, roadway reconstruction, and site improvement projects. Mr. Bendetti has managed projects from conceptual design through construction completion. Since 2003, he has worked extensively on projects for the Suffolk County Department of Public Works (SCDPW). Representative projects include:

EDUCATION	B.E., Civil Engineering, The Cooper Union School of Engineering, 1988
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY Primavera Expedition (Project Controls) OSHA 10 Hour Occupational Safety & Health Training
YEARS WITH THIS FIRM	21
YEARS WITH OTHER FIRMS	1

Pre-Construction and Construction Support Services to SCDPW, Project Manager. During the pre-construction phase, Mr. Bendetti worked closely with the design teams, SCDPW, and LiRo's staff of engineers and architects to ensure quality, cost and schedule control. Pre-construction services include:

- Providing detailed constructability reviews of the contract documents. Develop reports which identify errors, omissions, conflicts, and missing work in the contract drawings and specifications. Identify aspects of the work which can be redesigned to reduce costs without affecting quality.
- Development of conceptual construction budgets and detailed cost estimates during design development.
- Extensive value engineering and development of project scope revisions to ensure budget compliance.
- Development of design schedules and preliminary construction schedules; analyze schedule impact for proposed design and construction changes.
- Development of phasing plans and site logistic plans.
- Assist in the development of Project Labor Agreements (PLA).
- Provided analyses of bids and award recommendations.

Specific Projects Mr. Bendetti has provided pre-construction services for SCDPW include:

- **Civil Court Complex in Riverhead, NY.** Multi- phase project Includes construction of a 96,000 sf addition, and renovations to four existing court buildings ($35M)
- **Yaphank Jail in Yaphank, NY.** Multi- phased program includes construction packages which will provide for over 200,000 sf of additional jail inmate housing and support spaces ($151M).
- **County Center Complex in Riverhead, NY.** Includes renovations to 200,000 sf of office space ($29M)
- Mr. Bendetti also provides construction support services for SCDPW, including project oversight with regard to schedule, cost (change orders and overall budget), quality, and construction progress meetings. In addition to the above projects, Mr. Bendetti provided construction support services for the following SCDPW projects:

- **Fire Training Center, Class "A" Burn Building, in Yaphank, NY.** Construction of a reinforced concrete building for the Suffolk County Fire Training Academy for use in fire simulations ($4M)
- **DWI Facility in Yaphank, NY.** Construction of a new 16,000 sf secure facility for the Suffolk County Sheriff's Office ($6M)

Since 2006, Mr. Bendetti has also been Project Manager providing construction management services to the NYC DDC Transportation Unit. Projects include:

New Sunrise Yard NYC DOT Maintenance Facility in Ozone Park, NY- This $20M project includes demolition of two one-story brick structures; abatement/ remediation of asbestos and contaminated soils associated with these structures and a subsurface fuel storage tank; construction of a new two- story steel framed building to house material storage, shops, drive- through vehicle maintenance, locker room, and administrative offices; and associated site improvements, including new fence, paved parking, green spaces and art wall. The project is designed to achieve a LEED Gold Certification.

Inmate Housing Addition at GRVC on Rikers Island (2002 to 2003) - This multi- phased project included construction of two new housing units (50,000 sf each), a 65,000 sf administrative building, a new addition for the locker room, and site security upgrades. During the preconstruction phase reviewed various housing options and analyzed costs associated with population and security level. Developed project packaging and phasing to meet budgetary and logistical requirements, and to minimize impact to ongoing facility operations. Performed extensive constructability and value engineering, and coordinated with NYC DDC and the owners (NYC Dept of Correction) to ensure budget compliance ($120M).

New Security Control Room and Perimeter Fence Upgrade, Rikers Island (2001-2005) - Construction of new central control room and upgrade of security features throughout the perimeter fencing surrounding Rikers Island. Extensive coordination required to prevent lapses in security while work progresses. ($6M)

New Locker Room Building at EMTC, Rikers Island (2001-2003) - This multi-phased project included construction of a new facility entry sallyport and parking lot ($2M) and a new 12,000 sf locker room building. During the preconstruction phase, developed phasing plans to integrate portions of the Fence Upgrade Project (see above), which were required prior to constructing the new locker building. Reviewed various building configurations and construction types to provide the required functions at the lowest cost. ($5M).

C141SERV-1- System wide Kitchen Renovation Program for Department of Corrections (1996-2001) - This multi- phased, multi packaged project was fast tracked and subject to court mandated start and completion dates. Project included a short term phase wherein $10M of temporary improvements was made at fifteen correctional facilities throughout the City of New York within a four month period. Also included complete renovations and new kitchen facilities at six jails (BKHDM, NIC, BXHDN, BCF, CIFM & QHDM). Extensive phasing and temporary construction was required to maintain facility operations during construction in occupied facilities ($60M).

Employment History:
The LiRo Group (1989 to Present)
Associate

Eugene Bifulco, P.E.

SENIOR PROGRAM / PROJECT MANAGER

EDUCATION	B.S., Mechanical Engineering, New York Institute of Technology, 1987
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY OSHA 10 Hour Occupational Safety & Health Training NYC DOB 4-Hour Supported Scaffold User Certificate, NY NYC Site Safety Manager License
YEARS WITH THIS FIRM	21
YEARS WITH OTHER FIRMS	7

Mr. Bifulco has over 20 years of experience in the construction industry. Most recently, Mr. Bifulco has been extensively involved with LiRo's contracts with New York City Department of Design and Construction and Dormitory of the State of New York work. Mr. Bifulco is involved with administration, contracts, auditing project schedules and documentation, client liaison and technical troubleshooting. Having worked his way through the ranks, Mr. Bifulco possesses hands-on experience in all areas of construction management. Specific areas of expertise include cost estimating, CPM scheduling and electrical construction. Mr. Bifulco's experience is deeply rooted in public works and he is thoroughly familiar with Wicks Law construction contracts. Representative projects include:

Bernard Fineson Replacement Facility, Project Executive - Under this contract, LiRo provided CM services for DASNY for the pre-construction and construction phases of this project for the Office of Mental Retardation and Developmental Disabilities. The scope of work included the demolition of existing structures on a 12-acre site and the erection of eight new one- and two-story residential buildings and an 80,000 square foot program/administration building. Work also included the development of the 12-acre site and all utilities. (DASNY, $80M, 2009)

DASNY School of Architecture, Project Manager - Demolition and reconstruction of a 136,000 sf building to become the new School of Architecture building. The building frame was structural concrete, which remained. The balance of the building was demolished and rebuilt, including façade, interior and mechanical, electrical and plumbing systems. The estimated project construction cost was $52M. Prior to demolition, space was provided for the current occupants. These occupants were permanently relocated within the campus, which required the renovation of various locations at a cost of approximately $8M and was accomplished in one year.

Stony Brook University Medical Center - This project consists of various stages of construction with an anticipated overall cost of approximately $170M. The overall scope of work is anticipated to take 7 years, due to the intricate phasing that will be required to keep the facility in operation throughout the entire construction duration. The job consists of five separate projects: Patio Enclosure, Emergency Generator, The Heart Center Project, ACP Project, and a Major Modernization Project.

Westchester County Penitentiary - The Penitentiary Housing Replacement Facility project at Norwood E. Jackson Correctional Center, located in Valhalla, New York, was developed by the Westchester County Department of Public Works. The scope of the project included renovation of existing spaces and the demolition of existing building to allow for the construction of the new facility. The new facility includes a punitive segregation housing area and a general population area. The new facility is structured concrete with a masonry facade and has state-of-the-art security. New housing units replaced the three-story buildings. ($42M)

Kings County Hospital Center - Office of the Chief Medical Examiner (OCME) Construction Management Services - LiRo managed the construction of the new Office of the Chief Medical Examiner (OCME) facility in Brooklyn. This is a state-of-the-art facility offering the staff and the public a safe and private environment. Shared between Kings County Medical Center and the OCME, the new facility contains space designated for NYPD investigators. It was designed to be sensitive to the surrounding community and hospital campus. LiRo's role was to provide comprehensive construction management services from design development through the completion of construction. This included the coordination of all construction operations and related vehicular traffic so that it did not interfere with local traffic or hospital campus operations. The 40,000 sf facility was constructed in 28 months. (DASNY, $18M)

System-Wide Kitchen Renovation Program for NYC Department of Corrections, Project Manager - This contract entailed the phased renovation of kitchens, pantries and related food service areas throughout the NYC jails system. LiRo's role was to perform all construction management duties including bidding and entering into contract with various construction contractors. This program required an initial phase of construction in which 14 facilities were to be upgraded with systems that would last through the construction period. The balance of the program involved the total renovation of kitchens and food related services areas at six correctional facilities throughout Brooklyn, Queens and the Bronx. (NYCDDC, $50M)

Various Capital Project Requirements Contract - This CM/build project consists of separate contracts ranging in value from $1M to $14M each. Project types include court mandated correctional facility renovation work as well as renovations to a vintage theater/school in upper Manhattan. (NYCDDC, $35M)

Renovations and Expansions at the Brooklyn House of Detention for Men, Project Manager - This project involved 44,000 sf of new additions and renovations to a high security correctional facility. The new additions were constructed around 60% of the perimeter of the existing building which required a phased sequence of construction including restoration of entry and exit doors. Interruption of facility operations was prohibited and maintenance of security was critical. The additions required a two-story structure to be built along a busy city thoroughfare and very little staging space. (NYCDDC, $20M, 1995 - 2001)

Fire, Life and Safety Improvements at Brooklyn House of Detention for Men - Provided construction management services under a CM/Build requirement contract for fire, life and safety improvements. The Brooklyn House of Detention for Men is a maximum security jail located in downtown Brooklyn, a busy urban area providing the site with limited space (approximately 144,000 sf). This facility houses 815 inmates. (NYCDDC, 2003, $12M)

Employment History:
The LiRo Group (1989 to Present)
Vice President

Lawrence Blond, P.E.

SENIOR PROGRAM /PROJECT MANAGER

EDUCATION	B.S.C.E., Civil Engineering, Rutgers University
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY 10-Hour Occupational Safety and Health Training Course, NY
YEARS WITH THIS FIRM	16
YEARS WITH OTHER FIRMS	14

Mr. Blond has been providing construction management and engineering services since 1979. His past experience has included program and project management, structural design and analysis, building inspection and evaluation, cost estimating, quality control and quality assurance for both public and private sector projects. He has both performed and managed the general administration of construction projects, including design and constructability reviews, field inspection, scheduling, cost control and value engineering.

Since joining LiRo he has been directly responsible for over a half a billion dollars of construction projects, many of which have involved high profile municipal projects with mandated completion dates. Mr. Blond is currently overseeing the Program and Construction Management Division of the LiRo Group, which has been steadily growing over the past five years. Senior Management oversight is a key to LiRo's success and Mr. Blond leads the way with his direct involvement with his staff, ongoing projects and our clients. Representative projects include:

NYCDDC Fire Unit, Project Executive - This CM/Build program has included projects ranging from $2M to $12M of renovation and new construction of firehouse facilities. LiRo has completed $50M of work over the past three years and a total construction amount of $85M. (NYCDDC)

NYCDDC Stadia Projects, Project Executive - LiRo is working at both Yankee and Shea Stadiums performing CM/Build services. Approximately 30 fire, life, safety projects have been performed over the past two years including structural repairs, escalator repairs, and MEP upgrades. (NYCDDC, $50M)

Nassau County Government Operations Center, Project Executive- LiRo in a Joint Venture with Bovis Lend Lease is providing comprehensive construction management services for the Theodore Roosevelt Government Operations Building. The Theodore Roosevelt Executive and Legislature Building at 1550 Franklin Ave in Garden City, NY will be completely renovated. The original building was constructed in 1916 and was the first public building to be constructed using reinforced concrete. The building is listed on the State Register of Historic Places and is currently approximately 135,000 sf. Later additions to the building will be demolished so the final footprint will house approximately 85,000 sf of space. In addition, a 28,000 sf annex will be connected to the Old Courthouse building to house the new mechanical plant and Legislature chamber. The $36 million project is the result of an extensive evaluation of the County's requirements and the building's condition. (NCDPW)

New York City Department of Sanitation Requirements Contract, Project Executive- This contract involved providing construction management services to the DSNY on an on-call basis. These services were provided to support the numerous projects that DSNY has in progress throughout the five boroughs of New York City. Nine projects have been performed over the past three years ranging from scheduling services to complete construction management assignments. (DSNY, $8.5M)

Battery Park City Authority, On-Call Owner's Representative Construction Management Services, Project Executive - LiRo provided construction management services on an On-Call/ Emergency Basis. The contract primarily involved any work that was required construction management services throughout all of Battery Park City. The design phase responsibilities included constructability reviews, cost estimating, CPM scheduling, code compliance review, site layout and construction phasing recommendations. The construction phase responsibilities included all essential CM services for the specific task or project at hand. Emergency response was essential to the tasks that may arise.

Battery Park City, Site 14/14B Park Reconstruction, Construction Management, Project Executive - LiRo provided construction management services for the construction of Site 14/14B, adjacent to the Museum of Jewish Heritage. The project primarily involved landscaping the property around the Museum of Jewish Heritage and its new addition. It involved new lighting systems, new irrigation systems, installation of paving material around the entire site, and landscaping, implementing BPC green guidelines. The property encompassed approximately 80,000 sf. LiRo maintained careful coordination of this project with the adjacent concurrent construction of the Museum addition.

Battery Park City, Site 23/24 Baseball Fields - Construction Management, Project Executive - LiRo provided construction management services for the renovation/construction of new ball fields at Battery Park City's Site 23/24. As CM, our emphasis was on the coordination of all contractors, developers, BPCA/BPCPC, quality control, budget control, construction direction and supervision, scheduling and the creation of verifiable as-built for all work. LiRo also integrated the expertise of landscape architects and turf specialists in each phase of the project, implemented BPC green guidelines.

Battery Park City, Community Center Construction Management Services, Project Executive - LiRo is providing Owner's Representative/ Construction Management services for a 60,000 sf community center/ball field maintenance facility in the base of two residential towers at Site 23/24 in Battery Park City. LiRo will oversee the creation of the community center/ball field maintenance facility from design development through completion of all construction and post-construction. This facility will house 2 swimming pools, an auditorium, a gym, classrooms, and exercise center/outdoor plaza, as well as a maintenance facility for the Battery Park City Parks Conservancy for the care of the two adjacent little league ball fields. Site 23/24 will be developed according to the mission of the Authority of furthering sustainability in urban development. The community center/ball field maintenance facility will be built in accordance with the Authority's Environmental Residential Guidelines and with the latest LEED for Commercial Interiors (CI) rating system, now version 2.0. It is anticipated that the facility will attain a Platinum rating, the highest possible level bestowed by the USGBC. ($30M)

FDNY Fire Training Academy at Randall's Island, Phase II, Project Executive - This NYCDDC CM/Build project included the construction of four new state-of-the-art training facilities for the FDNY and renovation of three additional fire academy buildings. The new construction included classroom training facilities, a burn building, an indoor mock-up of a New York City street, and a subway simulation building. In addition, a new state-of-the-art security system was installed for the facility. ($55M)

Employment History:

The LiRo Group (1994 to Present)
Senior Vice President & General Manager

Jerrold S. Cohen, AIA

SENIOR PROGRAM / PROJECT MANAGER

Mr. Cohen has over 25 years of experience in construction management and design services for public sector and institutional clients. He understands that the stewardship of these projects constitutes a public trust requiring the highest level of professional and technical responsiveness. Mr. Cohen's experience includes K-12 schools and higher education facilities, courts, housing, health care, laboratory and research facilities. He has demonstrated expertise in the leadership of high priority, complex construction programs with multiple stakeholders. Mr. Cohen is a proven client service oriented team builder, skilled in delineating objectives, effective decision-making, in pro-active coordination, budget management and project delivery. Representative projects include:

EDUCATION	M Arch, State University of New York at Buffalo, 1981 B.A., Environmental Studies, State University of New York at Stony Brook, 1973 Environmental Design, Parsons School of Art & Design
REGISTRATION / CERTIFICATIONS	Registered Architect, NY Const. Claims Arbitration & Mediation, American Arbitration Negotiation Strategies for Public Construction OSHA - 10 Hours Certificate Partnering Facilitation, American Arbitration Assoc. DART Project Delivery Systems, Design Build, AIA Scaffold Safety Engineering, Construction Safety, OSHA
YEARS WITH THIS FIRM	7
YEARS WITH OTHER FIRMS	20

CM/Build Requirements Contract for NYC Housing Authority, Project Executive - LiRo is currently performing work on a task order basis including renovating and/or constructing several community centers throughout New York City. Work includes new construction of a community center, various renovations and upgrades, and infrastructure renovations including electrical, HVAC, and plumbing. These properties all require that LiRo perform preconstruction and construction phase services. LiRo is responsible for prequalifying potential construction contractors, bidding the work and ultimately entering into contract with the construction contractors. These projects require careful coordination with community residents so interruptions of utilities, housing access, etc. are kept to an absolute minimum. (NYCHA, $250M)

New York City School Construction Authority, Construction Management Emergency Response Management and Coordination Program, New York City, Project Executive - Under multiple contracts LiRo's extensive scope of work varied widely, and included the highly expedited renovation and construction and major restructuring projects for five new high school ranging from approximately $15 to $30 million. These projects, including extensive reconstruction of school facilities, were completed within less than 90 days during the summer period when regular school sessions have ended, as compared to the typical 1 year or longer durations for comparable work. Work was accomplished using round-the clock shifts, 7 days per-week with minimal disruption to students and faculty engaged in school activities and to the surrounding neighborhoods. LiRo also immediately mobilized construction professionals, trade labor union personnel, contractors and/or material suppliers to arrest dangerous conditions or contain hazardous materials at public schools within the five boroughs of New York City. In this capacity, work was performed on a 24 hour-per day, 7 day-per-week basis. Categories of work included the design administration; development of construction estimates, schedules, solicitation of bids in accordance with Authority requirements and the law; providing general conditions including but not limited to testing and controlled inspections; remediation of hazardous materials; construction and demolition of the work in accordance with the SCA's Project labor

Agreement (PLA) and contract documents issue by the Authority. Among the services that LiRo provided included: detailed construction cost estimates detailed CPM schedules cost and schedule controls and reporting bid and award of contracts management of all construction and hazardous remediation work and related activities general conditions work, including testing and controlled inspections To date LiRo has completed in excess of approximately $110 million under two successive contracts with the NYCSCA. (NYCSCA, $238M, 2004- on-going)

New York City School Construction Authority, Professional Staffing Services, Project Executive - LiRo, in JV, was selected under successive contracts to provide supplementary staffing to the New York City School Construction Authority. Assigned personnel responsibilities included the construction management administration and coordination of design and construction for rehabilitation, modernization and new school projects and campuses throughout New York City. Current assignments include providing Project Officers for both new school and school rehabilitation construction in the Bronx, Queens, Brooklyn and Manhattan. (NYSCSA, $29M, On-going)

Decontamination and Deconstruction of Fiterman Hall, Borough of Manhattan Community College, Project Executive - LiRo is currently serving as the Construction Manager Sub consultant to Pei Cobb Freed & Partners for the decontamination and demolition phases in anticipation of the rebuilding of Fiterman Hall, Borough of Manhattan Community College (BMCC). Services are provided on an ongoing work session review basis fully coordinated with Pei Cobb Freed personnel and with DASNY and CUNY project managers. This teamwork approach is structured to facilitate coordination amongst the multiple primary stakeholders, to minimize disputes, eliminate potential cost and schedule overruns, and to mitigate change orders, that may otherwise arise during construction. The project involves extensive New York City inter-agency coordination, particularly with LMCCC, LMDC, USEPA, NYCDEP, NYCDOT and the MTA. It also requires continual briefings and dissemination of process and update information to the local Community Board and the public. LiRo managed design investigations, providing site supervision and managing field contractor operations prior to and during the decontamination and deconstruction work. This includes interior and exterior environmental cleaning and removal of all building contents and components. All work is being conducted under special monitoring requirements applicable to the USEPA WTC Recovery Zone, and will occur within the jurisdiction of the USEPA WTC Recovery Program. Additionally being provided are preconstruction services, scheduling, contractor prequalification and bid packaging. (DASNY, $240M)

Westchester County Courthouse Renovations and Addition, Project Executive - This steel framed, twenty story building, was constructed in the early 1970's. It currently houses the offices of the district attorney, courtrooms and other miscellaneous county official offices. The project was made up of three major construction phases: 1) exterior renovation of the existing façade; 2) construction of an annex on the west face of the existing building; and 3) rehabilitation of the existing building interior. Extensive coordination and phasing was required in order to minimize the impact on the existing and continuing courthouse operations. (DASNY, $100M, 2005)

Employment History:

The LiRo Group (2003 - Present)
Vice President, Project Executive
NYCDDC (1997-2003)
Assistant Commissioner
Bonnie Roche Construction Services (1994-1997)
Construction Manager
Jerrold S. Cohen, A.I.A (1992-1997)
Consultant
Architecture for Health, Science & Commerce P.C. (1988-1992)
Associate and Project Manager
Hellmuth, Obata & Kassabaum, P.C. (1987-1988)
Director of Health Care Facilities
The Rosenfield Partnership (1982-1987)
Senior Associate and Project Manager

Anton R. Dolce, AIA

SENIOR PROGRAM/PROJECT MANAGER

Mr. Dolce is an architect with 35 years of experience in design, construction management, facilities operations, and maintenance. His primary strength is in healthcare facilities: he has served as Director of Engineering, Director of Operations, Safety Officer, and Vice President of Facilities for three metro New York hospitals. His most recent assignment has been as Project Manager for Dormitory Authority of the State of New York projects. Representative projects include:

EDUCATION	B. Arch., Architecture, Arizona State University/College of Architecture B.S., Construction Management, Pratt Institute
REGISTRATION / CERTIFICATIONS	American Institute of Architects, NY Brick Masonry-Inspections and Quality Control Certification, NY Brick Veneer and Metal Stud Backup Exterior Wall Cert., NY Certified Code Enforcement Officer, NY OSHA - 10 Hours Certificate Troubleshooting Exterior Masonry Walls Certification, NY
YEARS WITH THIS FIRM	11
YEARS WITH OTHER FIRMS	29

Westchester County Medical Center, Project Manager - LiRo is providing construction management services for projects which include ICUs, an Emergency Room, a labor and delivery center, patient rooms, offices, and laboratories, as well as extensive infrastructure upgrades such as parking, IT centers, switchgear, and building envelope repair.

DASNY School of Architecture - Demolition and reconstruction of a 136,000 sf building to become the new School of Architecture. The building frame was structural concrete, which remained. The balance of the building was demolished and rebuilt, including facade, interior and mechanical, electrical and plumbing systems. Prior to demolition, space was provided for the current occupants. These occupants were permanently relocated within the campus. This required the renovation of various locations at a cost of approximately $8M and was accomplished in one year. (DASNY)

Central Park Police Precinct -Project Manager. Mr. Dolce was the manager for the construction of a new police precinct in Central Park adjacent to the existing landmark precinct at the 82nd Transverse. This was a fast track project worth $5M and built in 6 months. (NYCDDC, $5M)

Kings County Hospital Center - Office of the Chief Medical Examiner (OCME) Construction Management Services, - LiRo managed the construction of the new Office of the Chief Medical Examiner (OCME) facility in Brooklyn. This is a state-of-the-art facility offering the staff and the public a safe and private environment. Shared between Kings County Medical Center and the OCME, the new facility contains space designated for NYPD investigators. It was designed to be sensitive to the surrounding community and hospital campus. LiRo's role was to provide comprehensive construction management services from design development through the completion of construction. This included the coordination of all construction operations and related vehicular traffic so that it does not interfere with local traffic or hospital campus operations. The 40,000 sf facility worth $17M was constructed in 28 months. (DASNY, $18M)

Kings County Hospital Center - Dialysis Unit, Project Manager- LiRo managed the construction of a new $6 million dialysis unit. The unit was built on an existing floor in the "C" building. A total renovation, including mechanical and electrical, was required, and the construction was adjacent to

occupied areas. LiRo worked closely with the KCHC construction management group, facilities and nursing staffs to ensure no disruption to their operations.

Kings County Hospital Center – Women's Option Unit, Project Manager - LiRo managed the construction of this new state-of-the-art clinical space. The project included the renovation of 9,000 sf of existing space on the fourth floor of the "E" building. The $1.7 million project opened during the summer of 2004.

James A. Thomas Center (JATC) Renovations at Rikers Island - Comprehensive construction management services were provided to the renovation of the James A. Thomas Center on Rikers Island (approximately 240,000 sf). The original construction of this high security facility dates back to 1933 and has a housing capacity of 1600 inmates. The program for renovation consisted of retrofitting existing spaces within the facility cell blocks, day rooms, showers, pantries, housing areas, mechanical rooms, electrical rooms, and common spaces. Part of the renovation program upgraded the electrical systems and domestic hot water distribution system. (NYCDDC, $25M, 1998 - 2001)

System Wide Kitchen Renovation Program for NYC Dept of Corrections - Mr. Dolce served as Project Manager for this $50M kitchen renovation program. This program involved the rehabilitation of six kitchens serving 6,000 inmates.

New York Methodist Hospital - For this 600-bed major teaching hospital, Mr. Dolce directed and managed a staff of 83 professionals, including biomedical engineering, with an annual construction budget of $25-30 million. He developed six off-site community health centers and was responsible for the operations and maintenance of 1.5 million sf of acute care and off-site facilities.

Vytra Healthcare - Mr. Dolce directed and managed a staff of 35 managed care professionals for this HMO. He was responsible for the design and construction of a 40,000 sf facility.

Long Beach Memorial Medical Center - Mr. Dolce was responsible for engineering, biomedical engineering, and operation of this 202-bed hospital and 200-bed nursing home facility. In addition, he was responsible for the construction of 200-bed nursing home and major additions to the hospital.

Employment History:
The LiRo Group (1999 to Present)
Senior Associate
New York Methodist Hospital (1997-1999)
Director of Engineering
Vitra Health Care (1995-1997)
Division Manager
Winthrop Hospital (1979-1995)
Vice president of Facilities
Long Beach Memorial Health Care Center (1974-1979)
Director of Facilities and Engineering

Bernard Jeffrey Fogel

SENIOR PROGRAM/PROJECT MANAGER

An expert in educational facility projects, Mr. Fogel is highly experienced in project management for both design and construction. For five years he served as Chief of Construction for the City University of New York, the nation's leading urban public university, serving more than 400,000 students at 20 colleges in New York City. In this capacity, he led implementation of a 5-year capital program including all science and laboratory programs valued at more than $1B.Mr. Fogel's experience includes a broad range of major, multi-disciplinary projects and programs, from the design and construction of new buildings by signature architects to emergency repair and reconstruction projects, where planning and scheduling of construction without interfering with ongoing operations was paramount. He is adept in project control, administration, coordination, and client relations. Representative projects include:

EDUCATION	B.S., Civil Engineering, Pennsylvania State University, 1983 A.A.S., Architectural Engineering, Pennsylvania State University, 1981
REGISTRATION / CERTIFICATIONS	Engineer-in-Training, PA Basic Code Enforcement Training Certification
YEARS WITH THIS FIRM	9
YEARS WITH OTHER FIRMS	18

City University of New York, Chief of Construction - Mr. Fogel supervised and provided overall coordination of all construction activities at the City University of New York, the nation's leading urban public university, serving more than 400,000 students at 20 colleges in New York City. In this capacity, he led the implementation of a five-year capital program valued at more than $1B. Projects included new construction of multi-million dollar facilities, total renovations, gut rehabilitations, upgrades of campuses and infrastructures, and emergency repair projects. Averages of 150 projects were ongoing at any one time, with individual projects as large as $500M.

- ***Queens College, Renovation of Science Lab*** - This renovation project involved an upgrade to existing science labs, and included new exhaust hoods, fans, and new fixtures for dispensing gas and compressed air service. The project was phased, limiting the number of classrooms being renovated to allow classes to continue. ($2M)
- ***Baruch College Academic Complex*** - This new 17-story urban classroom building features a 10-story atrium, a pool and gymnasium in three below-grade stories, a 500-seat auditorium, recital hall, student center, and theater. Designed by Kohn Pedersen Fox, the building has a unique curved profile and a staggered truss system. The design and construction were completed under a fast-track schedule. ($450M)
- ***Queens College, Building B*** - This project entailed a total gut rehabilitation of a four-story building down to its structural members, and completely renovating all classroom and support space within. ($70M)
- ***City College*** - Historic facades were reconstructed at Compton Goethals Hall, Shepherd Hall, and Harris Hall. The facades were carefully designed and constructed with historic components, including Manhattan schist and City seals.
- ***Lehman College*** - The lower floors of this elevated mid-rise building were enclosed to provide space for a new computer lab.

- ***Baruch College*** - A 4-story expansion was added to the existing library, including all building systems. The brick façade of the expansion was matched to the original structure.
- ***Brooklyn College*** - A major reconstruction and expansion of the chilled water system provided for new campus-wide water service at this urban campus.

Bernard Fineson Developmental Center Hillside Campus Replacement Facility, Project Manager - Mr. Fogel led design and construction management services for the Bernard Fineson Developmental Center. The Project includes construction of eight buildings serving 120 developmentally disabled and medically frail consumers in addition to a Program/Administration Building. The new construction for the resident building consists of six one story residences for medically frail consumers and two two-story residences for multiple disability consumers. The building program spaces comprise a total of 66,600 gross square feet. During this project a 3-story baseball stadium, laundry building, and bakery were demolished. Work included asbestos abatement and removal of hazardous materials. There is close coordination around existing operational utility tunnels. (DASNY, $80M)

Renovation of Fiterman Hall - The Borough of Manhattan Community College undertook the renovation of a mid-rise office in building in Lower Manhattan prior to September 11, 2001. The project included developing swing space on the upper floors of the building while renovation was completed on the lower floors. Elements included asbestos abatement, floor reinforcement, and new infrastructure, all maintaining a partially occupied building. (DASNY, $70M)

Westchester County Courthouse Phase 3 Tower, Project Manager - LiRo was retained by Westchester County to provide both design and construction management services for this $23 million interior renovation project. The program consisted of a combination of partial and complete renovations to 18 floors of the 20 story courthouse tower, including mechanical, electrical, telecommunications, fire alarm and security upgrades, ADA compliance throughout, new courtroom layouts and finishes, and all adjunct facilities to service New York State's civil courts and the County's Department of Probation. In order to meet the County's construction schedule, all work was designed around an intricate staging program that Mr. Fogel helped devise to maintain the County's requirements that the building remain fully operational throughout construction. Construction documents were completed in nine months from the date of design award and the project was completed, on time and under budget. (Westchester County DPW, $23M, 2007)

Westchester County Norwood E. Jackson Correctional Facility, Senior Project Manager - The project included a demolition and asbestos abatement phase, along with a swing space phase. The project's third phase was comprised of two new penitentiary buildings and renovation work. Project was completed on time and under budget. Project received "Project of the year for 2005" from the Westchester/Putnam Chapter of the New York State Society of Professional Engineers. (Westchester County DPW, $45M, 2005)

Employment History:

The LiRo Group (2001 to Present)
Senior Project Manager
City University of New York (1996-2001)
Chief of Construction
York Hunter (1994-1996)
Senior Project Manager
Facilities Development Corporation (1988-1994)
Regional Construction Manager
STV (1983-1988)
Project Manager

Joseph W. Fox

SENIORPROGRAM/ PROJECT MANAGER

Mr. Fox has over twenty years of experience in construction management, including administrative operations, project scheduling, and direction of construction activities. Projects have included rail yard construction, school reconstruction, industrial and office buildings, correctional institutions, power plants and infrastructure projects. His rehabilitation/ reconstruction experience includes code compliance requirements including ADA and Life Safety modifications.

EDUCATION	B.S., Civil Engineering, University of Maryland
YEARS WITH THIS FIRM	25
YEARS WITH OTHER FIRMS	14

Mr. Fox's typical responsibilities include project management, client liaison, CPM scheduling, directing the activities of field staff, coordination of subcontractors, processing shop drawings, negotiating change orders and overseeing cost control. Representative projects include:

Continental Airlines, Terminal Renovations at LaGuardia Airport, 1999-2000. Owner's representative for the renovation of ticketing and baggage handling. The work also involved extensive asbestos abatement. Critical to the project was the maintenance of continuous operations. This project represented the final phase of the overall modernization of the main terminal and was contracted in two parts: asbestos abatement and general construction. (PANY/NJ, $12M)

Sunrise Yard, NYC Department of Transportation Maintenance Facility, Ozone Park, NY, Construction Manager - Under this contract, LiRo is providing full construction management services. This project includes the demolition of two one-story brick structures; abatement/ remediation of asbestos and contaminated soils associated with these structures and a subsurface fuel storage tank; construction of a new two- story steel framed building to house material storage, shops, drive- through vehicle maintenance, locker room, and administrative offices; and associated site improvements, including new fence, paved parking, green spaces and an art wall. The project is designed to achieve a LEED Gold Certification. Unique to the project is the construction of a multimillion dollar art wall. The Art wall is 192' long and varies in elevation from 8' to 12'. The face of the art wall consists of close to 400 2'x2' panels with metal supports. Some of the material used in the design was from the demolition of the building itself and others were indigenous to the area to represent the earth strata. The art wall portion of the project required extensive coordination with the Public Design Commission (formerly known as the NYC Arts Commission). (NYCDDC, $20M, 2009)

Bond Street EMS Station, Brooklyn, NY, Inspector - As part of the On Call CM/Build Services for the NYCDDC Fire Unit, the Bond St. EMS Station project involved the complete gut and rehab of an existing building located at the corner of Bond Street and Carroll Street in Brooklyn, New York. The rebuilt structure now has an approximately 4,000 sq ft garage and an additional 3,900 sq ft space which houses a command center, locker and restroom area, lounge and fitness room. There is room for seven ambulances inside the building, and contains offices, a kitchen, conference rooms, personal decontamination area, and a truck decontamination area. (NYCDDC, $5.5M, 2006)

NYCSCA Emergency Response Management and Coordination Program. High School of Urban Assembly, Flatbush. LiRo managed and coordinated responses to the emergency needs of the NYCSCA. In this capacity, we stood ready to respond to emergencies on a 24 hour-per day, 7 day-per-

week basis. Predicated upon verbal authorization (a telephone call), we were prepared to immediately mobilize construction professionals, Trade Labor Union personnel, contractors and/or material suppliers to arrest dangerous conditions or contain hazardous materials at public schools within the five boroughs of New York City.

Columbia University - Schermerhorn Extension Window Replacement, Project Manager, 5/2002 - 9/2002. This project involved scheduling, procurement, and coordination activities for the renovation of the Schermerhorn Amex. (Columbia University, $3.5M, 5/02-9/02)

Bronx House of Detention for Men - Utility Upgrades, Project Manager - Upgrade to the electric system and install 3 new boilers. Project included asbestos abatement extensive mechanical and electrical renovations, overall project control to include scheduling, coordination of all work with the facility maintaining security and site access, etc. (NYCDDC, $20M, 10/02 - 2005)

Construction Manager, Shops and Yards Construction, 180th Street Bronx Subway Car Maintenance Facility- The 180th Street facility is a 600' by 150' subway car maintenance building located at NYCTA's 180th Street station. Mr. Fox was handpicked by NYCT to expedite the construction of this project. The project was several years behind schedule when Mr. Fox began the assignment. Mr. Fox turned this troubled project around and gained beneficial occupancy within 18 months. This full-service facility houses six tracks and includes a full range of cleaning, maintenance, and repair equipment, including overhead cranes, lubrication systems, pitted and posted tracks, an elevated stinger electrification system, and a freight elevator. The facility also contains administrative offices and locker rooms for NYCTA personnel, and is equipped with a communications system and card-access security system. Mr. Fox's role was to help expedite the reconstruction of this facility. Extensive track and track signal work was required both inside and outside of the building. Tying the new track into the existing track signal and switch work was an essential component of construction. (NYCT $45M)

PS 98 School Modernization Project, Construction Manager - Responsible for all field work for renovation and restoration to this public school built in 1928. The Project included asbestos abatement of all floor tile and thermal insulation, kitchen, HVAC, electrical upgrading, and restoration of the facade to NYC Historical Preservation Standards. (NYCSCA, $14M)

Employment History:
The LiRo Group (1985 to Present)
Construction Manager

Frank Franco, AIA

SENIOR PROGRAM/PROJECT MANAGER

Mr. Franco is a registered architect with over 20 years of experience in the construction industry. His experience includes extensive construction management for both public and private agencies and institutions including NYCDDC, DASNY, NYCHHC, BPCA and PA. Mr. Franco also spent six years in the health care field as a Director of Facilities and Construction for NY Methodist Hospital, Brooklyn, NY.
Representative project experience includes:

EDUCATION	B.S., Architecture, New York Institute of Technology at Old Westbury, NY, 1983
REGISTRATION / CERTIFICATIONS	American Institute of Architects, NY NCARB Certified, NY OSHA - 10 Hours Certificate
YEARS WITH THIS FIRM	11
YEARS WITH OTHER FIRMS	19

CM/Build Requirements Contract for NYC Housing Authority, Program Manager - LiRo is currently performing work on a task order basis including renovating and/or constructing several community centers throughout New York City. Work includes new construction of a community center, various renovations and upgrades, and infrastructure renovations including electrical, HVAC, and plumbing. These properties all require that LiRo perform preconstruction and construction phase services LiRo is responsible for prequalifying potential construction contractors, bidding the work and ultimately entering into contract with the construction contractors. These projects require careful coordination with community residents so interruptions of utilities, housing access, etc. are kept to an absolute minimum.
Representative projects include:

- Betances Houses Community Center, $10 M
- Queensbridge Houses Community Center, $5 M
- 1162 Washington Avenue Community Center, $500K
- Bayview Houses Community Center, $12 M
- Marlboro Houses Community Center, $3 M
- Baruch Houses Community Center, $1M
- Edenwald Houses Community Center, $1M
- Linden Houses Community Center, $10M
- Ocean Bay Facade Restoration, $52M
- Albany Houses Electrical Upgrades, $4M
- B41st Boiler Replacement, $3M
- Throgg's Neck Houses Facade Restoration, $12M
- Exteriors Unit Roofing Replacement Program, 15 Projects, $75M

(NYCHA, $250M)

NYCHHC, CM Services Requirements Contract, Project Executive - Under this contract, LiRo is performing CM Services on an On Call Basis. Current task performed to date include:

- Kings County Hospital "T" Building, LIU School of Nursing ($4M)
- Kings County Hospital "D" Building, NICU Renovation ($2M)

- Kings County Hospital 9th Floor Urology and Surgical Suite. A 10,000 SF renovation to the 9th floor of the "E" Building ($4M)
- Harlem Hospital Ron Brown Ambulatory Care Building ($40M)
- Queens Hospital Center N Building, 3rd and 4th floor renovations and expansion ($4M)

(NYCHHC, $58M)

Westchester Medical Center, Valhalla, NY, Project Manager - LiRo was contracted to provide construction management services for numerous projects at Westchester Medical Center. Services include:

Pre-Construction Services

- Review construction documents for constructability
- Prepare preliminary estimates
- Review and select contractors for the bid process
- Prepare/package bid documents and solicit bids

Construction Services

- Execute contracts with all contractors
- File for all necessary Permits
- Maintain all logs (shop drawing, RFI, change orders, etc.)
- Provide daily construction supervision and inspection
- Provide a construction schedule

(Westchester Medical Center, $150M)

Battery Park City, Community Center Construction Management Services, Project Manager - LiRo is providing Owner's Representative/ Construction Management services for a 60,000 sf community center/ball field maintenance facility in the base of two residential towers at Site 23/24 in Battery Park City. LiRo will oversee the creation of the community center/ball field maintenance facility from design development through completion of all construction and post-construction. This facility will house two indoor swimming pools, an auditorium/theater, a gym and basketball court, classrooms, and exercise center/outdoor plaza, as well as a maintenance facility for the Battery Park City Parks Conservancy for the care of the two adjacent little league ball fields. Site 23/24 will be developed according to the mission of the Authority of furthering sustainability in urban development. The community center/ball field maintenance facility will be built in accordance with the Authority's Environmental Residential Guidelines and with the latest LEED for Commercial Interiors (CI) rating system, now version 2.0. It is anticipated that the facility will attain a Platinum rating, the highest possible level bestowed by the USGBC. (BPCA, $30M)

Employment History:

The LiRo Group (1999 to Present)
Vice President
New York Methodist Hospital (1993-1999)
Director of Facilities Management and Construction (1997-1999)
Assistant Director of Engineering (1996- 1997)
Project Manager (1993 - 1996)
Avis Rent a Car, (1992 - 1993)
Project Manager
Blum and FitzSimmons Architects (1990-1992
Architect/Project Manager
Anthony J. Musso Architect (1980-1990)
Senior Associate Architect

David Hall, N-IV

SENIOR PROGRAM/ PROJECT MANAGER

Mr. Hall has 30 years of experience in construction administration, management and inspection. His projects include hospitals, schools, municipal buildings, wastewater treatment facilities, roads, drainage, utilities, site work and property development. Mr. Hall has managed multi-million dollar, multi-prime municipal projects under consent orders, many of which required continuous operations during construction.

EDUCATION	Architectural Technology and Civil Engineering, New York Institute of Technology, 1978 Business Administration and Accounting, Wheeling College, 1973
REGISTRATION / CERTIFICATIONS	OSHA 10 Hour Occupational Safety & Health Training NICET IV - Highway Construction
YEARS WITH THIS FIRM	21
YEARS WITH OTHER FIRMS	10

Representative projects include:

Stony Brook University Medical Center - Construction Management Services, Stony Brook, NY, Project Superintendent - This project consisted of various stages of construction with an overall cost of approximately $180 million. The overall scope of work took 7 years, due to the intricate phasing, that was required to keep the facility in operation throughout the entire construction duration. The job consists of 5 separate projects as follows:

- Patio Enclosure - This project had a contract value of $1.5 million and consisted of the enclosure of an outdoor sitting area and conversion into cafeteria setting and maintenance area, the project was completed 1 month early and on budget.
- Emergency Generator - This portion of the work consisted of the installation of a 2000kW generator to serve the future Heart Center Project as the backup power for all of their critical circuits. Included as part of the project were the construction of a combustion air penthouse and the alteration of the existing space including the construction of a new switch gear and control room, and the installation of all conduit and wiring from the physical plant to the new Heart center transfer switch. Cost of the work was $1.9 million.
- The Heart Center was the renovation of approximately 70,000 sf. The work entailed the construction of a new Orthopedic Department, a new Heart Center including the installation of 5 new single and bi-plane cath labs, and the creation of 14,000 sf of usable swing space, which is required for the future projects. The value for this portion of the work is $20.5 million. This work was completed as scheduled and on budget.
- ACP project consisted of a new 60,000 sf Cancer Treatment and Imaging facility as well as the extension of both the main loop road entrance to be tied into the main hospital entry road and the existing steam and electrical facilities to the new building. The estimated value of this work is $24 million.
- Major Modernization Project with a construction cost of $128 million. This project included the construction of 10 new OR suites and associated recovery, support and visitor spaces, a new OBGYN wing with its own operating suites, recovery, NICU and ancillary spaces, a totally new, as well as renovated Emergency Department, a new parking structure, a new Helipad, and the addition of a new lobby and renovation of the existing lobby from public into program space. The total square footage of this work is 225,000 sf of new spaces, 3 stories and a penthouse, and 180,000 sf existing space. This phase also included a great deal of infrastructure and site work including the development of an entirely new entry loop road. This project took 4+ years

because of the detailed phasing and commissioning that had to take place throughout its duration, in order to keep the hospital fully functional. (SUNY, $187M, 2009)

Fire Training Academy at Randall's Island, NY - The Fire Department of the City of New York has operated a Fire Training Academy on Randall's Island for over 25 years. This 27-acre waterfront facility sits between the DEP Wards Island Water Pollution Control Plant and NYC Park Department property. The current facility has nine buildings including both classrooms and hands-on training with simulated fires and smoke structures. (NYCDDC, $35M, 2003)

Housing, Classroom, and Dog Training Facility for Guide Dog Foundation, Project Manager - Mr. Hall has served as project manager for this new construction and renovation of spaces used for special training of guide dogs for the blind. Classroom and housing for training the blind in life skills. (Guide Dog Foundation, $7M, 2002)

United States Postal Service, On-Call Construction Management Services, Hoboken, N.J., Assistant Project Manager/Resident Engineer - Mr. Hall has been involved in all aspects of construction management and has managed several projects for this on-call construction management contract for services throughout New York City and Long Island. The assignments varied, ranging from the renovation of existing post offices to the construction of 2 completely new post offices. Multiple task orders were completed simultaneously under this contract. (USPS, $35M, 2000)

Neo-natal Intensive Care Unit, Harlem Hospital - Project Manager for complete gutting and construction of an intensive care unit for premature infants. The project included all architectural, mechanical, electrical, plumbing, and fire protection systems. An intense coordination effort was required, as the work was performed in around active patient areas. LiRo coordinated with NYSDOH, the NYC Building Department, Fire Department, and HICFA. (NYCHHC, $700K)

Nassau Community College Center & Classroom Building, Phase I - CPM Scheduling and Construction Management, General Superintendent- Construction Management for a 70,000sf College Center, a 95,000 sf Classroom building and demolition of a 50,000 sf Hangar, as well as asbestos abatement. The work included the installation of approximately 5000 lf of 18" Rickwill Piping from an existing Co-Gen plant to the new facility. Provided QA/QC inspection, cost control, and time control through a cost-loaded CPM schedule, change order estimating and negotiations, preparation of as-built drawings and testing of equipment. Issued monthly reports to describe time and cost status. (NCDPW, $35.5M, 1995)

Various Improvement Projects, Cedar Creek Water Pollution Control Plant , Superintendent of Construction - Building additions, expansions, modifications and rehabilitation, in order to upgrade the plant from 60 mgd to 75 mgd; a Consent Decree Program, which included the following: Generator Building Final Tanks Pelletization Building Influent Building Air Pollution Controls (NCDPW, $125M)

Employment History:
The LiRo Group (1989 to Present)
Associate

Kenneth J. Holmstrom, P.E.

SENIOR PROGRAM/ PROJECT MANAGER

Mr. Holmstrom has gained experience in various facets of engineering projects since 1976 including planning and design of highway improvements; bridge rehabilitation and construction design; site development design; design of infrastructure improvements; utility coordination; and building construction and renovation projects. Representative projects include:

EDUCATION	B.S.C.E., Civil Engineering, City College of New York, 1976
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY
YEARS WITH THIS FIRM	34
YEARS WITH OTHER FIRMS	0

Traffic Engineering Services - Port Newark/Elizabeth Marine Terminal, Stage 1 and II, Quality Assurance/ Quality Control - LiRo provided professional engineering services to conduct a comprehensive traffic study for the proposed redevelopment of the Port Newark/ Elizabeth Marine Terminal. The Port redevelopment included relocation and expansion of the existing terminal facilities as well as changes in the roadway network, site access locations, and inter-modal facility operations. (PANYNJ, $450K, 2004)

Port Authority On-Call Structural Engineering Services, Quality Assurance/ Quality Control - Project included various structural assignments including retaining walls, building inspection, parking garage designs, and building renovations. All projects located at JFK Airport. (PANYNJ, $200M, 2001-2004)

Brookhaven National Laboratories - National Synchrotron Light Source II, Project Manager. This project involved the conceptual design of a new facility which would provide the structures and systems necessary to enable installation and operation of the accelerator and experimental beam lines. Facilities consist of Ring Building, a central lab office building, up to four lab office buildings, a linac and RF building, and four service buildings containing mechanical and electrical equipment. LiRo provided conceptual plans for site development and utilities and performed construction cost estimating and scheduling services. (BNL, $200M)

Brooklyn College, Brooklyn, NY, Quality Assurance - Performed architectural and structural inspections, surveys, and evaluations; prepared reports; and generated construction contract documents for the exterior rehabilitation of 12 academic buildings at Brooklyn College. The architectural features, facades, roofs, parapets, and structural systems of many of these buildings had deteriorated due to water leakage, weathering, and deferred maintenance. Design included rehabilitation or replacement of roofing on three buildings and the replacement of windows on four buildings. (DASNY, $5.8M, 2001)

East Ramp Automotive Shop and North Hub Garage, Randall's Island, NY, Site Design Engineer- Design of a new 47,000 sf vehicle maintenance facility and parking facilities to accommodate 88 buses, trucks, vans, and cars. All necessary site improvements, mechanical and electrical work, fire protection and communication systems, and fuel and fluid dispensing systems were included in the project scope. The facility, including applicable mechanical and electrical systems and associated site work, was designed to comply with all applicable ADA requirements. (TBTA)

New York City Transit Authority Surface Facilities, NY, Project Manager- Design of a new, two-story, pre-fabricated building to be constructed at the Queens Village Bus Depot; rehabilitation of the bus dispatcher's tower at the St. George Ferry Terminal; security improvements at the Fanchon Parking Lot, East New York Depot; modifications to the HVAC system for Room No. 27 at the East New York Depot; upgrades to toilet facilities for the Brooklyn Division Office at One Jamaica Avenue; and design of paving, grading, and drainage for the new bus parking lot at the Castleton Bus Depot in Staten Island. (NYCT)

Queens-North Borough Vehicle Maintenance Facility, Queens, NY, Site Design Engineer- Design for site improvements and building service connections including reconstruction of pavement, curbs and sidewalks along the surrounding streets and sanitary sewer, storm drainage, water supply and gas service connections. (NYCDOS)

99th Street Area - Design of Street Reconstruction and New Water and Sewer Lines, Queens, NY, Project Manager - Design of street reconstruction and new water and sewer lines. Prepared the final design for the reconstruction of 4.2 miles of streets in Queens, New York. Project elements included performing survey involving updating of base mapping planimetrics and obtaining additional spot elevations; preparation of micro engineered best fit grading design which minimizes adverse impact on abutting properties and trees; and conducting a Tree Condition Inventory to determine which tree mitigation measures would be required to preserve existing street trees. Detailed Maintenance and Protection of Traffic Plans and Notes providing for the sequencing of construction to minimize disruption of vehicular and pedestrian movements during construction were developed. Further, the project also included reconstruction of water mains and street drainage facilities, construction of street lighting, and installation of pavement markings and signs. (NYCDDC, $11.9, 1998)

Route 112 Reconstruction, Suffolk County, NY, Quality Assurance - Planning and design for improvements to a 3-mile section of a principal arterial involving the preparation of a Design Report/Environmental Assessment which details existing conditions such as traffic volumes, intersection capacity, safety features, drainage systems, environmental issues, etc. defines project objectives and presents recommendations for proposed improvements. Required extensive coordination of sub consultant work including survey and mapping, environmental studies, hazardous material assessment and a community outreach program as well as coordination with three interrelated projects. (NYSDOT, $30M, 1999-on-going)

New York State Thruway MP 76.4 - MP 86.8, Ulster County, NY, Project Manager - Preliminary design for rehabilitation of a 10-mile section of the mainline Thruway involving super elevation improvements, left shoulder widening, roadway resurfacing, guide rail improvements, rock remediation and drainage improvements as well as rehabilitation of three bridges and reconstruction of one structure including deck rehabilitation, reconstruction of approaches, bearing replacement and substructure repairs. (NYSTA, $12M)

Employment History:
The LiRo Group (1976 to Present)
Vice President

Joseph Hurley, P.E.

SENIOR PROGRAM/ PROJECT MANAGER

Mr. Hurley has acquired extensive experience in public works, environmental, building, and infrastructure projects since 1970. He provides a unique approach to capital construction from both the municipal and private perspectives. During his former tenure as Commissioner of Public Works for Suffolk County, for the City of Long Beach, and for the City of Glen Cove, Mr. Hurley was responsible for complete administration of departmental activities as well as all projects from inception to completion. As a Public Health Engineer with the Nassau County Department of Health, Mr. Hurley was closely involved with the operations of all wastewater treatment plants in Nassau County as well as the County's extensive sewering program. This diversified experience has proven to be of considerable benefit in managing numerous assignments for LiRo.

Inherent in much of Mr. Hurley's public sector and management experience has been the chairing and coordinating of Citizen Advisory Committees, task force groups, and programs developed for public participation and involvement. His approach to the dynamics of public/community input on municipal projects and programs has provided a positive "spin" on many otherwise unpopular projects.

EDUCATION	B.S.M.E., Mechanical Engineering, Manhattan College, 1970 Course Work, Polytechnic Institute of New York, 1974 Operators Course Grade I-A, Polytechnic Institute of New York, 1979
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY Environmental Inspection Phase 1, by the EEA Grade I - WWTP Operators Course OSHA 10 Hour Occupational Safety & Health Training
YEARS WITH THIS FIRM	18
YEARS WITH OTHER FIRMS	22

For example, as the Public Works Commissioner for Glen Cove and Long Beach, he was actively involved in Municipal Solid Waste Management Plans including refuse collection, scheduling, equipment allocation and purchase, staffing, recycling, and disposal alternatives. Planning and organization for current and future needs were the key components of these plans as well as the appropriate interface with the regulatory agencies, principally the NYS Department of Environmental Conservation.

Mr. Hurley's extensive understanding of governmental agency operations and procedures and local community concerns has proven most beneficial in tailoring project management programs to satisfy the concerns and needs of both large and small municipal agencies. Representative projects include:

Downstate On-Call CM, Brooklyn & Queens, NY, Assistant Project Director - Task Order contract included upgrading/renovation or Coney Island WPCP, Oakwood Beach WPCP, Tunnel Shaft Close-outs, thus far. (NYCDEP, $15M)

Improvements to the Riverhead County Center, Project Executive. Provided project management services for improvements to the County Center Building in Riverhead, NY. Mr. Hurley was responsible for the schedule, controls and the project labor agreement. This included preparing a feasibility study,

development of the agreement, negotiating terms of the agreement and implementing the agreement during construction.

Suffolk County Civil Court Renovations and Addition, Project Manager. LiRo provided project management services for the preconstruction and construction for Civil Court renovation and a 93,000 sq. ft. 3-story addition in Riverhead. The Project site was a congested and heavily trafficked location in downtown Riverhead. Renovations to the existing facility which housed the Courthouse, Courthouse Annex, District Attorney Building and Commissioner of Jurors were also contemplated to facilitate code compliance, handicapped accessibility, fire protection and egress as well as improved functionality to the complex. Upgrading of existing mechanical systems was done as well as mitigation of ACM. ($35M)

Spring Creek Water Pollution Control Plant Upgrade, Assistant Project Manager (under a Joint Venture agreement) - LiRo provided project management, resident engineering inspection, and start-up services for the Spring Creek auxiliary water pollution control plant upgrade. (NYC DEP, 2/02 to 2006, $85M)

Rikers Island GRVC Addition, Project Executive- Services included management, coordination, and monitoring of the design process and subcontract all construction in accordance with a CM/Build form of contract. The project also included upgrade of the existing kitchen and laundry facility, locker room facility, and commissary at the George R. Vierno Center. (NYCDDC, $150M)

Replacement DWI Alternative Facility, Project Manager. Services provided by LiRo during the preconstruction phase included constructibility review, value engineering studies, construction cost estimates, preliminary construction schedule and development of a Project Labor Agreement. During construction LiRo provided construction management services for project controls including shop drawing log, RFI log, proposal/change order logs, meeting minutes, schedule review and compliance and Project Labor Agreement compliance. ($5.5M)

Construction of the New Sixth Police Precinct, Suffolk County, NY, Project Manager. Provided construction management services for the new construction of the Sixth Police Precinct in Suffolk County. On this project, Mr. Hurley had the responsibility of schedule, controls and the project labor agreement. ($10M)

Jail Replacement Facility at Yaphank Correctional Facility, Project Executive - LiRo is contracted by Suffolk County Department of Public Works for Construction Management Services during pre-construction and construction phases of the new Yaphank Jail Facility. Initially, the project involved the construction of an addition of 360 cells and the renovation of the existing dormitory. It will provide housing for the expansion and renovation of the infrastructure and support facilities necessary for the proper processing, care and feeding of the inmate population. Included in the project will be state of the art staff, administrative, health care and support facilities that provide the county with efficient and cost effective management and staffing. ($150M)

Employment History:
The LiRo Group (1992 to Present)
Associate
Suffolk County Department of Public Works (1988-1993)
Commissioner

Arthur Johansen

SENIOR PROGRAM / PROJECT MANAGER

Mr. Johansen is a 25 year veteran of the construction industry. During this time, he grew from a carpenter's apprentice to the Executive Vice President of a major carpentry contractor. He has successfully managed many large, high-end projects and was responsible for coordinating the activities of multiple trades and hundreds of craftsmen. Representative projects include:

EDUCATION	Degree, Construction Management, New York University Courses, Architectural Drafting, Mechanics Institute,
REGISTRATION / CERTIFICATIONS	OSHA - 10 Hours Certificate, NY
YEARS WITH THIS FIRM	5
YEARS WITH OTHER FIRMS	20

New York City School Construction Authority - Emergency Response Management and Coordination Program, New York City - Superintendent - Under this contract LiRo managed and coordinated responses to emergencies, on the basis of a telephone call at any time during a twenty-four hour period and on any day Monday through Sunday. LiRo immediately mobilized trades, people or firms and materials for the purpose of correcting or eliminating hazardous materials or dangerous conditions at public school in the five boroughs of New York City. Some of the work was performed in occupied schools. Accordingly, LiRo used best efforts to insure that all such work was performed in a safe and secure manner with minimum disruption to students and school personnel. (NYCSCA, $238M)

Park Slope Armories, Project Manager - LiRo is providing construction management services for this old military armory that is being converted into an indoor sports facility. The building is an historic landmark, over 110 years old. LiRo is overseeing two contracts: one for life safety for NYCDHS, and one for the sports facility for NYCDDC. (NYCDDC, NYCDHS, $15M)

College of Staten Island, Project Manager - Nastasi White - Supervised, furnished and installed drywall and acoustic ceiling for a new building containing a theater (focal point), multiple classrooms, and lavatory. This was a high profile theater project for the College. Project included light gauge framing in the theatre area. (CCNY, $5M)

Foley Square Courthouse, Project Manager - Vergara Nastasi - Supervised, furnished and installed drywall partitions and ceiling. The 600,000 sq ft space contains courtrooms, judges' chambers, common corridors, public assembly area, entrance area, and food service areas. (NYSOGS, $8.5M)

White Plains Court House, White Plains, NY, Project Executive, Nastasi White, Inc.

- Supervised, furnished and installed interior bid package consisting of drywall, drywall finishing, acoustic ceilings, architectural woodwork and wood and resilient flooring.
- Coordinated deliveries of woodwork to site as required.
- Provided executive support for field supervision during installation.
- Prepared, submitted and negotiated change orders with construction manager.
- Attended project meetings to help with coordination with various trades.
- Closed out project with CM and architectural wood work supplier.

Queens Civil Court House Queens, NY - Project Executive, Natasi White, Inc.

- Supervised, furnished and installed interior bid package consisting of drywall, drywall finishing, acoustic ceilings, architectural woodwork and wood and resilient flooring.
- Solicited bidders, review scope, bids, references and award project to woodworkers
- Maintained relations with various trade unions throughout project.
- Reviewed and approved sub contractors' requisitions.
- Supervised installation of woodwork.
- Closeout contracts with sub contractors and construction manager.

55 Wall Street, Manhattan, NY, Project Executive, Natasi White, Inc.

- Supervised, furnished and installed interior bid package consisting of drywall, drywall finishing, acoustic ceilings, architectural woodwork and wood and resilient flooring.
- Assisted construction manager with value engineering of project prior to project award date.
- Reviewed trade schedule to accommodate delays in owner furnished mill work.
- Attended meetings with owners and construction manager during project redesign.
- Processed change orders and project closeouts upon completion.

Employment History:

The LiRo Group (2005 to Present)
Resident Engineer
Nastasi White, Inc (1988-2004)
Executive Vice President (1993-2004)
General Superintendent (1990-1993)
Project Manager (1988-1990)

Murray L. Levi, A.I.A.

SENIOR PROGRAM/ PROJECT MANAGER

Mr. Levi's experience lies in the administration of projects for institutional clients including education, health care and government agency sponsored projects. He is acknowledged for his expertise with technically complex projects; and integration of digital technologies into academic settings, laboratory and hospital design. Mr. Levi, a long-term proponent of Sustainable design, is LEED Accredited Professional who sits on the Board of Directors of the USGBC New York Chapter. He frequently lectures on the art of high-performance building design including presentations of his work at the inaugural USGBC-Haworth "Green Pioneers" lecture series, BKLYN Designs,

EDUCATION	B.Arch, The Cooper Union, School of Architecture, 1979
REGISTRATION / CERTIFICATIONS	Registered Architect, NY Registered Architect, NJ Registered Architect, CT LEED Accredited Professional, US Green Building Council American Institute of Architects USEPA Accredited Inspector and Management Planner
YEARS WITH THIS FIRM	4
YEARS WITH OTHER FIRMS	27

IFMA and other professional, building trade, and management organizations. Representative projects include:

Empire State Development Corporation Monroe Community College Urban Campus Program Midtown Site Test Fit, Rochester, New York: Principal-in-Charge. LiRo has been retained by the Empire State Development Corporation (ESD) to investigate the potential for Monroe Community College (MCC) to build its new campus at the Midtown redevelopment site in downtown Rochester. Currently in progress, multiple scenarios are being investigated on the site to assess the most favorable campus configuration on the multiple parcels available to MCC. The study will result in three options with plans developed from the recommended option.

Settlement Health and Medical Services Executive Offices: Principal-in-Charge of approximately 5,700 sf of office space built out in an existing building to house Settlement Health and Medical Services' Executive Offices, in addition to the Billing and Finance Departments. The program includes seven individual offices and open workspace for nineteen employees. Support areas include: a state-of-the-art thirty-five person conference room with video conferencing capabilities; a staff lounge and pantry; server room and IT office; lateral file and boxed paper storage for the considerable needs of the Billing and Finance departments.

Verdopolis Green Energy Demonstration Plant: LiRo is the Executive Architect and Design Team Coordinator for the Verdopolis Green Energy Demonstration Plant. Verdopolis is one of the first in a new generation of green energy plants. Verdopolis is an electric generation plant that will produce 9 megawatts of carbon-neutral energy by converting 240,000 tons of food waste per year into bio-gas and saleable compost. The specific conversion process is unique in the United States; a hybrid process which combines features from two different food-waste digestion processes licensed from Holland and Denmark. The 120,000 square foot, $40 million project involves the adaptive re-use of an unused hangar at JFK airport supplemented by additions to provide specialized functions. LiRo is providing programming, code analysis, building analysis and architectural design for the project. LiRo is also working to coordinate the activities of a team of specialists providing process and controls design,

environmental engineering, in addition to traffic analysis, geo-technical, structural, and building MEP engineering.

Georgetown YMCA Georgetown, Connecticut - Principal-In-Charge. Designed a new 55,000 sq ft health, recreation, and wellness center for the first sustainably planned community in America. The YMCA will be part of a multimodal transportation complex to include a 600-car parking garage, Metro-North train station, and police precinct for the new town. (Georgetown Land Development Company)

Charles B. Wang Community Health Center - Administrative Offices. Principal in charge and designer of 7,000sf fit-out of back of house administrative offices for the CBWCHC. The project will deliver forty (40) workstations and offices for the Finance, and Information Technology, Health Education, and Billing. It will also provide a much needed conference room that seats thirty-five (35) and a training room. The project achieves a high level of indoor environmental quality through fundamental planning and careful material choices. The project will be completed in October 2009 at a cost of $875,000. (Charles B. Wang Community Health Center)

First LEED CI Silver Certified Private Doctor's Office in America - Drs. Walter and Robin Unger have selected LiRo to design 1,300 sf of new office space for their dermatology medical practice relocating to 720 Park Avenue. The doctors intend for the project to be the first private medical practice to achieve LEED Silver Certification. LiRo was selected for the excellence of its design work, expertise in medical planning and pioneering work in sustainable design. LiRo will provide design and construction administration services and also act as he LEED advocate for the project.

LEED Existing Buildings Process Management for Random House - Project Manager. As part of the process management for the Random House Bertelsmann headquarters building, LiRo facilitated the submission of the documentation for LEED for Existing Buildings to the US Green Building Council. LiRo was involved in creating the development density credit template, which involved the creation of data to be used with existing data sources. These GIS products demonstrated the development density of the Random House Berteismann headquarters, as well as the densities for the surrounding developments (Atkinson Koven Feinberg Engineers, LLP, $80K, 2008)

Battery Park City Community Center - LEED Advisor. LiRo is providing Owner's Representative/ Construction Management services for a 60,000 sf community center/ball field maintenance facility in the base of two residential towers at Site 23/24 in Battery Park City. Site 23/24 is being developed according to the mission of the Authority of furthering sustainability in urban development. It will be built in accordance with the Authority's Environmental Residential Guidelines and with the latest LEED for Commercial Interiors (CI) rating system, now version 2.0. It is anticipated that the facility will attain a Platinum rating, the highest possible level bestowed by the USGBC. Mr. Levi is responsible for ensuring contractors meet the requirements set forth in the guidelines and LEED rating system.

Employment History:
The LiRo Group (2006 to Present)
Vice President
Green4NYC, Architects - (2004-2006)
Founder and Principal
Helpern Architects, PC - (2000-2004)
Principal Architect
Einhorn Yaffee Prescott - (1998-2000)
Senior Associate
Taylor Clark Architects, Inc. - (1992-1998)
Project Director

Michael Mascaro

SENIOR PROGRAM/ PROJECT MANAGER

EDUCATION	B.S., Architecture, New York Institute of Technology
REGISTRATION / CERTIFICATIONS	ACI Flatwork Finisher and Technician OSHA 10 Hour Occupational Safety & Health Training
YEARS WITH THIS FIRM	11
YEARS WITH OTHER FIRMS	11

Mr. Mascaro has been in the construction industry since 1988. During this period Mr. Mascaro has served in a number of capacities:

As project manager and resident engineer for public works and private developments As cost estimator and scheduler for large building projects As inspector for a testing laboratory, supervising steel, concrete, masonry, and soils testing Having worked his way up from the bottom of the industry, Mr. Mascaro has an in-depth knowledge of construction elements and management processes. In particular, Mr. Mascaro has been involved with the NYCDDC and the CM/Build form of contract. Mr. Mascaro is familiar with the various elements of the CM/Build contract or prequalification, VENDEX, bidding requirements, change order processes, LBE requirements, etc. In addition, Mr. Mascaro can effectively deal with subcontractors in terms of performance and documentation. Mr. Mascaro is currently program manager of LiRo's Fire Unit Requirements contract with the NYCDDC which total contract value is $150M. For the past four years, he has managed over ten projects from design through construction. Representative projects include:

Program Management Services for Rehabilitation and New Firehouse/Emergency Medical Service Stations, Program Manager - Mr. Mascaro provided services for the design and construction of the rehabilitation and construction of new Firehouses and EMS stations. Program included 15 sites across NYC for which LiRo provided pre-construction & construction services. Included review of design documents, cost estimating, preparation of bid documents, management of construction and closeout. This was a complex, multisite, multimillion dollar program subject to Wicks Law and which required coordination of multiple prime contractors across the sites. (NYCDDC, $150M)

Randall's Island Phase I&II, Project Manager - Mr. Mascaro served as Project Manager during the Pre-construction, Construction and closeout phases of these projects. Project included the construction of a new Subway Simulator Building and building expansions for an Existing Apparatus Maintenance garage and the vital existing Mask Service Building. All work in existing buildings was completed under full occupancy and while maintaining complete FDNY operations. Mr. Mascaro also managed the completion and closeout of Buildings 11, 12, 5 and 2. (NYCDDC, $60M)

EMS #20 at Jacobi Medical Center, Bronx New York- Mr. Mascaro acted as Project manager for this project which included the structural replacement of the Apparatus floor and construction of new offices, lounge and locker facilities. This work was completed under "Emergency Status" and during full occupancy and operation by the FDNY. In addition to FDNY requirements Mr. Mascaro coordinated all work with the Jacobi Hospital Campus. This included Site Safety, Noise/Dust control, and

development of an agreed upon Staging and phasing plan. These plans were required in order to not impact the hospital campus.

Engine Company #277 Ladder #112, Brooklyn NY- As project manager Mr. Mascaro managed the pre-construction, demolition and is managing the construction phase of this project. Due to the adjacent NYC intermediate school, the project required demolition to be completed during school closing and coordination with the facility during all phases of construction. The award winning façade and structure required close coordination with the subcontractors and Consultants while completing the building envelope.

Engine Company #6 & #81 - Mr. Mascaro managed these projects from design to completion. These projects included the complete reconstruction of a 4 story firehouse in lower Manhattan and rehabilitation of a 4 story firehouse in the Bronx. Work included Select structural replacement, new electrical and mechanical systems/upgrades and the installation of all FDNY required systems (Neederman, FDNY Communications, Housewatch, etc.). Work in the Bronx was completed in a fully occupied firehouse requiring coordination and phasing to be completed with the FDNY.

Engine Company #201- Mr. Mascaro is acting as Project Manager for the project. The project requires the preparation of swing space, demolition of existing and erection of new 12,000 sf firehouse. Due to community requirements a swing space was prepared which include all FDNY operational requirements prior to the demolition of this firehouse. This site is located on a main Brooklyn thoroughfare and is adjacent to a MTA subway tunnel. The demolition, foundation and structural work will all be monitored so as to not impact the MTA and the adjoining buildings. The project will include all required FDNY systems.

Rikers Island CIFM Locker Room Building at Rikers Island, Resident Engineer - Mr. Mascaro was involved with all aspects of this 20,000 sf project from design through construction. He developed and presented construction phasing and staging schemes to the Department of Corrections for their approval. This CM/Build project required that Mr. Mascaro follow all contract guidelines as well as the New York City Procurement Policy Board rules. (NYCDDC, $5M)

System-wide Kitchen Renovation Program for Department of Corrections - Mr. Mascaro maintained project controls and project schedules. He was involved with bid packaging, bidding, and change orders. (NYCDDC, $50M)

Employment History:
The LiRo Group (1992-1996) (2003 to Present)
Project Controls/Associate Vice President
The Stegla Group (2002-2003)
Project Manager
C&L Contracting Corp. (2000-2002)
Project Manager
Tishman (1999-2000)
Project Manager
Raytheon (1998-1999)
Project Controls
JA Jones (1996-1998)
Project Controls/Asst. PM
Stallone Testing Laboratories (1990-1992)
Controlled Inspector

George J. Psillos

SENIORPROGRAM/ PROJECT MANAGER

EDUCATION	B.S., Architectural Technology, New York Institute of Technology, 1976
REGISTRATION / CERTIFICATIONS	Primavera Expedition (Project Controls) Brick Masonry-Inspections and Quality Control Certification, NY Brick Veneer and Metal Stud Backup Exterior Wall Cert., NY Troubleshooting Exterior Masonry Walls Certification, NY OSHA - 10 Hours Certificate, NY
YEARS WITH THIS FIRM	19
YEARS WITH OTHER FIRMS	14

Mr. Psillos has been providing construction management services for over 30 years. He has provided project management, CPM scheduling, specifications review and cost control services. He has worked on projects for the: New York City Department of Environmental Protection (DEP), Nassau County DPW, Suffolk County DPW, New York City Transit Authority, New York City Department of Sanitation and Merrill Lynch. These projects have ranged in value from $2 million to $600 million. Most recently, Mr. Psillos has served as Project Manager for a multi-site on-call contract with the United States Postal Service. On this project, Mr. Psillos managed nine LiRo field personnel on multiple projects totaling over $90M in renovations. Representative projects include:

U.S. Postal Service On-Call Construction Management Services, Project Manager. LiRo provided construction management services to the U.S. Postal Service under an indefinite quantity contract. The contract demanded both construction management and engineering/architectural expertise, with complete CADD capabilities. The work, which was performed for the New York Facilities Service Office, encompassed Post Office construction projects in the New York area. LiRo's specific responsibilities included:

- Design Consultation, Coordination, Estimating, Coordination Drawings
- Project Management, Coordination, Scheduling and Progress Surveillance
- Construction Planning and Cost Estimating
- Surveillance of Quality Control and Inspection of Construction
- Contract Document Interpretation
- Administration of Project Documents and Records
- Claims Analysis and Defense

(U.S. Postal Service, $59M, 2000-2008)

U.S. Postal Service, On-Call Construction Management Services, Project Manager- Mr. Psillos was project manager for this on-call construction management contract, which entails both construction management and A/E services for the U.S. Postal Service at various locations throughout New York City and Long Island. The assignments were varied, ranging from HVAC improvements to the construction of a completely new post office. Multiple task orders were being completed simultaneously. (U.S. Postal Service, $30M, 1997-2000).

Suffolk County Community College, Multi-Purpose Health Technology Building, Brentwood, NY, - This project involved the new construction for a new Classroom Building, Athletics Complex,

and Athletic Sport Fields. Involved CPM scheduling and project coordination for this new 250,000 sf health, sports and education center on the western campus. The multi-purpose building contains 22 general purpose classrooms, a 150 seat high-tech lecture hall, computer labs and state-of-the-art laboratories for the health sciences, a 60,000 sf field house and a modern fitness center, faculty and administrative offices and the Suffolk County Police Academy. The project was in conformance with the Wick's Law Requirements for multi-prime contracts. (DASNY, $55M, 1997-2000)

Cohalan Courthouse Complex, Assistant Project Manager and CPM Scheduler - Project involved CPM scheduling and project coordination for courthouse and office complex including holding cell and jail facilities for prisoners. ($90M)

Assistant Project Manager and CPM Scheduling for LIRR Herricks Road and Mineola Grade Crossing Elimination Project ($340M) - ***Phase I***: Raising 1 mile of mainline track and the lowering of Herricks Road, including a portion of Third Main Line track, installation of high-speed crossovers, signal system equipment, communication, signal and power lines, and signal bridges. ***Phase II:*** Elimination of the remaining five MTA LIRR grade crossings in the Mineola area: Main Street, Willis Avenue, and Roslyn Road on the mainline; and Willis Avenue and Second Street on the Oyster Bay Line. Mr. Psillos was responsible for all CPM scheduling for the LIRR Force Account work. Six weekend track outages were required for track cut-over's, each requiring CPM schedules on 1-hour intervals. Extensive coordination and interface with the railroad was required.

Nassau Community College Expansion, Assistant Project Manager - Mr. Psillos provided administrative and technical management of $35.5 million of contract for the demolition of a 55,000 sf block and brick frame aircraft hangar buildings. For the construction of two new buildings: an 115,000 sf three-story classroom building and 90,000 sf three-story college center. The new construction complies with all applicable codes including new ADA requirements. Coordinated operations of five prime contractors. Mr. Psillos was involved in all aspects of construction management including field inspection, estimating, change order estimating and negotiation, project meeting administration, document control, constructability review, and value engineering.

Additional Projects include:

- JFK 2000 Redevelopment Program, Project Control Engineer ($3.2 Billion)
- Cogeneration Facility at JFK International Airport, Project Control Engineer ($200M)
- Skilled Nursing Facility, Suffolk County, NY, CPM Scheduler($30M)
- Merrill Lynch World Financial Center , CPM Scheduling Engineer($600M)
- DOC Kitchen Rehabilitation, NYC DDC, CPM Scheduler($80M)
- Red Hood Sewer Treatment Facility, NYC DEP, Assistant Project Manager ($80M)
- Bay Park Sewer Treatment, Nassau Country DEP, CPM Scheduler ($120M)
- 63rd & 21st Street Subway Stations, NYC Transit Authority, CPM Scheduler ($60M)

Employment History:
The LiRo Group (1991-present)
Associate Vice President

Bijan Radafshar

SENIOR PROGRAM/ PROJECT MANAGER

EDUCATION	B.S., Civil Engineering, New Jersey Institute of Technology, 1980
REGISTRATION / CERTIFICATIONS	OSHA - Construction Safety & Health Certification, NY OSHA 30 Hour Occupational Safety & Health Training
YEARS WITH THIS FIRM	18
YEARS WITH OTHER FIRMS	12

Mr. Radafshar has over 30 years experience in progressive construction management, having worked as a field engineer, scheduling engineer, estimator and project manager. Among the clients that he has worked with are: Dormitory Authority of the State of New York, NYS Facilities Development Corp., NYS Office of Mental Health, NYC Department of Design and Construction, NYC Department of Sanitation, NYC School Construction Authority, Merrill Lynch and Nassau County D.P.W.

Mr. Radafshar's experience includes all aspects of construction management for both public and private agencies. Mr. Radafshar's experience includes contractor coordination, scheduling, estimating, contract development, change order negotiation, securing permits, obtaining certificates of occupancy, etc. Mr. Radafshar has been successful in motivating contractors in order to bring projects to timely completion in accordance with the construction documents and owner requirements. The project types where Mr. Radafshar has been responsible for contractor activity include court-mandated renovations at high security occupied correctional facilities throughout New York City, construction of the new Cohalan Court Complex and Merrill Lynch World Headquarters at Battery Park City. Mr. Radafshar is experienced with coordinating the activities of contractors on a Wick's Law project where the Project Manager must sometimes act as a referee and resolve conflicts and disputes. Mr. Radafshar has extensive knowledge of construction cost estimating as well as an ability to accurately estimate time and manpower requirements. This has allowed Mr. Radafshar to anticipate project costs, negotiate change orders and direct or convince contractors to increase their manpower levels in order to maintain schedule. Representative projects include:

New York City School Construction Authority - Emergency Response Management and Coordination Program, New York City - Sr. General Superintendent - Under this contract LiRo managed and coordinated responses to emergencies, on the basis of a telephone call at any time during a twenty-four hour period and on any day Monday through Sunday. LiRo immediately mobilized trades, firms and materials for the purpose of correcting or eliminating hazardous materials or dangerous conditions at public school in the five boroughs of New York City. LiRo's scope of work was extensive, varied widely and included the expedited renovation and restructuring of 7 schools with the approximate value for each project was between $6M to $28M. Our categories of work, services, trades or equipment to be provided on an emergency basis include the design, administration, management and coordination of the work; development of construction estimates, solicitation of bids in accordance with Authority requirements and the law; providing general conditions including but not limited to

testing and controlled inspections; remediation of hazardous materials; construction and demolition of the work in accordance with contract documents issues by the Authority. (NYCSCA, $238M)

George R. Vierno Center, 448 Bed Jail Facility - As Project Manager coordinated removal of contaminated soil and installation of piling & foundation and methane system for a $140M high security jail on Rikers Island. Due to shortfall of funding this project was redesigned to dormitory and total beds were increased to 823 beds. (NYCDDC, $20M, 2004)

System Wide Kitchen Renovation Program for N.Y.C. Department of Corrections - This project involved the complete gut/rehabilitation of 5 existing kitchens and construction of a new kitchen with all related services at six correctional facilities in New York City which served more than 6,000 inmates and 1,000 staff members' three meals per day. The facilities were occupied throughout the process therefore phasing and maintenance of security were major issues. Access and egress at each facility required advance planning and appropriate notice. In addition, the project was under a court-mandated schedule. Long lead kitchen equipment and security equipment were ordered early and tracked aggressively. (NYCDDC, $60M, 2004)

Electrical Service Upgrade at Queens House of Detention, New York City, Project Manager - The project consisted of installation of a new electrical service building, coordination with Con Edison in order to bring new feeders and terminate at the property line manhole. In addition, installed a new emergency generator for a 100% backup contingency. The work was performed while the facility was occupied. LiRo was responsible to coordinate and minimize interruptions to both the jail and the adjacent courthouse. (NYCDDC, $5M, 2002)

Powerhouse Masonry Facade Repair & Roof Replacement, Rikers Island New York City, Project Manager - the project consisted of repairing of the collapsed powerhouse wall, re-pointing of the remaining facade and replacing 12,000 sf of roofing. (NYCDDC, $1M, 2002)

Elevator Upgrade & Fire Life Safety Signoff by Fire Department, Bronx House of Detention New York City, Project Manager - the project consisted of full gut/rehabilitation of 4 existing elevators and installation of a new Fire Alarm Panel and associated devices and incorporating all existing panels to report to one panel for NYCFD final inspection & sign-off. (NYCDDC, $1M, 2001)

Columbus Avenue Rehabilitation from Lincoln Center to 110th Street, New York City, Scheduling Coordinator - As scheduling coordinator for the rehabilitation of this high profile and high traffic volume, prepared and maintained CPM schedule in order to maintain traffic and minimize interruption to the daily activities. (NYCDOT, $85M, 1996)

Employment History:

The LiRo Group (1992 to Present)
Associate Vice President
O'brien Kreitzberg & Associates (1987-1992)
Project Manager
Olympia & York (1983-1987)
Project Manager
DJA & Associates (1982-1983)
Resident Engineer

Ralph Tilleli

SENIOR PROGRAM/ PROJECT MANAGER

EDUCATION	B.S., Civil Engineering, University of Delaware, 1959
REGISTRATION / CERTIFICATIONS	Civil Engineering Society, NY Licensed Site Safety Manager, NY Licensed Site Safety Manager Notary Public, NY
YEARS WITH THIS FIRM	9
YEARS WITH OTHER FIRMS	42

Mr. Tilleli has been working in the construction industry for more than forty years. He has extensive experience in demolition work as well as the erection of high-rise buildings in New York City. He has had vast exposure to the unique construction conditions which exist in New York City including: unusual subsurface conditions, highly congested construction jobsites, and maintaining harmonious working relationships with the numerous trade labor unions. One of Mr. Tilleli's greatest attributes is his ability to communicate effectively with all parties involved in a construction project. He does this by developing strong personal relationships while maintaining leadership and firm project control.

A key component of Mr. Tilleli's demolition experience is his familiarity with scaffolding. He has directly supervised the erection, maintenance, relocation and dismantling of scaffolding ranging up to heights of seven building stories.

As a Licensed Safety Engineer, Mr. Tilleli is well-versed on required safety precautions, particularly when performing demolition work. Representative projects include:

DASNY School of Architecture, Project Manager - Demolition and reconstruction of a 136,000 sf building to become the new School of Architecture building. The building frame was structural concrete, which remained. The balance of the building was demolished and rebuilt, including façade, interior and mechanical, electrical and plumbing systems. Prior to demolition, space was provided for the current occupants. These occupants were permanently relocated within the campus. This required the renovation of various locations at a cost of approximately $8M and was accomplished in one year. (DASNY, $48M)

CUNY/DASNY - City College of New York, Shepard Hall, Great Hall, Senior Project Manager - This complex restoration project included the removal of existing floor fill and replacement with reinforced concrete; installation of new limestone flooring and steps leading to stage area (approx. 40,000 sf); the removal of existing ceiling panels approximately 60 ft. high and replacement with new fabric panels; and asbestos abatement. Phasing/coordination were a key factor, as was the maintenance of school operations throughout construction. ($1.75M, 1997)

CUNY/DASNY - The College of Staten Island, NY - Responsible for the management of the construction of a new, $360 million campus which consisted of renovation of existing buildings and the construction of six new buildings on an area of 204 acres and 1,235,937 GSF. The campus was the largest single phase project in the history of the City University of New York (CUNY) and the Dormitory Authority State of New York (DASNY).

CUNY/DASNY - New York City Technical College, Brooklyn, NY - Construction manager responsible for management of the construction and renovation of seven buildings within an eight-block area--a $45.5 million project budget. Project included a new 10-story atrium sandwiched between three existing buildings. Approximately 11,000 students in attendance were never interrupted as work progressed in a timely manner.

CUNY/DASNY - The College of Insurance, New York, NY - Construction manager responsible for the construction of a 12-story reinforced concrete building which included four upper floors as student dormitory rooms and a seven-story atrium, all enclosed by exterior precast walls at perimeter of building. The unique feature of this construction was the stepped balconies from the second to seventh floors. This was a $25 million project.

Telephone Building, New York, NY - Construction superintendent for the construction of a 22-story building with 16' floor heights. For this construction, the concrete batch plant was located in the building itself. Walls were reinforced concrete designed to withstand atomic attack. The building was designed to be self-sufficient, including a water well beneath the building.

Bronx Lebanon Hospital, Bronx, NY - Rehabilitative work included foundations and reinforced concrete superstructure. Construction managed the installation which was adjacent to a fully functioning operating room. The construction site was tight, requiring sidewalk bridges and overhead construction trailers.

Brookdale Hospital, Brooklyn, NY - Assistant superintendent for the structural steel construction of a new six-story building between two existing buildings. Included the replacement of an existing egg-shaped sewer sandwiched between existing buildings.

East Harlem Hospital, New York, NY - Construction superintendent for a new 28-story hospital. This project required deep excavation and blasting of hard rock adjacent to existing, fully functioning hospitals.

Jewish Home for the Aged, Brighton Beach, Brooklyn, NY - Responsible for management and coordination of all subcontractors for construction of a 12-story, reinforced concrete structure with brick exterior used as senior citizen housing.

Bishop Boardman Senior Citizen Housing, Brooklyn, NY - Supervised construction of five-story/50,000 sf masonry wall bearing building and coordinated subcontractors through all phases of construction. (NYS Division of Housing and Community Renewal)

Employment History:

The LiRo Group (2001 to Present)
Senior Associate
TDX (1979-2000)
Partner/Project Manager
Walsh Construction (1976-1979)
Assistant Project Manager
Gotham Construction (1971-1976)
Superintendent
Euclid Contracting Co. (1946-1971)
Superintendent

Euclin Contracting Co. (1946-1971)
Superintendent

Vikas Wagh, P.E.

SENIOR PROGRAM/ PROJECT MANAGER

Mr. Wagh has over 30 years experience in analysis and design of highways, bridges, buildings and transit facilities. He has performed numerous value engineering studies and constructability reviews for engineering projects of all types. Mr. Wagh has won awards for innovations in engineering and has presented and published many papers. He was the President of Wagh Engineers, PC for 10 years. Relevant project experience includes:

EDUCATION	B.E., Civil Engineering, University of Poona, India, 1976 M.S., Civil Engineering, University of Cincinnati, 1981 Graduate Courses in Business Administration, University of Pittsburgh, 1984
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY Professional Engineer, NJ Professional Engineer, PA Professional Engineer, MD Professional Engineer, OH Professional Engineer, DE American Society of Civil Engineers (ASCE)
YEARS WITH THIS FIRM	5
YEARS WITH OTHER FIRMS	29

Roosevelt Island Tramway Modernization, New York – Mr. Wagh is the Program Director for the Roosevelt Island Operating Corporation (RIOC). This 18-million-dollar Design-Build Contract was awarded to Pomagalski (Poma) of Grenoble, France. Currently, the project is under construction and is scheduled to complete by August 31, 2010. The Roosevelt Island Tramway (Tram) was commissioned in 1976. The original Tram system equipment was supplied by Von Roll Ltd. Located in Berne, Switzerland through their American partner VSL Corporation. The Tram installation is a bi-cable system of the double reversible type with two carriers traveling back and forth between terminals on two stationary paths. Each path consists of two track ropes whereby the carriages supporting the cabins travel along the path in a controlled motion by moving haul rope. Each carriage is connected to a concrete counterweight by a counter rope. The counterweight is located at the Manhattan terminal and the haul rope drive machinery is located at the Roosevelt Island terminal. (RIOC, 2008 – present, $18M)

East River Bridges in New York, NYCDOT: Director of East River Bridges, Design Division. Managed the ten year rehabilitation program for the four East River Bridges, namely Brooklyn Bridge, Manhattan Bridge, Williamsburg Bridge and Queensboro Bridge. The rehabilitation program involved design of a series of construction contracts for each one of the four bridges. The total cost of rehabilitation was approximately 1.4 billion dollars. East River Bridges presented various conditions that are unique to long span truss and suspension bridges. The development of these contracts required in-depth inspection of the several areas and components of these bridges. The projects involved deck replacements while maintaining traffic, seismic risk assessment of suspension bridges and truss bridges, suspension cable anchorage eyebars rehabilitation, cable strands replacement, cable rehabilitation including opening the cables with wedges, oiling, rewrapping with steel wires, neoprene wraps, etc., replacement of suspenders and cable bands, replacement of grid decks with closed rib steel orthotropic deck, various types of fatigue cracking details and their retrofits, pin and hanger connections, stiffening truss tie-downs, primary truss members consisting of eye bars, etc.

Tappan Zee Bridge/I-287 Corridor Environmental Impact Study, Project Manager - Project Manager for LiRo's efforts in developing the base maps including establishing the ROW lines and developing a database of highway and bridge inventory for the 33 miles of Thruway corridor (including the Tappan Zee Bridge) database for major utilities in the same corridor. Mr. Wagh also participated in the development of the new bridge crossing alternatives. (New York State Thruway Authority)

Tappan Zee Bridge/I287 Corridor Environmental Impact Study, New York State Thruway Authority, New York: Project Manager for Wagh Engineers, P.C. effort on this project. WEPC was assisted in the In-Depth Inspection of the bridge by providing one Team Leader and two Assistant Team Leaders. He performed Load Rating Analysis and Seismic Analysis and conceptual retrofit designs of all deck truss spans of this 3.1 mile long bridge. Studied the combined bridge and tunnel alternates for the replacement of the existing bridge. Cut and cover and bored tunnels were being suggested in the approach areas. (7/02 to 5/05)

Tappan Zee Bridge, Westchester County, NY, NYSTA: Project Manager for the rehabilitation of this 3.1 mile long bridge over the Hudson River between Tarrytown and Nyack consisting of 1.5 mile trestle spans, 19-250 foot deck truss spans and a 2,400 foot three-span cantilever through truss. The project involved inspection, rating analysis, seismic risk assessment and deck replacement. The design involved modifications to the bridge to accommodate new wider deck and retrofit work for live loads and wind loads. The seismic risk assessment work involved site specific seismicity investigation and response spectra and time history analyses using three-dimensional computer models. This project also included a comprehensive study to determine the most appropriate means for replacing the existing deck considering constructability, durability and traffic control. (4/94 to 12/95)

Walt Whitman Bridge Corridor Reconstruction, Contract No. 3, DRPA: Project Manager for the rehabilitation of the 10,000 + foot long bridge. The project included inspection, rating, preliminary and final design services for the rehabilitation of the main suspension spans and widening and redecking of approaches. The project also included construction staging, replacement and widening of the deck slab on the approaches, suspended spans deck repairs, overlay replacement, suspender collar retrofit, barrier replacement, fatigue investigation, and other structural modifications. The work also included seismic retrofit measures such as bearing replacement of the approach beam, girder and truss spans. The redecking was designed to be constructed in seven (7) construction stages to allow six (6) traffic lanes to be maintained during peak hours. The project included complete replacement and upgrade of the electrical system that supports roadway lighting, navigational and aviation lights and lane use signals. The Suspender Collar retrofit work consisted of modifying the existing suspender collar assemblies from panel point 65 to 65' on the north and south sides of the center suspended span (46 total collars). The work included removal of the existing collars, replacement of the zinc lining with a polyurethane liner, realigning of the collar and re-installation. (10/94 to 12/95)

Employment History:

The LiRo Group (2005 to Present)
Vice President
Wagh Engineers, P.C (1996 – 2005)
President
Frederic R. Harris, Inc. (1994 – 1995)
Project Manager
New York City Department of Transportation (1991 – 1994)
Director of East River Bridges, Design Division

Resume

Dennis Yap's broad range of skills has been utilized at airports of various sizes and service levels. His role is often considered that of a program manager for airports and sometimes as an assistant to airport management. The services Dennis provides are best defined as airport administration, programming, planning, design and construction.

Education

Bachelor of Science, Civil Engineering, Polytechnic Institute of New York, 1983

Years in Practice: 27

Registrations

Professional Engineer- NY, NJ, CT, PA, MA

Memberships

American Association of Airport Executives

Airports Consultants Council

New York Airport Managers Association

American Society of Civil Engineers

Airport Minorities Advisory Council

Southern New Jersey Development Council

DY Consultants

Dennis Yap, PE, Principal-in-Charge, QA/QC

Experience

Dennis has focused his nearly 27-year career entirely towards the planning and development of airport-related facilities throughout the US. He has successfully completed more than 400 aviation projects and has serviced more than 100 individual airports. He is president and hands-on owner of DY Consultants.

Planning:

As a project planner, Dennis monitors the production of planning projects for the company. The firm participates in planning studies such as: Airport Layout Plan Studies, Airport Master Plan Studies, Feasibility Studies, Obstruction Studies, Heliport Studies and Pavement Management Studies. His airport planning experience includes airfield inventory, aeronautical forecasting, demand/capacity analysis, alternatives development, recommendation of plans, development of Airport Layout Plans, environmental reviews, terminal planning, scheduling and cost estimating.

Administration:

Well versed in the FAA program and airports, Dennis has a strong understanding of the operational and administrative requirements associated with sponsors who utilize FAA funds for Capital Improvement Projects. Dennis provides clients with an overall understanding of the assurances associated with grants and the procedures involved in implementing grants.

Programming:

Dennis coordinates and aids in the development of capital improvement plans for airport facilities. He works very closely with clients to develop short and long-term programs. This effort is completed with the objectives of meeting the immediate needs, minimizing environmental impacts, minimizing financial exposure and providing a program that is consistent with the airport's future plans. This service typically involves the preparing of a capital improvement plan for a three-to-five year period, coordinating with funding agencies, procuring funds for individual projects, and following the administrative procedures of the funding agencies.

Design:

Dennis is very involved with the technical issues of all design projects assigned to the firm. He is ultimately responsible for the accuracy, quality, and production of all design reports, plans, specifications and other project documents. These projects range in cost $50,000 to $20 million. Dennis has vast experience with existing and new runways, taxiways, taxilanes and parking aprons. Many of these improvements involved the rehabilitation or reconstruction of existing pavements or the construction of new pavement sections. These projects involved rigid and flexible pavement sections for civilian and military facilities. Dennis is sensitive to minimizing disturbance to the airfield during construction and makes special efforts toward coordinating an acceptable Operational and Safety Plan for projects. In addition to the paving projects, Dennis has an extensive background in the development of airside visual and navigational aids.

Construction:

Construction duties provided by Dennis currently include liaison between client and contractor, supervising inspection team and sub-consultants, preparing all administrative documents, interpreting plans and specs, attending project meetings and preparing final close out documentation. In addition, he has participated during construction as both a Resident Engineer and a Project Engineer. Dennis provides expertise in quality assurance and quality control during construction. He reviews Job Mix Formulas, other related Materials Submittals, plant and in place test results, and quality control programs. He ensures compliance to project plans and specifications, determines penalties if applicable and confirms quantities placed.

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James V. Green, P.E.
Senior Engineer/P.E. Diver
Project Role: Senior Project Manager

Education:
M.S. Candidate, Structural Engineering, Manhattan College
B.S., Civil Engineering, Manhattan College, 1992
A.S., Engineering Science, Rockland Community College, 1988

Registration:
Professional Engineer: New York, New Jersey, Connecticut, Pennsylvania, Maryland, Delaware, Virginia, California

Certifications:
National Bridge Inspection Standards (NBIS), 2005 – Course #FHWA-NHI-130055
American Red Cross – Adult CPR and Standard First Aid
Association of Diving Contractors, Commercial Diver Certification, [redacted]
Open Water Diver Certification, 1994
OSHA Confined Space Entry and Fall Protection, 2006

Work History:
1996-Present – McLaren Engineering Group
1995-1996 – The RBA Group
1993-1995 – NYC Department for the Aging
1991-1993 – New York State Thruway Authority
1985-1991 – 2x2 Development, Stony Point

Experience:
Mr. Green is a structural engineer and diver with over 19 years of experience. His background encompasses resident engineering, field investigation, and construction inspection services, as well as review of shop drawings, subaqueous investigation, and extensive structural design. He has worked on underwater inspection and assessment programs and construction inspection programs for the PANYNJ, NYCDOT, NYSDOT, ConnDOT, NHDOT, NJDOT, and the NYSTA. His background includes experience in all facets of structural and civil engineering design on the waterfront, including ferry terminals, shipping facilities, piers and wharves, and foundation engineering. He is involved in the preparation of permit applications, EIS documentations, and consistency review documents, and coordination with and between agencies on permitting issues to include the Army Corps of Engineers, the Department of Environmental Conservation, the Department of State, National Marine Fisheries Service, the Fish and Wildlife Service, and other local agencies.

- **Design of an Oceanfront Pier, Ferry Terminal and Waterfront Destination; City of Long Branch, New Jersey;** Lead Marine Engineer/ P.E. Diver for the full marine and structural engineering services needed for design and construction of a new oceanfront pier in Long Branch, New Jersey. The pier will include a multi-functional retail and entertainment facilities, a ferry terminal providing commuter access to New York City, renewable energy resources, and a learning center. The pier is a critical aspect of the City's redevelopment plan, enhancing its identity as a premier United States destination.
- **New Jersey Marine Terminal Priority Marine Rehabilitation; for PANYNJ;** Team Leader/P.E. Diver for the performance of expert professional engineering services for PANYNJ Contract 415-09-065. Mr. Green provided the necessary waterfront structural engineering services associated with the inspection, evaluation, design and preparation of contract drawings, construction cost estimates and construction phase services for the priority repair work orders.
- **Port Elizabeth Berths 88-98 & Turntable; Newark/Elizabeth; for PANYNJ;** P.E. Diver for a condition survey of Berths 88, 90, 92, 94, 96, 98, and Turntable located at Elizabeth – Port Authority Marine Terminal. Involved with underwater inspection of timber and steel piles, pile caps and extensions and assessment of the concrete

edge beam, wharf topside, and steel sheet pile bulkhead. Mr. Green assisted in the preparation of a report indicating inspection findings, presenting pertinent photographs, and making priority repair recommendations.

- **Waterfront Structural Engineering Services for the New Jersey Marine Terminal; Elizabeth, NJ; for PANYNJ;** Structural Engineer/Inspection Team Leader responsible for providing waterfront structural engineering services for the inspection, evaluation, and rehabilitation design for the New Jersey Marine Terminal structures. Mr. Green prepared contract drawings and construction cost estimates for priority repairs for the structures, which included berths, a turntable, mooring dolphins, and timber walkways.
- **Underwater Condition Inspection of Bulkheads at Piers 2, 3, 4 & 5 at the New York Marine Terminal; Brooklyn, NY; for PANYNJ;** P.E. Diver for this high and low-level inspection of the relieving platforms and bulkheads. The project involved visual inspection of all above water elements including the deck underside, edge beams, reinforced concrete pile extensions, and stay lathing/bracing, as well as detailed underwater inspection services for the bulkheads between Piers 2 and 3 and Piers 4 and 5.
- **Underwater Inspection at JFK Airport; Queens, NY; for PANYNJ;** Team Leader/P.E. Diver for the underwater inspection of a 3,000-foot-long timber pile system pier at Runway 4R. Included report preparation, underwater photos, and repair recommendations.
- **Underwater Inspection of Piers 6, 7, 8, 9, 9A & 12 at the New York Marine Terminal; Brooklyn NY; for the PANYNJ;** Team Leader/P.E. Diver for underwater inspection of more than 10,000 timber piles and bulkhead, including a 10 percent in-depth inspection to determine marine borer infestation. A comprehensive report was prepared including condition assessment, repair recommendations, and cost estimates.
- **Engineering & Inspection Services for Marine Structures; Manhattan, NY; Battery Park City Authority;** Inspection Team Leader/Structural Engineer for the repair of the esplanade including piles, precast concrete seawall skirt, and the riprap slope protection that surrounds the perimeter of the Battery Park City Authority parcel in lower Manhattan. Mr. Green was responsible for the assessment of and design of repairs for approximately 3,500 precast concrete piles that support the relieving platforms at the esplanade. He also helped perform a testing program to investigate "hot spots" (areas of significant deterioration), statistical analysis of inspection data, and development of repair alternatives with cost estimates.
- **SUNY Maritime Rehabilitation and Expansion; Kings Point, NY; for SUCF;** Senior Engineer responsible for design and construction services in a project involving the 200-foot extension of the college pier, an addition to the approach pier, and an expansion of the working pier. Mr. Green is also involved with the management of NYSDEC and Army Corp permitting processes. The project includes rehabilitation of floating docks, pile repair and bulkhead remediation.
- **Williamsburg, The Edge Waterfront Development; Brooklyn, NY; for Douglaston Development;** Senior Engineer for the physical inspection, preliminary pier design and management of permitting issues for this waterfront development project along the East River. Project responsibilities included inspection of piers and bulkheads, evaluation of soil conditions, site/civil inspection, feasibility studies for water related activities, and design drawings.
- **Rehabilitation of the Astoria Site Waterfront Dock and Bulkhead; Queens, NY; Con Edison;** Structural Engineer/Inspection Team Leader responsible for performing professional engineering, design and construction support services associated with the rehabilitation of the Astoria Site Waterfront Dock and Bulkhead. Mr. Green was responsible for developing repair and replacement designs for these structures. Structures included: sheet piles, rip-rap revetment, existing steel pile hardware, fender systems and pump station intakes.

Brian C. Moody, P.E.
Senior Engineer/P.E. Diver
Project Role: Senior Project Manager

Education:
1999, Manhattan College, MSCE, Structural and Geotechnical Engineering
1997, Manhattan College, BSCE, Structural Engineering

Registrations & Certifications:
Professional Engineer - New York
National Bridge Inspection Standards (NBIS), 2005 -- Course #FHWA-NHI-130055
Association of Diving Contractors, Commercial Diver Certification #[redacted]

Work History:
2004-Present - McLaren Engineering Group
1997-2004 – Thornton Tomasetti / LZA
9/95 – 12/95 – Eschbacher & Associates
6/95 – 9/95 – NYS Thruway Authority

Experience:
Mr. Moody has over 13 years experience with underwater condition assessment, inspection, and structural design projects. He has worked on all types of structures, including bridges, marine structures, canal structures, roadways, buildings, and foundations. His responsibilities have included inspection, design and analysis, report preparation, and construction inspection. He has worked on projects for the NJDOT, NJT, NYCDOT, NYSDOT, NYSTA, New York Canal Corporation, Port Authority of NY and NJ, EDC, NHDOT and for various NJ Counties. As a Team Leader and P.E. Diver, Mr. Moody has performed the above and below water inspection of many bridges, piers, bulkheads, dams, and culverts. Representative projects for include:

- **Condition Survey Inspection of Berths 51-63, at Port Elizabeth Marine Terminal; PANYNJ;** Team Leader/PE Diver responsible for the cyclical condition survey of the New Jersey Marine Terminal, Port Elizabeth Berths 51, 53, 55, 57, 59, 61, and 63. The condition survey included an underwater inspection of the treated timber piles, steel H-piles, steel pipe piles, timber bulkheads, and an above water inspection of the concrete pile extensions, deck soffit, and top of deck. A Conditions survey report was also provided.
- **Condition Survey Inspection of Brooklyn Pier 12 and Bulkhead – New York Marine Terminal; PANYNJ;** Team Leader/PE Diver responsible for the field survey of Pier 12. Services included visual inspection and a ten percent hands-on inspection of all timber, and steel piles; all pile cap beams and pile extensions; all exposed and accessible surfaces along the entire length of the timber and steel sheet pile bulkhead, including ultrasonic thickness measurements of steel sheet pile bulkhead and soundings were taken along the bulkhead; a twenty percent hands-on inspection of the deteriorated portions of the deck soffit; and a visual inspection of the concrete edge beam and wharf topside. A Conditions survey report was also provided.
- **New York Marine Terminal Inspection of Piers 2, 3, 4, 5, & 11; Brooklyn, NY; for PANYNJ;** Team Leader/Marine Engineer for underwater inspection and assessment of bulkheads (timber piles, steel H-piles, pile cap beams, pile extensions, steel sheet piles) between Piers 2 and 3, Piers 4 and 5 and along Pier 11. A topside inspection of the concrete seawall and wharf was performed to determine its general condition.
- **Staten Island Homeport Bulkhead/Seawall Rehabilitation; Staten Island, NY; for NYCEDC;** Engineer for the design and construction support services for long-term rehabilitation of a collapsed portion of steel sheet pile bulkhead located at Staten Island Homeport. Services provided include engineering analysis and design for a replacement tied back bulkhead. A full set of construction drawings and technical specifications were prepared, as well as construction cost estimates and assistance with bidding.
- **Underwater Condition Inspection of Bulkheads at Piers 4, 5, & 11 at the NY Marine Terminal; Brooklyn, NY; for PANYNJ;** Team Leader/Marine Engineer for the Underwater Inspection and Assessment of the bulkhead between Piers 4 & 5 and along Pier 11.

Brian C. Moody, P.E.
Senior Engineer/P.E. Diver
Project Role: Senior Project Manager

- **Greenpoint Openspace Improvements; Brooklyn, NY;** Team Leader/Marine Engineer for open space improvements that include a pier, waterfront esplanade, and a waterfront park with the objective of giving the community much needed recreational space, connecting residents to the waterfront and accommodating future ferry service. Services performed included underwater inspection of timber low-level relieving platform and concrete seawall, schematic design, and consultation for the proposed park.
- **Condition Survey of the Hoboken Ferry Terminal - PANYNJ;** Team Leader/PE Diver responsible for the condition survey which consisted of an above water and underwater inspection of all structural elements comprising the Hoboken Ferry Terminal including pile caps, beams, bulkheads, piles, deck surface, and underside. Specifically, the structures include the following: the Pullman Immigrant Building and Cordoned-off Pier, the Rail Pier, two barges (Floating Terminals), and associated ramps, passageways, and gangways. The purpose of the inspection was to determine the overall condition of the structures and to identify structural and non-structural deficiencies. A report of findings and repair recommendations was also provided.
- **Civil Engineering Waterfront Structures Inspection Program – Former Kent Avenue Generating Station; Consolidated Edison Company;** Team Leader/PE Diver responsible for the inspection of a 600 ft. bulkhead for the overall condition and structural integrity; the concrete intake and discharge tunnels; and the Ash Pit Wall along the Wallabout Channel. Soundings were also taken of the river bottom along Wallabout Channel. A final report of findings was prepared.
- **Waterfront Revitalization 4th & 5th Street Piers, Kent Avenue; Brooklyn, NY; RD Management Corp;** Team Leader/Marine Engineer during the design phase of this redevelopment project along Williamsburg's waterfront in Brooklyn. The 4th & 5th Street Piers are being revitalized in two phases: demolition phase and construction phase. McLaren is performing detail design, construction inspection and construction administration services during these phases. McLaren performed an investigation of the waterfront structures including existing pile fields and bulkheads, and a hydographic survey of the project site area. McLaren provided a boring plan, waterfront site investigation and permitting services, and conceptual designs in addition to supervising the taking of geotechnical boring samplings.
- **Green Street Pier Inspection; Brooklyn, NY; for Park Tower Group;** Assistant Project Manager for the inspection of the existing Greet Street Pier. Responsible for marine engineering services, including a condition survey of the existing pier and adjacent bulkhead, a condition report of the pier and bulkhead, an alternatives study of at least three repair options for the pier, designs for the pier and for the new bulkhead, design of a water taxi landing and marina, and construction support services.
- **Assessment of the Water Club Marginal Wharf and Pier 11 Fender System; Manhattan, NY; for New York City Economic Development Corporation;** Team Leader/Marine Engineer for the Underwater Inspection and Assessment of the Water Club Marginal Wharf and the Pier 11 Fender System in Manhattan, NY for the New York City Economic Development Corporation.
- **Gowanus Substation Waterfront Structures Inspection; Con Edison;** Team Leader/PE Diver responsible for the routine inspection of the Gowanus waterfront. The 600 linear foot bulkhead is comprised of a wood bulkhead constructed of wood piles tied back into the supported large stone riprap and a small steel sheet pile bulkhead. A report of findings and repair recommendations was provided.
- **Engineering Services in Support of the Rehabilitation of the Bulkhead at Con Edison 74th St. Station; Consolidated Edison Company;** Team Leader/PE Diver responsible for the engineering and construction inspection services in support of the rehabilitation of the bulkhead at the Con Edison 74th Street Station. Field reports noting the construction progress, quality, adherence to detail, as well as any deficiencies requiring correction were provided.

Program/Project Managers

Rasem Abdo

PROGRAM/PROJECT MANAGER

Mr. Abdo is an accomplished professional with 24 years of construction management experience. He has successfully managed/supervised contractors and their field personnel and directed the new construction, renovation, and landmark exterior restoration of numerous educational facilities, as well as renovation and tenant fit out of residential, office and electrical facilities. Many of these projects encompass the simultaneous management of multiple sites. Representative projects include:

EDUCATION	B.S., Civil Engineering, Kuwait University, 1984 M.S., Civil Engineering, Kuwait University, 1986
REGISTRATION / CERTIFICATIONS	OSHA 10 Hour Occupational Safety & Health Training, NY
YEARS WITH THIS FIRM	6
YEARS WITH OTHER FIRMS	18

New York City Health and Hospitals Corporation, Façade rehabilitation, clay tile & flat roof replacement, selected lead panel & lead roof fascia repairs and associated asbestos abatement work for Buildings A, B & C at Kings County Hospital Center., Project Manager –
Kings County Hospital Center is one of the largest hospital complexes in NYC. This complex consists of more than twenty functional buildings that occupy an area of more than eight city blocks. This hospital complex was founded in 1831. The A, B & C buildings were erected in 1931. The A & B buildings are 11 stories and 120 feet in height. The B building is 13 stories and 140 ft in height. The three buildings are crowned with a clay tile and lead panel's cupola. Our project was to replace the original clay tile, flat roofing and designer lead panels, renovate and wash down the original face. Mr. Abdo's duties included, managing the site mobilization, coordination with the design architect and NYCHHC facilities management and the general contractor for this project regarding all aspects of the construction activities; especially phasing the renovation work in a manner the insures the uninterrupted activities of the hospital services until completion and final acceptance of the renovation work. This includes also reviewing and negotiating of contractor change orders proposals and preparing and/or reviewing contractor monthly requisitions. He also is responsible for management of shop drawing logs and submittals throughout the approval process, development of short-term schedules to support overall project milestones and assisting in updating site logistics plans for use in contractor coordination. (NYCHHC, $21M, 2008-Present).

CM/Build Requirements Contract for NYC Housing Authority (NYCHA), Betances Houses Community Center, Queens bridge Houses Community Center, Project Manager -Under this contract, LiRo performed work on a task order basis. We were in the design or construction phases of renovating and/or constructing community centers and several other renovation projects throughout New York City. These properties all required that LiRo perform pre-construction and construction phase services. Mr. Abdo's duties included, managing the site mobilization, coordination with the in-house NYCHA construction department, the design architect and NYCHA facilities management and all subcontractors (General construction, electrical, mechanical and plumbing) regarding all aspects of the construction activities until completion and final acceptance, reviewing and negotiating of subcontractor change orders proposals and preparing and/or reviewing subcontractor monthly requisitions. He also was responsible for management of shop drawing logs and submittals throughout

the approval process, development of short-term schedules to support overall project milestones and assisted in updating site logistics plans for use in contractor coordination. (NYCHA, $15M, 2005-2008)

Emergency Response Management and Coordination Program, New York City, Assistant Project Manager- Under this contract LiRo managed and coordinated responses to emergencies, on the basis of a telephone call at any time during a twenty-four hour period and on any day Monday through Sunday. LiRo immediately mobilized trades, firms and materials for the purpose of correcting or eliminating hazardous materials or dangerous conditions at public school in the five boroughs of New York City. LiRo's scope of work was extensive, varied widely and includes the expedited renovation and construction a new $18M, 55,000 sf high school within 90 days. Our categories of work, services, trades or equipment to be provided on an emergency basis include the design, administration, management and coordination of the work; development of construction estimates, solicitation of bids in accordance with Authority requirements and the law; providing general conditions including but not limited to testing and controlled inspections; remediation of hazardous materials; construction and demolition of the work in accordance with contract documents issues by the Authority. (NYCSCA, $108.7M, 2004-2005)

Previous Experience

Hudson River Park Trust (HRPT), Bovis Lend Lease LMB, Project Manager- In 1998, The Hudson River Park Act was enacted by the State Legislature and signed it into law by Governor Pataki. The bill established The Hudson River Park Trust (HRPT) to design, build, maintain, and operate the park. The goal of the organization is to create a new, self-supporting park that will provide an opportunity for water-related and recreational activities along the historic Hudson River Waterfront, and embrace the history, ecology, and culture of the river and its surrounding areas. Valued at $385M. Mr. Abdo managed the construction a 60,000 Square Feet Athletic Field inside Pier 40 under Wicks law and three new open door tennis courts at West Houston Street. The Athletic Field was constructed with synthetic turf. The building surrounding went through architectural, electrical, mechanical, and plumbing modifications to comply with current state and city occupancy codes with four contractors on board. His duties included outreach to with subcontractors and suppliers for bid solicitation, evaluation of sub contractor bids, writing subcontracts and purchase orders, reviewing and negotiating of subcontractor proposals through change events and change orders and preparing and/or reviewing subcontractor monthly requisitions. He also was responsible for management of shop drawing logs and submittals throughout the approval process, development of short-term schedules to support overall project milestones and assisted in updating site logistics plans for use in contractor coordination. (HRPT, $13M, 2003-2004)

Employment History:
The LiRo Group (2005 to Present)
Project Manager
Bovis Lend Lease LMB (1997-2004)
Project Manager
M.A. Angeliades Inc. (1992-1996)
Project Manager
Othman Engineering Firm (1987- 1990)
Project Manager
Rania Construction Corp. (1984-1986)
Site Superintendent

Aomar Achouri, P.E., P.T.O.E.

PROGRAM/PROJECT MANAGER

Mr. Achouri has an extensive background and education in traffic and civil engineering, both locally and globally. For LiRo, his responsibilities include capacity analysis, signal timing analysis and optimization, geometric analysis, Maintenance and Protection of Traffic and GIS data manipulation for clients such as NYSDOT, PANY/NJ, LMCCC and Nassau County DPW. Representative projects include:

EDUCATION	M.S., Civil and Transportation Engineering, The City College of New York, 2002 Advanced Studies Diploma, Civil Engineering, Ecole Normale Supericure de Paris France, 1994 B.C.E., Civil Engineering, Ecole Nationale Polytechnique d'Alger, Algeria, 1993
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY Professional Engineer, NJ Professional Traffic Operations Engineer
YEARS WITH THIS FIRM	9
YEARS WITH OTHER FIRMS	6

Comprehensive Traffic Study for Port Newark, Elizabeth, NJ, Traffic Engineer - Work included:

- Data collection and reduction
- Trip generation and travel demand forecasting
- Warrants analysis and signal design
- Develop Synchro model
- Capacity and level of service analysis
- Cost benefit analysis

(PANYNJ, 2003)

Intelligent Transportation System (ITS) in Lower Manhattan, NY, Project Manager-
The project consists of installing an integrated ITS System for Lower Manhattan, including subsystems for Wireless Traffic Monitoring Cameras, Traffic Sensors, Portable Variable message Signs, Transponder Readers, Highway Advisory Radio and a High-Speed Telecommunication Link. Mr. Achouri's responsibilities as Project Manager included the following; preconstruction meetings, document tracking and control, budget tracking, change order evaluations, contractor invoice review and recommendation, post installation equipment inspection, testing verification, substantial completion, and project closeout. (LMDC, $6M, 2007)

Reconstruction and Widening of Merrick Road, Rt. 27A, Freeport, NY, Chief Inspector - This project involved the widening, repaving, and resignalization of a 5 lane roadway in an urban area. The project included the realignment of a major intersection, Mill Road. New drainage, curb and sidewalk were installed. The entire intersection was paved with asphalt. The project also included extensive utility upgrades for gas, electric, and telephone service. MPT was critical due to the high traffic volumes running through the project corridor. The major portion of the work was performed at night and required nightly lane closures. All traffic control and MPT was done in accordance with NYSDOT standards and requirements. (Nassau County DPW, $3M, 2006)

Lower Manhattan Redevelopment Project, Traffic Engineer - Mr. Achouri's responsibilities included the following:

- Capacity and level of service analysis
- Signal timings plan design and optimization
- Maintenance and protection of traffic

- Accident and pedestrian flow analysis
- Geometric roadway design
- Simulation of traffic patterns and travel demand forecasting

(LMDC, 2005)

Neighborhood Traffic Studies, Transportation Engineer. LiRo conducted numerous neighborhood traffic safety studies (NTSS). The studies were targeted at specific neighborhoods and focused on what improvements were warranted to reduce the amount of accidents and address complaints from residents. To accomplish this LiRo collected all available accident and traffic data, sign and pavement ordinances, and supplemented the data with field volume and speed data. The results were arrayed to identify safety analysis/investigation issues. Each study request the assessment of the roadway networks operation from the Town/Village perspective.

Data analysis revealed discrepancies with existing signs, traffic signals, and pavement markings as well as any need for new signs, signals, and markings. In some locations, speed limit changes were also recommended. Maps showing existing and proposed conditions were developed. The results were delivered to the Town in report format and in a Map Info GIS database. (Town of Brookhaven, $120k, 2005)

Speed Sign and Impact Attenuators Study at JFK International Airport, Traffic Engineer - Work included the following:

- Located speed signs and impact attenuators on base map and noted their conditions and type
- Created a database
- Made recommendations to change damaged impact attenuators and improve signage visibility and effectiveness

(LMDC, 2004)

Canal Street Pedestrian and Vehicular Traffic Study, Traffic Engineer - Responsibilities included:

- Traffic volume and geometric data gathering
- Field observation and inventories
- Analysis of traffic operating conditions
- Evaluation of pedestrian crossing times at signalized intersections
- Develop new traffic signal timings to address deficient pedestrian crossing times
- Develop Synchro model

(LMDC, 2004)

Employment History:

The LiRo Group (2001 to Present)
Transportation Engineer
New York City Department of Transportation (1999 – 2000)
Transportation Engineer/Planner
Centre Scientifique et Technique du Batiment Paris, France. (1994 – 1995)
Junior Civil Engineer

Michael Albergo, PE, PMP

PROGRAM/PROJECT MANAGER

Mr. Albergo has over 20 years of experience in the planning, development, and engineering analysis of public works projects, with emphasis on transportation components. His experience includes project development from concept through construction, and analysis of the supporting logistics. He has worked with both public and private organizations to address their concerns during planning, design, and construction. Strong analytical, writing, and communications skills have enabled him to play a pivotal role in many of these projects. Representative projects include:

EDUCATION	B.S., Humanities and Engineering: Nuclear Engineering/Literature, Massachusetts Institute of Technology, 1983
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY OSHA 10 Hr. Construction Safety and Health, NY CMAA Project Management Institute
YEARS WITH THIS FIRM	11
YEARS WITH OTHER FIRMS	15

Lower Manhattan Construction Command Center, New York, NY. Project Manager, 9/11 Memorial Opening. Currently assigned to LiRo's program management contract for LMCCC, Mr. Albergo is providing planning, analysis, and coordination in connection with the permanent opening of the 9/11 Memorial scheduled for 9/11/11. In this capacity, he is examining issues and evaluating options for:

- Access and emergency egress
- Pedestrian queuing areas, queue lengths, sidewalk capacities, and operational impacts
- Tour bus drop-off locations
- Construction trucking impacts
- Potential security impacts
- Street and sidewalk reconstruction
- Signage, way-finding, and beautification

Lower Manhattan Construction Command Center, New York, NY. Logistics Coordinator. Assigned to LiRo's program management contract for LMCCC, Mr. Albergo authored all reports produced by the agency and is responsible for developing and analyzing the logistics data underlying $12 billion in construction in Lower Manhattan. This effort entails collecting or estimating data on concrete, steel, excavation, labor, and major equipment. Data was collected on more than 60 major projects, including the WTC site (Freedom Tower, Towers 2 through 4, PATH Hub, WTC Memorial and Museum, Vehicle Security Center, Performing Arts Center, and supporting slurry walls and connectors), Fulton Street Transit Center; South Ferry Terminal, and approximately 20 high rise buildings averaging 40 stories in height. In addition, because major regional projects were known to be drawing on many of the same resources, summary logistics and schedule data were collected for East Side Access, 2nd Avenue Subway, the Trans-Hudson Express Tunnel, City Water Tunnel No. 3, the Hudson Yards, the Atlantic Yards, and other major regional projects.

Mr. Albergo worked with the scheduling team to load this logistics data onto the master schedule developed for all of Lower Manhattan. He developed a series of reports and presentations with histograms detailing the peak demands in each area, balanced against the known or estimated supplies of

each resource. By developing typical labor and trucking profiles, he was able to accurately predict shortages in particular areas (e.g. metal lathers) and forecast construction traffic at various locations. By building a database of permitting, utility, site logistics, embargo, and other issues encountered at each construction site, he developed a series of project metrics which quantify the benefits of LMCCC's ongoing coordination – an essential step for LMCCC's continued funding.

The logistics data identified and supported the seven major issues to be addressed by LMCCC: concrete, trucking, staging, labor, security, worker transportation, and major equipment. Mr. Albergo worked closely with the local concrete industry, MTA Bridges & Tunnels, and other agencies to address concerns, develop procedures, and implement solutions. He has authored a series of reports and presentations evaluating these logistics, their associated issues, costs, and their potential solutions. These included *Emergency Preparedness / Emergency Response to Concrete Truck Incidents at the Brooklyn Battery Tunnel*), the *Logistics Summary and Solutions Reports, Recommendations to Government Agencies, Test of MTA Tow Equipment on Concrete Trucks, Analysis of Pier 57 as a Potential Truck Staging Area,* and the *Project Metrics Report.* Directly as a result of Mr. Albergo's efforts, the MTA changed its regulations regarding concrete trucks, and NYCDOT opened the inbound Williamsburg Bridge to truck traffic.

East 180th Street Station Rehabilitation, Bronx, NY. Deputy Project Manager. A landmark station, this $20 million rehabilitation project included structural, architectural, landscape architectural, mechanical, electrical components. Mr. Albergo assembled the project team for the overall effort, and served as Deputy Project Manager for the structural design, developing the scope and budget for the structural work.

Marcy Pedestrian Bridge Forensic Investigation, Marcy, NY. Deputy Project Manager. Mr. Albergo served as Deputy Project Manager for the investigation of the collapse of a pedestrian bridge under construction near Marcy, NY, as part of the Utica - Rome Expressway. One worker was killed, one critically injured, and eight others injured in the collapse. The scope of work included examination of the debris field, metallurgical tests, interviews with witnesses, and examination of NYSDOT practices. The causes contributing to the collapse were documented in a final report.

22 West Progress Group, Washington County, PA. Project Engineer. As a member of the Executive Committee, Mr. Albergo worked with school boards, municipalities, water authorities, and developers to examine the issues in developing a 20-mile stretch of Route 22 in western Pennsylvania. Development required the introduction of water service to the area, and Mr. Albergo was a key player in the formation of new municipal authority for this purpose. In particular, Mr. Albergo was responsible for the development of layered maps which would serve as the building blocks for a GIS system used to facilitate development. Five base maps were included in the study: Existing rail routes Existing highways and streets A map of the watersheds (for the introduction of water and sewer service)A demographic map A map of existing industries

Employment History:

The LiRo Group (1995-2002) and (2006 to Present)
Project Manager
Weidlinger Associates (2002 to 2006)
Vice President
Michael Baker Corporation (1992 to 1995)
Manager, Project Development
Blauvelt Engineers (1989 to 1992)
Project Engineer
John J. Kassner & Company (1984 to 1989)
Project Engineer

Abid M. Ansari, P.E., P.T.O.E.

PROGRAM/PROJECT MANAGER

EDUCATION	M.S., Civil Engineer, New Jersey Institute of Technology, 1989 B.S., Civil Engineer, NED University of Engineering and Technology, 1984
REGISTRATION / CERTIFICATIONS	Professional Engineer, CT Professional Engineer (pending), NY Professional Traffic Operations Engineer, NY
YEARS WITH THIS FIRM	11
YEARS WITH OTHER FIRMS	15

Mr. Ansari has been providing civil and traffic engineering services since 1984. Mr. Ansari has managed and conducted numerous traffic studies and has prepared reports for various public and private clients. He has also provided technical reviews of design documents and environmental impact statements for various diversified projects.

Mr. Ansari has extensive experience in the planning, design, and maintenance of existing and proposed civil and transportation facilities, preparation of environmental impact statements, MPT plans and traffic/transportation operation and safety studies. He has also developed improvement measures for traffic impacts and calculated their effectiveness through computer modeling.

Mr. Ansari's specific experience with traffic and transportation studies includes:

- Managing and conducting traffic analyses, safety and accident studies, parking demand studies and traffic circulation studies
- Preparation of detour and MPT plans and evaluation of associated impacts
- Overseeing activities such as geometric design, capacity analysis, field surveying, traffic modeling, traffic projections and forecasting and signal analysis and design
- Analysis and design of parking facilities
- Pedestrian and mass transit analysis

Representative project experience includes:

Port Newark/Elizabeth Marine Terminal - Mr. Ansari conducted a comprehensive traffic study for the proposed redevelopment of 900+ acre site of the Port Newark/Elizabeth Marine Terminal. The project included relocation and expansion of the existing terminals as well as changes in the roadway network, site access locations and inter-modal facility operations. This study included extensive field surveys to gather traffic database including manual and machine counts. The data were used to analyze the existing traffic conditions. Synchro models were developed for the existing and future scenarios. Using the existing and future capacity analysis results, operating conditions were evaluated and deficiencies were identified. Feasible improvement measures were developed and proposed to improve traffic operations and to minimize congestion and delays for the interim, short term and long term. Mr. Ansari prepared a comprehensive report to summarize the analysis data, methodology, findings, conclusions and recommendations of the study.

World Trade Center Area Pedestrian Study - Mr. Ansari conducted a comprehensive pedestrian circulation and operation study in the World Trade Center site vicinity. For this project, Mr. Ansari prepared and completed a detailed data collections program. Using this data, analysis models were developed along Church Street, Vesey Street, Liberty Street and West Street (9A) to determine the current operating conditions at key sidewalks, crosswalks and street corners. Analysis models were utilized to assess pedestrian conditions and potential impacts and to develop mitigation related to construction of various facilities in the area.

Lower Manhattan Traffic Model - Mr. Ansari was responsible for developing a comprehensive traffic operation model for lower Manhattan covering the entire island south of Canal Street. The model, based on Synchro and SimTraffic software, was developed for the Lower Manhattan Borough Commissioner's office in relation to the aggressive post 9/11 utility works and comprehensive roadway reconstruction program in the area. In addition to gathering and utilization of available information, extensive traffic data were collected. This effort established a unified set of traffic data for various ongoing projects. The model presents an operational assessment of existing conditions as well as provides a platform to project and evaluate future scenarios. The model was also used for developing and assessing MPT plans. Mr. Ansari has developed alternate detour schemes for roadway construction and closures and demonstrated associated impacts and viability by utilizing the traffic model, and presented the findings to NYC and NYS DOT.

Canal Street Corridor Study - Mr. Ansari conducted a comprehensive vehicular and pedestrian traffic study along Canal Street in Manhattan. The study was conducted for the Lower Manhattan Borough Commissioner's Office in response to the Canal Area Transportation Study (CATS Phase I) recommendations. The intent of the study was to evaluate the existing operations as well as various improvements recommended by CATS. In addition to the arterial and progression analyses, pedestrian operations and crossing times were evaluated. Traffic signal timing plans were reviewed and modified throughout the corridor to address potential safety and operational issues. In addition, evaluation of existing traffic control devices, installation of new traffic signals, adequacy of existing crosswalks and feasibility of mid-block crosswalks at various locations along Canal Street were studied and assessed. Mr. Ansari also prepared a comprehensive written report presenting findings and conclusions.

George Washington Bridge Bus Station - Mr. Ansari was responsible for traffic design and MPT plans for HVAC system renovations at the bus station. The project involved vehicular and pedestrian circulation and operation analyses as well as preparation of contract documents for permanent traffic conditions and MPT plans at the terminal and busy adjacent streets including Broadway, W. 178th Street and W. 179th Street. It also included partial and full closure of Trans-Manhattan Expressway (I-95) lower level eastbound, which passes under the work area at the bus station.

JFK Terminal 8 & 9 Expansion Project - This project involved pedestrian and vehicular traffic circulation analysis and design and development of MPT plans for the terminal access and frontage roadways, construction phasing and coordination with utilities for a major American Airlines terminal expansion at JFK Airport.

Continental Airlines Terminal C Redevelopment - This project at Newark Airport involved pedestrian and vehicular circulation studies at the terminal frontage and parking facilities and development of MPT plans for the terminal expansion and proposed parking garage.

Employment History:
The LiRo Group (1999 to Present)
Director of Transportation
SIMCO Engineering, P.C (1999)
Vice President – Engineering
Eschbacher Associates (1995-1999)
Associate/Supervising Transportation Engineer
Ethan C. Eldon Associates (1989 –1995)
Senior Transportation Engineer

Steven Asquith

PROGRAM/PROJECT MANAGER

Mr. Asquith has over 30 years experience in underground and aboveground petroleum and chemical storage tank design, installation, closure, testing and remediation. He has been involved with numerous projects in the public and private sectors as Senior Project Manager providing turnkey environmental engineering, consulting and contracting services. He has been responsible for planning, implementation and coordination of site clean ups for hazardous and non-hazardous contamination soils and ground water. He has also managed Capital Improvement and Construction Rehabilitation projects for the City of New York. Representative project experience includes:

EDUCATION	B.S., Meteorology and Physical Oceanography, SUNY at Maritime College, 1970 M.S., Geological Oceanography, The City College of New York, 1976
REGISTRATION / CERTIFICATIONS	Ameron Fiberglass Pipe Installation, NY Basic Code Enforcement Training Certification Brick Masonry-Inspection and Quality Control Cert., NY Brick Masonry-Inspections and Quality Control Certification, NY Brick Veneer and Metal Stud Backup Exterior Wall Cert., NY Certified Asbestos Monitor, NYSDOL, NY Concrete Construction Seminar Confined Space Entry Certification NYC Fire Dept. License - Tank Installation, Testing & Repair NYSDEC Tank Installation Certification, NY OSHA 10 Hour Occupational Safety & Health Training OSHA Certified 40 Hour Hazardous Waste Worker Training, NY P1-Unlimited Plumping Troubleshooting Exterior Masonry Walls Certification, NY Welding Inspection Issues Seminar, NY
YEARS WITH THIS FIRM	12
YEARS WITH OTHER FIRMS	20

Yankee Stadium City Work Redevelopment, Bronx, NY, Project Coordinator - LiRo is responsible for providing Construction Management/Build services for the design and construction work that is required of the City of New York as part of the Yankee Stadium Agreement. LiRo has performed the following projects and infrastructure upgrades within the entire scope of work: Demolition of five buildings at the Bronx Terminal Market; Excavation and disposal of contaminated soils at the Bronx Terminal Market Waterfront Park site; Installation of synthetic turf little league baseball fields and additional recreation facilities at two sites in the adjacent Bronx neighborhood; Restoration of retaining walls along 161st Street which included concrete imbedded baseball logos in time for the April 2009 baseball season; Widening of the sidewalk bridge for McCombs Dam approach for NYC DOT; Installation of a 20" water main around the new Yankee Stadium for NYC DEP; Installation of a 36" combined sewer from 157th Street to the Major Deegan service road and a 24" sewer along Ruppert Place for NYC DEP. LiRo is presently in the process of redeveloping the Bronx Terminal Waterfront Park by restoring the waterfront bulkhead along the entire site in preparation of the construction of 16 new tennis courts, an outdoor classroom, water features and an esplanade within a passive park setting. Also under restoration, is a historic building that is owned and will be occupied by the Parks & Recreation Department of NYC.

Mr. Asquith is responsible for Contract compliance, quality and procedural manuals for site safety, proposal preparation and contractor procurement, all document control from preconstruction through construction closeout, agency meetings, project reports and coordinating/sequencing the work to meet the contract milestones using P3 for scheduling and Prolog for a database. (NYCEDC, $144M, 2006-Present)

Various Capital Construction Projects at Yankee Stadium and Shea Stadium, NY, Project Manager - LiRo provided construction management/build services at both former Yankee and Shea Stadiums. The projects involved all disciplines with particular emphasis on life safety issues and mechanical systems. The majority of the work required completion during the off season with strict deadlines to avert opening day activities. Work during the baseball season had to be performed around the teams' schedules and Stadium operations. The Project involved multiple contracts related to structural improvements for concrete walls and facades, escalator repair and rehabilitation, HVAC upgrades, plumbing system upgrades, cooling tower support modifications, parking garage structural repairs and fire sprinkler upgrades, stairway replacement in Parking Garages 3 & 8 at Yankee Stadium, and painting of the steel superstructure. As Project Manager, Mr. Asquith was responsible for all phases of work at both Stadiums. (NYCDDC, $50M, 2004-2006)

Remediation of Petroleum Contaminated Soil and Groundwater Project, NY, NY, Project Manager - Implementation of a remediation program to comply with a NYS DEC consent order at over seventy NYC owned/operated sites, LiRo provided the Construction Management/ Design/Build services with the following types of remediation systems: Total Fluid Recovery, Dual Phase Recovery, Soil Vapor Extraction, Bio-Venting or Bio-Remediation. For each site, LiRo established the nature and extent of contamination, determined the need for site remediation, performed an evaluation of remedial alternative and recommended site remedies for NYS DEC approval. As Project Manager, Mr. Asquith was responsible for management of construction subcontracts, including the construction of remediation systems, oversight of system operations and a maintenance program. Monthly reports were provided to NYS DEC indicating system status and progress until final approval was given for termination of remedial action by NYS DEC. (NYCDDC, $37M, 2001-2004)

Bulk Petroleum Storage Tank Projects for various NYC Agencies including DDC and DOS, Assistant Project Manager - Mr. Asquith has design/replacement/ upgrade/closure of AST's and UST's at over two hundred and fifty city sites including site investigation, design, pre-qualification of contractors, management of bid awards, and coordination of construction with contractors. Tank sizes have varied from 250 to 25000 gallon tanks. In addition to diesel and gasoline products, projects have included fuel conversions from oil to gas, alcohol tanks, lubricating oils and waste oils. Permit agencies included NYC Building Dept, Fire Dept. of NY, Dept. of Environmental Protection, and NYCDOT. (NYCDDC / NYCDOS, $42M, 1998-2001)

Route 9A, Segment 1 Reconstruction Project, Field Inspector - Mr. Asquith was responsible for the direct field inspection and supervision of the drilling operations for soil borings and rock coring to determine soil characteristics and bedrock criteria for pier foundations at the Intrepid Museum and the Morris Street Pedestrian Bridges. Mr. Asquith's responsibilities included supervising the daily drill rig operations for soil sampling and rock coring following NYS Standard Specifications and procedures, including proper spilt-spoon sampling, determining RQD values for coring, documentation for all boring logs and bore hole restoration. (NYSDOT, Region 11, $18M, 2001)

Employment History:

The LiRo Group (1998 to Present)
Project Manager
New York City Department of Design and Construction (1996-1998)
Senior Project Manager

Michael Belling, P.E.

PROGRAM/PROJECT MANAGER

Mr. Belling is a licensed Professional Engineer with experience in civil engineering, program/project management and construction inspection. He has experience interacting with City, State and Federal agencies regarding all aspects of construction. He is also experienced in utility work, relocation and highway design, including highway drainage design, traffic control (signing and striping), accident analysis, horizontal and vertical alignments and capacity analysis. Mr. Belling also has extended experience in environmental engineering, including bulk fuel storage system design and site remediation. His project experience includes:

EDUCATION	B.S., Civil Engineering, Manhattan College, 2000 M.S., Civil Engineering, Manhattan College, 2004
REGISTRATION / CERTIFICATIONS	Confined Space Entry Certification OSHA 10 Hour Occupational Safety & Health Training Professional Engineer, NY
YEARS WITH THIS FIRM	10

Construction Management and Inspection Services for Project VN-80A, Utility Relocation for the Upper Level Replacement of the Verrazano-Narrows Bridge (TBTA), Resident Engineer: LiRo served as the construction management consultant for the Triborough Bridge and Tunnel Authority for the VN-80A project. The project involved relocating the bridge's vital electric, communications and fire standpipe utilities, as well as new redundant circuits for upper level lighting, lower level lighting and 24-hour power. A new SCADA operating system is also being installed and integrated with the existing Quindar system. Some specific items of work include:

- Installation of conduit, steel channel hangers and pull boxes for 5kV, fiber optic and medium voltage cable
- Installation of fire standpipe branch lines and hose connections
- Installation of lighting and 24 hour circuits
- Installation and splicing of fiber optic cable, 5kV cable and medium voltage cable
- Removal of bridge telephone system and existing fire standpipe branch lines
- Installation of SCADA operating system, including interfacing with existing Quindar system
- Installation of SCADA cabinets and implementation and training of new control system
- Monitoring of cut over of existing systems (cameras, lighting, etc.) to newly installed cables
- Monitoring of end-to-end OTDR tests and other tests as specified

Maintenance and protection of traffic and coordinated lane closures were required for this installation on both the upper and lower level roadways. Coordination with facility personnel was of great importance, due to the fact that systems were required to be temporarily taken off-line during cut over. Security access management was also a vital part of this project, as there was extensive work required within the bridge towers and anchorages. Responsibilities also included the management of the contract with regard to submittals, project progress and safety meetings, as well as contractor payments and as-built drawing documentation. (November 2008 - Present)

Program Management for Lower Manhattan Development Corporation (LMDC) and Lower Manhattan Construction Command Center (LMCCC), Construction Coordinator: LiRo is serving as a Program Management consultant for the LMDC & LMCCC, whose responsibilities involve nearly all construction projects, both public and private, south of Canal Street, including all World Trade Center site development. The goal of this work is to provide a service which coordinates over 70 major projects with the community and all federal, state, and city agencies. Mr. Belling is also a member of the

LMCCC's Construction Permit Enforcement Taskforce (CPET). This group meets on a daily basis and is comprised of representatives from LMCCC, NYPD, NYCDOT, NYCDEP, NYCDOS, NYCDOB and the Alliance of Downtown New York. CPET's purpose is to provide a daily interface where all city agencies that issue and enforce construction permits can coordinate their efforts to ensure all federal, state and city regulations are followed. Public noise complaints, after hours construction work, illegal street closings, bus idling and unsafe working conditions are only a few of the issues reported to the appropriate agency at this meeting. (January 2007 - November 2008)

Replacement, Upgrade, Closure or Removal of Underground Heating Oil and Emergency Generator Fuel Storage Tanks for the New York City Fire Department, Design Engineer: This project involved the replacement, upgrade, closure or removal of heating oil and emergency generator fuel underground storage tanks at four FDNY Communication Center Facilities and two firehouses. Design responsibilities included developing design documents for bidding. Specific responsibilities included acquisition of site specific information, development of site plans and details, coordination of contract drawings, compilation and writing of contract specifications including determination of specific project scope for each site and manufacturer equipment investigation and determination. Post-bid award responsibilities include sub-contractor's submittal approval for operation plans and other required items requiring approvals. (NYCDDC, 1/00 - 1/07)

Replacement, Closure or Removal of Underground Lube Oil Storage Tanks with Installation of New Product Delivery Systems for the FDNY and NYC Department of Sanitation, New York, NY, Design Engineer - These projects involved the replacement of existing storage tanks for such fluids as motor oil, hoist oil, anti-freeze and transmission fluid. New air driven pumps and product delivery hose reels and nozzles were installed for these fluids. Sites included sanitation garages in New York City, which required 24-hour operation during construction. Design responsibilities included developing design documents for bidding. Specific responsibilities included acquisition of site-specific information, development of site plans and details, coordination of contract drawings, compilation and writing of contract specifications including determination of specific project scope for each site and manufacturer equipment investigation and determination. Post-bid award responsibilities include sub-contractor's submittal approval for operation plans and other required items requiring approvals. (NYCDDC, $82M, 2007)

Tappan Zee Bridge/I-287 Corridor Study, Senior Project Engineer: This project involved tasks supporting the Tappan Zee Bridge replacement and the I-287/I-87 corridor improvements reaching from Rye, in Westchester County, to Suffern, in Rockland County. This project also included Route 119 as well Metro North's Hudson, Harlem and New Haven rail road lines in Westchester County. Tasks involved complete highway right of way (ROW) delineation and base mapping for the entire corridor, highway and utility infrastructure photo inventory and contacting and coordinating with various utility facility owners to confirm locations of all utilities within the corridor.

Employment History:
The LiRo Group (2000 to Present)
Civil Engineer

Michael D. Byrnes, CIH, CSP

PROGRAM/PROJECT MANAGER

Mr. Byrnes has 25 years' experience in the construction management field with an extensive emphasis on environmental remediation issues. He has extensive experience in asbestos; lead, indoor air quality, and laboratory analysis. As a Certified Safety Professional, Mr. Byrnes specializes in protecting workers, the public, property, and the environment by identifying, evaluating, and controlling hazards. As a Certified Industrial Hygienist, Mr. Byrnes is responsible for the management, planning and staging all aspects of asbestos abatement projects from the initial building survey, through design and preparation of bidding documents and technical specifications, evaluation of bid submittals and contractor selection, monitoring of the abatement project and oversight of the abatement contractor's activities, and post-project close-out. Representative projects include:

EDUCATION	B.S., Chemical Engineering, 1984
REGISTRATION / CERTIFICATIONS	OSHA 500 OSHA 510- Occupational Safety & Health Standards, NY OSHA 30 Hour Occupational Safety & Health Training, NY OSHA 10 Hour Occupational Safety & Health Training Certified Safety Professional Hazardous Waste Operations & Emergency Response OSHA - 10 Hours Certificate American Board of Industrial Hygiene Certified Industrial Hygienist NYSDOL Asbestos Inspector, NY OSHA Confined Space Entry Training NYSDOL Asbestos Project Monitor, NY NYSDOL Asbestos Project Designer NYSDOL Asbestos Air Sampling Technician, NY NYSDOL Asbestos Certificate, NY MTA Track Safety Training SSPC C-3 Certified NIOSH 582 Certification NYCDEP Certified Asbestos Investigator, NY NYSDOL Management Planner OSHA 40 Hour HAZWOPER
YEARS WITH THIS FIRM	9
YEARS WITH OTHER FIRMS	17

New York City School Construction Authority, NY – Field Inspector during disinfection of newly installed water piping in association with plumbing alterations, new additions, and new construction for various projects in association a New York City School Construction Authority (NYCSCA) hazardous materials management contract. Duties included: pre-disinfection site visits to determine if necessary interior of exterior piping is installed, and shut off valves are located at transition points between newly installed and existing piping in order to prevent chlorination of existing lines; review of Disinfection Water Quality Testing Plans (DWQTP) to determine compliance with NYCSCA and other applicable standards, codes and recommendations; field oversight of disinfection operations to ensure that approved DWQTP and other applicable codes, standards and recommendations are adhered to, including determination of proper chlorine concentration for disinfection is obtained, proper holding time of disinfectant in piping, and ample flushing following holding time to determine diminution of chlorination levels to less than 1 part per million, as required by applicable codes and NYCSCA standards; and witness sampling for total coliform/E-Coli bacteria, and heterotrophic plate counts (HPC) is performed, not less than 24-hours following ample flushing. Representative disinfection projects included: New Utrecht High School – new addition; PS 234K – new construction, disinfection of newly installed interior piping from service main interior double control valve to fixtures and drinking fountains; PS 265K – new construction, disinfection of two new service mains from exterior box valve to interior of building; PS 13Q (1) – disinfection of newly installed service mains from exterior box valve to interior double control valves; PS 13Q (2) – disinfection of newly installed hot and cold water

pipes from service mains interior double control valves to newly installed fixtures. Performed pre-disinfection walk-through, to determine if proposed DWQTP and disinfection can proceed, at the following schools: August Martin High School, Queens, new interior piping and fixtures; Mott Haven Complex, Bronx, new construction of charter school, three high schools, auditorium and gymnasium facilities, including exterior service main connections from street, interior hot and cold water piping and fixtures; Manhattan Academy, Manhattan, new interior hot and cold water piping, and fixtures on 7th floor of leased space for new school at 26 Broadway; Manhattan School of Math, Science and Engineering at the City University of New York, new hot and water piping and fixtures for new science labs, bathrooms and drinking fountains; and walk through and review of DWQTP for East NY Family Academy, new hot and cold water piping associated with kitchen modernization.

Remediation and Disposal of Contaminated Paint – Various Sites – New York City Department of Environmental Protection - LiRo is currently serving as the Construction Manager consultant to the New York City Department of Environmental Protection (NYCDEP) for the remediation and disposal of contaminated paint at various NYCDEP facilities located throughout Westchester County, and the Catskill and Delaware Watersheds. The project involves the removal and disposal of paint contaminated with lead, mercury, and PCBs, from various building and equipment surfaces, and the re-painting of those surfaces required by NYCDEP. LiRo will facilitate coordination of Contractor with NYCDEP personnel, and local authorities at the various facilities. Pre-construction services consist of reviewing NYCDEP Contract requirements, and assisting NYCDEP is finalizing Contract Technical Specifications. Services also consist of developing Health and Safety Plans (HASP) to address hazards that will be encountered during the paint remediation operations.

Resident engineering services will include reviewing Contractor submittal packages, Contract schedules, coordinating site activities so as to make the least impact on NYCDEP operations and site specific requirements, managing progress meetings, reviewing Contractor payment requisitions, and coordinating with Contractor and NYCDEP for disposal of hazardous materials, during the course of the site work. Services will also include overseeing field supervision, Contractor compliance with Contract Specifications, NYCDEP specific health and safety requirements, applicable regulations, codes and standards.

MTA/NYCT Asbestos and Environmental Consulting Services, NY - Project Manager for several consulting contracts with MTA New York City Transit totaling over $4,500,000. The Contract involved the coordination of site facility surveys and asbestos abatement design specifications and preparation of New York State Department of Labor site specific variances (SSV). The Contract also involved the management of project monitoring services for the asbestos abatement phase of the work, including evaluation of abatement contractor's work practices to ensure compliance with applicable federal, state and local regulations and standards, and the Contract documents. Prepared final reports, which included evaluation of post-abatement submittals and payment applications.

Employment History:

The LiRo Group (1998-1999 (2001 to Present)
Certified Safety Professional
Certified Industrial Hygienist
TRC Environmental Corporation, (1997-1998)
(1999 to 2001)
Senior Project Manager
Law Environmental, Inc. (1996-1997)
Project Manager
Warren & Panzer Engineers, PC. (1991-1996)
Project Manager
Applied Technology Services, Inc. (1987-1991)
Field Engineer
Enviro-Probe, Inc. (1985-1987)
Field Engineer

Anthony Caggiano

PROGRAM/PROJECT MANAGER

Since joining LiRo, Mr. Caggiano has been involved in requirements contracts involving multisite, wicks law projects. Over the years, he has become an expert in managing and coordinating theses projects from design through construction. He possesses both the technical and communication skills required to create workable designs, coordinate and schedule with individual facilities, and package the overall project and inspect and document the construction. Over the past ten years, he has performed work at over 350 facilities including over 100 fire department facilities. Work has included tank removals and upgrades, gas conversions and emergency generator installations. This experience has given him intimate knowledge of the FDNY operations.

EDUCATION	B.S., Industrial Engineering, City College of New York, 1966
REGISTRATION / CERTIFICATIONS	OSHA 10 Hour Occupational Safety & Health Training Troubleshooting Exterior Masonry Walls Certification, NY Brick Veneer and Metal Stud Backup Exterior Wall Cert., NY Brick Masonry-Inspections and Quality Control Certification, NY Confined Space Entry Certification CPM Scheduling Certification, NY Construction Management Certification Prep Course Risk Management Course, NY IFCI - Certified in UST Installation/Retrofitting PETCON Course - UST Closures IFCI - Certified in UST Decommissioning ASTM Course - E1739-RBCA Course for Integrated Environmental Solutions, NY PETCON Course - UST Installation
YEARS WITH THIS FIRM	16
YEARS WITH OTHER FIRMS	30

Representative projects include:

Project Manager/Assistant Project Manager for Four NYC Department of Design and Construction Petroleum Storage Tank Projects. These four projects with a total value of $70 million involved the construction management of replacement /upgrade/decommissioning of ASTs and USTs at over 300 city sites. Responsibilities included site investigation, design review, development of subcontractor RFPs subcontractor prequalification, bonding, insurance and VENDEX certification.

Duties also involved maintaining of schedules, utilizing Primavera, monthly status reports, shop drawing review, ISRP and SSIP review, requisition review, cost control, cost estimating, progress payment requests, punch lists, maintenance and warranty controls, change order processing and approvals. The project required close coordination with NYC Department of Design and Construction client agencies, subcontractor personnel, and field inspection on multisite, multicontractor construction.

Project Manager for Design and Construction Management for Installation of FDNY Emergency Generators, Citywide. Responsibilities included site investigation, design review, development of subcontractor RFB's, subcontractor pre-qualification, required insurances, bonds and vendex certification. Duties also included schedule maintenance, shop drawing review, requisition review, cost control, cost estimating, change order processing and approval, progress payment requests, substantial completion requests, punch lists, and maintenance and warranty controls. The project required close coordination with NYC, DDC, FDNY, subcontractor personnel, and field inspection on multi-site contractor construction.

Assistant Project Manager for Tank Upgrade and Fluid Distribution System Installation at NYC Department of Sanitation Central Repair Shop. Duties included participation in determining motor vehicle fluid system requirements, design and installation. The project included the location and subsequent removal and/or replacement and remediation of sixteen (16) USTs consistent with the relevant State, Federal and City requirements governing these tanks.

Assistant Project Manager for Tank Upgrade and Fluid Distribution System Installation at NYC Housing Authority. Duties included supervision of pre-design investigation, removal, replacement, and remediation of USTs on a multi-site project.

Employment History:
The LiRo Group (1994- Present)
Associate Vice President
Frequency Controls Products (1984-1994)
Director of Sales & Marketing
ADI Electronics (1975-1983)
Vice President & General Manager
Arrow Electronics (1978-1982)
Director
Servo Development Corp. & FEE Industries (1977-1981)
Vice President of Manufacturing
GAP Instrument Corp (1969-1976)
Director of Manufacturing
Otis Elevator Electronics (1964-1969)
Manufacturing Manager
Belock Instrument Corp. /Otis Elevator Electronics (1962-1964)
Manager of Estimating & Industrial Engineering
Belock Instrument Corp. (1958-1961)
Manager of Estimating

Todd Colabella, N-IV

PROGRAM/PROJECT MANAGER

Since 1980, Mr. Colabella has worked in the construction inspection and administration field on a wide variety of highway, bridge, and heavy construction projects. He has served as Inspector, Chief Inspector, and Resident Engineer. Representative projects include:

REGISTRATION / CERTIFICATIONS	Brick Masonry-Inspections and Quality Control Certification, NY Brick Veneer and Metal Stud Backup Exterior Wall Cert., NY LIRR Safety Training NICET Level IV NICET IV - Highway Construction OSHA 10 Hour Occupational Safety & Health Training OSHA 30 Hour Construction Safety and Health OSHA Safety Certificate Traffic Control Training - NYSDOT, Region 11 Transportation Eng. Technology/Highway Construction/Level IV Troubleshooting Exterior Masonry Walls Certification, NY
YEARS WITH THIS FIRM	12
YEARS WITH OTHER FIRMS	18

Replacement of Steinway Street Bridge over the Grand Central Parkway, Chief Inspector - This project for NYCDOT - Division of Roadway Bridges involved construction inspection for the reconstruction of two rigid frame arch structures over the Grand Central Parkway in Astoria, NY. The project included the demolition of the existing rigid frame arch structures; erection of new steel frame posts and arches, pouring of encasement abutments and new poured-in-place concrete deck slabs and sidewalks; bridge railing & fencing; permanent soldier pile and lagging sheeting with grouted tie-back anchors; the installation and removal of two temporary ACROW truss bridges; and extensive MPT detour scenarios. Project elements also included; drainage systems; underground and bridge supported utilities (water main, gas, telephone and NYC DEP & FDNY communications); traffic signals; and intersection and safety improvements. (NYCDOT, $18.4M)

Resurfacing of the Wantagh State Parkway from the Southern State Parkway to the Northern State Parkway, Chief Inspector - This project involved the complete resurfacing of 9.8 km of the Wantagh State Parkway in Nassau County, NY. This project required that Mr. Colabella coordinate nightly closures of the Parkway with the NYSDOT, NYS Troopers and the local community. All existing asphalt pavement was milled. Full and partial depth pavement repairs were made. Over 300 drainage structures were modified. The existing concrete curb was milled and replaced with new modified curb. Extensive electrical work was also performed including 5000 lf of conduit, numerous pull boxes, and electrical appurtenances rewired to support the INFORM system. (NYSDOT, $16.2M)

Long Island Expressway (I-495) HOV Lane, Exits 57-61, Long Island, NY, Chief Inspector - This project involved the construction of new High Occupancy Vehicle (HOV) lanes on the Long Island Expressway and the reconstruction of the LIE mainline pavement from Exits 57-61. A total of eight bridges were reconstructed and/or replaced. Construction encompassed three phases to allow for an unimpeded traffic flow. Project specifics included:

- Drainage: Over 28,000 lf of RCP and PE pipe in sizes ranging from 15 in. to 42 in. diameter.
- Asphalt: Over 240,000 tons. All asphalt was placed in accordance with Superpave specifications.
- Sound Barrier: Precast concrete panels and posts were mounted on cast-in-place piers. 640,000 sf total.
- Concrete Curb: 12,000 lf.

- Concrete Median Barrier: 30,000 sf, all precast.

Other work elements included drainage structures, street lighting, INFORM upgrades, and the installation of Variable Message Signs (VMS). MPT on this project was of paramount importance due to the extremely high traffic volumes on the LIE. This project incorporated two A+B bid contracts. The project ran as many as three shifts. (NYSDOT, $95M)

Throgs Neck Bridge, New York, NY, Resident Engineer - Mr. Colabella was responsible for the inspection and coordination of installation and testing of a VMS system at the approaches to the Throgs Neck Bridge. This project included MPT with complete nighttime closure of the bridge. Project elements included: installation of new sign gantries across the northbound and southbound roadways; inspection of installation and erection of all structural attachments, electric, power, communications, and central computer control system; removal of the existing signs and support structures; erection of temporary work platforms on underside of the bridge at four locations; lead paint removal for the cantilevered attachment of new steel to the existing floor beams outside fascia girder; and painting utilizing a three-coat system. The assignment included a total of two structures and four signs. Two of the VMS are full color, and two are tricolor. Mr. Colabella attended progress meetings and generated contractor's estimates and change orders. (TBTA, $3M)

Rehabilitation of 20 Bridges Throughout New York, NY, and Rehabilitation of 19 Bridges on Various New York State Highways, Office Engineer/Chief Inspector - Mr. Colabella was in charge of construction inspection for these projects. He assured compliance with plans and specifications; supervised five Inspectors; coordinated activities of sub consultants; and enforced maintenance and protection of traffic. The projects' elements consisted of concrete columns, cap beams, bridge seats, stems, back walls, pedestals, portions of structural slabs, curbs, winter concrete, and vertical and overhead patch work; structural lifting operations for the replacement and/or resetting of fixed and expansion bearings, stringers, stiffeners, diaphragms, finger joints, and armored joint systems with compression seals; cleaning and painting of structural steel; epoxy coating for the protection of concrete repairs; and micro-silica concrete overlay. He supervised the concrete testing and checked shop drawings for acceptance of proper materials. (NYSDOT, $20M)

MacArthur Airport Taxiway "F" Construction, East Taxiway Overlay, and Terminal Apron Expansion for American Airlines, Resident Engineer/Inspector for C&S Engineers - Client: Federal Aviation Administration, Project Cost: $9M. This project consisted of the excavation, replacement and new construction of taxiways "E", "F" and Eastern Apron Expansion at Terminal building. It also involved the removal, regrading and resurfacing of intersection at Taxiway "E" and runway 15R-33L, approx. 80,000 tons of P-401 mix design. Project included: Saw & Seal Transverse joints in newly constructed asphalt pavement; Monitoring all field testing and sampling supplied by testing agency; Assured flow, stability and air voids within proper ranges for P-401 asphalt mix design. As Inspector, Mr. Colabella performed layout of asphalt core sampling and testing by method of random sampling and utilizing standard deviation for payment purposes.

Employment History:

The LiRo Group (1998 to Present)
Chief Inspector
Ensign Engineers (1997-1998)
Resident Engineer
Eschbacher Associates (1995-1997)
Chief Inspector
Gibbons, Esposito & Boyce (1980-1990) (1992-1995)
Chief Inspector
Calocerinos & Spina Engineers (1990-1992)
Resident Engineer

Eugene J. Comilloni
PROGRAM/PROJECT MANAGER

Mr. Comilloni has been providing civil design, building construction supervision, construction cost estimating and architectural field representative services since 1967.
Relevant project experience includes:

EDUCATION	Civil Technology, Westchester Community College
YEARS WITH THIS FIRM	12
YEARS WITH OTHER FIRMS	32

United States Postal Service, On-Call Construction Management Services - Mr. Comilloni managed several projects for this on-call construction management contract which entailed construction management services throughout New York City and Long Island. The assignments varied, ranging from HVAC improvements to construction of elevator replacement to the restoration of an existing post office. Multiple task orders were completed simultaneously.

Bridgeport Schools Repair and Replacement Project - LiRo is providing construction management services for 20 schools in Bridgeport CT. The project includes various repair work from pavers, window replacement, masonry repair, HVAC upgrade and toilet room upgrades. (Bridgeport School District, $10M)

Street Reconstruction, Massapequa Park, NY. Senior Technician. LiRo provided design services for improvements to approximately 1.3 miles of residential streets in the Village of Massapequa Park. The project involved roadway reconstruction, road realignment, and drainage improvements. LiRo's work on this project included: Collecting and reviewing existing utility information. Performing a pavement and drainage condition survey; survey of the streets; development and implementation a boring program to determine pavement thickness and sub-grade description; performance a condition evaluation of existing drainage facilities to determine repair, cleaning or replacement; provision of a cost estimate for the construction; and coordinate and attend meetings with Utility Companies. Maintenance of traffic plans was developed to maintain access during construction.

Route 112 Reconstruction - Long Island Expressway to Route 25, Suffolk County, NY. Senior Technician. Preparation of the Design Report/Environmental Assessment for the construction of improvements to a 3.5-mile section of Route 112, a principal arterial in Suffolk County. (NYSDOT, 1999-present).

Town of Brookhaven, On-Call Engineering Services, Senior Technician. Provided engineering services in connection with the Town's Capital Program. Measured work done by contractors; prepared pavement requisitions; supported the Town of Brookhaven traffic staff in conducting neighborhood traffic studies; analyzed roadways and geologic features as applied to traffic; developed a consortium for transportation professionals to prepare a Traffic Calming Procedure manual for the Town. (Town of Brookhaven, $500,000)

Bruckner Expressway/Cross Bronx Expressway Interchange, Senior Technician. The rehabilitation of this interchange's bridges was designed by another consultant. LiRo was asked by the State to assist with the review of shop drawings and investigation of deterioration to structural members as requested by EIC. The scope of work included review, approval and maintaining a log for approx.

600 shop drawings which included Erection Drawings, Steel Details, Sheeting, Temporary Towers and various repairs. (NYSDOT, $250K, 2000 - 2001)

Westchester County Courthouse Phase 3 Tower, Resident Engineer - The LiRo Group was retained by Westchester County to provide both design and construction management services for this $23 million interior renovation project. The program consisted of a combination of partial and complete renovations to 18 floors of the 20 story courthouse tower, including mechanical, electrical, telecommunications, fire alarm and security upgrades, ADA compliance throughout, new courtroom layouts and finishes, and all adjunct facilities to service New York State's civil courts and the County's Department of Probation. In order to meet the County's construction schedule, all work was designed around an intricate staging program that LiRo devised to maintain the County's requirements that the building remain fully operational throughout construction. Construction documents were completed in nine months from the date of design award and the project is currently under construction, on time and under budget. Construction completion is anticipated for the summer of 2007. (Also includes architecture).

County Route 80 Reconstruction, Senior Technician - Roadway widening and resurfacing, drainage installation and bulkhead reconstruction in conformance with NYSDOT requirements. Provided for the inspection of all fieldwork, survey control and drainage layout and preparation of daily reports. Installation of drainage facilities for flood control, reconstruction of asphalt and concrete roadways, replacement of concrete curb and sidewalks, Towns of Hempstead and North Hempstead. Responsible for inspection on all field operations and record keeping, according to Town requirements. (NYSDOT, Region 10)

Concourse Village, Bronx, NY, Resident Engineer - Supervision of the construction of major structural reconstruction, electrical rehabilitation, utility relocations, drainage improvements and parking improvements. These efforts included review of proposed construction efforts and the development of construction cost estimates for project change orders.

Employment History:
The LiRo Group (1997-Present)
Superintendent
Evans & Posthauer Engineers (1989-1997)
Assistant Engineer
Riverbay Corporation (1988-1989)
Assistant Director of Construction
Russel Gibson von Dohlen (1981-1988)
Field Representative
Perkins & Will (1964-1981)
Architectural Field Representative/Construction Administrator

Louis Comunelli, P.E.

PROGRAM/ PROJECT MANAGER

Mr. Comunelli has had over 40 years of experience in the administration of major roadway and bridge reconstruction contracts. As the Director of the East River Bridge Construction Unit, he was responsible for managing reconstruction work on the Williamsburg, Manhattan and Queensboro Bridges. Prior to that assignment, Mr. Comunelli was a Project Manager on projects for the Connecticut Department of Transportation, the New Jersey Department of Transportation, the Westchester County Department of Public Works, the New York City Department of Environmental Protection and the New York City Department of Parks and Recreation. In prior Civil Service, he was the Engineer-in-Charge of two Manhattan Bridge rehabilitation contracts for NYSDOT and the NYCDOT Borough Engineer of construction for Manhattan and Staten Island. Representative projects include:

EDUCATION	B.E., Civil Engineering, City College of New York, 1965
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY Professional Engineer, NJ Professional Engineer, PA Amtrak Track Safety Course Installation-Entire UST System Closure, NJ Metro-North Track and Safety Course Subsurface Evaluation, Tank Testing & Corrosion Specialist, NJ American Engineering Alliance Board of Directors, NY
YEARS WITH THIS FIRM	11
YEARS WITH OTHER FIRMS	31

Traffic Engineering Services at NY & NJ Airports, Project Manager- LiRo provided traffic engineering services on an as-needed basis. Assignments included projects at JFK Airport, JFK Air Train, Newark Airport, and LaGuardia Airport. (PANYNJ, $78M, 2008)

Reconstruction of Gun Hill Road Bridge, Bronx, NY, Project Manager. LiRo is providing Resident Engineering Services for this project which entails the removal and replacement of the eight-lane wide Gun Hill Road Bridge over Metro-North Rail Road. The project was performed in three separate demolition and construction phases. The new bridge is a single-span steel structure with a concrete deck. Extensive utilities span across the bridge and were replaced including a 36" water main, electric power and communications lines. This project also required major coordination with Metro-North Operations personnel and force account support departments. LiRo staff coordinated all of the third party construction activities with the MNRR operations representative within the required advanced notice. The staff is actively involved in requesting flag protection and track outages for the project, in addition to coordinating with the MNRR Force Account Departments who are providing Maintenance of Way support for track and Power Department support services. LiRo ensures that all demolition and erection procedures are being followed according to the approved drawings. The manufacturer and the model numbers of the cranes are checked as well as the Approval and Operations Certificate issued by the NYC Department of Buildings. Counterweights are checked, the pick location is checked and the rigging is checked. The fabrication of shields used in the demolition procedures is thoroughly checked. Lumber grade and dimensions, and fastener material and dimensions are checked, as well as the overall fabrication of the shields.

MPT and Traffic Signals
Due to field conditions, several aspects of the MPT had to be revised and traffic signals had to be relocated. LiRo staff responded to NYCDOT OCMC's request to install additional signs on the Bronx River Parkway, and to their request to close an exit ramp with concrete barriers. They coordinated the relocation of traffic signals, and the installation of temporary ones that were not called for in the contract documents. LiRo interacted closely with the NYCDOT Bureau of Traffic to affect these traffic signal relocations.

Community Relations
LiRo interacts with the community by informing them of the construction work through a Newsletter. In addition, LiRo updates the NYCDOT's web page for this project. LiRo personnel have met with local community leaders to explain the aspects of the project.
(NYCDOT, $14M)

Replacement of Steinway Street Bridge over the Grand Central Parkway, Project Manager. This project for NYCDOT - Division of Roadway Bridges involved construction inspection for the reconstruction of two rigid frame arch structures over the Grand Central Parkway in Astoria, NY. The project included the demolition of the existing rigid frame arch structures; erection of new steel frame posts and arches, pouring of encasement abutments and new poured-in-place concrete deck slabs and sidewalks; bridge railing & fencing; permanent soldier pile and lagging sheeting with grouted tie-back anchors; the installation and removal of two temporary ACROW truss bridges; and extensive MPT detour scenarios. Project elements also included; drainage systems; underground and bridge supported utilities (water main, gas, telephone and NYC DEP & FDNY communications); traffic signals; and intersection and safety improvements. (NYCDOT, $18.4M)

Rehabilitation of Bridge Joints on the Brooklyn-Queens Expressway Triple Cantilever Structure, Project Manager. LiRo provided Resident Engineering Inspection Services for contract HBKC1144, which was designed to correct leakage, structural defects, and traffic noise problems occurring at approximately 100 expansion joints. The joints were located on a reinforced concrete structure comprised of three cantilevered levels located in downtown Brooklyn.
(NYCDOT, $2M)

NYCDOT Contract Nos. HBCY093 and HBCY096, Marine Structural Repairs, Project Manager - These contracts called for when and where repairs for waterway bridges throughout New York City. Due to the time-critical nature of the work, there was little advance notice of the general defects discovered by condition inspection teams. LiRo prepared specific designs for work on a fast-track basis, as well as applications for DEC/Corps of Engineer and Coast Guard Permits. We performed Construction Inspection and site engineering services as an integral part of a combined team that was closely integrated with NYCDOT. (NYCDOT, $10M)

Employment History:
The LiRo Group (1999 to Present)
Senior Project Manager
Bettigole, Andrews & Clark (1996-1999)
Project Manager
NYCDOT Brooklyn (1967-1984) (1991-1996)
Resident Engineer
Director of East River Bridge Construction
NYSDOT (1984-1988)
Engineer- in-Charge

James Eckhoff, P.E.
PROGRAM/PROJECT MANAGER

Since 1989, Mr. Eckhoff has worked in the construction management field as Resident Engineer, Office Engineer and Chief Inspector on major bridge and highway reconstruction projects for the NYCDOT, NYSDOT in Regions 8 and 10, Long Island Rail Road, Port Authority of NY and NJ and the NY State Thruway Authority. Representative projects include:

EDUCATION	B.S.C.E., Civil Engineering, Manhattan College, Riverdale, NY, 1989
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY OSHA 10 Hour Occupational Safety & Health Training
YEARS WITH THIS FIRM	12
YEARS WITH OTHER FIRMS	9

Traffic Engineering Services at NY & NJ Airports, Senior Associate- LiRo provided traffic engineering services on an as-needed basis. Assignments included projects at JFK Airport, JFK Air Train, Newark Airport, and LaGuardia Airport. (PANYNJ, $78M, 2008)

High Line Reconstruction, New York, NY, Resident Engineer - LiRo is providing construction management and inspection services for the transformation of an abandoned elevated rail line into an urban park. This project involves the conversion of a 1.5 mile abandoned elevated freight line into a linear public park that will serve as an open space with outstanding views. The project spans 20 city blocks from Gansevoort Street adjacent to the Gansevoort Market Historic District, north through the meatpacking district, and up to 30th Street where it wraps around the Hudson Rail Yards. The project will also provide 12 points to access the elevated structure and will generate pedestrian traffic in the area. Rentable event space will also be created. Upon its completion, the High Line will take an unused structure and transform it into a one of a kind linear park that will be a great benefit to the community and city. (NYCEDC, $125M)

Long Island Rail Road - Suffolk County Bridges, 5 Rehabilitation Projects, Resident Engineer - This project consisted of the rehabilitation of 5 bridges in Suffolk County. LiRo was responsible for the construction management of the project. The core of the project centered around two bridges that required an increase in loading capacity due to the weight of the fleet of railcars purchased by the Long Island Rail Road (LIRR). Construction at both locations required for the removal of the tracks and extensive coordination between the LIRR and the contractor. Project specifics include:

- Bridge deck waterproofing.
- Structural steel painting with epoxy paint and mastic system to minimize the need for extensive surface preparation and lead abatement required by conventional coating systems.
- Concrete repairs using shotcrete.
- Replacement of the existing steel bearing pads with elastomeric and multi-rotational pot bearings. In order to minimize the impact of replacing the pads on train schedule, the existing girders were jacked and supported on temporary shoring towers. The towers were designed to withstand E50 loading using AREA standards. Since these bridges spanned over high volume roadways, extensive maintenance and protection of traffic was required.
- Concrete cracks were repaired with a low pressure epoxy injection system.
- Installation of gabion retaining walls and rip rap for slope stability.

(MTA-Long Island Railroad, Jamaica, NY)

Long Island Rail Road - Nassau County Bridges, 12 Rehabilitation Projects, Resident Engineer - This project consisted of the rehabilitation of 12 bridges in Nassau County. LiRo was responsible for the construction management of the project. The bridges were located on the Long Island Rail Road's (LIRR) busiest lines, the Mainline and the Montauk Branch. The project was completed 4 months ahead of schedule and below the budgeted time allowed for fouling the tracks. Project specifics include:

- Bridge deck waterproofing.
- Structural steel painting with epoxy paint and mastic system to minimize the need for extensive surface preparation and lead abatement required by conventional coating systems.
- Concrete repairs using shotcrete.
- Replacement of the existing steel bearing pads with elastomeric and multi-rotational pot bearings. In order to minimize the impact of replacing the pads on train schedule, the existing girders were jacked and supported on temporary shoring towers. The towers were designed to withstand E50 loading using AREA standards. Since these bridges spanned over high volume roadways, extensive maintenance and protection of traffic was required.

(MTA-Long Island Railroad, Jamaica, NY)

Staten Island Ferry Emergency Reconstruction of Pier 1, Ferry Maintenance Facility, St. George, Staten Island, New York, Resident Engineer -The emergency reconstruction of Pier 1 was due to the ferryboat Andrew Barberi collision at the Ferry Maintenance Facility, Richmond, New York. The project consisted of restoring the pier back to its original condition prior to the collision. The impact of the collision collapsed approximately 1500 SF of the Southeast corner of the pier. In addition, during the underwater damage inspection of the pier divers also discovered excessive damage to other piles along the pier caused by marine borers, which were required to be posted. Work consisted of the following:

- Removal of the existing reinforced concrete deck slab.
- Removal of the supporting timber cap beams.
- Removal of the timber pier piles and bracing.
- Removal of the fender system including fender piles
- Removal of debris in the waterway to ensure safe navigation
- Installation of new greenheart timber piles.
- Posting of existing piles under the intact section of the pier damaged by marine borers
- Installation of greenheart timber bracing
- Installation of greenheart timber pile clamps, cap beams and splice/sister beams
- Installation of reinforced concrete deck
- Installation of steel bollard and cleats.

(NYCDOT, $1.4M, 2004)

Employment History:

The LiRo Group (1998 to Present)
Senior Associate
Savin Engineers (1998)
Chief Inspector
Gibbons, Esposito and Boyce, PC (1992-1997)
Chief Inspector/ Assistant Resident Engineer
George R. Lehan and Associates (1989 – 1992)
Structural Engineer

Joseph Enang
PROGRAM/PROJECT MANAGER

Mr. Enang has over 19 years experience in performing and managing lead based paint remediation and surveying, as well as asbestos abatement projects. In his career, he has been responsible for all tasks associated with lead based paint and asbestos hazard consulting projects. Representative projects include:

EDUCATION	B.A., Business Management, College of Mount Saint Vincent, 1991
REGISTRATION / CERTIFICATIONS	USEPA Lead Risk Assessor SSPC C-5 Certified, NY NYSDOL Asbestos Designer NYSDOL Asbestos Air Sampling Technician, NY NYSDOL Asbestos Project Monitor, NY NYSDOL Asbestos Inspector EPA Lead Risk Assessor
YEARS WITH THIS FIRM	11
YEARS WITH OTHER FIRMS	9

New York City Transit (NYCT) Comprehensive Environmental Consultant Services Contract, NY. Senior Inspector for lead based paint assessment and remediation oversight services; enforced contractor work plans and monitored field operations including abrasive blasting, needle gun scaling, chemical striping wet scraping at various NYCT facilities ranging from elevated structures and pedestrian bridges, to active bus depots and station platforms; he has conducted control inspections of designated hazardous waste storage areas for EPA compliance and provided weekly reports to NYCT.

MTA Bridges and Tunnels (Tri-borough Bridge and Tunnel Authority). Monitor conducting daily contractor oversight, enforcing all applicable EPA, SSPC and MTA specifications during field operations involving 3P containments for the manual wet scraping or needle gun scaling of coatings; projects include vents shafts & security devices upgrades for the Queens Midtown Tunnel and Brooklyn Battery Tunnel, in addition to anchorages at the Verrazano Narrows Bridge. Worked in close coordination with construction management and resident engineering staff while enforcing MTA/TBTA regulations and site specific procedures during the construction phase of work.

NYS Department of Parks, Recreation and Historic Preservation, Bear Mountain Inn. EPA licensed Inspector and Risk Assessor during investigation and scoping of lead based paint remediation following incidental disturbance of contaminated coatings during construction activities. Subsequently prepared design procedures and specifications for lead dust decontamination and overall lead paint abatement; provided on-site enforcement of all relevant EPA, NYSDOL, Local laws, RCRA and application of SSPC practices, as well as OSHA regulations.

NYC Economic Development Corporation - Highline Reconstruction Rehabilitation. Project Manager for the implementation and enforcement of SSPC, NYSDOT, EPA, OSHA, NYS, and relevant Local laws and guidelines for the removal, treatment, disposal and handling of lead based paint on industrial applications pertaining to abrasive blasting of lead based paint from over 2 miles of structural steel. Coordinated continuous inspections of blasting containments and waste storage areas; assisted in the preparation of monthly reports summarizing field data and EPA Method 22 daily visual inspection results; enforced procedures for the abatement of asbestos containing track bed expansion joints, and miscellaneous ACM encountered during the project.

NYSDOT-Roslyn Viaduct Rehabilitation. SSPC supervisor and lead field inspector implementing the enforcement of NYSDOT project specifications and SSPC guidelines for the removal, temporary storage and disposal lead based paint during needle gun scaling on structural steel beneath a major roadway spanning Hempstead Harbor. Coordinated with the Engineer-In-Charge continuously to

provide schedule and progress information and communicate compliance and/or corrective actions taken in the field to ensure timely completion of the work.

Comprehensive Environmental Consultant Services Contract, NY, Senior Inspector- Responsible for lead based paint assessment and remediation oversight services; enforced contractor work plans and monitored field operations including abrasive blasting, needle gun scaling, chemical striping wet scraping at various NYCT facilities ranging from elevated structures on the Flushing IRT line and pedestrian bridges at Corona Park, to active bus depots and station platforms; he has conducted control inspections of designated hazardous waste storage areas for confirming EPA compliance and provided weekly reports to NYCT. (NYCT, $26.5M, 2008)

On Call Lead and Asbestos Monitoring Contract, Project Monitor- Responsible for conducting daily contractor oversight, enforcing all applicable EPA, SSPC and MTA specifications during field operations involving 3P containments for the manual wet scraping or needle gun scaling of coatings; project sites include vents shafts & security devices upgrades for the Queens Midtown Tunnel and Brooklyn Battery Tunnel, anchorages at Verrazano Narrows Bridge. Worked in close coordination with construction management and resident engineering staff while providing on-site implementation of MTA/TBTA regulations and site specific procedures during the construction phase of work. (MTA, $250,000, 2008)

Highline Reconstruction Rehabilitation- Implementation and enforcement of SSPC, NYSDOT, EPA, OSHA, NYS, and relevant Local laws and guidelines for the removal, treatment, disposal and handling of lead based paint on industrial applications pertaining to abrasive blasting of lead based paint from over 2 miles of structural steel. Conducted continuous inspections of blasting containments and waste storage areas; assisted in the preparation of monthly reports summarizing field data and EPA Method 22 daily visual inspection results; enforced procedures for the abatement of asbestos containing track bed expansion joint, rail connector rust inhibitor, and miscellaneous ACM encountered during the project. (NYCEDC, $500,000, 2008)

Battery Parking Garage, NY, Field Supervisor- Mr. Enang was Responsible for all phases of daily operations including obtaining permits, prioritizing and supervising. Duties also included documentation of abatement activities; field lead testing, bulk asbestos and lead paint chip sample collection, air sampling/monitoring and project reporting to construction management team for Burns & Roe. ($75,000, 1997)

New York City School Construction Authority, NY, EPA Inspector and Asbestos Project Monitor- Responsible for the Asbestos/Lead Consultant Services Contract. Services included asbestos, lead based paint, and mold spore investigations and reports, development of abatement work plans, cost estimating, project coordination and interfacing with site representatives, general project management, and final report compilation submission. Project sites where throughout the 5 NYC boroughs. ($2M, 2008)

Employment History:
The LiRo Group (1999 to Present)
Project Manager
Warren Panzer (1990-1998)
Environmental Scientist

John Eskridge, N-IV

PROGRAM/PROJECT MANAGER

Since 1974, Mr. Eskridge has been involved in the construction inspection and administration of civil engineering projects. Projects include highway and bridge construction, installation of storm and sanitary sewers, concrete and asphalt pavement operations on city streets and site improvements, including landscaping and irrigation. He has extensive experience in utility installation and coordination. His project experience includes:

EDUCATION	Construction Technology, SUNY at Farmingdale
REGISTRATION / CERTIFICATIONS	ACI Concrete Field Testing Technician - Grade I NICET IV - Highway Construction Welding Inspection Issues Seminar SSPC C-1 Certified, NY Portland Cement 40 Hour Concrete Pavement Construction Permit-Required Confined Space Entry Course - 29CFR/OSHA OSHA 10 Hour Occupational Safety & Health Training Formal MPT Training - NYSDOT Confined Space Entry Certification Advanced Practice of Concrete Construction & Specifications
YEARS WITH THIS FIRM	22
YEARS WITH OTHER FIRMS	13

LIRR Rehabilitation of Amott Drainage Culvert, Resident Engineer - The project consists of adding a 72 inch diameter culvert to augment the existing culvert. Rehabilitation of the existing culvert includes repair/replacement of the spillway, inlet structure, drainage pipes and outfall piping. The work included coordination with railroad departments such as Electric Traction Power, Maintenance of Way and Rail Operations. The major items of work include the following:

- Construction of a catch basin at the LIRR Substation to receive: a) flow from the existing 15 inch diameter steel pipes, b) flow from the LIRR substation swale.
- Modify/extend the LIRR substation swale to carry swale flow to the new catch basin.
- Construct a stair sluice at the LIRR substation.
- Demolish portions of the existing stair sluice at the LIRR substation and fill/stabilize the eroded area of the adjacent embankment.
- Provide and install a precast concrete trough at the bottom of embankment from the proposed stair sluice at the LIRR substation over a distance of approximately 350 ft. on the south side of the ROW.
- Provide and install a 42 inch diameter reinforced concrete pipe over a distance of approximately 750 ft. on the south side of the ROW.
- Provide and install a 72 inch reinforced concrete carrier pipe inside of the 96 inch steel jacked under both tracks at Amott Culvert and grout in place.
- Construct new head and wing walls at Culvert at Amott Culvert.

Parkway, PIN XM97.51 D015486- This project involved the repair and painting of 37 bridges on or spanning the Grand Central Parkway in Queens, NY. The bridges required a wide variety of repairs including those to steel, joints, concrete decks, drainage system and scuppers, masonry veneers, as well as paving and complete bridge painting utilizing full Class Containment. The bridges ranged in size from a three span pedestrian overpass to a 28 span viaduct ten lane wide and included the Clearview Expressway/Grand Central Parkway interchange. Work was performed on a 24/7 basis. Multiple change orders were processed. (NYSDOT, $29M)

Reconstruction and Widening of Merrick Road, Rt. 27A, Freeport, NY, Resident Engineer - This project involved the widening, repaving, and resignalization of a 5 lane roadway in an urban area. The project included the realignment of a major intersection, Mill Road. New drainage, curb and sidewalk were installed. The entire intersection was paved with asphalt. The project also included extensive utility upgrades for gas, electric, and telephone service. MPT was critical due to the high traffic volumes running through the project corridor. The major portion of the work was performed at night and required nightly lane closures. All traffic control and MPT was done in accordance with NYSDOT standards and requirements. (Nassau County DPW, $3M, 2006)

When and Where Marine Structural Repairs, Directed within the Five Boroughs (Tasks 1 & 3), Chief Inspector - This contract called for when and where repairs for waterway bridges throughout New York City. Due to the time-critical nature of the work, there was little advance notice of the general defects discovered by condition inspection teams. LiRo prepared specific designs for work on a fast-track basis, as well as applications for DEC/Corps of Engineer and Coast Guard Permits. We performed Construction Inspection and site engineering services as an integral part of a combined team that was closely integrated with NYCDOT. (NYCDOT, $10M)

Reconstruction of Glen Cove Road at Northern Boulevard (RT 25A), Greenvale NY - This project involved the widening and realignment of a major intersection. New turning lanes were constructed. The project included the installation of a new drainage system, concrete curb installation, Superpave asphalt paving, stripping, traffic system resignalization, and extensive utility upgrades. Due to the heavy traffic volumes MPT was critical and the majority of the work was done a night. The project was for the Nassau County DPW but was all done according to NYSDOT specification due to the extensive work on Northern Blvd. The project also required extensive coordination between the NCDPW and the NYSDOT. (NCDPW, $3M, 2005)

Resurfacing of the Wantagh State Parkway from the Southern State Parkway to the Northern State Parkway (D015384), Levittown, NY, Chief Inspector - This project involved the complete resurfacing of 9.8 km of the Wantagh State Parkway in Nassau County, NY. All existing asphalt pavement was milled. Full and partial depth pavement repairs were made. Over 300 drainage structures were modified. The existing concrete curb was milled and replaced with new modified curb. Extensive electrical work was also performed including 5000 lf of conduit, numerous pull boxes, and electrical appurtenances rewired to support the INFORM system. A unique aspect of the project was that full nighttime closures of the Parkway were required each night. The closures were coordinated with the NYSDOT, INFORM, the contractor, as well as local municipalities. NYS Troopers provided closure protection. Extensive signage was required for detours within a 5-mile radius of the project. (NYSDOT, $16.2M)

Long Island Expressway Reconstruction, Queens County, NY, Chief Inspector - This project for NYSDOT involved the ***replacement of 18 bridges, the rehabilitation of 7 others***, and the reconstruction of 7 miles of highway. The project also included the construction of 5 noise walls and the construction of 12 retaining walls. A major component of the project was a complete ITS system including facilities such as VMS boards, closed circuit cameras, ranging radar detectors, highway advisory radio, central office facilities and many others. Project specifics included 31,000 sm of "European" concrete pavement, superstructure deck replacement with "Inverset" structural spans, "Superpave" asphalt overlays, modification or replacement of over 700 drainage structures, and replacement of 35 overhead sign structures. (NYSDOT, $200M)

Employment History:
The LiRo Group (1988 to Present)
Chief Inspector

James Gaspari

PROGRAM/PROJECT MANAGER

EDUCATION	B.S., Mechanical Engineering, Hofstra University, 1993 J.D., Touro School of Law, 2000
REGISTRATION / CERTIFICATIONS	CPM Scheduling Certification, NY New York State Appellate Court 2nd Division OSHA 10 Hour Occupational Safety & Health Training
YEARS WITH THIS FIRM	16
YEARS WITH OTHER FIRMS	0

Mr. Gaspari brings experience on more than $700M in construction projects, including more than $200M in educational facilities. He has extensive experience building higher educational projects in occupied campus environments. He recently completed the CUNY School of Architecture, a 136,000 square foot academic building with labs built on an occupied campus with 17,000 students and faculty. Mr. Gaspari has also built several other higher education projects, including a 95,000 square foot facility and a 70,000 square foot facility for Nassau Community College. These projects were built on an active campus with 21,000 students. Mr. Gaspari knows the intricacies of working around students in a safe, effective manner that minimizes disruption to the campus while finishing the project within budget. Mr. Gaspari is also a CPM scheduler and is OSHA certified. Representative projects include:

School of Architecture, Project Manager - LiRo provided construction management services for the demolition and reconstruction of a 136,000 sf building into the new School of Architecture, Urban Design and Landscape Architecture (SAUDLA) building. After complete gutting, the existing building structure was extensively renovated highlighted by a multi-level atrium and roof top amphitheater. Designed by Raphael Vinoly, the building was transformed into a modern education facility with classrooms, exhibition rooms, design/workshop studios, computer labs and common areas. Construction was within a very active college campus requiring protection for the student and faculty population. Extensive site work was also required integrating the building with the existing rock outcropping and vegetation. (DASNY, $52M, 2008)

Park Terrace Garden Window Replacement, Project Manager- LiRo Program and Construction Management was retained to provide full client Construction Management services for the replacement of over 3000 windows for Park Terrace Gardens, a residential coop in upper Manhattan. Preconstruction services included design and shop drawing review, asbestos and lead investigations, and monitoring of window mock-up installation. LiRo provided ongoing schedule and budget information and coordinated the final installation plan that allowed tenants safe, continued occupancy throughout the process. The project budget was approximately $2,500,000, with an additional $750,000 for asbestos removal. (EMG Corporation, $3.25M, 2006)

Brooklyn House of Detention for Men - Base Building Renovation, Project Manager - The project was the addition to and renovation of the existing maximum security BKDC facility. The project included site and landscaping work, asbestos abatement, the removal and relocation of existing temporary modular buildings, the demolition of existing partitions, stairs, floor slabs and exterior walls, the construction of 16,669 square feet of new building area and remodeling of 22,765 square feet of existing building area. This work took place on the cellar, first and second floor levels. In addition, the project included renovation of shower rooms on floors three through ten (3 - 10), waterproofing and

repair of an existing tunnel, and reconstruction of existing windows at the tenth floor. Work was performed in six separate phases, each of which included demolition of existing facilities, asbestos abatement, construction of new facilities, relocation of existing furniture, equipment, associated power/signal feeds and hook-ups, etc. to provide a fully operational new area. Construction and maintenance of temporary security partitions was included in the work of each phase. (NYCDDC, $16M)

Brooklyn House of Detention for Men - Fire, Life, Safety Improvements, Project Manager - Work included the installation of a new emergency generator to supplement the existing generator. General construction work included the modification of interior partitions to bring them in compliance with current code criteria. In addition to the partition renovations, existing doors were replaced with fire-rated door assemblies. A new smoke purge system was installed to meet new code requirements. As part of the smoke purge system new motorized damper assemblies were installed in the existing ducts and interlocked into a new smoke purge control system. The contract work also included the upgrading of the existing sprinkler system and associated control devices. Hazardous material removals including asbestos abatement and lead abatement were required and continued to be a concern during the staging of the construction work due to the age of the facility. (NYCDDC, $2M, 2003)

Program Management Services for New Emergency Medical Service Stations, Resident Engineer - LiRo provided services for the design and construction of new EMS stations to speed ambulance response times. The project included 30 sites across NYC for which LiRo provided pre-construction services which included review of design documents and cost estimating of drawings. This was a complex, multi-site, multi-million dollar project subject to Wicks Law. Coordination of multiple prime contractors across the sites and providing QA/QC inspections at out of state fabrication plants was necessary throughout construction (NYC DDC, $29M, 2000).

System Wide Kitchen Renovation Program, Inspection - This program required that kitchen facilities, feeding lines, and supporting services at 15 correctional facilities throughout Rikers Island, Queens, Brooklyn, Manhattan, and the Bronx be upgraded in accordance with a court-mandated schedule while maintaining DOC operations, feeding schedules, and food quality during construction. Mr. Gaspari performed inspections of kitchen equipment to ensure compliance with the project specifications. (NYCDOC, $50M, 1995)

Nassau Community College, Office Engineer / Inspection - This project called for the construction of a new college center on the site of an existing aircraft hangar building. It required: Demolition of a 55,000 sf block and brick frame aircraft hangar building, a 6,000 sf wood frame building and a 2,000 sf brick and concrete steam building; The construction of two new buildings: a 95,000 sf 3-story Classroom Building and a 70,000 sf, 3-story College Center. The project included cast-in-place concrete caisson footings, structural steel framing, and extensive masonry work. Mr. Gaspari's duties included shop drawing review, change order control, estimating, payment requisitions, and construction inspection. His inspection work focused on the footings, concrete block and brick work, electrical conduit, and gas connections. (NCDPW, $36M, 1995)

Employment History:
The LiRo Group (1994 to Present)
Senior Associate

Thomas Gibbons, Jr., RLA

PROGRAM/PROJECT MANAGER

Mr. Gibbons has over 10 years of landscape architectural experience in the construction industry. He has been responsible for multi-disciplinary projects with emphasis on conceptual design and planning. Mr. Gibbons has experience in preparation of contract documents, specifications and estimates, client interaction, proposals, visual and environmental impact studies, surveying, GPS surveying, construction inspection and garden design. Representative projects include:

EDUCATION	B.L.A., Landscape Architecture, SUNY College of Environmental Science and Forestry, 1995 A.A.S., Ornamental Horticulture, SUNY Farmingdale, 1990
REGISTRATION / CERTIFICATIONS	Landscape Architect, NY Landscape Architect, CT Council of Landscape Architectural Reg. Boards, NY 10-Hour Occupational Safety and Health Training Course
YEARS WITH THIS FIRM	8
YEARS WITH OTHER FIRMS	7

Westchester County Airport, Westchester, NY, Landscape Architect. The scope of this project was to enhance and expand the airport's existing perimeter security road. This required surveying existing conditions, identifying existing trees and routing the road for minimal impact on the vegetation. (Westchester County Airport, 2004)

New York City Department of Parks and Recreation - Project involved restoration of several sites including Juniper Valley Park, Baisley Pond Park, Alice Austen Park, Mount Prospect Park, Owl's Head Park, William E. Kelly Park, and Irving Square Park. Work included restoration of existing ball fields, pathways, lawns, planting beds, and drainage structures. Work also involved installation of new basketball courts, ball fields, play and exercise areas, paving patterns, water features, and new planting designs. (NYCDPR)

Gaynor Park, Glen Head, NY, Landscape Architect- The scope of this project is to provide a pre-fabricated restroom building and a pre-fabricated 1,000sf storage building for this existing park. The project also calls for the design of a pedestrian and vehicular path, site grading and drainage, sanitary systems, electric service, water service and landscaping. In addition to the new work, modifications are required for the irrigation system, existing playground, baseball batting cage and other incidentals. (Town of Oyster Bay, 2007- Present)

Sabellico Field, Farmingdale, NY, Landscape Architect- The scope is to provide a pre-fabricated restroom building for an existing park containing a little league baseball field. In addition to the new building, modifications and design are required for pedestrian paths irrigation system, water service, electrical service, sanitary connections, site grounding & drainage and landscaping. (Town of Oyster Bay, 2007-Present)

Borella Farm Fields, Plainview, NY. Landscape Architect. Borella Fields is an existing 10.2-acre park facility that consists mostly of open grass areas for baseball, softball and soccer use. There were minimal amenities to the site consisting basically of some chain-link fencing for backstops and a gravel area designated for parking. The proposed project called for planning and design of one full-sized baseball field with a 350' center field, one little league field with a 200' outfield and one softball field with a 185' out field. The ball fields each contain two dugouts with batter's box, one scorer's booth, two sets of

bleachers, a scoreboard and perimeter fencing. In addition to the ball fields, there was a proposed soccer/multi-use field, measuring 180' x 360', with bleachers and decorative bleacher walls. The project also called for a restroom facility building, parking for 85 vehicles (which include four ADA spaces), decorative entrance walls with signage, irrigation, 8,000+ sf of decorative retaining wall and a playground area with equipment for children ages two to five, and five to 12, as well as a gazebo. (Town of Oyster Bay, $4M, 2005)

Field of Dreams Athletic Park, Massapequa, NY., Landscape Architect. LiRo was responsible for the planning, design and construction inspections for this project from conception to completion. The Field of Dreams project, located in Massapequa, NY, is a multi-use sports facility for the Town of Oyster Bay. The park consists of two full-size multi-purpose fields, measuring 180' x 360' and a half field measuring 180' x 180'. These fields host numerous soccer, football and lacrosse sporting events. Each field contains its own set of bleachers, a wire-less electronic score board, field-lighting and irrigation. The fields were constructed with a modified soil structure to allow for increased vertical drainage of rain water. In addition, the surface of the soil received a treatment of plastic mesh fibers to increase the holding capacity of the turf. This mesh was installed down the middle of each of the fields, as well as the entire extents of the goal areas. The mesh will allow for greater longevity of the field turf under heavy use and harsh playing conditions. Restroom & utility building facilities were also constructed. Other site amenities included basketball court, two separate playgrounds for children ages two through five and five through 12, on-site parking for 128 cars; extensive landscaping; entrance walls and gates; site lighting, drinking fountains, decorative and utilitarian fences, relocation of electrical services from above ground to underground, sewer connections, curbing and sidewalk. (Town of Oyster Bay)

Hecksher Park, Huntington, NY, Landscape Architect. The scope of this project was to redesign four entrances to the park in order to make them aesthetically inviting to park users. In addition, a gazebo area with landscaping was added next to an existing playground that overlooks the park's lake. The project also required the addition of a decorative retaining wall to solve an existing erosion problem (Town of Huntington, 2005)

Votypka Property, Woodbury, NY, Landscape Architect. The scope of this project was to create a master plan consisting of 27 multiple housing units on a 5.4 acre site. Design criteria included maximizing the allowable area for construction while adhering to property line offsets drainage retention, site access, circulation and provide and environmental buffer from an existing on-site wetland. (Votypka, 2005)

Various Levittown Parks, Levittown, NY, Landscape Architect. This project entailed the redesign of the expansion of six community parks. The work consisted of replacing out-dated playground equipment with ADA compliant equipment. Additional design elements included new pathways, benches, vinyl clad chain link fencing, shade trees, drainage and signage. (Town of Hempstead, 2005)

Employment History:
The LiRo Group (2002 to Present)
Landscape Architect
GPI (Greenman Pederson, Inc.) (1996- 2002)
Landscape Architect
Storch Associates (1995-1996)
Assistant

Matthew Iannuzzi, P.E.

PROGRAM/PROJECT MANAGER

Mr. Iannuzzi has over 15 years of experience providing construction management and engineering services for New York public agencies. Most of his experience is on-site management of multi-prime building renovation projects on occupied sites. Virtually all of his prior projects were situated on complex sites where coordination with neighboring governmental agencies and the overall community were keys to the success of the projects. Representative projects include:

EDUCATION	B.S., Civil and Environmental Engineering, Carnegie-Mellon University, Pittsburgh, Pennsylvania, 1996
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY OSHA 10 Hour Safety Training Certification Primavera Expedition (Project Controls)
YEARS WITH THIS FIRM	18
YEARS WITH OTHER FIRMS	0

FDNY / Leary Firefighters Foundation Addition / Renovation of Building 1, Project Manager - Design / Build Contract. Masonry high rise simulation facility housing a full burn unit, central smoke system and a flashover system for both residential duplex and full commercial floor simulation at the FDNY Training Academy on Randall's Island, NY. (FDNY Foundation / Leary Firefighters Foundation, $4.4M)

FDNY Rehabilitation of Engine Company 259, Assistant Project Manager - CM/Build Contract. Complete gut / rehabilitation of fire house located in Long island City, New York. The building interior was totally gutted and an extension to the rear of the building was added. A new state-of-the-art firehouse was then constructed. (NYC DDC, $9.6M)

FDNY Rehabilitation of R&T Building, Assistant Project Manager - CM/Build Contract in occupied facility that houses FDNY's vehicle maintenance division and the building maintenance division. The existing electrical service is being upgraded. Two (2) new emergency generators are being installed. Three (3) existing boilers are being removed and replaced and central air conditioning will be installed in the 2nd floor office area. Multi phased construction to allow the FDNY to continually occupy / operate (24/7) out of the building, while work is in progress. Long Island City, NY (NYC DDC, $8.1M)

FDNY Engine 84 and 286, Kitchen / Bathroom Renovations, Resident Engineer - CM/Build Contract in occupied fire houses. Kitchens and bathrooms in the two (2) fire houses were renovated in multi phased construction to allow the FDNY to continually occupy / operate out of the fire houses while work was in progress. (NYC DDC, $1.5M)

FDNY Training Academy, Randall's Island Phase I & II, Resident Engineer - The security project included a complete security upgrade of the main entrance to the training facility. This project integrated the construction of Architectural security walls, fencing, a security control guard booth, security devices and high speed crash barriers. Infrastructure was added to the site to allow for monitoring of the new security system through FDNY's fiber optic / data network. Access / egress to the facility had to be maintained through the construction site and all new security equipment had to be tied into existing security and communication systems.

In addition to the above, Mr. Iannuzzi oversaw the punch list / closeout / sign off phase of the following work; Construction of a new Subway Simulator Building, building expansions for an Existing Apparatus Maintenance garage and the existing Mask Service Building. And the sign off phase of Buildings 11, 12, 5 & 2 (NYC DDC, $60M)

Kingsland Avenue Warehouse, Resident Engineer - Construction of a 12,000 SF building (removal of contaminated fill, metal walls and roof panels on pile foundation). There were two (2) demolition projects (adjacent buildings and incinerator stacks) in progress on the site and the site was also completely surrounded by the Newtown Creek Sewage Treatment Plant that was in the midst of a major (one (1) billion dollar upgrade / expansion). Coordination with multiple contractors, consultants and agencies was essential. The local Community Board closely monitored the project over concerns that the construction on the site would disturb prior underground contamination (petroleum). (NYC DOS, $2M)

Queens House of Detention for Men, Kitchen Renovation, Resident Engineer - Renovation of existing kitchen and storehouse (approximately 8,000 SF of space). CM/Build contract. Occupied facility where NYC Corrections daily operations could not be disrupted. Access / egress for Daily truck deliveries from Rikers Island (delivering meals for inmates three (3) times a day while the kitchen was out of service) had to be maintained. Coordination with the neighboring Queens Court Complex, NYC Department of Transportation (Parking facility and street work) and NYC Department of Probation was of great importance. (NYC DDC, $5M)

Queens House of Detention for Men - Electrical Service Coordination Project - Resident Engineer - New building addition (brick/block/steel) to house switchgear, emergency generator, etc. required for new 4000 amp service. CM/Build contract. Occupied facility where NYC Corrections daily operations could not be disrupted. A major part of the project was maintaining daily bus access to the facility (inmates being transported to court) and fire egress. Project ran concurrently with the Kitchen Renovation project listed above. (NYC DDC, $4M)

North Infirmary Command Kitchen Renovation, Resident Engineer - CM/Build contract. Occupied facility where NYC Corrections daily operations could not be disrupted. Conversion of existing space (some of which housed sick inmates / hospital environment) to pantries and interim kitchen, demolition of existing kitchen building (modular building) and construction of new kitchen building (12,000 SF - brick, block and steel). An existing steam tunnel and the electric service to other buildings ran through the foundation of the new kitchen building requiring extreme caution / coordination during pile / foundation work. (NYC DDC, $9M)

Queens House of Detention for Men, Kitchen Renovation, Resident Engineer - This project was part of the System-Wide Kitchen Renovation Program for Department of Corrections, a $50M contract, which entailed the phased renovation of kitchens, pantries, and related food service areas throughout the NYC jails system. LiRo's role was to perform all construction management duties including bidding and entering into contract with various construction contractors. This program required an initial phase of construction whereby 14 facilities were to be upgraded with systems that would last through the construction period. The balance of the program involved the total renovation of kitchens and food related services areas at six correctional facilities throughout Brooklyn, Queens, and the Bronx. ($5.5M)

Employment History:
The LiRo Group (1992 to Present)
Associate

Edward A. Sartoris

PROGRAM/PROJECT MANAGER

Mr. Sartoris is a construction manager with an extensive background in rehabilitation projects and restoration. He has successfully worked on numerous projects for NYCDDC, DASNY, NYCT, NYSOGS, NYSCA and several other city and state agencies. He is adept in working in occupied facilities.
Representative projects include:

EDUCATION	B.S., Structural Design and Construction Engineering Technology, New York Institute of Technology, 1991
REGISTRATION / CERTIFICATIONS	ACI Certification for Slump Testing Air Compressor/Spray Equipment Asbestos Handler Asbestos Supervisor Bridge Painting Inspection Certificate from S.G. Certified by Lehighton Associates Facility Fire Marshall Lead Awareness Certified Lead Awareness Instructor NYCTA ED&TPD Certificates OSHA 30 Hour Occupational Safety & Health Training OSHA 316 Course OSHA 40 Penney & Associates Propane Fuels/High Pressure Gases Site Safety Lic. #7 Store and Use Compressed Gas F19/21 Torch Use/Fire Guard Track Safety Instructor Yard Hydrant/Sprinkler
YEARS WITH THIS FIRM	6
YEARS WITH OTHER FIRMS	15

NYCSCA Mentor Program, New York, NY, Project Manager - LiRo, in Joint Venture, is serving as the School Construction Authority's Mentor Program Construction Manager, ensuring that construction projects awarded through the Mentor Program are completed safely, qualitatively, timely and within budget in accordance with the SCA's requirements. Services under this assignment include a wide range of projects and all facets of construction, firm management, and emergent contractor development. LiRo's work involves managing key components of the Mentor Program, including construction management, construction and firm capacity building services. Specific services include construction supervision, field inspection, scheduling, change order management, closeout, and also assistance with loan acquisition and payment processing. Mr. Sartoris is associate project manager of this project. LiRo is currently managing over 50 concurrent projects totaling over $15M. Due to the nature of the Mentor Program and the emergent contractors, projects are limited to $750,000K each.

Westchester County Courthouse Phase 3 Tower, Project Manager - The LiRo Group was retained by Westchester County to provide both design and construction management services for this $23 million interior renovation project. The program consisted of a combination of partial and complete renovations to 18 floors of the 20 story courthouse tower, including mechanical, electrical, telecommunications, fire alarm and security upgrades, ADA compliance throughout, new courtroom layouts and finishes, and all adjunct facilities to service New York State's civil courts and the County's Department of Probation. In order to meet the County's construction schedule, all work was designed around an intricate staging program that LiRo devised to maintain the County's requirements that the building remain fully operational throughout construction. Construction documents were completed in nine months from the date of design award and the project underwent construction on time and under budget. Construction was completed during the summer of 2007. (Westchester County DPW, $23M)

Construction Management Services in Connection with Emergency Management and Coordination, Assistant Project Manager - Under multiple contracts LiRo's extensive scope of work varied widely, and includes the highly expedited renovation and construction and major restructuring projects for five new high school ranging from approximately $15 to $30 million. These projects, including extensive gut renovation of school facilities, were completed within less than 90 days, as

compared to the typical 1 year or longer durations for comparable work. Work is accomplished using round-the clock shifts, 7 days per-week with minimal disruption to students and faculty engaged in school activities and to the surrounding neighborhoods. To date LiRo has completed in excess of $125 million under two successive contracts with the NYCSCA. Our categories of work, services, trades or equipment to be provided on an emergency basis included: Design, administration, management and coordination of the work Development of construction estimates, solicitation of bids in accordance with authority requirements and the law Provide general conditions including but not limited to testing and controlled inspections Remediation of hazardous materials Construction and demolition of the work in accordance with contract documents issues by the NYCSCA. (NYCSCA, $178M)

Home Crest Health Clinic and Crown Heights Health Clinic, and Washington Heights Health Clinic, Project Manager - Installation of Elevators ($1.2M each) at Crown Heights and Home Crest. Façade repair of multi-storied health clinic. Repointing, spandrel beams repaired and waterproofing of parapet walls throughout.

Bellevue Hospital, Chief Medical Examiner's Office, Project Manager - Renovation ($6M)
Bellevue Annex (Second Avenue Clinic), Project Manager - Demolition, Asbestos Abatement, Re-insulation of Ductwork in Basement, First and Second Floors, Modernization of All Sprinkler Lines; New Loading Bay Ramp (500 Yds Concrete) ($1.9M)

Reconstruction of $32M capital project at Yankee Stadium station, and $27M project at 7 stations on the Broadway line in Brooklyn, Project Superintendent - Supervised, planned, and coordinated all tasks. Developed safety plans and theft deterrent practices which resulted in major cost saving allowance in theft ridden area. Coordinated with NYCT to allow smooth transition and round the clock work force to accomplish completion by opening day. Acted as a safety superintendent on Broadway line and coordinated all night work - as well as all logistics associated with NYCT for work trains, flagging, and schedules. Responsible for all scheduling, implementation, and record keeping for employee training and classes directly related to industry standards.

Coney Island Hospital, Assistant Project Manager (Design Phase) - Modernization, Electrical Upgrade, New Curtain Walls ($15M)

Employment History:
The LiRo Group (2004 to Present)
Project Manager
New York City Transit Authority (1985-2004)
General Superintendent

Nancy Silver, R.A., LEED AP

PROGRAM/PROJECT MANAGER

Ms. Silver has experience as a Project Architect and as a Project Manager on a wide variety of renovation projects for local municipalities and government agencies. She has been responsible for performing initial field inspections and writing project scope reports, preparing bid documents, ensuring ADA compliance, cost estimating, and providing construction support. Relevant project experience includes:

EDUCATION	M.S., Construction Management, Polytechnic University of New York, 1985 A.B., Architecture/Civil Engineering, Princeton University, 1982
REGISTRATION / CERTIFICATIONS	Registered Architect, NY LEED Accredited Professional LEED for New Construction, Green Building Certification
YEARS WITH THIS FIRM	11
YEARS WITH OTHER FIRMS	17

Port Authority of New York and New Jersey, GWB Bus Station Lower Bus Level Renovations, Project Manager. Developed architectural design documents and coordinate design team for the replacement of 150' long storefront entrance wall and metal panel ceiling system at the bus parking area. (PANYNJ, $1.2 M)

Port Authority of New York and New Jersey, LaGuardia Airport Structural Slab Repairs, Project Architect. Prepare a feasibility study, in coordination with the structural engineering prime, to determine potential methods of repairing areas of deteriorated structural slabs. Extensive field survey work was performed. (PANYNJ)

Port Authority of New York and New Jersey, LaGuardia Airport Pump house No. 6, Project Manager. Developed architectural design documents for the replacement of exterior cladding for this small building, housing storm water runoff pumping apparatus. (PANYNJ, $200K)

NYC School Construction Authority, Project Manager. Architectural and engineering upgrade projects in over 135 schools over a ten-year period. Responsibilities include field surveys and development of project scope reports and estimates; coordination of design team; preparation of architectural design documents; building department filing; and provision of post contract services. Projects include:

- Science lab renovations, including complete replacement of new casework, room finishes, mechanical and electrical utilities, and computer networking.
- Program accessibility, including renovations to toilets, entrances, and public assembly spaces. Design of new elevator additions.
- Gymnasium floor replacement Coping stone and roofing replacements
- Window replacements
- Exterior masonry restoration.
- Swimming Pool Upgrades Library upgrades
- MEP upgrades including boiler replacements
- Feasibility Studies for new school buildings, including site evaluation and zoning analysis, development of conceptual designs, and generation of construction cost estimates.

(NYCSCA)

DASNY/ CUNY SAUDLA Swing Space Relocation, New York, NY - Project Manager. Developed program requirements for the relocation of a total of 14 departments, originally housed in 50,000 sf in the "Y" Building, to new locations on the City College Campus. Developed architectural design documents, coordinated design disciplines, and provided construction phase services for 5 of those departments. (DASNY, $1.8M).

Town of Oyster Bay Town Hall South Relocation, Project Architect. Performed field surveys, wrote existing conditions assessment reports, and prepared cost estimates for the upgrade of both the existing town hall building and of the Packard Middle School, which the Town is considering purchasing for use as a new town hall.

Ellsworth Allen Park, Farmingdale, NY, Project Architect. Developed architectural design documents and provided construction phase services, in coordination with the engineering prime, for the construction of a new 5,000 sf building, including a community room, full service kitchen, administrative office spaces, and public toilets. (Town of Oyster Bay, $710K)

Marjorie Post Park Skatehouse, Massapequa, NY, Project Manager. Coordinated design team and prepared architectural design documents for the renovation of a 5,000 sf building, including complete interior demolition and reconstruction of toilets, skate rental and repair shop, full service kitchen and concession area, and public lounge area. (Town of Oyster Bay, $750 K)

Design of Animal Shelter in Town of Southampton, Project Manager. Coordinated design team, developed conceptual design, prepared architectural design documents, and provided construction phase field support for a new 12,000 sf animal care facility, including animal holding areas, animal recreation spaces, veterinary clinic, staff spaces, and a community meeting room. The design incorporates noise control, specialized HVAC and plumbing design, and ADA compliance. (Town of Southampton, $1.9M, 2001)

Jackson Avenue Master Plan, Project Manager. Developed a conceptual master plan for the future development of an 80-acre central public works/ public safety site. Tasks included survey of existing building conditions, review of program information for departmental expansions, development of phased plans for future expansion, and coordination of design team to perform utility survey of site and analysis of fuel storage conditions. (Town of Southampton, $55K, 2004)

Playground at Heckscher Park, Project Manager. Developed architectural design documents and coordinated design team for the complete renovation of an existing playground. (Town of Huntington, $400K)

Village of Thomaston, Village Hall Renovation/ Addition, Project Manager. Coordinated design team and prepared architectural design documents for the renovation of existing courtroom and office spaces, and the addition of new office space, and the installation of an elevator to meet ADA requirements. (Village of Thomaston, $900 K)

Employment History:

The LiRo Group (1999 to Present)
Associate

Lockwood Greene Engineers (1989 – 1999)
Project Manager/ Architect

Grumman Corporation, Bethpage (1982 –1989)
Architect, Facilities Department

Prem Singh, N-IV

PROGRAM/PROJECT MANAGER

Mr. Singh has over 30 years of experience in the field of construction inspection field both in the United States and in the West Indies. His experience is primarily in the areas of highway and sewer reconstruction projects, but also includes some structural bridge and building work. Representative projects include:

EDUCATION	H.Y.D., Civil Engineering, University of Guyana, 1975 Road Construction Course-TAMS Engineers of USA, 1980
REGISTRATION / CERTIFICATIONS	Brick Masonry-Inspections and Quality Control Certification, NY Brick Veneer and Metal Stud Backup Exterior Wall Cert., NY CPM Scheduling Certification, NY NICET IV - Highway Construction, NY NYCDDC Concrete Field Testing & Training Certification, NY OSHA 10 Hour Occupational Safety & Health Training SSPC C-1 Certified, NY Troubleshooting Exterior Masonry Walls Certification, NY
YEARS WITH THIS FIRM	23
YEARS WITH OTHER FIRMS	13

Engineered Resurfacing South of Canal Street, Manhattan, Chief Inspector - This three-year project involved the resurfacing and reconstruction of 44 streets in lower Manhattan. Work on individual streets ranged from full depth reconstruction to milling and resurfacing. Work was performed on some of the busiest streets in Manhattan including Broadway, Greenwich Street, John Street and Beaver Street. Work was performed both day and night. This project also included an intensive community liaison effort to help keep residents and businesses apprised of the work status. The construction cost to the NYCDDC for this project was relatively modest at approximately $4 million. The utility relocation costs, however, exceeded $40 million, greatly increasing the scope and complexity of the project. (NYCDDC, $44M)

World Trade Center - Lower Manhattan Roadway Milling and Paving Project, Assistant Resident Engineer - This was one of LiRo's most unique and difficult projects. LiRo had been working at Ground Zero since September 17, 2001. On April 16, 2002, we were given an assignment by the New York City Department of Design and Construction to provide construction inspection services for the milling and repaving of 61 lane miles of streets in the Trade Center area. This project was performed under the auspices of FEMA and the FHWA. The project commenced on Monday, April 22, 2002 and was completed by June 7, 2002. Work was performed at night. The work consisted of milling 1-1/2" of asphalt roadway, adjustment of street hardware, miscellaneous roadway repairs, and placement of a 1-1/2" asphalt concrete roadway surface. The operation was staggering. Approximately 150 men, multiple milling, paving and chipping crews, and over 50 trucks were utilized each night. Asphalt production averaged nearly 1,200 tons per night on tight lower Manhattan streets. LiRo had up to 16 inspectors on this project. Extensive coordination with local community boards was essential. (NYCDDC, 2002, $14M)

Reconstruction of Jamaica Avenue, Chief Inspector - This high profile project was located in a combined residential/commercial area. The work included 10,000 lf of water main; 1,500 lf of sanitary sewer; 1,100 lf of storm sewer up to 24" in diameter; 1,400 lf of storm sewer 30" - 36" in diameter. Roadway widening involved 10,000 lf of curb; 130,000 sf of sidewalk; 15 reinforced concrete bus pads; 3" asphalt on a 6-inch concrete base; an urban park; catch basins and connections. There was extensive

scheduling and community outreach, especially with regard to operations at Jamaica Hospital. Maintenance and protection of traffic was a major consideration for the contractor and for the inspection staff. (NYCDDC, $9M, 2000)

Greenwich Street Reconstruction - Liberty to Rector Streets, Manhattan, NY, Chief Inspector - The scope of the project included installing new sewer lines, new catch basins, subway vents, water services, manholes as well as sidewalks, curbs and roadways on the east and west side of this six block stretch. This work was critical due to the age of the infrastructure as well as the damage it withstood during the collapse of the World Trade Center. The subway vent work conducted was vital due to the re-opening of the Rector Street subway station.

This project used 3,400 square yards of asphalt, 900 cubic yards of concrete base, 1,600 lf of new steel curbs, 800 lf of new and rehabilitated sewers, 900 lf of new water mains as well as new traffic signals and decorative street lighting. (NYSDDC, $2.1M)

Rehabilitation at TBTA Facilities, Resident Engineer - These projects included pothole repair, milling and paving, pavement marking and striping, and concrete work (slab and grade) at toll plazas and approaches. (TBTA, $14M, 2000)

Paving at Various Facilities (GFM - 398), Resident Engineer - This multi-year project involved asphalt and concrete paving at all TBTA facilities. All work was performed by a single contractor and a requirements type contract. Specific work activities included asphalt milling and paving full and partial depth calcium chloride concrete repairs, application of waterproofing membranes emergency pothole repair, and pavement marking. Work was done primarily on nights and weekends. This project required extensive MPT and coordination with various facility engineers and managers. (TBTA, $10M, Project Manager: I. Shapiro, 2002)

Rust Street Reconstruction, Chief Inspector- This project involved resident engineering inspection for the reconstruction of Rust Street in Queens from Flushing Avenue to Maspeth Avenue, and on Grand Avenue from 57th Street to 58 Place. The half-mile stretch of urban roadway was widened and repaved with a 3-inch asphaltic concrete wearing course on an 8-inch concrete base and 6inch sub base course. New steel faced concrete curbs and concrete sidewalk, new traffic signals, and street lighting were also provided.

- Rust Street is adjacent to LIRR tracks, which run atop an embankment for the entire project length. The construction of a retaining wall for the embankment was a key component of the project.
- Coordination with the numerous City agencies (DOT, DEP, Transit Authority, Police, Fire, and Sanitation), utilities (Con Ed, NY Telephone, Empire City Subway), the Community Board, and local business was required.
- All of the above work was accomplished while maintaining vehicular and pedestrian traffic throughout the project in addition to maintaining access for emergency services and the necessary every day service.

Employment History:
The LiRo Group (1987 to Present)
Resident Engineer

Mark J. Swanson
PROGRAM/PROJECT MANAGER

Mr. Swanson has over 25 years experience in the construction industry. He has extensive project experience with public works agencies, both from CM firm and client perspectives. Mr. Swanson is a former Senior Project Officer for the New York City School Construction Authority. He has also performed Project Management services for Construction Management and Owners Representative firms for numerous high profile, complex projects. Representative projects include:

EDUCATION	Certificate, Masonry Restoration and Preservation, Mechanics Institute of Technology, NY, 1982 Advertising Art & Design, Farmingdale University, 1977
REGISTRATION / CERTIFICATIONS	Management Skills Training Course Eight Hour OSHA Certification Course 30 Hour OSHA Certification Course OSHA 10 Hour Occupational Safety & Health Training
YEARS WITH THIS FIRM	4
YEARS WITH OTHER FIRMS	24

Bernard Fineson Developmental Center, Hillside Complex, Office of Mental Retardation and Developmental Disabilities, Queens, NY, Project Manager - Under this contract, LiRo is provided CM services for DASNY for the pre-construction and construction phases of this project for the Office of Mental Retardation and Developmental Disabilities. The scope of work included the demolition of existing structures on a twelve acre site and the erection of eight new one and two story residential buildings and an 80,000 square foot program/administration building. Work also included the development of the twelve acre site and all utilities. (DASNY, $80M, 2009)

CM/Build Requirements Contract for NYC Housing Authority, Albany Houses Electrical Upgrade, NY, Assistant Project Manager - Under this contract, LiRo performed work on a task order basis. We provided services for upgrades of building systems and facade/roofing restoration projects throughout New York City. These properties all required that LiRo perform pre-construction and construction phase services. The work at Albany houses included new outlets and fixtures in over 1,200 apartments and new electric distribution panel's at all nine buildings. (NYCHA, $3.5M)

Kings County Hospital Center - A/B/C Buildings Renovation, NY, Project Manager - LiRo is providing construction management services for the pre-construction and construction phases of the exterior envelope renovation of Building A, B, & C at the Kings County Hospital Center. The renovation work includes parapet wall replacement, complete flat roof replacement, masonry pointing at all facades, masonry cleaning at all facades, rehabilitation of existing ornamental stone and wrought iron fencing and the removal and replacement of all existing terracotta roof tiles. (NYCHHC, $25M, 2009)

Kings County Hospital Center, 9th Floor, Surgery and Urology Suites, N.Y., Project Manager - As part of our requirements contract with the New York City Health & Hospitals Corporation, LiRo provided construction management services for the construction of the new 9,000 sf surgery and urology suites in the E Building. The new construction consisted of full demolition of the existing space, new mechanical, electrical and plumbing tie-ins to existing services, construction of new surgery rooms, diagnostic rooms, elevator lobby and new mechanical room on the roof. This project required continuous coordination with a rehabilitation project that was occurring below the 9th floor, as well as HVAC coordination with new chiller work in an adjacent hospital building.
(NYCHHC, $3.5M, 2007)

Park Terrace Gardens Window Replacement, Project Manager - LiRo was retained to provide full client construction management services for the replacement of over 3,000 windows for Park Terrace Gardens, a residential coop in upper Manhattan. Pre-construction services included design and shop drawing review, asbestos and lead investigations and monitoring of window mock-up installation. LiRo provided ongoing schedule and budget information and coordinated the final installation plan that allowed tenants safe, continued occupancy throughout the process. (EMG Corporation, $3.25M, 2006)

Employment History:

The LiRo Group (2006 to Present)
Project Manager
Zubatkin Owner Representation, LLC (2005-2006)
Project Manager
New York City School Construction Authority (1997-2005)
Senior Project Officer
TDX Construction Corp./ TDX Becom Joint Venture (1989-1997)
Project Manager

Leonard Venechanos

PROGRAM/ PROJECT MANAGER

EDUCATION	B.S., School of Architecture, City College of New York, 1977
REGISTRATION / CERTIFICATIONS	Fire and Safety Response Suicide Prevention Infectious Disease Control Hazardous Materials Handling Chemical Agent Utilization
YEARS WITH THIS FIRM	11
YEARS WITH OTHER FIRMS	21

Mr. Venechanos has over 30 years of construction management and design experience. His specific experience includes large public projects which are subject to Wicks Law and require construction phasing, coordination and security. These projects have included both renovations and new construction.

Mr. Venechanos managed major public capital improvement projects for New York City Department of Correction since for 20 years. In that time Mr. Venechanos was responsible for projects ranging in size from $14 million to $336 million. Mr. Venechanos has been responsible for coordinating both design and construction phases of various projects. It was his responsibility to ensure that the owner was provided with a design which reflects the pre-described scope and that the completed construction was in accordance with those design documents. Representative projects include:

Westchester Medical Center, Valhalla, NY, Assistant Project Manager - This renovation and addition project addressed the following specific areas of work:

- New Emergency Department Addition- including patient/visitors waiting administrator's area, triage and connecting corridor.
- Renovation of Emergency Department- including new adult and pediatric exam rooms, nurse's station, fast track and pharmacy.
- Renovation of the Labor and Delivery Suite- the replacement of all finishes and systems for patient rooms, pharmacy, nurse's station, on- call residents and operating rooms.
- Renovation of the Oncology Suite- provides 44 new patient beds, including isolation rooms, pharmacy, nurse's station, on-call suites and staff and patient lounges.
- Renovation of Pediatric Hospital- providing 8 additional pediatric beds
- Renovation of On-Call Residence's- providing new finishes and systems for resident's facilities serving multiple medical disciplines.
- Renovation of the Medical Intensive Care Unit- including 22 new patient beds, finishes, systems. Functional areas include pharmacy, on-call residences, nurse's station, administrative functions and visitor's waiting areas.
- Renovation of the Neonatal Intensive Care Unit- including all finishes and support functions for 5 new neonatal beds.

(Westchester Medical Center, $125M)

Jail Replacement Facility at Yaphank Correctional Facility, Yaphank, NY, Design Review - LiRo was contracted by Suffolk County Department of Public Works for Construction Management Services during pre-construction and construction phases of the new Yaphank Jail Facility. The project involves the construction of an addition to the existing facility and the renovation of the existing structure. It will provide housing for 1265 inmates as well as the infrastructure and support facilities

necessary for the proper processing, care and feeding of the inmate population. Included in the project will be state of the art staff, administrative, health care and support facilities that provide the county with efficient and cost effective management and staffing. (Suffolk County Department of Public Works, $150M)

Bridgeport Schools Repair and Replacement Project, Bridgeport, CT - LiRo is providing construction management services for 20 schools in Bridgeport CT. The project includes various repair work from pavers, window replacement, masonry repair, HVAC upgrade and toilet room upgrades. (Bridgeport School District, $10M, 2008)

Westchester County Courthouse Phase 3 Tower, Westchester, NY, Assistant Project Manager - The LiRo Group was retained by Westchester County to provide both design and construction management services for this $23 million interior renovation project. The program consisted of a combination of partial and complete renovations to 18 floors of the 20-story courthouse tower, including mechanical, electrical, telecommunications, fire alarm and security upgrades, ADA compliance throughout, new courtroom layouts and finishes, and all adjunct facilities to service New York State's civil courts and the County's Department of Probation. In order to meet the County's construction schedule, all work was designed around an intricate staging program that LiRo devised to maintain the County's requirements that the building remain fully operational throughout construction. Construction documents were completed in nine months from the date of design award and the project is currently under construction, on time and under budget. The contract also included architecture. (Westchester County Department of Public Works, $23M, 2007)

Westchester County Norwood E. Jackson Correctional Facility, Westchester, NY, Assistant Project Manager - The project includes a demolition and asbestos abatement phase, along with a swing space phase. The project is currently in its third phase which is comprised of two new penitentiary buildings and renovation work. (Westchester County Department of Public Works, $45M, 2005)

Westchester County Courthouse Renovation and Addition, Westchester, NY, Liaison Engineer - This project consisted of the renovation and addition to the Westchester County Courthouse. This steel framed, 20-story building was constructed in the early 1970's. It currently houses the offices of the district attorney, courtrooms and other miscellaneous county official offices. (Westchester County Department of Public Works, $100M, 2005)

Hecksher Theater Renovation - Renovation of a community-based theater originally built in 1921. The renovations included a new ventilation and air conditioning system in the theater and adjacent art gallery. In addition, the theater received new seating, carpeting, stage rigging, curtains, painting, and other finishes. A fire alarm upgrade was part of the renovations. All renovations were performed while other areas of the build remained open. The theater renovations required special care in order to maintain the integrity of the original building elements such as ornate plaster ceilings and wall murals. (NYCDDC, $3M, 2001)

Employment History:
The LiRo Group (1999 to Present)
Senior Project Manager
NYC Department of Correction (1980-2000)
Project Manager (1980-1990)
Director of Design and Construction (1990-2000)

William Wall

PROGRAM/ PROJECT MANAGER

Mr. Wall has over 35 years of experience in Supervision and Management of Construction Projects. His expertise includes working from a lead carpenter foreman and estimator to superintendent on multimillion dollar projects. This varied experience complements LiRo's Construction Management approach in that Mr. Wall's knowledge of cost control, cost tracking, estimating, scheduling, QA/QC inspection, on-site management, and supervision of multiple contractors and trades is exactly what our Resident Engineers must possess. Mr. Wall was Project Superintendent on multiple high rise, residential, and commercial projects including renovations and expansion of existing facilities for a major Long Island contractor. His responsibilities included supervision of all contractor and trades, negotiations of subcontracts and change orders, requisitions, problem solving, and project close-outs including fire-life-safety/inspections, TCO's and CO's. Representative projects include:

EDUCATION	Business Management, Nassau Community College B.S. (Pending), Civil Engineering, Manhattan College Construction Management, SUNY at Farmingdale
REGISTRATION / CERTIFICATIONS	10-Hour Occupational Safety and Health Training Course Brick Masonry-Inspections and Quality Control Certification, NY Brick Veneer and Metal Stud Backup Exterior Wall Cert., NY Troubleshooting Exterior Masonry Walls Certification, NY
YEARS WITH THIS FIRM	12
YEARS WITH OTHER FIRMS	14
YEARS SELF EMPLOYED	9

HHC Emergency Power Generators, New York City, Assistant Project Manager - The scope of work for this contract consisted of demolition and reconstruction of outdated Emergency Power Systems at six hospital trauma centers and various other smaller hospital facilities located in the New York City area. The contract required LiRo to prepare cost estimates for the various types of work in the projects. Typical elements of work for these projects included: Emergency Generators, paralleling switchgear, remote radiators for generator cooling systems, power distribution panels, underground fuel oil storage systems and conduit & wire distribution to all associated equipment. (DASNY, $121M)

Improvements to the County Center Building - Phase II, Riverhead County Center - Riverhead, NY. LiRo is providing project management services for improvements to the County Center Building in Riverhead, NY. This project provides for major renovations of the 140,600 sf building including:

- 10,000 sf Records Storage Addition
- MEP Demolition, Replacement and Upgrading
- Escalator Demolition/Elevator Installation
- Asbestos Survey/Investigation/Mitigation as necessary
- Building Façade Removal and Replacement
- Security Enhancements (including Card Reader System)

On this project LiRo was responsible for developing a Project Labor Agreement. This included preparing a feasibility study, development of the agreement, negotiating terms of the agreement and implementing the agreement during construction. In addition, LiRo performed constructability reviews,

provided cost estimates and developed phasing plans during the development of the contract documents.

During construction LiRo was responsible for providing and updating the coordinated schedule based on input from the prime contractors. In addition, LiRo maintained project controls including the shop drawing log, RFI log, proposal/change order logs and meeting minutes. Our project management responsibility of schedule, controls and the project labor agreement provided the County staff with all the tools they needed to successfully complete the project. (Suffolk County Department of Public Works, $34M, 2007)

NYC Department of Sanitation, Manhattan 5 Garage & Repair Facility, Project Superintendent - Provided construction management services for the construction of a new garage and repair shop located adjacent to Gansevoort Incinerator. The new structure is a two-story building with approximately 15,000 sf of usable space. The project had four prime contractors and a total cost of approximately $6M. The first floor consists of six maintenance bays for vehicle repair (4) and for building maintenance (2). Also included are offices and storage space for operative personnel. The second floor includes locker rooms, lunch rooms and toilet facilities for four different types of personnel being housed at this site. The building contains heat mechanical equipment for four air changes per hour. Also included are a fluid dispensing system, security monitoring systems, underground drainage/oil separators, underground storage tanks (UST) and public address systems. (NYC DOS, $6M, 2005)

Kings County Hospital Center - Office of the Chief Medical Examiner (OCME) Construction Management Services, Project Superintendent - LiRo managed the construction of the new Office of the Chief Medical Examiner (OCME) facility in Brooklyn. This is a state-of-the-art facility offering the staff and the public a safe and private environment. Shared between Kings County Medical Center and the OCME, the new facility contains space designated for NYPD investigators. It was designed to be sensitive to the surrounding community and hospital campus. LiRo's role was to provide comprehensive construction management services from design development through the completion of construction. This included the coordination of all construction operations and related vehicular traffic so that it did not interfere with local traffic or hospital campus operations. The 40,000 sf facility worth $17M was constructed in 28 months. (DASNY, $18M, 2004)

New York Methodist Hospital, Dyker Heights Dialysis Center, Project Superintendent-
LiRo was the Construction Manager involved in the gut / renovation of 21,000 square feet including new electrical service, boiler, HVAC, elevator, exam rooms, administrative space and 21 chair dialysis suite. This project was a fast track, revenue producing facility, with a cost of $3,000,000.

Employment History:
The LiRo Group (1998 to Present)
Assistant Project Manager
4- Wall Construction (1990-1998)
Owner
Riccardi Construction (1985-1990)
Lead Carpenter/ Foreman
Gemma Construction (1983-1985)
Supervisor
John J. Kassner & Associates Consulting (1981-1983)
Field Inspector

Resume

Steve Smolenski, PE, Project Manager

EDUCATION

MBA, Executive Management, from St. Johns University

Master of Science, Transportation Planning, from Polytechnic Institute of Brooklyn

Bachelor of Engineering, Civil Engineering, from Manhattan College

PROFESSIONAL ENGINEER:

NY

Over 40 Years Experience

Experience

Trenton-Mercer Airport, Taxiway A, C & J Rehabilitation, Construction Management

Responsible for the oversight of the construction of this multi-million dollar project. Manages resident engineers as well as daily coordination with construction contractor. Steve oversaw all aspects of the administration and engineering process associated with the construction of this project. This included monitoring costs, complying to plans and specs, and conflict resolution. He was responsible for both field and office engineers.

Lincoln Park Airport, General Aviation Apron, Construction Management

Responsible for the oversight of the construction an apron and taxiway system being constructed to support T-hangars.

Port Authority of New York & New Jersey

Program Director, JFK Redevelopment-- 5/01-1/05

Was responsible for the delivery and integration of a coordinated planning, design and construction effort for all elements of the $10 billion Redevelopment Program at Kennedy International Airport, including oversight of the $1.4 billion International Arrivals Terminal and the $1.1 billion American Airlines Terminal, facility coordination of the $1.9 billion AirTrain system. Lead technical negotiations on the lease and development of the $875 million JetBlue project. Developed and negotiated alternatives with various landmark groups on the adaptive reuse of the TWA Saarinen Building. Coordinated planning and construction of passenger and baggage screening installations by the Transportation Security Administration. Developed roadways and parking structure projects. Administered ongoing project management contracts and A/E agreements. Made presentations/speeches on the program to governmental agencies, Chamber of Commerce and others.

Assistant Program Director, JFK Redevelopment-- 8/98-5/01

Assisted in the development of the lease for the $1.1 billion American Airlines Terminal, coordinating and facilitating the project commencement. Resolved issues during the construction of the International Arrivals Terminal, facilitated its commissioning. Led coordination efforts during the initial stages of the AirTrain construction. Responsible for reviewing and approving construction payment applications and consultant invoices.

Manager, Airport Facilities Division, LaGuardia Airport 2/85-8/98

Was responsible for the maintenance of the physical plant, project management of the Capital Program, supervision of construction and tenant activities. Served as Project Executive on the LaGuardia Overrun Project including testimony and presentations to community boards, Queens Borough President's Office, New York City Planning Commission and New York City Council. Directed projects on the rehabilitation and strengthening of the runway and taxiway decks and the Central Terminal Modernization and Expansion. Developed Requests for Proposals for CM/PM services and served on selection committee. Interacted with local labor unions on maintenance and construction issues. Responsible for all snow removal operations and providing direction during aircraft, flood and fire emergencies.

Acting General Manager, LaGuardia Airport 6/96-10/96

Was responsible for the day-to-day activities of the airport during the General Manager's leave of absence, including all landside and airside operations, security and crash/fire rescue (CFR). Developed and presented the facility budget including all service agreements. Met with community leaders on airport related issues.

DY Consultants

© DY Consultants

Resume

Lisa has 20 years of aviation planning experience and recently joined DY after having been with a large consulting firm for over 16 years. She has managed and actively participated in the development of airport master plans, joint-use civilian and military base master plans, environmental assessments, environmental impact statements, FAR Part 150 noise compatibility plans, terminal feasibility studies, economic benefit plans and other airport facility planning studies and has led many public information programs associated with them.

Education

Master of Science, Aeronautics, Arizona State University

Bachelor of Arts, Education, Arizona State University

Noise Compatibility Planning at FAA Academy Management Skills for Planners, AICP Training Service

Over 20 years experience

Registrations

Professional Associations:

American Association of Airport Executives

Florida Airports Council

DY Consultants

Lisa Mastropieri, Assistant Program Manager

Experience

Lisa has more than 20 years of aviation planning experience including working on several on-call contracts. She brings a wealth of relevant experience having managed and actively participated in the development of airport master plans, environmental assessments, environmental impact statements, FAR Part 150 noise compatibility plans, terminal feasibility studies, economic benefit plans, other airport facility planning studies. She has led several public information programs associated with publicly funded projects.

Venice Municipal Airport, Master Planning, Venice Florida

Project Start: January 30, 2009 Completion: January 30, 2010

Project manager responsible for completing the Venice Municipal Airport Master Plan. The project is controversial within the community and requires an innovative approach to developing alternatives that are compatible with the community. A unique aspect of the project included a six month aircraft counting program to accurately identify the critical aircraft operating at the airport as well as provide an accurate count. The counting system utilized six wireless cameras positioned on the airfield that captured a photo of the aircraft and provided data to a server including the time of the operation, aircraft type and owner information. In addition two cameras were specifically installed to capture touch and go activity. At the conclusion of the six month period the City decided to purchase the equipment and keep it permanently installed to continue the counting program on a daily basis.

Flagler County Airport, General Engineering Consulting Services, Flagler County, FL

Project Start: October, 2006 Completion: October 31, 2009

- Project Director as well as Manager of all planning and environmental tasks undertaken. Recent work includes an Airport Access Road Feasibility Study to assess the viability of accessing the airport from the east. The team reviewed various conceptual layouts to determine a more preferable option having the least impact to wetlands and water quality impacts. Order of magnitude costs were also prepared.
- Airport Minimum Standards and Rules and Regulations were developed to replace the airport's existing documents that are over 10 years old. Two documents were developed – one containing the Minimum Standards the other for the Rules and Regulations.

Philadelphia International and Philadelphia Northeast Airports, On-call Airport Planning Services, Philadelphia, Pennsylvania

Project start and completion: 1995-2006

- 2000 Airport Master Plan and Airport Layout Plan Update (PNE).
- Runway Safety Area Evaluation (PNE): Manager of effort in conjunction with ALP Update for Northeast Philadelphia Airport. Included assessment of declared distance standards, and relocation of local roadway to provide traditional safety area length and EMAS. Coordinated with PHL Division of Aviation FAA and Penn DOT Bureau of Aviation throughout process.
- Concourse D and E expansion (PHL): Project manager for various task assignments for each terminal, including terminal space programming, aircraft parking layouts and gate requirements, security requirements, baggage make-up areas, and all other aspects of short-term needs.
- Terminal area landside master plan and environmental assessment (PHL): As project coordinator, Lisa's responsibilities included project management, in-house coordination, QA review, technical task analysis and study, and oversight of meeting materials and documentation.
- Various on-call services (PNE): Coordinate on-call services, including land use planning, noise analysis, properties lease surveying, layout of corporate hangars, coordination with FAA on form 7460s, assistance with capital improvement programming, and runway safety area analysis, among other tasks.

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WPA / Sung Hun Cho

PROFESSIONAL EXPERIENCE

WORKS-IN-PROGRESS ASSOCIATES, New York, NY 2008-Present

Field Inspector on the Bronx-Whitestone Bridge

- Provides inspection services of the bridge and the tower structures.
- Monitors the contractor's activities ensuring performances are executed according to the contract plans, specs, shop drawings, etc.
- Monitors bolted installation of steel plates, diaphragms, angles, beams etc.
- Inspects Suspender Rope Shielding (Types 1 & 2), Main Cable Shielding, Splayed Main Cable Strand Shielding, Shielding Panels at Underside of Desk, etc.

SJH ENGINEERING P.C, New Jersey 2006-2008

Assistant Inspector on the Cumberland and Middlesex County bridges

- Performed routine inspection preparing field reports, drawings, and equipment requirements on daily basis prior to each bridge inspection.
- Coordinated with team leader on site and inspect bridges with most efficient and safe performance.

Assistant Engineer

John F. Kennedy International Airport

- Performed a baseline condition survey and cyclical condition survey at 7 various buildings at JFK in Queens County, New York as a sub consultant to Gannet Fleming Engineers and Architects, P.C. The purpose of this inspection was to determine the overall condition of the buildings and to identify the structural and non-structural deficiencies.

Journal Square

- Performed a condition surveying, structural, and architectural drawings of the new escalators assigned by NYDOT.

100 Centre Street and 27 Madison Avenue

- Performed a condition surveying and architectural drawings of the courthouse, ADA accessibility, and new redesigned floors and rooms for DCAS.

Temple of Bharat Sevashram Sangha of North America

- New proposed building of four-stories, 5000 sq. ft.
- Designed structural drawings with lead engineer's assistant and managed architectural, electrical, mechanical, and plumbing drawings with each engineer.
- Managed all specifications and installations with other lead engineers.

Sprint Recycling Plant

- Performed an inspection for the structural elements of the building and developed as-built plans and details as necessary for the purpose of making the required modifications.
- Repaired design drawings for the modifications that were proposed.

Design Engineer

Public School 114, Brooklyn, NY

- Prepared structural stability, design, and preparation of structural stability drawings.

Public School Q89, Queens, NY

- Prepared structural design services and review of field notes, architectural layout drawings, preparation of structural details, and the drawings for the installation of a folding partition for Public School Q89, Queens, NY.

Geotechnical Engineer

- Prepared soil classifications based on Unified Soil Classification System (ASTM D2488-06) and proctor or modified proctor tests (ASTM T99 or T180) based on boring samples.
- Concrete inspector, for Starbucks, Hess gas station, Bank of America, McDonalds, and etc. performing sampling freshly mixed concrete (ASTM C172-07), Slump Test (ASTM C143), and prepared curing concrete test specimens (ASTM C31).
- Performed DCP testing for experimental investigation of the effects of moisture and density on the elastic moduli and strength of four sub-grade soils at similar retail clients above.

WPA / Sung Hun Cho

EDUCATION

Rutgers University - Pending
BS Civil Engineering

CERTIFICATIONS

AutoCAD 2006 Certification
Troxler Radiation Certification
Primavera Project Management Training (Port Authority of NY & NJ)
Rutgers Traffic Control Certification
New Jersey Society of Asphalt Technologists
ACI – Concrete Field Technician I
NICET II Highway Construction

PROFESSIONAL EXPERIENCE

MANUEL ELKEN CONSULTING, The Bronx, NY — Sept. 2009 – Present
Resident Engineer

- Resident Engineer for the reconstruction of Vincent Ciccarone Comfort Station located south of East 188th Street between Arthur Avenue and Hughes Avenue in the Borough of Bronx. Oversaw General, Electrical, Plumbing and HVAC Contractors.
- Ensure construction activities are done according to specifications, contract drawings, shop drawings and approved submittals.
- Perform Daily and Weekly Reports of The Contractors Bid Items and authorizing payments to the contractors as required by NYC-DPR.
- Interpret contract drawings, specifications and shop drawings, in order to inspect the construction properly.

MANUEL ELKEN CONSULTING, The Bronx, NY — April 2009 – Sept. 2009
Bridge Inspector

- Bridge Inspector for Reconstruction of Manhattan College Parkway, West 239th Street, West 252nd Street and West 232nd Street over Henry Hudson Parkway in the Borough of Bronx.
- Performed Inspector's Daily Report required by NYC-DOT:
  - Assured contractor activities done according to construction plans.
  - Recorded interim quantities of materials and services performed.
  - Maintained written & photographic documentation of all activities.
- Ensured job safety of construction workers from bridge traffic.

PHILLIP HAKIMIAN CONSTRUCTION SERVICES, Great Neck, NY — Jan 2008 – March 2009
Founder & Owner

- Supervised & held responsibility for construction of 3 mansions.
- Implemented construction according to plans & specifications.
- Coordinated subcontractors' schedules & tasks to manage deadlines.

7/2002 – 12/2007 **Philco Builders Corp., Great Neck, NY**
Construction Manager

- Successfully completed 9 projects, totaling 24 houses.
- Responsible for day to day management of 8-20 employees per day.
- Coordinated subcontractors' schedules & tasks to meet deadlines.
- Conducted budget & expenditure control, material purchasing, hiring, & firing.

PHILLIP HAKIMIAN JEWELRY COMPANY, Great Neck, NY — 1980 – 2002
Founder & Jewelry Salesman

ENVIRODYNE ENGINEERS, Chicago, IL — 1977-1980
Bridge Inspector

- Inspected super & sub-structures of over 100 bridges.
- Monitored & prepared reports on health of bearings & structural components.
- Demonstrated expertise in dealing with:
  - Bridge expansion & contraction caused by differential temperatures.
  - Concrete, beams, foundations, & structures.
- Successfully prevented potential bridge collapses.

EDUCATION

University of Illinois, Chicago, IL, 1977
Bachelor of Science in Structural Engineering

Matthew J. Daniels, P.E.
Senior Engineer/P.E. Diver
Project Role: Project Manager

Education:
B.S., Civil Engineering, Manhattan College, 2000

Active Registration:
Professional Engineer: New York (# [redacted], Delaware (Reciprocity Pending)

Certifications:
National Bridge Inspection Standards (NBIS) -- Course #FHWA-NHI-130055
Bridge Inspection Workshop (2005), NYSDOT
Annual Bridge Inspector's Training (2005), NYSDOT
NICET Level I
NAUI Certified Open Water Diver
ADCI Entry-Level Tender/Diver

Work History:
2008-Present - McLaren Engineering Group 2000-2008 – Boswell Engineering

Experience:
Mr. Daniels has over nine years of experience as a Team Leader on above and underwater condition surveys, Project Manager, Resident Engineer, fathometric surveyor, and design engineer. He has participated in structural integrity inspection and evaluation projects for various bridges, culverts, and marine structures, including assignments for the Port Authority of New York & New Jersey, NYSDOT, NYCDOT, DELDOT, and various private clients. In addition, he has performed over 300 fathometric surveys associated with bridge scour assessments and is proficient in preparing reports and drawings utilizing Autodesk Land Desktop 2006. Mr. Daniels also has experience in preparing fathometer survey contour drawings based on hydrographic positioning techniques. His expertise includes design of marine structures, including rehabilitation designs and cost estimates. Representative projects include:

- **Waterfront Structural Engineering Services for the New Jersey Marine Terminal; Elizabeth, NJ; for PANYNJ;** Senior Engineer/Inspection Team Leader for the above and underwater inspection of New Jersey Marine Terminal structures, which includes berths, a turntable, mooring dolphins, and timber walkways. Mr. Daniels led an inspection team in performing detailed inspections to determine needed repairs and is supporting the design process and construction cost estimating.
- **Port Newark Marine Terminal, Berths 2 through 36; for PANYNJ;** Resident Engineer/Team Leader for the diving inspection and construction quality assurance of the substructural rehabilitation repairs throughout the 16,500 LF of active shipping terminals located in Port Elizabeth, NJ.
- **Port Elizabeth Marine Terminal, Berths 50 through 62 and 76 through 86; for PANYNJ;** Functioned as Team Leader for the diving inspection and construction quality assurance of the sub-structural rehabilitation repairs throughout the 8,500 LF of active shipping terminals located in Port Elizabeth, NJ.
- **Ferry Shore Facilities – Miscellaneous Engineering Services (On-Call); for New York City Department of Transportation;** Senior Engineer/Diver for structural reconstruction of ferry facilities and other miscellaneous work when and where directed by the NYCDOT. Mr. Daniels is managing the replacement of elevated slabs at Slips 4, 5 and 6, an effort that involves slab design – from demolition through construction documents – construction cost estimates, and bid phase support. In a separate task, he was involved with the inspection and damage assessment at St. George Ferry Terminal Slip 5.

Matthew J. Daniels, P.E.
Senior Engineer/P.E. Diver
Project Role: Project Manager

- **Engineering and Inspection Services for Marine Structures; Manhattan, NY; for Battery Park City Authority;** Senior Engineer/Diver for the performance of construction administration and inspection services associated with marine structure repairs at the Battery Park City Authority parcel in lower Manhattan. Mr. Daniels performed above and underwater inspection of pile repairs under the Battery Park City Esplanade (Phase 1) and will perform additional inspections for similar repairs, scheduled to begin in Spring 2010 (Phase 2). The project involves the assessment of and repair recommendations for approximately 3,500 precast concrete piles that support the relieving platforms at esplanade, as well as timber piles that support a platform at the north end.
- **Repair of Floating "Trim Tank" System at Peter Jay Sharp Boathouse; New York, NY;** Project Manager/Diver for inspection and design services needed for repairs at Peter Jay Sharp Boathouse. Mr. Daniels was involved with review of existing construction documents as well as a dive inspection of the Boathouse and its external flotation "trim" tanks. He directed preparation of a letter report of inspection findings, recommendations for repairs, and repair design. Construction documents were prepared and bid phase support was provided. Construction administration and inspection are ongoing.
- **Survey and Inspection of Coney Island Outfall; Brooklyn, NY; for Malcolm Pirnie/Baker Engineering;** Senior Engineer/Diver for the condition inspection of the Coney Island Outfall. Mr. Daniels was involved with underwater inspection/reconnaissance of the damaged section of the Outfall. Project also included topographic and hydrographic survey, including location of surrounding structures; and side-scan sonar for entire length of Outfall pipe.
- **Inspection of Ellis Island Seawall; for HDR Engineering;** Senior Engineer/Diver for the underwater and topside inspection of the Ellis Island Seawall and preparation of Class C, Class B and Class A Construction Cost Estimates. Mr. Daniels performed a "hands-on" inspection on 5,333 LF of existing seawall and has prepared a condition survey report. His effort also included preparation of construction cost estimates for schematic and preferred alternatives as well as the final design.
- **Construction Inspection of FDR Drive Sinkhole Repair; for New York City Department of Transportation;** Senior Engineer who provided topside support for the underwater construction inspection of emergency repairs to the platform structure below the FDR Drive near 15th Street in Manhattan.
- **Investigation of Piers C & D; Weehawken, NJ; for Hartz Mountain;** Senior Engineer/Diver for construction administration and inspection services for repairs at Piers C and D.
- **Pier 61 Damage Assessment; New York, NY;** Senior Engineer/Diver for investigating pile failures at the two locations of Pier 61, Chelsea Piers. Mr. Daniels was involved with the field inspection, dive inspection, document research, structural analysis/modeling, meetings, and a report of observations and assessment for each failure location.
- **Village of Dobbs Ferry Waterfront Park; Dobbs Ferry, NY;** Senior Engineer for the evaluation of existing riprap condition along the Village's Hudson River shoreline. Project also includes design of shoreline stabilization improvements, which may include new riprap, and/or sheet piling; preparation of cost analysis for construction; meetings with Village Officials; and environmental permitting. Construction documents will be prepared and construction administration will be provided.
- **Military Ocean Terminal Bayonne;** Project Engineer for the underwater structural inspection of all submerged structural components of Berths N1, N4 and N5 including in-depth condition surveys of the timber and steel bulkheads and mudline profiles beneath the wharf.

Christopher M. Mase, P.E.
Marine Engineer
Project Role: Project Manager

Education:
B.S., Civil Engineering, University of Delaware, 2005

Registration:
Engineer In Training, 2004, Delaware

Work History:
2006-Present – McLaren Engineering Group

Experience:

Mr. Mase is an engineer with extensive construction management and construction inspection experience, coupled with expertise in design of marine structures and components, such as piers, piles, pile caps, and bulkheads. He has provided these services in projects for several private clients, as well as for public agencies like the PANYNJ, NYCDOC, and NYSDOT. His construction management experience includes bid phase support, coordination with contractors, shop drawing review, responding to RFIs, and site visits. Mr. Mase is also well versed in permit preparation for the NYCDEC, Army Corp, and Department of State. Representative projects include:

- **Battery Park City Ferry Terminal; Battery Park City, NY; for PANYNJ;** Project Engineer responsible for providing construction administration services for the 32,000sf floating ferry terminal valued at $70 million in construction cost. Responded to all RFIs, provided shop drawing review, and made minor design recommendations during construction phase. Also was involved with design of below-deck supports. The terminal consists of a mono-hull main terminal with five ferry slips with variable height landing systems.
- **Beach Channel High School Seawall Remediation and Upgrades; Far Rockaway, NY;** Project Engineer for the design of a new revetment at the Beach Channel High School Seawall. Optimized shoreline protection by altering the position of the seawall and using the existing seawall to provide support. Produced design drawings for the new revetment and then prepared joint permit application for the NYCDEC, Army Corp, and Department of State. The Seawall's deterioration had caused subsidence and sinkholes in an access path above it.
- **Piermont Seawall Repair Design; Piermont, NY;** Engineer preparing contract documents and providing bid phase support in the repair of upland sinkholes. Issued bid set and provided review support.
- **Newport Bulkhead Study and Rehabilitation; Jersey City, NJ;** Project Engineer for the modification and upgrade of the Newport Bulkhead. Designs were to prepare the bulkhead for extension of the Hudson River Walkway, which runs along the bulkhead. Performed calculations and structural analysis of the existing bulkhead in order to identify and design the necessary support, such as concrete cut-off walls. Also was involved with the design of low-level decking repairs to eliminate sinkholes at the Newport Tennis Pier.
- **Waterfront Revitalization – 4th and 5th Street Piers at Kent Avenue; Brooklyn, NY; for RD Management Corp;** Project Engineer for the revitalization of the 4th and 5th Street Piers at Williamsburg, Brooklyn. Involved with both design and construction management of the project. During construction, was responsible for site visits, preparing progress reports, and acting as a point-of-contact for the contractor and client. On the design side, assisted in the design of the pre-cast piers, pre-cast piles and a cantilevered sheetpile bulkhead wall. The project has included detailed underwater inspection,

hydrographic survey, geotechnical services, design services, construction inspection services, and construction administration services.

- **Williamsburg, The Edge Waterfront Development; for Douglaston Development;** Project Engineer for the design of pile caps, a concrete cut-off wall, and an irrigation room at this widespread waterfront development project along the East River. Overcame significant challenges in the pile cap design caused by variable elevations at the site, due to various stairs, pathways and structures, and differing construction materials. McLaren performed an in-depth physical inspection of piers and bulkheads, evaluated soil conditions, produced feasibility studies for waterborne activities, and provided design drawings.
- **Vernon C. Baim Center Dry Docking Inspection and Repair Design; New York, NY; for NYCDOC;** Project Engineer involved with the inspection and design of repairs for the Vernon C. Baim Center barge and upland facilities. Coordinated above and underwater inspection of the barge, which involved a non-destructive testing program, with field team. Based on inspection findings, then provided design recommendations for the sheetpile bulkhead repair and replacement of the barge fendering system. Recommended use of plastic lumber for the new fendering system.
- **Columbia (Little Pea) Island Pier Boat Landing Dock; New Rochelle, NY;** Engineer for the preparation of permit applications and construction documents, and construction management services for a boat landing dock at the existing pier on the west side of Columbia Island. Construction documents included ferry landing plans and technical specifications for piles, gangways, operating equipment, fendering, and navigational lighting. Construction administration included shop drawing review and site visits.
- **Raritan Yacht Club Condition Assessment; Perth Amboy, NJ;** Junior Engineer for a condition survey of the above water and underwater elements which comprise the various structures of the Raritan Yacht Club. Prepared necessary permits for the repairs. McLaren inspected the structures for possible deterioration, damage, and marine borer activity and prepared construction documents of the repairs.
- **Design of NYCDOC Passenger Ferry Ramp Landing; Astoria, Queens;** Project Engineer for the design of an emergency ferry landing positioned off Con Edison's A-11 dock. The landing was proposed to accommodate transport to and from Riker's Island, and its design needed to incorporate an ability to disconnect from the Con Edison bulkhead. Design thus included a cantilevered platform and a guide beam connection system, which was set to circumvent the dock's timber fendering system and attach to the bulkhead. The guide beam's rollers were to provide ample support for the docked vessel and facilitate easy disconnect of the landing.
- **Design of Crew Access Structures at Hoboken Ferry Terminal; Hoboken, NJ; for NY Waterway;** Engineer responsible for the design of a 30X90 barge and eight 12X50 Kentucky floats at Hoboken Ferry Terminal. Designed the appropriate gangways and platform off existing bulkhead. Also was involved with pile design, which involved careful consideration and analysis of the soil quality at the site. The structures were intended to provide storage for NY Waterway's vessels and were essentially platforms off the existing bulkhead at the Terminal.
- **U.S. Gypsum Pier Extension; Stony Point, NY;** Engineer for structural and marine engineering support, pier rehabilitation, and construction inspection. Produced a feasibility study and designed mooring dolphins, similar to an offshore oilrig, to accommodate a 20,000-ton cargo vessel. Also prepared construction documents for the project, which included structural analysis, environmental evaluation and geotechnical investigation.

Schedulers

Robert Barsky
SCHEDULER

Mr. Barsky has been providing construction and project management services since 1979. He is a Vice President with the firm and is presently serving as our Director of Project Controls. Under Mr. Barsky's guidance and leadership, LiRo's CPM scheduling and estimating staffs have grown to be one of the largest and most accomplished in the New York metropolitan area.

Most recently, Mr. Barsky has been LiRo's Contract/Project Manager for the New York City Transit Authority's Indefinite Quantity Scheduling & Technical Support contracts. His duties have involved close interaction with the Program/Project Schedule Control personnel as well as in-house construction managers in NYCT's Capital Program Management Department. Under Mr. Barsky's direction, 19 CPM schedulers and 15 construction inspectors have been provided to NYCTA to meet their specific needs and demands. The foregoing has involved the matching and placing of project personnel within NYCTA program areas, such as: Shops, Yards & Busses; Stations; New Routes; Electrical; and Environmental/HAZMAT.

EDUCATION	B.S.C.E., Civil Engineering, Lafayette College, 1979
REGISTRATION / CERTIFICATIONS	Primavera Expedition (Project Controls) Primavera Project Planner (CPM Scheduling) Engineer-in-Training, PA Engineer-in-Training, NY
YEARS WITH THIS FIRM	20
YEARS WITH OTHER FIRMS	10

In his capacity as a CPM scheduler, Mr. Barsky has developed master program schedules, developed detailed baseline CPM schedules, updated detailed CPM schedules, prepared periodic narrative reports which detail project status, documented reasons for gain or loss of time and proposed means/methods for recovery of any lost time. He has also provided resource and cost loading of CPM schedule activities and has generated and analyzed resource and cash flow projection curves and histograms. Representative projects include:

Program Management Services for Brooklyn Navy Yard Development Corporation, Brooklyn, NY: LiRo is currently serving as the Program Manager for the construction of the Perry Avenue Building, NYPD Tow Pound Facility and NYC DCAS Building at the Brooklyn Navy Yard. For this assignment, Mr. Barsky is serving as LiRo's Executive-in-Charge. LiRo's involvement began during the pre-construction (design) phase and continued through the completion of construction.

- Review of design documents and presentation of recommendations
- Value engineering
- Estimating
- Constructability reviews

LiRo's pre-construction efforts helped to reduce the overall building costs and provide a more efficient design. Additionally, LiRo advised the owner (BNYDC) of the various types of construction management contracts that were available. We helped guide their selection into using a CM/Build contract and participated in the procurement/selection of a construction manager.

- Ensure CM compliance with contract documents
- Review CM's cost requisitions
- Review CPM schedules
- Review project budget and compare with actual expenditures
- Provide recommendations regarding change orders/requests for time extensions

(Brooklyn Navy Yard Development Corporation)

New York City Housing Authority CM/Build Requirements Contracts (Two Contracts: 2004-2007 & 2005-2008), New York, NY, Project Controls Manager: Under these contracts, LiRo is performing work on a task order basis. Currently, we are in the design or construction phases of renovating and/or constructing numerous community centers, performing upgrades of building systems and facade/roofing restoration at several housing projects throughout New York City. These properties all require that LiRo perform pre-construction and construction phase services. (NYCHA, $250M)

School of Architecture, Urban Design and Landscape Architecture (SAUDLA): LiRo provided construction management services for demolition and extensive reconstruction of a 136,000 sf building into the new SAUDLA building. The building frame of structural concrete still remains and the balance of the building were demolished and rebuilt, including façade, interior and mechanical, electrical and plumbing systems. (2009, $60M)

New York City Department of Sanitation Requirements Contract, New York, NY, Administrative Project Manager: This contract involved providing construction management services to the NYCDOS on an on-call basis. These services were provided to support the numerous projects that NYCDOS has in progress throughout the five boroughs of New York City. Nine projects have been performed over the past three years ranging from scheduling services to complete construction management assignments. (NYCDOS, $8.5M)

New York City Transit Authority, On-Call Technical Inspection Contract (CM-1145), New York, NY, Project Manager: LiRo was contracted to render support services to NYCTA in connection with technical inspection, monitoring and oversight responsibilities under the supervision of the construction managers of the NYCTA. Locations of work are within the five boroughs of New York City. Program areas include new routes, stations, structures and environmental. Duties performed by LiRo personnel include inspection of field construction work; preparation of progress estimates and payments, processing additional work orders (AWOs), interaction with NYCTA flagmen, review of shop drawings, as-built drawings and manuals, constructability reviews, phasing plan reviews, cost estimating, CPM scheduling, safety inspection, review of contractors quality control program and value engineering. (NYCTA, $5M, 2005)

Employment History:
The LiRo Group (1990 to Present)
Vice President
O'Brien – Kreitzberg & Associates (1983 to 1990)
Senior Project Manager
Fogel & Associates (1982 to 1983)
Project Manager - Construction Claims Analyst
Arnold M. Diamond (1979 to 1982)
Project Engineer

Anthony R. Carrion
SCHEDULER

EDUCATION	B.S., Civil Engineering, University of Puerto Rico
REGISTRATION / CERTIFICATIONS	Construction Management Certification Prep Course
YEARS WITH THIS FIRM	<1
YEARS WITH OTHER FIRMS	20

Mr. Carrion has more than 20 years of experience in construction management and project controls. During this time he has performed CPM scheduling, evaluated schedules prepared by others, analyzed delay claims, performed work force optimization studies and developed cost estimates. Mr. Carrion has worked upon a diverse array of projects for both municipal and private clients such as: MTA-Long Island Railroad, AMTRAK, Dormitory Authority State of New York, NYC School Construction Authority, NYC Housing Authority, Puerto Rico Power Authority, United Nations, New York State Department of Transportation, and American Airlines. Types of projects worked upon include: tunnels, railroad, airports, power facilities, schools, hospitals, laboratories, stores, conference centers and housing projects. Specific CPM scheduling duties and responsibilities have included: Development of work breakdown structure & logic diagrams, Computerization and de-bugging baseline, CPM schedule Periodic (typically monthly) updating of CPM schedule Preparation of monthly schedule progress reports and narratives Analyzing delays and impacts Review/critique schedules prepared by others Cost loading of CPM schedules Cost tracking and forecasting Earned value analyses Resource loading of CPM schedules Optimization of resources. Relevant project experience includes:

New York State Department of Transportation (NYSDOT) LiRo – 2010 - Present Senior Scheduler 2.78 Kilometers of Asphalt and Concrete Highway Reconstruction with Precast and Prestressed Concrete Bridge Construction on I-278 (Staten Island Expressway) Richmond County Reviewed CPM Progress Schedule prepared by the contractor using the Primavera Scheduling software provided by the NYSDOT on network servers and accessed though the Internet. Reviewed Progress Schedule at Bid and Progress Schedule at Award. Conduct Schedule Monthly Review Meetings

MTA – Long Island Rail Road LIRR - East Side Access ESA Dragados USA – 2010 Senior Project Controls Engineer East Side Access ESA Project will bring the Long Island Rail Road trains into a new station under Grand Central Terminal. Provided CPM Scheduling services for Contract CM019 – Manhattan Structures I Provided CPM Scheduling services for Contract CM009 – Manhattan's Tunnels Excavation Monitored actual progress, compare to baseline and report progress against schedule Created "what if" project schedules for analysis of project alternatives Analyzed schedule impacts and delays Prepared schedule monthly status reports Prepared & maintained Six (6) Week Look Ahead Schedules Conducted weekly schedule development and status review meetings

North Lawn Conference Building, United Nations Headquarters, NY, NY Skanska USA Building – 2008-2010 Senior Project Controls Engineer Advisor to the UN CMP Management Staff. Developed the Project Work Breakdown Structure (WBS) and WBS dictionary Developed and updated the project schedule Created "what if" project schedules for analysis of project alternatives Analyzed schedule impacts and delays Prepared monthly schedule status reports Conducted weekly schedule development and status review meetings Developed a General Conditions Cost Tracking System

Developed manpower requirement analysis Prepared logistic analyses which extracted project schedule information and presented in the context of the project logistic plan

Puerto Rico Power Authority, Gasoducto del Sur, Ponce Puerto Rico Skanska USA Building – 2006-2008 Project Controls Engineer The Gasoducto del Sur Project involved installing a 43 mile long, 42" Natural Gas Pipeline. The project cost was in excess of $170 million. Provided CPM scheduling and cost control Prepared cost/ schedule analysis for alternative construction methods Prepared monthly cash flow analyses Provided construction cost and schedule forecasting Conducted risk management studies for tunneling operations

Best Buy Stores, San Juan, Puerto Rico Skanska USA Building – 2006 – 2008 Project Controls Engineer Prepared level IV project plans and CPM schedules Generated monthly applications for payment as well as periodic budget and cost reports Inspected jobsite to view work progress Updated the CPM Schedule on a weekly and monthly basis Prepared plan, schedule, risk, man power load and cost performance reports using earned value analysis. Created Work Breakdown Structure, Organization Breakdown Structure and Cost Breakdown Structure. Monitored actual progress, compare to baseline and report progress against schedule Prepared and issued management progress reports such as Earned value and Cost reports. Provided schedule recommendations to ensure completion of projects on time

Lyos & Zosyn Laboratories, Wyeth Pharmaceutical, Carolina, Puerto Rico Skanska USA Building 2006 – 2008 Project Controls Engineer Developed CPM schedule for project Updated the schedule on a daily and weekly basis Performed schedule trending and forecasting analyses Provided analysis of schedule delays and impacts Prepared various spreadsheets such as material delivery, plan and schedule analysis, etc. to assist project management team Prepared several periodic reports including: construction progress, earned value, cost status Recommended schedule recovery actions to project management team Reviewed sub-contractors' plans and schedules Tracked labor productivity

National Railroad Passenger Corporation – Amtrak / Long Island Rail Road LIRR DMJM+Harris (AECOM) 2000-2006 Office Engineer / Project Controls Engineer Rehabilitation of East River Railroad Tunnels and Facilities at 1st Avenue Ventilation Shaft, New York, NY, Amtrak / MTA-Long Island Rail Road Developed and updated the Project master Schedule on Primavera P5.Developed a custom database to review and create report analysis. Responsible to generate reports for the tracking of the project schedule, project trends, budget and change orders. Forecasted overall costs including change orders and the impact on the project schedule. Supported the CM Staff with providing the assessment of risks and uncertainties within the project schedule.

Other projects for which Mr. Carrion has performed similar scheduling duties (1989-2005) include: New AML-14 Process Laboratory, Amgen Laboratories, Juncos, Puerto Rico Office of the Chief Medical Examiner Laboratories at Queens Hospital Center, Queens, NY, Dormitory Authority of the State of New York American Airlines Terminal 9, John F. Kennedy Intl. Airport, Queens, NY Boiler Conversion Program, NYC School Construction Authority, Facilities Division Queens Hospital Center, Queens, NY, Dormitory Authority State of New York Department of Asset Management & Private Market Operations, New York City Housing Authority, New York, NY

Giovanni L. Graceffa

SCHEDULER

Mr. Graceffa has over 20 years of construction experience on a wide variety of types of construction projects. These projects include: rail, transportation, airports, schools, universities, laboratories, hospitals, prisons, housing projects, libraries, museums and water pollution control plants. His extensive experience includes cost estimating, project management and design engineering. He has worked on projects for numerous municipal agencies such as: MTA-NYC Transit, MTA-Capital Construction, Dormitory Authority State of NY, NYC Department of Design & Construction, NYC Department of Homeless Services, State University Construction Fund, NYC Department of Sanitation and Nassau County Department of Public Works.

Mr. Graceffa work responsibilities have included the following:

- Preparing detailed cost estimates at all stages of design
- Negotiating and coordinating change order work

EDUCATION	B.S., Physics, New York Institute of Technology, Old Westbury, 1989
REGISTRATION / CERTIFICATIONS	Primavera Expedition (Project Controls) Society of Physics Students of N.Y.I.T.
YEARS WITH THIS FIRM	10
YEARS WITH OTHER FIRMS	12

- Reviewing design documents for constructability
- Analyzing bids and making contract award recommendations
- Value Engineering
- Analyzing and resolving contractors' claims for damages and delays
- Reviewing/processing contractors' payment requisitions
- Performing field Inspections
- Conducting project meetings and generating meeting minutes
- Developing design documents

Representative projects include:

Continental Airlines, Interim Regional Jet Operations Gate A-1 - As the Owner's Representative for Continental Airlines, LiRo was responsible for the creation of a hold room and office space at Gate A-1 for Continental Express at LaGuardia Airport. This project consisted of an accelerated schedule requiring close coordination between all trades and the owner. The project entailed the demolition of existing office and storage spaces and the installation of fan coil units, lighting, millwork, carpeting, seating and communication data links, and telephone lines.

MTA New York City Transit – East 180th Street Maintenance Facility, Bronx, NY - Demolition and reconstruction of a six track 120,000 sf maintenance facility building for the New Technology Subway Cars including replacement of tracks. The building is a steel frame building with metal panel and masonry exterior walls. The building interior consists of six pitted and posted rail tracks and a three floor office & administration area. Building systems originated from a separate utility building adjacent to the facility and included: (3) New 200 HP Boilers for the Heating and Domestic Hot Water Systems, New Compressors for the Compressed Air System, New Emergency Generator, New Fire Pumps, Elevator machine Room and New Electrical Switchgear. Heating & Ventilation was provided to the Shop Area via Rooftop Heat Recovery type Air Handling Units. (MTA-NYCT, $46M)

MTA New York City Transit, Capital Program Management Department, Senior Estimator - Prepared cost estimates for major multi-million dollar capital projects. Performed general construction feasibility estimates. Estimated change orders for various parts of the infrastructure. Negotiated impact

cost claims and change orders in fair and equitable settlements for the Authority's benefit. Among the specific projects for which cost estimates were prepared were the following:

- Rehabilitation of Tunnel Lighting - Lenox & White Plains Lines, $11.1M
- Rehabilitation of Tunnel Lighting - Broadway/7th Ave. Lines, $20.1M
- Tunnel Lighting Modernization – Broadway Line, $31.5M
- Rehabilitation of Pumping Facilities - Broadway/Nassau Lines, $8.5M
- Rehabilitation of Pumping Facilities – Crosstown Line, $4.1M
- Rehabilitation of Pumping Facilities – Lexington Line, $2.5M
- Rehabilitation of Pumping Facilities – Flushing Line, $4.4M
- Rehabilitation of Pumping Facilities – Concourse & 8th Avenue, $12.1M
- Rehabilitation of Fan Plant & Pump Room – Crosstown Line, $8.6M
- New Ventilation Plant - Crosstown Line, $20.7M
- Furnish & Install 17 Escalators at Various Locations, $39.5M
- Replacement of Gap Fillers – South Ferry Station, $4.5M
- Lenox Avenue Line Rehabilitation, $13.3M
- Lenox Avenue Line Rehabilitation & DOT Work, $63.5M
- 63rd Street Connection, $9.7M

James A. Thomas Center (JATC) Renovations at Rikers Island - Comprehensive construction management services were provided to the renovation of the 240,000 s.f. James A. Thomas Center on Rikers Island. The original construction of this high security facility dates back to 1933 and has a housing capacity of 1,600 inmates. The program for renovation consisted of retrofitting existing spaces within the facility cell blocks, day rooms, showers, pantries, housing areas, mechanical rooms, electrical rooms, and common spaces. Part of the renovation program upgraded the electrical systems and domestic hot water distribution system. (NYCDDC, $25M)

Manhattan Civil Court, Construction Management Services, Cost Estimator - This project called for an extensive reconstruction of the building's infrastructure and exterior. Key elements included electrical upgrade that included fire alarm and security systems, mechanical/HVAC that included HVAC controls and building management systems, plumbing, fire protection, DAD compliance for building, entrances and bathrooms, and facade and parapet wall improvements. All work was completed within 12 months while building and court operations continued without interruption. LiRo's construction management services for this facility included design reviews for constructibility; cost estimating; scheduling; development of phasing and staging plans; trade coordination; construction inspection. \Mr. Graceffa performed design reviews for constructability and detailed cost estimates during the design phase of the project. During the construction phase, he estimated and negotiated change orders with the contractors. (DASNY, $16M)

FDNY Fire Training Academy at Randall's Island, Phase II, Estimator - This project involved the renovation of two existing buildings and construction of a new building at the FDNY facility at Randall's Island. Mr. Graceffa performed detailed cost estimates during the design phase of the project. (NYCDDC, $7.5M)

Employment History:

The LiRo Group (2010 to Present)
Senior Scheduler
VJ Associates (2008-2010)
Senior Estimator
The LiRo Group (1998-2008)
Project Manager
NY Transit Capital Program Management (1988-1998)
Mechanical Engineer level II

George Gifford
SCHEDULER

Mr. Gifford has more than 17 years of experience in the CPM scheduling, cost estimating, planning and maintaining of progress schedules for major civil public works projects including renovation / rehabilitation projects, such as municipal office buildings, courthouses, hospitals, schools and construction of new facilities.

In addition, Mr. Gifford has experience in large environmental remediation and decommissioning projects including removal and replacement of aboveground /underground storage tanks and product distribution systems, contaminated ground water remediation systems and large contaminated soil removal / disposal projects for both public and private concerns. Representative projects include:

EDUCATION	B.S., Business Management, State University of New York at Plattsburgh
YEARS WITH THIS FIRM	7
YEARS WITH OTHER FIRMS	12

NYCDOT, Rehabilitation of 11th Avenue Viaduct, Scheduler - LiRo is providing Resident Engineering and Construction Management services to the NYC Department of Transportation in connection with the rehabilitation of the 11th Avenue viaduct. The viaduct is located between 29th Street and 34th Street on the west side of Manhattan. The viaduct spans the active West Side Rail Yard which is operated by MTA - Long Island Rail Road. The construction work scope includes replacement of: bridge decking, concrete pier heads, spalled concrete, sidewalks, fencing and street lighting. To prevent any interruption to the rail service, it was necessary to construct a protective shield beneath the viaduct prior to the commencement of any other construction work. Scheduling duties included: review of contractor's baseline CPM schedule, review of contractor's monthly CPM schedule updates, preparation of written reports, responses to schedule-related issues and analysis of impact/delay claims. (NYCDOT, $25M)

Battery Park City, Community Center Construction Management Services, Scheduler - LiRo is providing Owner's Representative/ Construction Management services for a 60,000 sf community center/ball field maintenance facility in the base of two residential towers at Site 23/24 in Battery Park City. LiRo will oversee the creation of the community center/ball field maintenance facility from design development through completion of all construction and post-construction.

This facility will house 2 swimming pools, an auditorium, a gym, classrooms, and exercise center/outdoor plaza, as well as a maintenance facility for the Battery Park City Parks Conservancy for the care of the two adjacent little league ball fields. Site 23/24 will be developed according to the mission of the Authority of furthering sustainability in urban development. The community center/ball field maintenance facility will be built in accordance with the Authority's Environmental Residential Guidelines and with the latest LEED for Commercial Interiors (CI) rating system, now version 2.0. It is anticipated that the facility will attain a Platinum rating, the highest possible level bestowed by the USGBC. (BPCA, $30M, 2010)

Westchester County Courthouse Phase 3 Tower - The LiRo Group was retained by Westchester County to provide both design and construction management services for this $23 million interior renovation project. The program consisted of a combination of partial and complete renovations to 18 floors of the 20 story courthouse tower, including mechanical, electrical, telecommunications, fire alarm and security upgrades, ADA compliance throughout, new courtroom layouts and finishes, and all adjunct facilities to service New York State's civil courts and the County's Department of Probation. In order to meet the County's construction schedule, all work was designed around an intricate staging program that LiRo devised to maintain the County's requirements that the building remain fully operational throughout construction. Construction documents were completed in nine months from the date of design award and the project is currently under construction, on time and under budget. (Westchester County DPW, $23M, 2007)

Mercy High School, Bronx, NY - Gut renovation of Mercy College that was transformed into Bronx High School of Visual Arts (NYCSCA, $15M, 2004)

Yaphank Residential Juvenile Detention Center, Yaphank, NY, Architectural and Engineering Design Services - LiRo was retained to design and build this new 32 bed juvenile detention center complete with housing, intake, medical, educational, food service, administrative, visiting, indoor gymnasium and outdoor baseball and soccer fields and courtyard recreation areas. The project design was completed in the spring of 2003. (SCDPW, $10M, 2003).

Taft High School - As part of the Emergency Response Management Coordination Program, this project at William Taft High School in the Bronx consisted of restructuring of approximately 28,000 sf of space, included new Science Labs, new Clinic and upgrading of existing classrooms. Liro developed detailed construction cost estimates & CPM schedules, solicited bids and awarded contracts in accordance with Authority requirements, and managed and coordinated all construction work. Also, LiRo provided general conditions including testing and controlled inspections, remediated hazardous materials, and maintained cost controls for all time & materials contract work. (NYCSCA, $11M)

Bridgeport Schools Repair and Replacement Project, Scheduler - LiRo is providing construction management services for 20 schools in Bridgeport CT. The project includes various repair work from pavers, window replacement, masonry repair, HVAC upgrade and toilet room upgrades. (Bridgeport School District, $10M, 2008)

Employment History:

The LiRo Group (2005 to Present)
Scheduler
Fenley & Nicol Environmental, Inc (1997-1999)
Estimator
Environmental Products & Services, Inc. (1994-1997)
Project Manager/Estimator
CDM Federal Programs Corporation (1992-1994)
Global Positioning System Technician
Unicorn International Consultants (1991-1992)
Project Manager/Damage Assessor
Marcor of DC, Inc (1989-1991)
Project Manager/Estimator

Philip Kalmus
SCHEDULER

Mr. Kalmus has been involved in the construction industry for more than 37 years. He is a professional experienced in both construction management and project controls. He specializes in the application of CPM scheduling and project control techniques. Among his areas of expertise are the following:

- CPM/PERT development
- Time/schedule control techniques
- CPM scheduling/phasing
- Claims analyses

EDUCATION	B.S., Architecture, New York Institute of Technology, 1975 A.A.S., Design Drafting, New York City Community College, 1969
YEARS WITH THIS FIRM	7
YEARS WITH OTHER FIRMS	31

- Delay/impact studies
- Earned value assessment
- Monthly reporting/narratives
- Proposal schedules

Representative projects include:

Newark Draw and Approach Structures Rehabilitation, Morris and Essex Lines, Bridges MP7.41, 7.42, 7.48, 7.53, 7.59 and 7.65, Scheduler - The work of this contract generally is to rehabilitate the substructure and superstructure of the Newark Drawbridge and the approach structures to the East and West. The work includes repairing the structural steel in the superstructure and the masonry and concrete in the substructure, repairs to the fender system and the electrical and mechanical repairs to the swing span. The scheduling responsibilities include: Review/commenting on the contractor's baseline schedule until approved Develop/issue monthly schedule Update review/analysis reports and narratives Attend/participate in monthly schedule update review meetings Review/comment and report on the contractor's cost loading of the schedule
(NJT, 2009)

NYSTA Tappan Zee Bridge Project, Milepost 14.67 +/-: The scheduling responsibilities include:

- Reviewing/ Commenting on the contractor's monthly schedule updates
- Developing/ issue monthly schedule review/ analysis reports
- Assist in conducting monthly schedule review meetings
- Attend job progress meetings

(NYSTA, 2009)

WP-269 Pumping Station, Construction of sewers, pumping station, force mains, & associated facilities, Meadowmere & Warnerville, Queens, NY, Scheduler- LiRo is providing full project management (Resident Engineer) on site services. The scheduling responsibilities include:

- Assist contractor in developing baseline schedule by review/comments
- Conduct monthly schedule update review meetings
- Review monthly site progress
- Develop/issue monthly schedule review/analysis reports and narratives
- Attend job progress and I & T meetings

(NYCDEP, 2009)

Sunrise Yard, New DOT Maintenance Facility, South Ozone Park, NY, Scheduler - LiRo is providing full project management on-site services. The scheduling responsibilities include:

Assisting contractor in the development of the baseline schedule by review/comments Conduct and issue periodic schedule updates, as required Produce recovery schedules, as required Produce summary schedules for project minutes Review site progress and discuss with project staff, (NYCDDC, 2009)

Park Slope Armory Revitalization Project, Brooklyn, NY, Scheduler- Under this contract LiRo is performing project management for the renovation of the existing drill floor area which involves full GC/Electrical/Mechanical & Plumbing services and the upgrade of the Life Safety Services. Duties include:

- Developing Scheduling of remaining work items
- Periodic progress updates
- Issuing schedule reports, as required

(NYCDDC, $15M, 2008)

Improvements to County Center Building, Yaphank, NY, Scheduler- Under this contract LiRo performed CM services for constructing a new 4-story 85,000sf Civil Court building, followed by renovating the existing three original court buildings. The renovation included new mechanical, electrical, and plumbing services, along with new interior GC finishes. The third part of the project involved the exterior restoration and weather proofing of the original structures. The scheduling tasks performed were:

- Developing baseline schedules
- Conducting monthly status updates and end date projection
- Walk job to determine progress with the contractors
- Developing and issuing monthly schedule reports and narratives

(SCDPW, $34M, 2007)

Hope VI Ocean Bay Apartments, Far Rockaway, NY, Bayside, Masonry, GC Work, Electrical Distribution, NYCHA - Oceanside, GC and Masonry Work, NYCHA, Day Care/Senior Centers, Scheduler - Under this contract, LiRo performed work on a task order basis. We were charged with renovating and/or constructing several community centers throughout New York City. In addition, we performed new construction of a community center and various renovations and upgrades at Ocean Bay apartments in Rockaway. These properties all required that LiRo perform preconstruction and construction phase services LiRo was responsible for prequalifying potential construction contractors, bidding the work and ultimately entering into contract with the construction contractors. Of particular importance was that these projects required careful coordination with community residents so interruptions of utilities, housing access, etc. was kept to an absolute minimum. In addition, a community liaison was necessary to keep local residents well informed as to the progress and new developments on the project.

Employment History:

The LiRo Group (2003 to Present)
Senior Scheduler
NYC School Construction Authority (1999-2003)
Scheduling Engineer
J.A Jones-GMO LLC (1997-1999)
Scheduling Engineer
Lehrer/McGovern/Bovis (1995-1997)
Scheduling Engineer
Stone & Webster (1990-1995)
Planning Engineer
New York City Transit Authority (1988-1990)
Cost/Schedule Supervisor
Ebasco Services (1971-1976)
Scheduling Engineer

Andrew J. Chattaway

Sr. Scheduler

11 YEARS EXPERIENCE
3 YEARS WITH PMA

Education

BIPP PQE (BA equivalent)
Professional Qualifying Exam in Photography Film & Television
British Institute of Professional Photographers
HND (Higher National Diploma 2-year course)
Photography Concentration
Film & Television
OND (Ordinary National Diploma 2-year course)
Design/Photography Concentration
Plymouth College of Art and Design
Plymouth, UK

City & Guilds Certificate in Communication studies
Graduated with four Distinctions
Plymouth Chamber of Commerce & Industry
Plymouth, UK

Mr. Andrew Chattaway has extensive experience in a diversity of project-based industries. He is highly proficient in Primavera P3, P3e, P5 and P6, Pertmaster risk software, MS Project and MS Office software for development of schedules and budgets, managing costs, progress reporting, data analysis and presentation techniques. He has worked as an integral member of project teams on large civil, nuclear, construction and wastewater management projects. He has also successfully produced large-scale video productions, both on time and to budget. He has a unique range of skills that integrate with and compliment diverse project management requirements.

SCHEDULING

Lower Manhattan Construction Command Center (LMCCC) - New York, NY

Mr. Andrew Chattaway is currently serving as a lead schedule consultant for Lower Manhattan Construction Command Center (LMCCC). He prepares, updates, and analyzes project schedules and is responsible for coordinating and integrating schedules into a single master schedule using P5. He is proficient using the full Primavera suite of products and has developed EPS, WBS, and project coding structure to report data from over 400 construction projects identified. He has developed layouts and outputs for regular monthly progress review, and he has analyzed contract SOW documents and plans for schedule development and project phasing. He has been integral in providing Risk Analysis support for various Value Planning exercises utilizing Pertmaster for analysis of project schedules. The resulting schedule scenarios were integrated into Gehry Technologies' Digital Project; a 3-D BIM modeling tool, to create a 4-D simulation of the WTC site program and surrounding projects. This enabled comparisons between various schedules, project interdependencies, stake-holder issues and logistical requirements.

PRIOR EXPERIENCE

Previously with JCMS, Inc., Mr. Chattaway served as a project controls/scheduling engineer. His project experience included initial planning for the deconstruction of 130 Liberty Street at the WTC Site and an environmental impact study for Lower Manhattan/JFK/Jamaica rail link.

With JoLee TV, Inc., Mr. Chattaway served as a production manager and associate producer. He managed day-to-day business operations, including scheduling,

preparing budgets and bids, cost actualizing, purchasing, billing, and supervising administrative personnel/production staff and marketing meetings.

With MWH Project Management/North West Water AMP3 Projects, Mr. Chattaway served as Planning Engineer for Project Controls.

Mr. Chattaway also served as Deputy Planning Manager on the major Civil Nuclear Construction Project for AMEC Group Ltd. /British Nuclear Fuels Ltd. (BNFL) Project B41 Waste Retrieval Plant.

He also worked for Allott & Lomax Consulting Engineers, as Advisor to the UK Ministry of Defense, Project D154, served as Planning Engineer (Planning & Risk Support).

Jamie Apostolou

Scheduler

10 YEARS EXPERIENCE
1 YEAR WITH PMA

Education

BS,
University of Massachusetts

Case Study on European Union's Infrastructure & Development,
Universiteit Van Amsterdam

Mr. Jamie Apostolou has extensive experience in project management, project controls, dispute resolution, project oversight as well as on-site construction. His past project experience includes utilities, airports, education, medical and residential facilities, sports arenas, railways, and convention centers. His software capabilities include Microsoft Office, Mac OS, OmniPro, Primavera, SAP, Corel Draw, AutoCAD, Practice Master, Lenstar, Word Perfect, Photoshop, and construction equipment operation.

PROJECT CONTROLS

Mr. Apostolou serves as Senior Consultant and member of the PMA team assisting PSE&G to establish a world-class project controls office (PCO) within the delivery projects and construction organization. The project controls group manages a $1 billion portfolio of new projects as well as system wide upgrades. Mr. Apostolou's primary emphasis is on the management of design, procurement, schedule, contracts, assets and costs for each project.

PRIOR EXPERIENCE

Prior to joining PMA, Mr. Apostolou served as a consultant performing analysis and oversight on capital projects for public, private and government clients. He also assisted counsel on litigation matters including deposition, mediation, and trial. Mr. Apostolou's forensic and dispute resolution experience on various project includes RFI & change order analysis, manpower analysis, damage and design assessment, project control analysis, design error and omission assessment, defense development, measured mile and schedule analysis as well as assistance with the preparation for litigation matters including arbitration, mediation, deposition and trial.

In addition to dispute resolution and forensic cases, Mr. Apostolou also performed project oversight, risk assessment and management as well as advisory services. His experience includes schedule review, process analysis, budget monitoring, risk analysis, project status analysis, and development for software designed to monitor project status and risk exposure.

Mr. Apostolou served as Oversight Advisor with the Federal Transit Authority on a $50 million ski lodge, a $9 billion hotel and casino development and a $611 million LNG facility.

As a legal assistant for the Real Estate and

Construction practice within a private law firm in Chicago, he was responsible for processing sensitive and confidential cases, deadline execution, calendar management and daily communication among staff with top tier American banks. He also assisted with implementation and training of a new document control and tracking software.

Mr. Apostolou also served with a private general contractor for a large public facility's maintenance division, where he participated in the construction of a 120-unit residential subdivision development and supervised a 136-acre facility. Mr. Apostolou was responsible for the supervision of additional staff as well as performing a variety of construction activaties, including paving, masonry, roofing, drywall, concrete, light steel erection, finishes and equipment operation.

Purvasha V. Patel

Jr. Scheduler

4 YEARS EXPERIENCE
2 YEARS WITH PMA

Ms. Purvasha Patel has extensive experience in the engineering and construction industry with an emphasis on project, cost, and scheduling management.

Education

BS, Civil Engineering

Rutgers University

COST ESTIMATING

Ms. Patel has performed cost analysis and cost management services on many large projects.

- **Northline Utilities, On-Call Contracts Review & Claims Assistance**

SCHEDULING

Ms. Patel has extensive experience in the development, updating, and analysis of project schedules using P3 and P6.

- **MTACC On Call Schedule Assistance** - New York, NY - $24B
- **Norwich University Student Housing Project**
- **Mount Pleasant Water Main**
- **NYCDEP Dependability Program**

PRIOR EXPERIENCE

Previously, Ms. Patel served as Project Engineer/Scheduler on a $145 million highway project. She was responsible for the submission of schedule updates to the owner and distribution of four-week and one-week look-aheads to team and upper management. She also helped implement a company-wide P3 schedule system. She oversaw a $2.8 million precast operation. Her responsibilities included oversight of revenue, cost, schedule impact and product procurement.

Previously, Ms. Patel served as Field Engineer. She was responsible for monthly billing to the client. She also teamed with the project superintendent to oversee installation of all post and panels retaining walls and MSE retaining walls. She tracked weekly labor costs and production on precast/cast in place concrete work. She also managed vendors and subcontractors.

Previously, Ms. Patel served as Assistant Field Engineer. She utilized P3 to create schedules under the guidance of the head scheduler. She collaborated with the project management on buy-out process and the project engineers to establish a submittals process.

Sadia Janjua, LEED AP

Jr. Scheduler

8 YEARS EXPERIENCE

Education

BS, Industrial Engineering and Operations Management

Minor Civil and Environmental Engineering

University of California, Berkeley

Professional

Leadership in Energy and Environmental Design (LEED AP®)

Members

U.C. Berkeley Engineering Alumni Society (board member)

National Association of Women in Construction

Project Management Institute

Ms. Janjua is a scheduler and project controls specialist with particular experience in preparing schedules and cost analyses for education, government, and healthcare facilities as well as pipeline construction projects. She is skilled with developing and updating baseline project schedules, performing trend and critical path analyses, and preparing cost estimates and audits. Ms. Janjua has experience in engineering design, construction management, financial and resource planning, and dispute resolution for several agencies, including the San Francisco Public Utilities Commission (SFPUC). Ms. Janjua is proficient with the following software: Primavera Project Planner, Primavera Contract Manager, SureTrak, SAP, i2, MS Projects.

SCHEDULING

Ms. Janjua has extensive schedule development, review, updating and analysis experience that includes utilizing CPM scheduling to produce master schedules for all project phases and project delivery methods. Her scheduling experience has been assisting general contractors as well as owners. She has represented the following projects:

- **Willis Ave Bridge Replacement - Queens, NY, $612**
- **New Jersey Transit Portal Bridge project - New Jersey, $7.3B**
- **MTA Capital Construction LIRR East Side Access - New York, $16.8B**
- **Cross Harbor Freight**
- **Lockheed Martin Multipurpose Building**
- **Lockheed Martin High Bay Addition- New York, $9.5M**
- **DASNY Bronx Family Courthouse Renovation - Bronx, NY**
- **NYCHA Housing Projects Renovations - Various Area, NY**
- **Mateo College of San Mateo Science Building 36 - San Mateo, CA, $19.5M**
- **University of California Berkeley C.V. Starr East Asian Library - CA, $42M**

PROJECT CONTROLS

Ms. Janjua also has extensive experience with project controls and cost for project development support for various projects. Her work has included establishing and providing full-time project controls for projects, reviewing and validating contractor, change order, project planning and status reviews; schedule reviews, monitoring actual progress, change order management, and final project reporting. She has represented the

following projects:

- DDOT 11th Street Bridge Rehabilitation - Washington, DC, $10.5M
- STV Project Controls Department Procedures
- NYCHA Housing Projects Renovations - Various Area, NY
- New Jersey School Development Authority Capacity Study - NY $450M
- Hillsborough Unified School District 2007 CIP, $449M
- BG Group Trinidad Cross Island Pipeline, $3B
- Sonatrach/Japan Ohanet Oil and Gas/Woodside Energy Southern Algeria Pipeline, $1B
- San Francisco Public Utilities Commission - San Francisco, CA

Dane C. McBaine, LEED AP

Scheduler

7 YEARS EXPERIENCE
7 YEARS WITH PMA

Representative Projects

Detroit Water & Sewerage Department (DWSD) Water Meter Replacement & Automatic Meter Reading Equipment Installation – Detroit, MI *($150M)*

DWSD 800 MHz Radio System Detroit, MI *($120M)*

DWSD CS-1304 As-Needed Capital Improvement Program Detroit, MI *($2B)*

DWSD CS-1433 As-Needed Capital Improvement Program Detroit, MI *($2B)*

Visteon Village Corporate Headquarters *($270M)*

Guardian Electric v. State of Michigan (Anchor Bay Schools)

State of Michigan Center for Forensic Psychiatry *($95M)*

Education

BS, Civil Engineering
Michigan State University

MIOSHA 10-Hour Training
Construction Association of Michigan

LEED Professional Accreditation Seminar
United States Green

Mr. Dane McBaine started his career as an intern with PMA in 1994. PMA hired Mr. McBaine as a full-time employee after he graduated from Michigan State University in 2003. Mr. McBaine has seven full-time equivalent years experience in project controls administration, project management, field inspection, and claims avoidance and resolution.

PROJECT CONTROLS

Mr. McBaine has been working on The Port Authority of NY & NJ (PANYNJ), Capital Improvement Program to implement the cost loaded schedules using Primavera P6.2 and Web client applications for the Project Management Office and capital planning group, which have a combined capital program and operating budget in excess of $1 billion per year on 100 projects. Mr. McBaine has performed schedule reviews and associated analyses for the DWSD on a regional 800 MHz radio system, Springwells Water Treatment Plant Chemical Feed Improvements, and on water meter replacement and automatic meter reading equipment installation projects, and for Visteon on their corporate headquarters project for compliance with respective contracts.

Mr. McBaine has provided cost estimating services and monthly billing reviews for the regional radio system project and on the water meter replacement and automatic meter reading equipment installation project. He also provided project controls for architect costs on the Visteon Village Corporate Headquarters project.

PROJECT MANAGEMENT

Mr. McBaine provided project management and administration services, including RFI responses, submittal reviews, correspondence, changes, and QA/QC of contractor work for a regional 800 MHz radio system and for water meter replacement and automatic meter reading equipment installation projects.

PROCUREMENT ASSISTANCE

Mr. McBaine provided procurement assistance for the water meter replacement and automatic meter reading equipment installation project. Responsibilities included assisting the client with proposal evaluation, contract award, and negotiation of contract scope and price.

DISPUTE RESOLUTION

On claims for Water Works Park II, Lake Huron Water Treatment Plant, *Guardian Electric vs. State of Michigan* (Anchor Bay Schools), *Center for Forensic*

Psychiatry vs. URS Corporation, and *Rockwell International vs. MDOT*, Mr. McBaine provided support to senior consultants through analyses of cost and damages, schedule analyses, delay and disruption analyses, and by preparing issue books.

REPRESENTATIVE PROJECTS

- **Detroit Water and Sewerage Department (DWSD) Water Meter Replacement & Automatic Meter Reading Equipment Installation** – Detroit, MI *($150M)*
- **DWSD Regional 800 MHz Radio System** – Detroit, MI *($120M)*
- **DWSD Springwells Water Treatment Plant Chlorination Feed Improvements** – Detroit, MI *($14M)*
- **Visteon Village Corporate Headquarters** – Van Buren Twp., MI *($270M)*
- ***Guardian Electric vs. State of Michigan* (Anchor Bay Schools)** *(Conf'l)*
- ***State of Michigan Center for Forensic Psychiatry vs. URS Corporation*** – Ann Arbor, Mi *(Conf'l)*
- **DWSD Water Works Park II** – Detroit, MI *($288M)*

ZACHARY O. WALTERS, PSP

Scheduler

5 YEARS EXPERIENCE
1 YEARSWITH PMA

Education

BS Electrical Engineering,

University of Maryland

Professional

AACEi Planning & Scheduling Professional (PSP)

Mr. Zachary Walters has extensive experience in commercial and residential construction. He is proficient in Primavera/Oracle Project Management (P3, P5, and P6), SureTrak, Microsoft Project Planner, entire Microsoft Office Suite, Trouble Shooting and Updating Windows Software Programs, HTML. He has completed various coursework including Comprehensive Calculus, Physics, and Engineering Curriculum, Numerical & Statistical Methods, Urban Planning, Product Liability.

SCHEDULING

Mr. Walters has performed expertise scheduling service for the following types of projects including Schools, Waste Water Treatment & Water Pollution Control, Road & Bridge, Scientific Research Laboratories, Vertical Structures, Embassies and Mixed Use Residential. He is currently serving as a scheduler to perform schedule management tasks for NYCDEP project. This project involves the expansion and upgrade of the existing 350 MGD Newtown Creek Wastewater Treatment Plant in Brooklyn, NY. The upgrades involved will enable the owner to begin a major $1 billion expansion and upgrade at the conclusion of this assignment.

PRIOR EXPERIENCE

Prior to joining PMA, Mr. Walters worked with FTI Consulting *in* Rockville, MD. He developed and worked with CPM schedules of up to 30,000 activities and worked closely with clients on-site or in home offices when needed. He loaded schedules with costs and resources for billing and usage reporting and generated comprehensive schedule update packages with reports for schedule narratives, remaining Work, critical Path, total float and provide monthly and weekly look-a-heads, TIAs and fragnets.

Cost Engineers/Estimators

Edward Frysztacki, C.C.E., P.E.

COST ENGINEER/ESTIMATOR

Mr. Frysztacki has a rare combination of talents: he is an experienced structural engineer, an expert CPM scheduler, and an excellent cost estimator. He has been performing these duties since 1977. His experience includes highways and bridges, grading and drainage, sewage treatment plants, pumping stations, and building design, including the structural, civil, mechanical, and electrical trades. Relevant project experience includes:

EDUCATION	B.S.C.E., Geotechnical Engineering, University of Toronto, 1977
REGISTRATION/ CERTIFICATIONS	Professional Engineer, NY Certified Cost Engineer, NY Professional Engineer, NJ Primavera Expedition (Project Controls) Troubleshooting Exterior Masonry Walls Certification, NY Brick Masonry-Inspections and Quality Control Certification, NY Brick Veneer and Metal Stud Backup Exterior Wall Cert., NY
YEARS WITH THIS FIRM	19
YEARS WITH OTHER FIRMS	14

Program Mgmt. Services for: Perry, Tow pound & DECAS Bldgs at the Brooklyn Navy Yard - LiRo is currently serving as the Program Manager for the construction of the Perry Avenue Building and the NYPD Tow Pound Building at the Brooklyn Navy Yard. LiRo's involvement began during the Pre-construction (Design) Phase and will continue through the completion of construction. Our responsibilities during preconstruction included:

- Review design documents, provide recommendations
- Value engineering
- Estimating
- Constructability reviews
- LiRo's Pre-Construction efforts helped to reduce the overall building costs and provide a more efficient design. Additionally, LiRo advised the owner (BNYDC) of the various types of construction management contracts that were available. We helped guide their selection into using a CM/Build contract and participated in the procurement/selection of a Construction Manager. During the Construction Phase of the project, LiRo is performing the following services:
- Ensure CM compliance with contract documents
- Review CM's cost requisitions
- Review CPM schedules
- Review project budget and compare with actual expenditures
- Provide recommendations regarding change orders/requests for time extensions

(Brooklyn Navy Yard Development Corporation)

New York City Housing Authority CM/Build Requirements Contracts (Two Contracts: 2004-2007 & 2005-2008), Design Review / Constructability Review / Value Engineering - Under these contracts, LiRo is performing work on a task order basis. Currently, we are in the design or construction phases of renovating and/or constructing numerous community centers, performing upgrades of building systems and facade/roofing restoration at several housing projects throughout New York City. These properties all require that LiRo perform pre-construction and construction phase services. (NYCHA, $250M)

DASNY School of Architecture, Urban Design and Landscape Architecture (SAUDLA) - Demolition and reconstruction of a 136,000 sf building to become the new School of Architecture, Urban Design and Landscape Architecture (SAUDLA) building. The building frame was structural concrete, which remained. The balance of the building was demolished and rebuilt, including façade,

interior and mechanical, electrical and plumbing systems. Prior to demolition, space was provided for the current occupants. These occupants were permanently relocated within the campus. This required the renovation of various locations at a cost of approximately $8M and was accomplished in one year.

FDNY Fire Training Academy at Randall's Island, Phase II, Estimator - This New York City DDC project involved the renovation of two (2) existing buildings and construction of a new building at the FDNY facility at Randall's Island. ($7.5M)

Kings County Hospital Center - Office of the Chief Medical Examiner (OCME) Construction Management Services, - LiRo managed the construction of the new Office of the Chief Medical Examiner (OCME) facility in Brooklyn. This is a state-of-the-art facility offering the staff and the public a safe and private environment. Shared between Kings County Medical Center and the OCME, the new facility contains space designated for NYPD investigators. It was designed to be sensitive to the surrounding community and hospital campus. LiRo's role was to provide comprehensive construction management services from design development through the completion of construction. This included the coordination of all construction operations and related vehicular traffic so that it does not interfere with local traffic or hospital campus operations. The 40,000 sf facility worth $17M was constructed in 28 months. (DASNY, $18M)

Bay Park Water Pollution Control Plant in Nassau County, NY, CPM Scheduling - Included pump stations and other sewage treatment structures. Projects included construction of various concrete process control structures (e.g. refurbishing of 5 mainline sewage pumps which serve the plant) and supplementary plant operations buildings. CPM scheduling detailed procurement and installation of state of the art computerized instrumentation systems. (NCDPW, $80M)

West 158th Street Maintenance and Repair Facility, Preconstruction Review/Estimator - This project involved the construction of a NYCDOT Maintenance and repair facility beneath the Riverside Drive in Upper Manhattan. In the design phase, Mr. Frysztacki was part of the estimate and document review team. (NYCDOT, $12M)

Cedar Creek Water Pollution Control Plant in Nassau County, NY, CPM Scheduling - Projects included construction of various concrete process control structures and supplementary plant operations buildings. CPM scheduling detailed procurement and installation of state of the art computerized instrumentation systems. (NCDPW, $20M)

Department of Homeless Services On Call Services, Design Review/Estimator - Provided construction management services to the Department of Homeless Services under a requirements contract. The contract demanded both construction management and engineering/architectural expertise. He managed over a dozen projects at numerous homeless shelters. Responsibilities included design review, coordination, estimating, and assessment; award coordination, analysis, and recommendations; project management and coordination; project scheduling and progress surveillance; construction planning; cost estimating verification; surveillance of quality control and inspection of construction; contract document interpretation; administration of project documents and records; claims analysis and defense. Projects included roof and window replacement, mechanical and boiler replacement, facade repair and general renovation. (NYCDHS, 1999 - 2000, $13M)

Employment History:
The LiRo Group (1991-present)
Associate, Sr. CPM Scheduler/ Chief Estimator

Alfio Paladino, P.E.

COST ENGINEER/ ESTIMATOR

Mr. Paladino has 24 years experience in the construction industry. His extensive experience includes cost estimating, project management and engineering. He has worked on a broad range of Capital Program Projects for New York City Transit where he has held the positions of Senior Estimator, Project Engineer and Mechanical Engineer. Mr. Paladino's broad range of experience in construction and engineering has enabled him to become an accomplished Cost Estimator. He has extensive experience in developing cost estimates for rail construction projects in the areas of Power, Mechanical Systems, Rail Facilities, Environmental Abatements and Fiber Optics. His experience as a Project Engineer, managing construction projects, provides the background required for developing and interpreting construction work scopes. Representative project experience includes:

EDUCATION	B.S.M.E., Mechanical Engineering, Manhattan College, 1984
REGISTRATION / CERTIFICATIONS	Professional Engineer, NY
YEARS WITH THIS FIRM	6
YEARS WITH OTHER FIRMS	20

New York City School Construction Authority - Emergency Response Management and Coordination Program, New York City - Estimator - Under this contract LiRo managed and coordinated responses to emergencies, on the basis of a telephone call at any time during a twenty-four hour period and on any day Monday through Sunday. LiRo immediately mobilized trades, people or firms and materials for the purpose of correcting or eliminating hazardous materials or dangerous conditions at public school in the five boroughs of New York City. Some of the work was performed in occupied schools. Accordingly, LiRo used best efforts to insure that all such work was performed in a safe and secure manner with minimum disruption to students and school personnel. (NYCSCA, $70M)

Bronx Civil Supreme Courthouse, Estimator- Under this contract, LiRo provided construction management services for the Interior Renovation & Stair Remediation Work. As one of the services, the electrical work cost estimate was performed for maintenance of budget. The electrical work consisted of new interior lighting, power distribution panels, fire alarm system upgrades and telecommunication system. In developing the estimate, calculating quantities and the obtaining of material price quotes were performed. As part of the estimating process, value engineering suggestions were developed and implemented to achieve budget goals. In addition, constructability review was also performed to identify deficiencies and conflicts in the contract documents for correction prior to bid to avoid potential change order work during construction. The total estimated construction cost was calculated to be over $21M.

Battery Park City Community Center, Estimator- As part of the construction management responsibilities for this project, LiRo was required to determine the adequacy of budget for the construction costs reflective of the project design documents. Electrical work cost estimate was performed for new systems which include power distribution, lighting, fire alarm, communications and security. Constructability review of the construction documents was also performed. The total estimated electrical work cost was calculated to be over $5.4M.

Brookhaven National Laboratory National Synchrotron Light Source II, Estimator- The scope of work for this contract consisted of the construction of a new research facility to be used for the development of new efficient energy sources. This facility includes a new one-story Ring Building,

Injection Building and RF Building along with various other buildings that will house MEP systems. The contract required LiRo to prepare cost estimates for the MEP systems. Electrical work estimate was performed. Elements of this work included: site work power distribution system, site lighting, new switchgears and power distribution panels, interior lighting and power, emergency generators and fire alarm system. The total estimated construction cost was calculated to be over $195M.

Norwalk Community College, Estimator- The scope of work for this contract consisted of the construction of a new building wing to replace an existing outdated one. The renovation of another existing wing was also part of the scope of work. Electrical cost estimate was developed for construction costs related to new systems that included power distribution, lighting fixtures, communication, fire alarm, audiovisual and security work. The performance of quantity take-offs, obtaining material price quotes and utilization of estimating software along with current wage rates and industry standards were implemented. Constructability review of documents was also performed to ensure project scope. The total estimated construction cost was calculated to be over $28M.

New Family Intake Center, Estimator- The construction of a new 80,000 SF multi-story office building for the Department of Homeless Services was to be managed by LiRo. The development of a construction cost estimate for all construction work was required as part of LiRo's construction management services to ensure the adequacy of the allocated budget. Electrical and plumbing work estimates were developed as part of this task which included: new power distribution system; lighting; security; fire alarm; domestic water distribution; drainage including sanitary and sewer lines. Estimates were developed by performing quantity take-offs and utilizing documented wage and productivity rates and material price quotes. Constructability review of the construction documents was also performed. The total estimated construction cost was calculated to be over $47M.

DASNY/HHC Emergency Power Systems Upgrade, Estimator- The scope of work for this contract consisted of demolition and reconstruction of outdated Emergency Power Systems at six hospital trauma centers and various other smaller hospital facilities located in the New York City area. The contract required LiRo to prepare cost estimates for the various types of work in the projects. Typical elements of work for these projects included: Emergency Generators, paralleling switchgear, remote radiators for generator cooling systems, power distribution panels, underground fuel oil storage systems and conduit & wire distribution to all associated equipment. The total estimated construction cost was calculated to be over $121M.

Engine Company #277 / Ladder Company 112 - CM Build Services, Estimator - As part of a Requirements Contract, LiRo managed the new construction, renovation, and/or demolition of fire houses or related facilities throughout New York City. The contract required that LiRo participate during the design phase by preparing cost estimates, schedules, reviewing phasing and staging system and constructability issues. Typical elements of construction for these projects included: structural steel, masonry facade, historical masonry and details in some cases, mechanical systems for heat and ventilation, electrical service, vehicle exhaust extraction system, vehicle fuel storage and distribution.

Employment History:

The LiRo Group (2004-Present)
Senior Estimator
New York City Transit (1987 - 1994)
Senior Cost Estimator, Project Engineer, Mechanical Engineer
Spielman Associates Consulting Engineers (1985-1987)
Project Engineer

Mireya Yong
COST ENGINEER/ ESTIMATOR

Ms. Yong has over sixteen years experience within the construction industry. Prior to joining LiRo, she served as a Senior Estimator for MTA-New York City Transit. Additionally, she has worked in the capacity of Structural Design Engineer, Resident Engineer and Field Inspector for MTA-New York City Transit. As a Senior Estimator, Ms. Yong has worked in establishing budgets for Capital Projects. She has prepared detailed construction cost estimates from the preliminary through final stages of design. Ms. Yong has helped resolve change orders by: preparing cost estimates, reviewing contractors' const estimates, negotiating cost with contractors finalizing the change orders, and preparing feasibility studies and constructability reviews of design documents. Representative projects include

EDUCATION	B.S., Civil Engineering, Polytechnic University
REGISTRATION / CERTIFICATIONS	Intern Engineer, NY Primavera Expedition (Project Controls)
YEARS WITH THIS FIRM	10
YEARS WITH OTHER FIRMS	16

No. 7 Subway Line Extension, Program and Construction Management. New York City's Number 7 Subway Line, known as the Flushing Line, is the system's busiest, linking Queens to Times Square. The new 7,000-foot-long tunnel stretches west and south from Times Square to the Jacob J. Javits Convention Center on West 34th Street and 11th Avenue. LiRo is providing program and construction management for the Number 7 Subway Line Extension, which includes:

- 9,400 feet of tunnel by excavation, primarily with 2 Herrenknect Hard Rock Double Shield 22.5' diameter tunnel boring machines
- Installation of 5 shafts, averaging 110 feet deep and 39 feet in diameter. The shafts are installed both by excavation in soft ground and drill and blast in rock. The finished shafts are lined with steel fiber reinforced shotcrete.
- A 950' by 65' x 66' station cavern at West 34th Street, constructed by drill and blast methods of underground construction.
- Construction of steel and concrete structures for stations and other facilities, construction and installation of tracks, drainage, third rail power and other electrical systems, signals, communications, HVAC and tunnel ventilation systems.
- Multiple fan plants, HVAC facilities, traction power substations, facility power substations, circuit breaker houses, fare collection and communications and signal rooms.

The terminal at 34th Street will be fully fitted out for operation and commissioned with the Number 7 Subway Line Extension project, including major building work to make a complete station. (MTACC, $2.1B)

DASNY, Bernard and Anne Spitzer School of Architecture Project- LiRo completed the demolition and reconstruction of a 136,000 sf building to become the new Bernard and Anne Spitzer building. The building frame was structural concrete, which remained. The balance of the building was demolished and rebuilt, including façade, interior and mechanical, electrical and plumbing systems. Prior

to demolition, space was provided for the current occupants. These occupants were permanently relocated within the campus. This required the renovation of various locations at a cost of approximately $8M and was accomplished in one year. (DASNY, $60M)

DASNY, Bronx Psych Center- LiRo is managing the construction of the new Adult Behavioral Center in the Bronx. The project is being built for the New York State Office of Mental Health (OMH) through the New York State Dormitory Authority. The four-story building features standing seam metal roofing, a combination of brick, stucco & metal panels at the facades, large curtain wall at the main entrance elevation and skylights at the one story section of the building. All HVAC equipment will be located on the main roof of the building. The Adult Center is being designed by STV and will be a LEED Silver certified building and is being designed using BIM/Revit software. ($85M)

Preconstruction CM Services for Storrs Hall Addition & Modifications at the University of Connecticut- LiRo provided Preconstruction Construction Management services for the construction of a new 15,000 sf classroom building addition as well as modifications to existing Storrs Hall. Preconstruction services included: Cost Estimating, CPM Scheduling, Site Logistics, Phasing Plans and Constructability Reviews. (UConn, $11.75M)

Additional Project Experience

- Bronx Civil Supreme Courthouse (DASNY, $14.5M)
- 448 Bed Addition to GRVC (NYCDDC, $90M)
- Staff Locker Facility at CIFM (NYCDDC, $5M)
- Perimeter Alarm Upgrade and Reconstruction for Fence Security at Riker's Island (NYCDDC, $2M)
- Minimum/Medium Security Facility at Yaphank (NYCDDC, $10M)
- Electrical Upgrade for Police Firing Range (NYCDDC, $6M)
- Regent Family Residence (NYCDHS)
- Window Replacement at Charles Gay Annex Bldg (NYCDHS)
- Roof Replacement at Hospitality House (NYCDHS)
- Miracle Makers SRO, Building Upgrade (NYCDHS)
- Brooklyn Women's Shelter, Building Upgrade (NYCDHS)

Employment History:

The LiRo Group (1999-2004, 2008-Present)
Project Controls
Estimator
MTA New York City Transit (1997-1999)
Estimating and Cost Control Division
Estimator
Structural Engineering and Design Division (1993-1997)
Design Engineer
Station Construction, Capital Program Management (1987-1993)
Resident Engineer

William Curran
COST ENGINEER/ESTIMATOR

Mr. Curran has approximately 16 years of construction experience on a wide variety of types of construction projects. These projects range from structural, airport, and heavy construction projects to environmental work at water pollution control facilities. Mr. Curran has served as an estimator, construction inspector, project engineer, and office engineer on numerous projects throughout the New York Metropolitan area.

EDUCATION	B.S., Mechanical Engineering, New York Institute of Technology
REGISTRATION/ CERTIFICATIONS	Primavera Expedition (Project Controls)
YEARS WITH THIS FIRM	12
YEARS WITH OTHER FIRMS	6

His responsibilities have included: Performing constructability reviews of contract documents

- Preparing detailed cost estimates
- Negotiating and coordinating change order work
- Inspecting field work for quality control compliance
- Preparing daily inspection reports, meeting minutes, and project correspondence
- Reviewing contract plans and specifications
- Reviewing and processing contractor/subcontractor payments
- Reviewing shop drawings
- Reviewing project CPM schedules
- Resolving contractors' claims for delay and associated damages

Representative projects include:

New York City Housing Authority CM/Build Requirements Contracts (Two Contracts: 2004-2007 & 2005-2008), Estimator / Design Review / Constructability Review / Value Engineering - Under these contracts, LiRo is performing work on a task order basis. Currently, we are in the design or construction phases of renovating and/or constructing numerous community centers, performing upgrades of building systems and facade/roofing restoration at several housing projects throughout New York City. These properties all require that LiRo perform pre-construction and construction phase services. (NYCHA, $250M)

Department of Homeless Services, Estimator and Plan Reviewer - Mr. Curran has performed detailed budget estimates, change order estimates and constructability reviews for various DHS projects.

- Jackson Family Residence
- Jerome Avenue
- Help USA - Supportive Employment Center

CUNY School of Architecture, NY, NY, Estimator and Plan Reviewer - This New York State Dormitory Authority project involved the total renovation of the existing City College "Y" building into the future School of Architecture. Mr. Curran performed detailed budget estimates and constructability reviews for each of the schematic design, design development and construction document phases. (DASNY, $40M, 2008)

FDNY Fire Training Academy at Randall's Island, Phase II, Estimator - This New York City DDC project involved the renovation of two (2) existing buildings and construction of a new building at

the FDNY facility at Randall's Island. Mr. Curran performed detailed budget estimates during the pre-bid phase of the project. (NYCDDC, $10.5M, 2005)

James A. Thomas Center (JATC) Renovations at Rikers Island, Estimator - Comprehensive construction management services were provided to the renovation of the James A. Thomas Center on Rikers Island (approximately 240,000 sf). The original construction of this high security facility dates back to 1933 and has a housing capacity of 1600 inmates. The program for renovation consisted of retrofitting existing spaces within the facility cell blocks, day rooms, showers, pantries, housing areas, mechanical rooms, electrical rooms, and common spaces. Part of the renovation program upgraded the electrical systems and domestic hot water distribution system. (NYCDDC, $25M, 2004)

Kings County Hospital Center - Office of the Chief Medical Examiner (OCME) Construction Management Services, Estimator - LiRo managed the construction of the new Office of the Chief Medical Examiner (OCME) facility in Brooklyn, completed in 28 months. This state-of-the-art 40,000-s.f. facility offers the staff and the public a safe and private environment that is shared between Kings County Medical Center, the OCME, and NYPD investigators. It was designed to be sensitive to the surrounding community and hospital campus. LiRo provided comprehensive construction management services from design development through the completion of construction including the coordination of all construction operations and related vehicular traffic to avoid interference with local traffic or hospital campus operations. (DASNY, $18M, 2004)

Steam Tunnel Renovations at Rikers Island, Long Island City, NY, Project Engineer/ Inspector - This project involved the renovation of existing steam tunnels from the central power plant to the various facilities at Rikers Island. Work included removal and replacement of existing steam piping expansion joints, valves, supports, condensate pumping stations and the modification of existing and addition of new steam and condensate piping. Also included in this work were the repair of existing concrete tunnel walls and the addition of new concrete vent houses. (NYCDDC, $19M, 2004)

Manhattan Civil Court, Construction Management Services, Estimator - This project called for an extensive reconstruction of the building's infrastructure and exterior to be completed within 12 months, while building and court operations continued without interruption. Key elements included electrical, mechanical/HVAC, plumbing, fire protection, fire alarm and life safety, HVAC controls and building management systems, DAD compliance for building, entrances and bathrooms, facade and parapet walls, structural and waterproofing, security systems. LiRo's construction management services for this facility included design reviews for constructability; cost estimating; scheduling; development of phasing and staging plans; trade coordination; construction inspection. (DASNY, $16M, 2003)

Bridgeport Schools Repair and Replacement Project, Estimator - LiRo is providing construction management services for 20 schools in Bridgeport CT. The project includes various repair work from pavers, window replacement, masonry repair, HVAC upgrade and toilet room upgrades. (Bridgeport School District, $10M, 2008)

Employment History:
The LiRo Group (1998-present)
Estimator/Constructability Reviewer
Durr Mechanical Construction (1997-1998)
Project Manager/Asst. Project Manager
H. Sand & Co./Slattery/Skanska (1993-1997)
Project Engineer

Prakash Daulatani

COST ENGINEER/ ESTIMATOR

Mr. Daulatani has over 13 years of experience as a cost estimator and performing constructability reviews on various projects including building and road construction. Representative projects include:

EDUCATION	B.S., Civil Engineering, RKNEC College of Engineering, India, 1993 M.S., Civil Engineering, BITS Pillani, India, 1995
YEARS WITH THIS FIRM	5
YEARS WITH OTHER FIRMS	10

New York City Housing Authority CM/Build Requirements Contracts (Two Contracts: 2004-2007 & 2005-2008), New York, Cost Estimator/Plan Reviewer - Under these contracts, LiRo is performing work on a task order basis. Currently, we are in the design or construction phases of renovating and/or constructing numerous community centers, performing upgrades of building systems and facade/roofing restoration at several housing projects throughout New York City. These properties all require that LiRo perform pre-construction and construction phase services. Mr. Daulatini is involved in the following projects; Tompkin Houses Electrical Upgrade, Woodson Houses, Electrical Upgrade, Electrical upgrade Albany Houses, Wyckoff Garden Roof Replacement, Fort Washington Roof Replacement. (NYCHA, $250M)

Reactivation of the Staten Island Rail Road, Cost Estimator - LiRo was responsible for the Construction Management of the contractor activities for the Reactivation of the Staten Island Railroad. The construction contract, on a fast-track schedule of 18 months, was awarded at $40M.
The Construction Management scope of services included the following activities:

- Owners on-site representative
- Construction Supervision and Inspection
- Coordinated USCG and NYS DEC permits
- Monitoring the contractors' activities
- Contract Document Review to identify long lead procurement items and special conditions
- Expediting and tracking of shop drawing submittals
- Providing project controls support to monitor a baseline schedule and construction progress
- Develop coordinated and maintain work plans for each work element
- Estimating changes in scope
- Scheduling and review of contractor schedule updates

(NYCEDC, $40M, 2005)

Family Intake Center, Cost Estimator/Plan Reviewer - This project consists of the construction of office building for Department of Homeless through the New York City Department of Homeless Services. The Seven story building features a detailed Terra Cotta Rain Screen system and has been designed to achieve a silver LEED rating. The building has approximately 84000 SF of floor area with a total cost of $47 million dollars. (NYCDDC, $47M)

Mamaroneck Public Library, Cost Estimator/Plan Reviewer - This project consists of the construction of a major renovation and addition to the Mamaroneck Public Library approximately doubling the size of the existing facility. The library site is located on a corner bound on the north and west by narrow streets, on the south by the Emelin Theater and on the east by the rear yards of stores along Mamaroneck Avenue. The multilevel facility includes an extensive renovation of the existing facility (including MEP systems) and a new addition. When completed, the new facility will total 44,294

sf. The facade of the facility is a skillful blend of the old stone work with new energy efficient materials defining the new addition and entry. (Mamaroneck Public Library, $12M)

Betances Houses IV & VI Community Center Renovation, Cost Estimator/Plan Reviewer - The project consists of the renovation of two existing buildings; a one story boxing gym with a full cellar, which is to be included in the renovation and a Community Center which is located on the first floor of an adjacent residential tower. The existing Boxing Gym is a one-story steel frame building with a full cellar and is to be completely gutted including its exterior brick and block walls. The existing Community Center located in the residential tower adjacent to the Boxing Gym is to be completely gutted, including interior, non-bearing CMU partitions. This area is to be completely renovated. Vehicular and pedestrian ramps that exist within the boxing gym building and separate the two program spaces are to be removed and replaced with new program space. The two buildings are to be connected internally and a two-stop elevator is to be added to service the cellar boxing area. (NYCHA, $250M)

Bronx Civil Supreme Court House, Bronx, NY, Cost Estimator/Plan Reviewer - This project is being performed in three separate contracts; the design phase, the construction phase, and the general conditions work phase. The phasing will take into consideration areas of availability, work hours, temporary protection, swing space, coordination with DCAS MEP and elevator projects, safety and security. The plans will include temporary signage, posting notices and newsletters. (DASNY, $16M)

Engine Company 201, Brooklyn, NY, Cost Estimator/Plan Reviewer - Preparation of swing space, demolition of existing and erection of new 12,000 sf firehouse. Due to community requirements a swing space was prepared which include all FDNY operational requirements prior to the demolition of this firehouse.
This site is located on a main Brooklyn thoroughfare and is adjacent to a MTA subway tunnel. The demolition, foundation and structural work will all be monitored so as to not impact the MTA and the adjoining buildings. The project will include all required FDNY systems. (NYCDDC, $10M)

Bernard Fineson Replacement Facility, Queens, NY, Cost Estimator/Plan Reviewer - The Project includes construction of eight (8) buildings serving 120 developmentally disabled and medically frail consumers in addition to a Program/Administration Building. The new construction for the resident building consists of six (6) one story residences for medically frail consumers and two (2) two-story residences for multiple disability consumers. The building program spaces comprise a total of 66,600 gross square feet. Program/Administration Building is located on a 12.46 acre open sited adjacent to the grounds of the New York State Creedmore Psychiatric Hospital, Queens, NY. The Program/Administration Building will contain 70, 274 gross square feet on two (2) floors plus a basement. The total program area for the Project is 122,454 gross square feet. (DASNY, $80M)

Employment History:

The LiRo Group (2005 to Present)
Estimator
VJ Associates, Inc (2000-2005)
Cost Estimator
N R E Associates, Inc (2000)
Cost Estimator
Public Works Department (India) (1996-2000)
Site Engineer/Cost Estimator
M N Dastur & Company Limited (India) (1995)
Training Engineer
Junghare Designers & Consultants (India) (1993-1994)
Site Engineer

Wayne Egbert

COST ENGINEER/ ESTIMATOR

EDUCATION	B.S., Civil Engineering, Polytechnic Institute of New York, 1981 A.A.S., Civil Engineering, Nassau Community College, 1978
YEARS WITH THIS FIRM	10
YEARS WITH OTHER FIRMS	17

Since 1981 Mr. Egbert has worked in the field of Civil Engineering. He has extensive construction project management experience having worked as a Project Manager and an Assistant Project Manager for a general contractor. He has also worked as a Structural Engineer in the concrete industry and has performed cost analysis and feasibility studies for proposed and completed projects. He has experience overseeing all areas of construction projects including estimating, contract award and project management. He has experience preparing feasibility studies as well as scope preparation while working for a utility company. Mr. Egbert currently uses and is thoroughly familiar with Primavera Expedition. Representative projects include:

DASNY/HHC Emergency Power Systems Upgrade, Cost Estimator - The scope of work for this contract consisted of demolition and reconstruction of outdated Emergency Power Systems at six hospital trauma centers and various other smaller hospital facilities located in the New York City area. The contract required LiRo to prepare cost estimates for the various types of work in the projects. Typical elements of work for these projects included: Emergency Generators, paralleling switchgear, remote radiators for generator cooling systems, power distribution panels, underground fuel oil storage systems and conduit & wire distribution to all associated equipment. The total estimated construction cost was calculated to be over $121M.

Queens Midtown Tunnel, Construction Administration and Inspection Services for the Rehabilitation of the Roadway Drainage System (QM-10), Estimator - This project involved the rehabilitation of the tunnel's roadway drainage system. The work was performed at six locations (Queens Ventilation Building, Manhattan Ventilation Building, Queens Plaza, Manhattan Plaza Entrance, Manhattan Plaza Exit, Mid-River Pumping Station). The project called for the replacement of the main drainage pumps as well as the stripper pumps at all pump stations. Specific work items included: Replacement of all switchgear, MCC's, circuit breakers and wiring for the pumps Lead and asbestos abatement Concrete and structural steel repair Installation of new lighting and unit heater Replacement of liquid level controller Replacement of piping and piping support Replacement of piping insulation Concrete repair of the drainage sumps (MTA-TBTA, $6M, 2003)

DASNY School of Architecture, Estimator - Demolition and reconstruction of a 136,000 sf building to become the new School of Architecture building. The building frame was structural concrete, which remained. The balance of the building was demolished and rebuilt, including façade, interior and mechanical, electrical and plumbing systems. Prior to demolition, space was provided for the current occupants. These occupants were permanently relocated within the campus. This required the renovation of various locations at a cost of approximately $8M and was accomplished in one year.

NYC Department of Environmental Construction, Lead Estimator – Mr. Egbert was responsible for implementation of a cost estimating program in the Bureau of Design and Construction (BEDC). This program was designed in order to develop consistent formats for Cost Estimates from Consultant Engineers. This consisted in the development of Work Breakdown Structures, Basis of Estimate Reports and estimates in a consistent format (IE: Timberline, Heavy Bid, etc.) Presently reviewing projects in the NYC DEP's fiscal budget thru 2015. These projects consist of tunneling projects, Dams, Pipelines, Water Treatment Plants and Waste Water Treatment Plants. (6/08-2010)

New York City Housing Authority CM/Build Requirements Contracts (Two Contracts: 2004-2007 & 2005-2008), Estimator / Design Review / Constructability Review / Value Engineering - Under these contracts, LiRo is performing work on a task order basis. Currently, we are in the design or construction phases of renovating and/or constructing numerous community centers, performing upgrades of building systems and facade/roofing restoration at several housing projects throughout New York City. These properties all require that LiRo perform pre-construction and construction phase services. (NYCHA, $250M)

Mechanical/HVAC Reviewer for the Long Island Rail Road, Constructability Review and Value Engineering - This 4-year project involved constructability review, value engineering, and code compliance review for numerous LIRR projects. The projects were all reviewed by "peer" groups comprised almost exclusively of licensed professional engineers and registered architects. The LIRR was provided with detailed written reports for the reviews as well as monthly summary reports outlining the work performed and the budget status. He reviewed the designs of others in accordance with MTA Long Island Rail Road Station Design Guidelines and the Guidelines for Preparation of Technical Requirements, the NY State Uniform Fire Prevention and Building Code, applicable requirements of the Americans with Disabilities Act (ADA), and other applicable state and federal requirements. In addition, he provided assessments and recommendations regarding constructability, value engineering, compliance with applicable codes and requirements, phasing and interface of the work with other Railroad activities, and necessary flagging and support, as well as conflicts or omissions in the documents. (Project Manager: M. Wolfe-Mulch, LIRR, 2003)

Bernard Fineson Replacement Facility, Cost Estimator - Demolition/New construction of eight residential buildings in addition to an 80,000 sf Program/ Administration Building. Program/Administration Building is located on a 12.46 acre open sited adjacent to the grounds of the New York State Creedmore Psychiatric Hospital, Queens, NY. The Program/Administration Building will contain 70, 274 gross square feet on two (2) floors plus a basement. The total program area for the Project is 122,454 gross square feet. (DASNY, $80M)

Employment History:

The LiRo Group (1998-2008) (2010-Present)
Senior Cost Estimator
MWH Constructors (2008- 2010)
Lead Estimator
Durr Mechanical Construction Inc. (1993 -1998)
Project Manager, Assistant Project Manager, Project Coordinator
Hazen & Sawyer, Environmental Engineers and Scientists (1991-1993)
Engineer
Abrahams and Karp Services, Inc. (1984-1991)
Structural Engineer
Jamaica Water Supply Company (1982 - 1984)
Management Engineer
Scorcia & Diana Associates, Inc. (1981- 1982)
Project Manager

Steven M. Pagani

Sr. Cost Estimator

25 YEARS EXPERIENCE
7 YEARS WITH PMA

Education

Construction Management Program

Worcester Polytechnical Institute

Civil Program Studies

Cape Cod Community College

Construction Supervisory License, MA #[redacted]

Real Estate Salesperson, MA

Mr. Steven Pagani has extensive experience in all corporate administrative functions. His industry experience includes construction, government, and infrastructure projects.

COST ESTIMATING

Mr. Pagani has developed many construction cost estimates on a variety of projects. He has performed material takeoffs requiring the review of contract documents, specifications, cut sheets, and impact statements. He also supervised the development of a proprietary cost-based estimating system for primary use in the New York City area, with expansion possibilities on a national level.

MTA / LIRR East Side Access Project - New York, NY

Mr. Pagani is currently the senior estimator for the East Side Access Project. The East Side Access Project is a $ 7 Billion public works project being undertaken by the Metropolitan Transportation Authority (MTA) in New York City, designed to bring the Long Island Railroad (LIRR) into a new East Side station to be built below and incorporated into Grand Central Station in Manhattan.

Port Authority Trans Hudson (PATH) World Trade Center (WTC) Transportation Hub - New York, NY

This $2 billion project was designed by world-renowned architect Santiago Calatrava to serve as a source of inspiration for the heroes, survivors, and families of September 11th, as well as for those who live and work in and visit Lower Manhattan.

SCHEDULING

Mr. Pagani has extensive schedule development, review, and analysis experience that includes utilizing CPM scheduling to produce master schedules for all project phases and project delivery methods.

Croton Water Treatment Plant - New York, NY

This $2 billion project is a 290 MGD facility to treat New York City's Croton water supply.

DestiNY USA Management Company LLC - Syracuse, NY

The DestiNY USA project involved the design and construction of an $25 billion amusement/retail/hotel complex. This includes 12 hotel towers and 6 million-SF of retail space.

CLAIMS ANALYSIS

Mr. Pagani has prepared claim estimates and has assisted in the negotiations of more than $325 million in contract claim settlements.

Massachusetts Turnpike Authority (MTA) Central Artery Tunnel (CA/T) - Boston, MA

This $14.6 billion project is the largest infrastructure project in the country. It involves extending I-90 under the Boston Harbor to Logan International Airport and replacing the existing I-93 highway viaduct with a newly constructed tunnel.

PRIOR EXPERIENCE

Prior to joining PMA, Mr. Pagani worked with Bearse Corporation in East Sandwich, Massachusetts, as a Senior Project Manager where he managed all ongoing projects for this midsized contracting firm. His project highlights include the MBTA Police Station, Boston, MA; Am-Trak car wash maintenance facility, Boston, MA; a wastewater treatment facility, Otis Air Force Base, Sandwich, MA; and the Brighton District Court House, Brighton, MA.

Specific Relevant Experience

D

1. Entities for which Similar Services have been provided

LiRo's multidisciplinary capability and locally-based resource pool enables the firm to provide a full range of professional services to our clients. The firm is unique in that we offer primary strengths in professional Program/Project/Construction Management (scheduling, cost control, constructability review, value engineering, bid packaging, claims control, construction program management and on-site inspection) while also offering the full range of engineering support services (civil, environmental, structural, mechanical, electrical, and architectural.)

1. Entities – Similar Services
2. Specific Relevant Experience

LiRo is presently managing the construction of over $10B of public sector capital construction projects locally. LiRo's management staff has extensive experience coordinating, progressing and delivering major construction projects in difficult environments and sensitive operational facilities. A particularly noteworthy assignment awarded to LiRo and led by Luis Tormenta, P.E. in June 2008 involved an assessment of the schedule, budget and challenges for the overall World Trade Center Construction Program (Program). The report identified the key challenges confronting the project and then presented a risk assessment of the Program schedule and budget. The report was provided to the Executive Director of the Port Authority and was the basis of a report provided to Governor Patterson in the Fall of July 2008. Additionally, we have recently completed project management and resident engineering inspection services on a call-in basis to the Port Authority on two assignments: the $800M JFK Terminal 5/6 Redevelopment, and the new $65M parking garage associated with this terminal.

We are adept at working within the constraints of complex, occupied facilities, and we know how to coordinate interior and exterior renovation projects with building owners and tenants. Our careful attention to CPM scheduling and construction staging and phasing allows for smooth transitions, continuous facility operations, timely progression of construction work, and public safety.

In addition to currently providing project/construction management services on major Metropolitan area capital projects, LiRo has unmatched experience on Call-In Project/Construction Management contracts that demand immediate responsiveness supported by extensive resources and often as an extension of staff. (Please see the following table for relevant on call project experience.)

Due to our large and varied number of staff assigned to these types of projects, LiRo has a constant pool of resources available.

Project	Agency	Contract Type	Comment
On-Call CM Services 2006-2010	PANYNJ	PM/CM	Initial contract
On-Call Indefinite Quantity Security Program	MTACCC	PM/CM	Numerous projects throughout the system
On-Call CM Services	DSNY	PM/CM	Ten projects over 3 years
Construction Management for CM-1308	MTA NYCT	PM/CM	Third consecutive contract
On-Call CM Services	MTA NYCT	PM/CM	Second consecutive contract for LIRR
On-Call CM Services	USPS	PM/CM	Third consecutive contract
As-Needed CM Services	MTA TBTA	PM/CM	Fourth consecutive contract
On-Call CM Services	MTA LIRR	PM/CM	Third consecutive contract
On- Call CM and Inspection for Various Capital Improvement Projects	NYCHHC	PM/CM	Second 3-year contract
On-Call Owner's Representative CM Services	BPCA	PM/CM	Third consecutive contract
Emergency Response Management and Coordination Program	NYCSCA	PM/CM Extension of Staff	Immediate response required.
On-Call CM/Build Services	NYCDHS	CM/Build	Second consecutive contract
CM/Build Requirements Contract	NYCHA	CM/Build	Third on-call contract
On-Call Indefinite Quantity Scheduling	MTA NYCT	Scheduling Extension of Staff	Third consecutive contract
On-Call Indefinite Quantity Technical Inspection Service	MTA NYCT	Inspection	Extension of staff
On-Call CM Services	NYS DPRHP	PM/CM	Initial contract

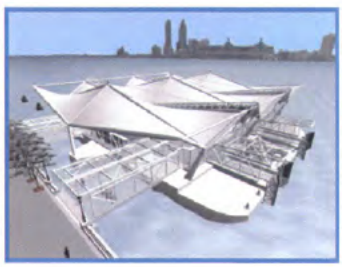
2. Specific Relevant Experience

Specific experience of the LiRo Team is presented on a 'project-type' basis within the sections that follow. These sections are categorized in the following manner: Aviation, Tunnels, Bridges and Terminals, Port Commerce, PATH, World Trade Center, and Additional Experience. A matrix providing added experience is presented at the end of this section.

Aviation

Call-In Construction Management Contract 2006-2010 ***Owner:*** *Port Authority of NY & NJ* ***Contact:*** *William Kehoe, P.E.* *241 Erie Street,* *Jersey City, NJ 07310* *201-216-2070* ***Start:*** *2006* ***End:*** *2010* ***Cost:*** *$900M*	The LiRo team provided Project Management and Resident Engineering Inspection services on a call-in basis. Assignments included: John F. Kennedy International Airport Terminal 5/6 Redevelopment Project John F. Kennedy International Airport Parking Garage at JetBlue	
Delta Airlines Terminals 2 & 3 ***Owner:*** *Delta Airlines* ***Contact:*** *Corgan Associates* *350 Fifth Avenue* *New York, NY 10118* [redacted] ***Start:*** *2003* ***End:*** *2005* ***Cost:*** *$50M*	The LiRo team provided a comprehensive study & implementation of an Infrastructure Investment Plan at JFK Airport for Delta Airlines Terminals 2 & 3. Delta increased flights, and invested more than $300M in improving its JFK terminals over 6 years. The facility investments planned for Terminals 2 and 3 focused on the scope of work required to maintain operational reliability, improve service levels & address building code deficiencies. The scope included passenger experience enhancements, infrastructure improvements to building systems, envelope & apron pavement rehabilitation.	
Air Train Station ***Owner:*** *Port Authority of NY & NJ* ***Contact:*** *Tom Amoia* *Jamaica Air Train Terminal* *148-15 Archer Avenue* *Jamaica, NY 11435* [redacted] ***Start:*** *2003* ***End:*** *2007* ***Cost:*** *$5.4M*	The LiRo team provided field inspection & administrative services on the Jamaica Air Train Station. This link now provides a true inter-modal hub with connections to & from the MTA/LIRR, the MTA/NYCT, and Air Train JFK. The LiRo team has provided civil engineers, mechanical engineers & contract administrators. The LiRo team has provided a significant role in two major areas: Vertical Circulation Building /Jamaica Central Control & Platform/ Portal.	

Port Commerce

Waterfront Structural Engineering Services New Jersey Marine Terminal-Elizabeth, NJ ***Owner:*** *Port Authority of NY & NJ* ***Contact:*** *Yu Shing Wong* *3 Gateway Center* *Newark, NJ 07102* [redacted] ***Start:*** *2009* ***End:*** *2010* ***Cost:*** *N/A*	The LiRo team provided the waterfront structural engineering services necessary to inspect, evaluate, design and prepare contract drawings and construction cost estimates for priority repairs for the following: • NJMT Port Newark Berths 3 to 25 (Odd) • NJMT Port Newark Berths 2 to 36 (Even) • Elizabeth PAMT Berths 50 to 86 (Even) • Elizabeth PAMT Berths 88 to 98 (Even) & Turntable • NJMT AMT Berths 1 &2, Conc. Mooring Dolphins & Timber Walkways	
Battery Park City Ferry Terminal ***Owner:*** *Port Authority of NY & NJ* ***Contact:*** Nilgun Ozdemir, P.E. *3 Gateway Center* *Newark, NJ 07102* [redacted] ***Start:*** *1998* ***End:*** *2008* ***Cost:*** *$70M*	The LiRo team to provide structural and marine engineering services for the design of a permanent floating ferry terminal, which will provide the facility a minimum 25-year life. The facility is the largest of its kind in the US, encompassing more than ¾ acres of floating structure. The floating terminal structure consists of a mono-hull main terminal; two anchorage towers anchored to bedrock, 75 feet below the water; & pedestrian walkways connecting to the Battery Park City Esplanade.	
Inspection of NJ Marine Terminal–Port Elizabeth ***Owner:*** *Port Authority of NY & NJ* ***Contact:*** *Mr. C. John Lin, P.E.* *3 Gateway Center* *Newark, NJ 07102* [redacted] ***Start:*** *2007* ***End:*** *2007* **Cost:** N/A	The LiRo team provided marine engineering services in connection with the performance of a condition survey of Berths 88, 90, 92, 94, 96, 98 and Turntable located at the NJ Marine Terminal in Elizabeth, NJ. The condition survey enabled the verification of the status of all load restrictions and priority repair recommendations as compared with the previous condition survey inspection.	

Tunnels, Bridges, and Terminals

MTA's East Side Access Project ***Owner:*** *MTA Capital Construction* ***Contact:*** *Alan Paskoff* *2 Broadway* *New York, NY 10004* [redacted] ***Start:*** *2007* ***End:*** *2015* ***Cost:*** *$6.3B*	The project connects the LIRR's Main Line and Port Washington Branch in Queens to a new LIRR terminal beneath Grand Central Terminal (GCT) in Manhattan and includes 7 miles of tunneling in Manhattan and Queens. Work includes the construction of 5 ventilation buildings, new transportation terminal 135' below GCT, new passenger station at Sunnyside train storage facilities, 50,000' of track, a reconfigured Harold Interlocking and systems components including signals, communications, power and security.	
As-Needed Construction Management & Inspection Services ***Owner:*** *MTA TBTA* ***Contact:*** *Igor Shapiro, P.E.* *2 Broadway* *New York, NY 10004* [redacted] ***Start:*** *2005* ***End:*** *2009* ***Cost:*** *$25M*	On Call construction inspection services including highway and bridge construction, electrical and mechanical construction, building construction and renovation, asbestos & lead abatement, underground storage tank replacement, as well as estimating, scheduling, and shop drawing review. Work was performed day and night at all TBTA facilities	
Triborough Bridge Deck Replacement on the Wards and Randall's Island Viaduct (TB-64B) ***Owner:*** *MTA TBTA* ***Contact:*** *Tom Bach, P.E.* *2 Broadway* *New York, NY 10004* [redacted] ***Start:*** *2005* ***End:*** *2010* ***Cost:*** *$282M*	This project involved the reconstruction of the Wards/Randall's Island Viaduct, new coatings, bearing replacement on the Queen's Approach and Bronx Truss, construction of new ramps, access road construction on Randall's Island and widening of the Queens to Manhattan Ramp.	

PATH

PATH Reconstruction-World Trade Center Site to Exchange Place ***Owner:*** *Port Authority of NY & NJ* ***Contact:*** *David Caruth* *Senior Project Manager* *2 Gateway Center* *Newark, NJ 07102* *212-435-7121* ***Start:*** *2002* ***End:*** *2003* ***Cost:*** *$323M*	The LiRo team provided project management services in support of the reconstruction of the PATH from the World Trade Center site to Exchange Place in Jersey City. Key project features: • New rock tunnel and rail turnouts at exchange place • Removal and replacement of signal & communication systems, third rail power cables, tunnel lighting, track and third rail • Temporary & permanent ventilation system	
Post 9/11 Temporary PATH Station Pedestrian Analysis ***Owner:*** *Port Authority of NY & NJ* ***Contact:*** *Renalto Commacio, P.E.* *EADD Traffic Engineering* *2 Gateway Center* *Newark, NJ 07102* *973-565-7837* ***Start:*** *2001* ***End:*** *2004* ***Cost:*** *$200M*	A simulation model was built to compile passenger routing, based on various entrances and exit flows observed for the peak periods. These were probabilistically applied to tens of thousands of passengers via millions of computer calculations. Population densities were reported continuously. The model was used to evaluate the effect of flow surges increased loads & reconfigured entrances and exits. The assignment focused on the completion of a (NEPA) 130 Analysis & a dynamic simulation of pedestrian activity associated with the Port Authority Temporary PATH Station.	
No. 7 Subway Line Extension, Program and Construction Management ***Owner:*** *MTA -NYCT* ***Contact:*** *Phil McGrade, P.E.* *Program Manager* *2 Broadway* *New York, NY 10004* [redacted] ***Start:*** *2008* ***End:*** *2013* ***Cost:*** *$6.3B*	The LiRo team is providing program & construction management for the No. 7 Subway Line Extension, which includes: • 7,000 feet of tunnel by excavation, • A cavern station terminal • Shaft excavations for tunnel access/ vertical circulation, construction of steel/ concrete structures for stations/other facilities, construction & installation of tracks, drainage, third rail power/other electrical systems, signals, communications, tunnel ventilation systems	

World Trade Center

Lower Manhattan Infrastructure - Program Management ***Owner:*** *NYCDDC* ***Contact:*** *Thomas Foley* *30-30 Thomson Ave.* *LIC, NY 11101* [redacted] ***Start:*** *2001* ***End:*** *2003* ***Cost:*** *$9M (fee)*	The LiRo team provided program management services in support of: • Coordination of all Infrastructure below Canal Street • Road Projects included, West St. Liberty, Vesey, Barclay • WTC 7 Area Coordination and Scheduling • Coordination of City Five Year Road Construction Program • Utility Coordination ConEd, ECS, City DEP • Agency Coordination, NYC DDC, NYC DOT, Port Authority, State DOT	
LMCCC Program Coordination Services ***Owner:*** *LMCCC* ***Contact:*** *Robert Harvey, PE* *One Liberty Plaza* *New York, NY 10006* [redacted] ***Start:*** *2005* ***End:*** *Ongoing* ***Cost:*** *$9M (fee)*	The LiRo team is the primary day-to-day coordinator of the lower Manhattan construction projects, responsible for coordinating and organizing logistics, scheduling, and other actions relating to the various construction projects, in addition to taking all appropriate steps to insure minimize disruption to the lower Manhattan residential and business community	
Rebuilding of Fiterman Hall - Borough of Manhattan Community College ***Owner:*** *DASNY* ***Contact:*** *Richard Dalessio* *One Penn Plaza* *New York, NY 10119* [redacted] ***Start:*** *2007* ***End:*** *2012* ***Cost:*** *$160M*	The LiRo team is presently serving as CM subconsultant for the rebuilding of Fiterman Hall for the Borough of Manhattan Community College. For this project, LiRo is providing construction management services including scheduling, cost estimating and constructability review and inspection services.	

Additional Experience

Emergency Response Management and Coordination Program 2006-2009 ***Owner:*** *NYCSCA* ***Contact:*** *Gordon Tung* *Chief Project Officer* *30-30 Thomson Ave.* *LIC, NY* [redacted] ***Start:*** *2004* ***End:*** *Ongoing* ***Cost:*** *$230M*	The LiRo team is serving as CM to manage and coordinate responses to emergencies. CM personnel, as an extension of staff, are on-call 24 hours/day, 7 days/week, including holidays responding to emergencies, immediately mobilize our CM personnel, the required trades/labor, hire Contractors/Subcontractor/Subconsultant, & procure required materials & equipment for the purpose of correcting, stabilizing and/or eliminating dangerous conditions at public schools in NYC.	
CM/Build Requirements Contract Citywide ***Owner:*** *NYC Housing Authority* ***Contact:*** *Constantino Sagonas,* *Assistant. Deputy General Manager* *90 Church Street* *New York, NY 10007* [redacted] ***Start:*** *2005* ***End:*** *Ongoing* ***Cost:*** *$265M*	The LiRo team is performing work on a task order basis which has included the design or construction phases of roofing façade repair projects, boiler room upgrades and electrical system upgrades throughout NYC. Projects include a wide variety of PM/CM services.	
On-Call Owner's Representative Construction Management Services ***Owner:*** *BPCA* ***Contact:*** *Kevin Finergan,* *1 World Financial Ctr* *New York, NY 10281* [redacted] ***Start:*** *2005* ***End:*** *Ongoing* ***Cost:*** *$2M*	The LiRo team provided CM services on an On-Call/Emergency basis. The contract involved work throughout all of Battery Park City. Projects included: • Rector Street Bridge repair • North End sidewalk widening and fence relocation • New ballfield maintenance shed • Installation of new street and directional signage	

PROJECT NAME, LOCATION	Capital Budget	Program/Project Management	Strategic Planning and Development	CIP Prioritization and Validation	Design Management	Organizational Development	Benchmarking and Baseline Assessments	Staff Training/Skills Technology Transfer	Regulatory Compliance/Consent Order Management	Document Controls and Progress Reporting	Cost and Schedule Tracking and Controls	Communications/Public Outreach	Subcontractor Coordination and Management	QA/QC Auditing Services	Procurement Support Services	Risk Analysis/Risk Management	Specification and Construction Contract Standardization	Interagency– Intergovernmental Liaison	Construction Contract Preparation, Negotiation, and Execution	Operations Management	Construction Management	Constructibility, Operability, VE Reviews	Claims Avoidance and Resolution
LiRo Program and Construction Management																							
Port Authority On-Call 2006-2010 Terminal 5/6 Redevelopment	*$900M*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MTA - East Side Access	$6.3B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NYCEDC High Line Reconstruction Project	$125M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
No. 7 Subway Line Extension, Program and Construction Management	$2.1B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
LMCCC Program Management Services	$9M (fee)	✓	✓			✓			✓	✓	✓	✓				✓	✓	✓					
MTA TBTA Triborough Bridge Rehabilitation	$160M	✓		✓		✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓
Long Island Railroad Capital Improvement, Jamaica, NY	$2B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MTA-Bridges and Tunnels As-Needed Construction Management Services 2004-2007	$30M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NYSDOT Region 11 (New York City) and Region 5 As-Needed Construction Management Services 2005-2007	$170M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MTA-NYCT On-Call Scheduling Support Services 2004-2007	*$10M*	✓						✓	✓	✓		✓				✓						✓	
Post 9/11 Infrastructure Reconstruction, Lower Manhattan, NY	$700M	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
World Trade Center PATH Station Service Restoration Roadway Analysis	*$250K*	✓	✓		✓	✓			✓	✓				✓				✓				✓	
Post 9/11 Temporary PATH Station Pedestrian Analysis	$200M	✓			✓				✓			✓	✓	✓				✓					
City-Wide Facilities Upgrade (EMS, Fire Academy, Correctional Facilities), NYCDDC	$143M	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

RELEVANT EXPERIENCE

PROJECT NAME, LOCATION	Capital Budget	Program/Project Management	Strategic Planning and Development	CIP Prioritization and Validation	Design Management	Organizational Development	Benchmarking and Baseline Assessments	Staff Training/Skills Technology Transfer	Regulatory Compliance/Consent Order Management	Document Controls and Progress Reporting	Cost and Schedule Tracking and Controls	Communications/Public Outreach	Subcontractor Coordination and Management	QA/QC Auditing Services	Procurement Support Services	Risk Analysis/Risk Management	Specification and Construction Contract Standardization	Interagency– Intergovernmental Liaison	Construction Contract Preparation, Negotiation, and Execution	Operations Management	Construction Management	Constructibility, Operability, VE Reviews	Claims Avoidance and Resolution
NYC Housing Authority Renovation/Upgrading Program, NY	$265M	✓	✓	✓		✓			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
NYC Department of Design and Construction (DDC) On-Call Construction Management Services for Shea and Yankee Stadia 2004-2006	$50M	✓	✓			✓	✓	✓	✓	✓	✓		✓		✓			✓	✓		✓	✓	✓
NYC School Construction Authority Emergency Response Management and Coordination Program	$265M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NYSDOT LIE – Grand Central Parkway to Van Dam Street, Queens, NY	$165M		✓		✓				✓	✓	✓	✓	✓	✓		✓	✓	✓			✓	✓	✓
USPS On-Call Construction Management Services 2000-2008	$60M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CUNY School of Architecture	$60M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NYCDDC New Bronx Family Intake Center	$50M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
McClaren Engineering																							
Long Branch Ferry Terminal Design & Entertainment Pier	$89M	✓	✓		✓	✓			✓			✓			✓			✓			✓		
Battery Park City Ferry Terminal	$70M	✓	✓		✓							✓			✓				✓				
Battery Park City Authority Inspection and Design Services for Marine Structures	$25M	✓	✓		✓	✓							✓	✓								✓	
DY Consultants																							
Delta Airlines, Terminals 2&3 JFK	$50M		✓		✓			✓	✓											✓			
Jet Blue Hangar, JFK	$50M	✓							✓		✓			✓	✓			✓					
Runway Safety Area Improvement Analysis									✓		✓			✓	✓			✓				✓	

Management Approach

E

Project/Program Management falls into two categories:

1. The owner has similar projects at separate sites, which may be designed and constructed by different architects/engineers and contractors. The owner however wants to impose programmatic standards on the process. These standards may include **consistency of design, operation, equipment, materials, document control, QA, accounting, warrantees, and schedule.** The overall goal is to ensure that even though each of these facilities was created separately they nevertheless reflect the Port Authority's standards and image.
2. The owner has multiple projects that are co-located. These mega-projects, made of separate smaller projects are because of their proximity or because of their functional interfaces, must be coordinated to ensure that all component elements are designed and constructed in the most efficient and effective manner. On mega-projects, because of their size and complexity several firms may be involved in the design and construction and there must be **project wide consistency in the design and construction process.**

The LiRo team has extensive experience managing both types of projects and programs. The approach is to create and establish a system based upon best practice architectural, engineering, and construction experience, and ensure that these systems are rigorously implemented.

The purpose of a program manager is to ***control costs, manage the schedule, and ensure that the new facility meets all of the client's goals and expectations.*** In essence, the program manager brings expertise that allows for strong administration and sound decision-making. Ultimately, this approach saves time and money.

How does the program manager do this? By guiding and coordinating the design and construction process from start to finish.

1. Project Management Plans

A1 Identifying your needs and goals for the facility and translating these into project management plans and design objectives.

The LiRo team will work with Port Authority personnel to develop the programmatic needs and project management plans for the project. This is an essential task because there is inherent competition for operations, administration, utility and retail space. It is also important to have a clear understanding of what the design goals are for the project in the context of other Port Authority projects which may be in the vicinity.

Large projects are not created in a vacuum and there are inevitably agendas imposed on public agencies to meet outside needs. All of these goals must be put into a concise design bid package that clearly identifies function goals, design guidelines, design schedule, and construction budgets. The design bid documents will also clearly identify the Architects/Engineers responsibilities during preconstruction and construction. It must be absolutely clear that the design documents are not the end of the process and that the ***designers are expected to play an important part in the review and approval of shop drawings, responding to Requests For Information, and resolving design flaws*** on an expeditious basis.

Success in the permitting and approval process starts at the design stage. The designer must be aware

that their design must meet all necessary codes and regulations, and they will need to have representatives on site at critical junctures to ensure that they can sign off on all building department forms. The need for a full understanding of the subsurface conditions of a site is vital to the success of a project. In its preparation of the design documents, ***the Design Team must include the services of a geo-technical firm who will perform full assessment of the site for geology, utilities, and hazardous materials.*** The findings of this survey must be incorporated into the design and bid documents for which the Design Team is accepting professional responsibility.

A.2,3,4 Identifying the key design expertise needed, developing selection criteria, and guiding you in selecting an architect.

The LiRo team will assist in the prequalification of design firms to ensure that all proposers have the technical expertise to provide the needed services. We will also assist in the preparation of Requests for Qualifications (RFQs) and Requests for Proposals (RFPs). All bid documents will be tightly linked to the selection criteria to ensure that proposers clearly understand the type and format of the information being requested. In addition, the fee proposed must clearly identify costs associated with the various tasks of the scope of services being provided. The fee will be broken down into phases by percentage so that ***the majority of the designer's fee is not paid out up front leaving little financial incentive to provide construction and closeout phase services.***

A.5 Coordinate project related risk analysis and management activities.

LiRo is well experienced in leading risk management activities, including risk planning, identification, qualitative and quantitative analyses, risk responses, and monitoring and controlling risk. We adhere to the Project Management Institute's (PMI) Project Management Body of Knowledge (PMBoK 4th edition) and PMI's Practice Standard for Risk Management. We have provided risk identification and analysis for the World Trade Center construction as part of our work with for the Lower Manhattan Construction Command Center. This effort required LiRo to convene a two-week workshop of experts from around the world to work with the Port Authority and other stakeholders in identifying risks, ranging their impacts to the project schedule, evaluating and prioritizing their impacts, and performing quantitative (Monte Carlo) analyses to develop a probabilistic risk-adjusted schedule and budget. This approach mirrors PMI's Practice Standard for Risk Management, and it is the approach we take for all risk-related activities.

It is important to note that although the risk management activities described above take place during the planning phase of the project, the monitoring and controlling of project risks must continue throughout the life of the project. It is an iterative process that requires the integration of risk monitoring and controlling with project monitoring and controlling, continued awareness of risks and their trigger conditions, and the management and implementation of risk responses. LiRo offers PMI-certified project managers who will bring formal training in risk management and a culture of risk awareness to the Port Authority's projects.

2. Project Management Plans Implementation

B.1 Design Phase Coordination and Support

LiRo will take the lead in providing Design Phase coordination and support regarding the implementation of the management plans and the work performed by all project team members. Design

firms may have difficulty accessing information needed for their projects and then identifying a venue to resolve the conflicts identified. In this function, LiRo will conduct kick-off and progress meetings, and act as both liaison and mediator between the owner/designers, facility operations personnel and the various utilities and regulatory agencies.

B.2 Utility Design Conflicts:

The LiRo Program Management Team will ensure that all of the Utilities, Owners, and Agencies involved in the construction location are identified.

- Identifying construction conflicts and ensuring that the parties determine and agree upon who is financially responsible for resolving the conflict is necessary since this will have a significant impact on the solution options selected.
- Methodically working through each conflict to develop a workable design, with the understanding that all necessary information may not be available until test-pitting and/or actual excavation has been conducted.

B.3 Cost Estimating

Cost Estimating is an on-going process during the Design Phase. LiRo estimators will attend project meetings on a regular basis and will be available at all times to answer cost-related questions which emanate from the design process, both informally and by performing detailed cost studies of alternate proposals.

At various points during the design phase, LiRo will prepare construction cost estimates in the format prescribed by the Port Authority. LiRo anticipates preparing cost estimates at the following design phase milestones.

- Schematic, if feasible
- 60% Construction Documents
- 100% Construction Documents

A key element in this process will be the reconciliation of these estimates with those of the A/E's. Each of these estimates will be developed in a way which is consistent with the level of detail provided by the design documents.

B.4 Value Engineering

At LiRo, the Program Management Team fully understands that the performance of Value Engineering on any project must take into account the continuous usage that the facilities will encounter and temper that with required pay back terms over the project life. Often times the least costly equal value-value engineering approach does not apply to the life cycle of municipal facilities. However, the VE basics of an interdisciplinary group meeting for several days of intensive brainstorming and review of all aspects of the project will lead to a final design effort with the operations and maintenance requirements as well as the designer's objectives intact. The following summarizes our ***key qualifications for value engineering:***

- LiRo's staff includes veteran construction managers, design engineers, and architects who have completed 40-hour training programs in value engineering and applied VE principles on numerous projects.
- We have performed VE reviews both as construction managers and as members of design review teams.

- Our value engineering projects range from infrastructure and heavy construction to courts, healthcare, and recreational facilities.
- LiRo's diversity of expertise – civil, structural, architectural, mechanical, electrical, transportation, and sanitary engineering – enable us to adeptly provide value engineering across a broad range of engineering disciplines

B.5 Document Control

The Program Management Team will develop and provide an Integrated Electronic Document Controls System utilizing *Expedition*. The document filing structure will adhere to the Program's Work Breakdown Structure ("WBS") as much as possible. ***The Document Control System will constitute of a hard copy filing system mirrored by an electronic storage system with redundant daily backups.*** The document control system will include but not be limited to the following modules:

- Internal Correspondence
- Inter-Agency Correspondence
- Agreements/Memoranda of Understanding, etc.
- Contracts, Changes
- Shop Drawings and Requests for Information (RFIs)
- Construction Coordination Minutes of Meetings
- Daily Construction addressing interface points between projects and the Program milestones
- Transmittals
- Facility Force Account Work
- Drawings of Record

The Electronic Document Control System provides the capability of tracking and monitoring different document types by the program WBS or by common issues. It also includes a workflow engine that will allow the automatic routing of documents for responses or approval, following business rules defined in the Program procedures.

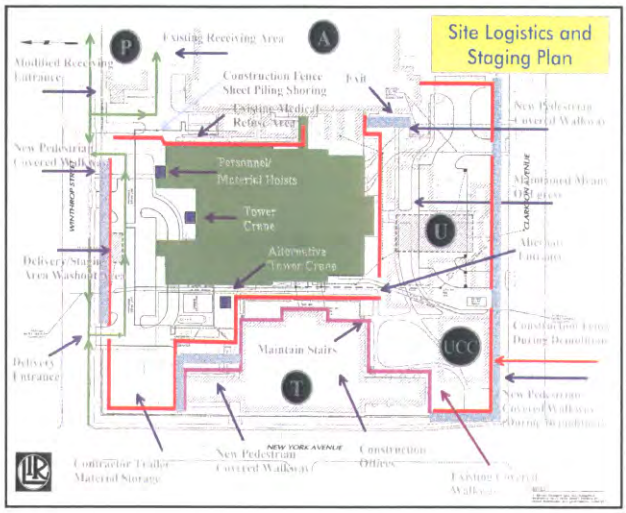
The Document Control System can be set up as a secured Web Site where Stakeholders can post or upload certain project documents. The server allows electronic transmittal and tracking of documents, version controls, and review status of documents and drawings.

B.6 Construction Procurement

LiRo will coordinate bidding and award of construction contracts, assess and recommend procurement options, prepare addenda, bid evaluations and recommendations for award. LiRo has extensive experience in contractor prequalification, bid and award and with developing reliable bid documents. These documents ensure that ***the Port Authority's interests will be protected.*** Bid documents must contain the essential elements of scope, plans, insurance, work rules, relevant M/WBE requirements and any other necessary requirements that can potentially affect the contractor's pricing of the project. Potential problems that may affect construction progress should be clearly identified so that ***claims may be avoided.*** In addition to a project involving multiple contractors, the relationship of the contractor to the overall schedule must be clearly specified, and it must be clear that time is of the essence and the Port Authority owns the schedule float.

Selecting the right contractor(s) is based on their experience, inspection of recently completed projects, current workload, and financial status. ***LiRo maintains a database of qualified local contractors to aid in developing a short list.***

B.7 Preconstruction Coordination



LiRo will support the Port Authority in evaluating the projects' plans and potential impacts. The LiRo PM Team members have developed a comprehensive methodology for evaluating realistic project durations. Meetings will be held with the Port Authority/Construction Managers/ Contractors to evaluate, review and comment on:

- Plans to mitigate project impacts on the community and ongoing operations
- Project Phasing and Logistics Planning
- Utility Coordination
- Heavy equipment placement planning – access, crane sweeps, street impacts
- Stakeholder and Community Communication and Outreach
- Interface and coordination with other projects
- Evaluation of whether the proposed schedule is realistic given project scope and risks
- Construction Management Plans (safety, security, QA/QC, documentation, testing)
- Status of Permits from DOB, EPA, NYSDOT, DEP and others, as may be applicable.

It has been LiRo's experience that the construction stakeholders are most cooperative when ***planning is done sufficiently far in advance so their plans can be adjusted without significant impacts on their project's cost or time.*** Once their plans are formalized, bid, and in construction, the flexibility is very limited. LiRo's Logistics Plan shall support the gathering of information for the various project construction activities, identify potential conflicts and work with the parties to develop a Master Plan with schedule commitments from the various parties involved.

3. Monitoring And Reporting

C.1 Project Controls and Scheduling

LiRo will lead the development and implementation of a Project Controls System that will enable proactive coordination of the work. ***The keystone of this effort shall be a Master Schedule*** of all work. In addition to identifying Critical Path and start and end dates, the schedule will also highlight critical:

- Interim project milestones – essential to identification of projects trending off schedule and in need of remedial attention.
- Logistical interface milestones – where one project must complete an effort so another project can proceed.
- Facility Force Account Work
- Closeout Periods – including Maintenance and Operations Training and Manuals
- Drawings of Record Submissions

Once developed, the schedule must be a useable and meaningful tool. Schedules on highly visible projects can be influenced by factors unrelated to construction realities. LiRo's experience is that

scheduling documents are most effective as coordination tools when distribution is limited to internal use.

The Master Schedule, in addition to focusing on the Critical Path for the projects, will also be manpower and material loaded to ensure that the cumulative needs of all the projects, at any point in time, do not exceed the resources available. In addition to the Master Schedule, Executive Reports will be issued monthly, which will provide the status of the overall program, detail trends, and identify critical issues. Funding issues will also be tracked to determine where these issues become critical to progressing the program.

C.2 Logistical Planning

Mega-projects by definition have a large impact both on the community and the construction logistics of the region. LiRo will take the lead in developing the Program Logistics Plan. The Logistics Plan will be dynamic – ***there will not be one solution, but rather a series of sub plans*** that reflect the changing landscape of construction impacts as the numerous projects throughout the area progress through their stages. The Logistics Plan must enable all parties to accomplish their construction in a safe and efficient manner, while also ensuring the continued operation and quality of life around the project area. The Logistics Plan must also coordinate with the Utilities Plan to ensure that it has been integrated into the overall construction program. Logistical planning will include:

- **Master Utilities Plan and Agreements**
- **Workforce Mobility Strategy**
- **Construction Coord. & Mitigation Plan**
- **Master Staging/ Logistics/ MPT Plan**
- **Program Safety Plan Reviews**

The Master Schedule will be prepared in Critical Path Method (CPM) format and will be maintained in hierarchical form so that summary and detailed reports may be easily produced. The Master Schedule will include all phases of Program Development including planning studies, environmental assessments, permitting, funding approvals, engineering, design reviews, bidding, construction, and commissioning. The Master Schedule will also include inter-project constraints and restraints consistent with the Program Phasing Plan. The Master Schedule is cost-loaded so that cash flow expenditure projections may be continually provided.

The Master Schedule is updated monthly based on the input received from all Stakeholders. We will prepare a Master Schedule report each month that focuses on:

- Changes in forecast schedule for any Program elements.
- Issues, concerns, or decisions required that are affecting Program schedule.
- Any unresolved project issues that could delay or interfere with the delivery of other elements.
- Recommended workarounds or options to recover delays.

LiRo will chair a monthly Master Schedule review meeting among key Program participants to review the report and focus on resolution of issues that are affecting Program progress.

The maintenance of a cost-loaded Master Schedule is also critical for supporting the Port Authority's overall Program Management budget plans.

C.3 Progress Review Meetings

Throughout the project, we will conduct progress review meetings and ***provide leadership to highlight unresolved issues and their respective impact on budget and schedule***. The meeting minutes and issues database will be available online to all approved parties through the web-based

project management system to facilitate faster resolution and allow management to focus on items by exception. Our Project Manager will conduct executive briefings at least monthly. At these briefings, the agenda will include the overall status of the Master Schedule, the budget status of all projects, and key concerns that require resolution.

C.4 Comprehensive Reporting

Progress reports will be required for all tasks and assignments to address schedule and cost performance. The reports will contain an executive summary of Program progress, identify areas of concern and action, programmatic level cost and schedule data focusing on variances to plan, and mitigation approaches. In addition, ***each project will have an individual summary of that project's cost and schedule performance.*** Appendices to the report will identify quality and safety issues. Detailed and summary cost management reports will be issued monthly, providing details of budgets, invoices, payments, costs incurred, and contract or work authorizations. Most importantly, the reports will include cost-to-complete forecasts for each work item so variances can be projected and recovery actions taken.

C.5 Safety Program

All employees, worksites, projects and subcontractors working under the direction of LiRo are held responsible for the items described in the project Health and Safety Program. A copy of this program is made available to all employees on each job site. All applicable local, state and federal regulations are upheld and maintained in accordance with such regulations and this Health and Safety Program. The Health and Safety Program identifies hazards involved in such operations and outlines the appropriate methods to perform the specified work in the safest manner available. Checklists are provided to summarize the criteria necessary to meet the requirements of the program. If additional information is necessary to meet the requirements of a specific task or job site, the health and safety officer for the project refers to the regulatory standards provided by OSHA. The items addressed in this program are upheld ***in accordance with all applicable OSHA regulations and industry standards.***

C.6 Claims Avoidance Program

LiRo's experience has dictated that the ***major claims avoidance begins during the design and preconstruction phase of the project*** with the development of quality construction documents. However, during the construction phase, construction procedures, particularly involving multiple contracts, require constant vigilance to avoid, mitigate, and reduce claims. During this phase, we therefore implement cost, schedule and contract controls to perform the following functions:

- Establish and implement the policies and procedures for quality control, including inspection, testing, and submittal reviews
- Administer the project in a fair and reasonable manner
- Establish effective procedures for processing and monitoring changes, submittals, requests for information and disputes
- Thoroughly document, with daily field reports, schedule reports, cost reports, photographs, and correspondence, the actions or inactions of each prime contractor.
- Keep the CPM schedule pro-active and the focal point of meetings, correspondence, and job progress.
- Notify, on a regular basis, each prime contractor as to the progress or lack thereof, as well as outstanding items. In essence, force the contractors to expedite the job.

Our experience with major construction programs has enhanced our capabilities in the field of claims prevention, mitigation and analysis. In the event that claims do arise, the project team has assembled a group of ***experts in the analysis and mitigation of construction claims.*** In the event of contractor claims, LiRo is prepared to provide services from claims analysis litigation support to expert testimony.

4. Program Level Management Services

D.1 Program Level Controls and Scheduling

LiRo will assist the Port Authority in the scheduling and implementation of selected programs and/or groups of programs by the development and implementation of a Master Program Controls System and Master Program Schedule that will enable ***proactive coordination of the various programs and/or projects.*** Key effort will be the identification and monitoring critical Port Authority objectives and program components, including:

- Annual and/or Program Resource Requirements
- Key project and program start and end dates and critical paths
- Interim project and program milestones – essential to identification of projects and programs trending off schedule and in need of remedial attention.
- Logistical interface project and program milestones – where initiatives compete for resources or must complete efforts so another can proceed.
- Tracking of key project and program M/WBE sub-contractor goals attainment

Executive Program Level Reports will be issued monthly, which status the overall program, detail trends, and identify critical issues. Funding issues will also be tracked to determine where these issues become critical to progressing the Port Authority's program objectives.

5. Program Management Support

E.1 Ancillary Program Management Support Services

LiRo will assist the Port Authority in the provision of ancillary program management support services as may be required. LiRo has extensive experience in providing program management services for our clients on programs and projects that are prominently situated in the public's eye.

E.2 Bidability and/or Constructability

We believe that it is highly advantageous to implement a disciplined project constructability program in the early stages when the opportunity for positive impact is often greater than in later stages. Prior to bid, LiRo will review the plans and specifications, seeking out the inconsistencies and ambiguities that impact cost, schedule and quality.

Design and construction work in and around operating Port Authority facilities poses a special set of challenges, and requires a dependable set of construction bid documents that must reflect actual construction details and work processes, contractor capabilities, existing conditions and necessary requirements to maintain uninterrupted operations. We will ensure that the contract documents are sufficiently complete in advance of bidding, to result in budget conformant bids, to allow the construction to begin immediately thereafter, and to enable the work to proceed unimpeded by procurement, design, detailing or budget issues.

Document coordination and review prior to bidding is critical to thoroughly review the documents for clarity, completeness, and to eliminate potential conflict issues. Our focus will be to eliminate change orders, errors and omissions, and delays.

LiRo will recommend changes to clarify trade responsibilities and eliminate conflicts, to simplify details and to improve the overall clarity of the design documents. We will confirm that the special requirements clearly delineate procedures and criteria for occupancy, systems turnover, testing, punchlists, as-built/record drawings, commissioning and acceptance. Our multidisciplinary, bidability and constructability approach has proven to provide our clients with truly reliable, cost and schedule effective bid documents.

E.3 As-Built Drawings/Record Drawings

During construction, LiRo will work closely with the Port Authority and facility personnel to plan a smooth transition from construction to acceptance/occupancy. This plan, which includes maintenance of records and preparation for punch lists, final inspections, as-built/record drawings and maintenance training and turnover procedures, is also included in the detailed construction schedule. As required, ***closeout procedures will be enforced for areas of beneficial occupancy to avoid post-occupancy conflicts*** with the prime contractors.

LiRo will work with the A/E Design Consultant, the Port Authority, and facilities personnel to prepare a ***running punch list*** to be addressed as construction is completed, supervise and ensure the closeout of these items. In addition, we will ensure that the contractor prepares a set of marked up plans for preparation of as-built drawings for submission to the facility and/or the Port Authority. Major items include:

- O&M Manual finalization, and training for maintenance personnel
- Final submittal of updated shop drawings and cuts
- Final as-built drawings
- Final inspections and punch lists

To ensure that all O&M manuals for the equipment are furnished, ***we require their submittal prior to payment in excess of fifty percent of the total contract cost.*** These manuals will be used to ensure that initial testing of equipment is done in accordance with the manufacturer's specifications. Spare parts inventory, warranties and guarantees, as necessary, will be provided. We will work with user agencies to coordinate and schedule training and video-taping, as may be required, of personnel on specialized equipment. Prior to the end of the guarantee period, we will prepare a report of discrepancies and deficiencies applicable to the guarantee and will work with the contractors or suppliers to have these items corrected.

E.4 Support Services

The LiRo team has a proven record of providing superior services in program and project management support for our public sector clients on highly critical, highly visible major projects and programs. Our team's qualifications and experience summarized in this document profile our capabilities to provide a wide range of dependable program support services, as may be required, to prepare technical presentations and assist in responding to inquires from outside entities and the public. LiRo's continuing work as Program Manager for the Lower Manhattan Construction Command Center represents, among others, directly relevant, proven, comprehensive, program management ***support capabilities focused on senior management's organizational objectives*** and on the preparation of information for distribution to, access by, and in response to requests by stakeholders and the public.

E.5 Project Procedures Manual, Document Controls and Primavera

LiRo will tailor our Project Procedures Manuals specifically for the Port Authority. The Project Procedures Manual establishes the procedures, and the protocols, which must be followed through the life of the project. It establishes the type and schedule of meetings at various stages. It clearly outlines the lines of responsibility and authority of the program and/or project team members. It incorporates the design, bidding, construction schedule, and pertinent sections of policy, procedure and operations manuals (including plans for security, life safety, utility management, hazardous materials, equipment management, security and emergency preparedness.

We couple the use of the Manual with the *Primavera Project Expedition* software to ensure that all program and project level documents, i.e. change orders, request for clarifications, invoices, shop drawing submittal process, etc. are monitored in real time and that all of the team members understand what is expected and when it is due. This is especially useful in managing the implementation of program management initiatives and construction progress, as ***it keeps senior management continually apprised and informed, keeps the contractors on constant notice, and also assists in potential future claim mitigation.***

LiRo will maintain a Document Controls System for the Port Authority utilizing *Expedition*. The document filing structure will adhere to the Program's Work Breakdown Structure ("WBS") as much as possible. The document control system includes a workflow engine and modules that allow the automatic routing of documents for responses or approval, and to track and expedite the following critical processes and documents, including, but not limited to::

- Contracts, Changes
- Shop Drawings and Requests for Information (RFIs)
- Facility Force Account Work
- Drawings of Record

The Document Control System can be ***set up as a secured Web Site*** where Stakeholders can post or upload certain project documents. The server allows electronic transmittal and tracking of documents, version controls, and review status of documents and drawings.

E.6 Project Management Training and Workshops

LiRo has extensive experience providing project management training and workshops, as may be required, for our staff and for our clients. Our programs are based on the best industry practices, our project procedures manuals and tailored to the specific requirements of our client's organization protocols, policies and procedures. ***Training ranges from introductory project management practices through highly detailed primavera-based project controls, scheduling, document controls and cost engineering systems.***

Additionally, our subconsultant team member, PMA, is a Primavera Authorized Representative (PAR), who provides training and implementation for the entire suite of Primavera products and services, including PrimeContract®, Primavera Project Planner® (P3), SureTrak® Project Manager, and Primavera® (formerly Enterprise, TeamPlay, and Primavision) and Primavera Expedition®.

Hourly Rates/Multiplier Breakdown

F

1. Multiplier Breakdown

Provided herein, is the multiplier for the LiRo Team, including all of its components as requested in the Submission Requirements of the RFP. Please note that the entire LiRo Team will be utilizing the same multiplier. LiRo Program and Construction Management's Team multiplier is **1.97.**

Multiplier Components:

Direct Project Payroll	1.00
Overhead & Payroll Burden	
- Vacation & Sick Pay	0.07
- Holiday Pay	0.06
- Payroll Taxes	0.10
- Employee Fringe Benefits	0.09
- Workers' Compensation	0.01
- Indirect & Adm. Salaries	0.30
- Legal, Acct'g & Consultants	0.04
- Rent & Utilities	0.03
- Cleaning & Maintenance	0.01
- Office Supplies & Service	0.01
- Telephone	0.01
- Auto & Travel	0.03
- Professional Development	0.01
- Professional Liability Insurance	0.01
- Other Insurance	0.02
- Equip. Rental & Field Supplies	0.01
- Business Taxes	0.01
- Depreciation & Amortization	0.02
Total Overhead	0.85
Overhead + Direct Project Labor	1.85
Profit	0.12
TOTAL MULTIPLIER:	**1.97**

1. Mulitplier Breakdown
2. Cost Analysis

2. Cost Analysis

Our Team's Cost Analysis / Billing Rate Schedule for this 'Call-In' Assignment is included in the following pages. This Rate Schedule shows the billing rates of all the available proposed team members, including job titles for architectural, engineering and other technical personnel who may be assigned to the anticipated tasks. Following the billing rate schedule is our company policy for compensation for premium pay.

PERSONNEL RATE SCHEDULE

						**Status: E - Employee; SC - Subconsultant		
Firm Name	**LiRo Program and Construction Management, PC**					***Multiplier will = 1 for partners and principals		
PANYNJ Title	**Employee Name**	**Project Title**	**Status****	**Actual Hourly Rate**	**Multiplier*****	**Billing Rate**	**Premium Rate (Actual)**	
							OT	**Night**
LiRo								
Project Executive	Tormenta, M. Luis	Project Executive	E	$125.00	1.00	$125.00	N/A	N/A
Project/Contract Manager	Burton, Michael	Program/Project Contract Manager	E	$84.14	1.00	$84.14	N/A	N/A
Sr./ Program Project Managers	Ahrens, James	Senior Program/ Project Manager	E	$84.26	1.97	$166.00	$84.26	$92.69
	Althoff, Gordon	Senior Program/ Project Manager	E	$74.19	1.97	$146.16	$74.19	$81.61
	Aidikoff, Brant	Senior Program/ Project Manager	E	$94.10	1.97	$185.38	$94.10	$103.51
	Bailey, Michael	Senior Program/ Project Manager	E	$108.23	1.97	$213.21	$108.23	$119.05
	Balog, Gilbert	Senior Program/ Project Manager	E	$74.09	1.97	$145.96	$74.09	$81.50
	Bendetti, Michael	Senior Program/ Project Manager	E	$77.88	1.97	$153.42	$77.88	$85.67
	Bifulco, Eugene	Senior Program/ Project Manager	E	$91.29	1.97	$179.84	$91.29	$100.42
	Blond, Lawrence	Senior Program/ Project Manager	E	$108.23	1.97	$213.21	$108.23	$119.05
	Bornkamp, Donald	Senior Program/ Project Manager	E	$68.63	1.97	$135.20	$68.63	$75.49
	Busch, Raymond	Senior Program/ Project Manager	E	$93.27	1.97	$183.74	$93.27	$102.60
	Cohen, Jerrold	Senior Program/ Project Manager	E	$88.91	1.97	$175.15	$88.91	$97.80
	Deprima, Leonard	Senior Program/ Project Manager	E	$82.27	1.97	$162.07	$82.27	$90.50
	Dolce, Anton	Senior Program/ Project Manager	E	$74.52	1.97	$146.81	$74.52	$81.97
	Fogel, Bernard	Senior Program/ Project Manager	E	$75.01	1.97	$147.78	$75.01	$82.52
	Fox, Joseph	Senior Program/ Project Manager	E	$67.16	1.97	$132.30	$67.16	$73.87
	Franco, Frank	Senior Program/ Project Manager	E	$86.27	1.97	$169.95	$86.27	$94.90
	Green, Jim (MCL)	Senior/ Program Project Manager	SC	$43.41	1.97	$85.52	$43.41	$47.75
	Hall, David	Senior Program/ Project Manager	E	$72.34	1.97	$142.50	$72.34	$79.57
	Holmstrom, Kenneth	Senior Program/ Project Manager	E	$72.76	1.97	$143.34	$72.76	$80.04
	Hurley, Joseph	Senior Program/ Project Manager	E	$87.87	1.97	$173.10	$87.87	$96.66
	Johansen, Arthur	Senior Program/ Project Manager	E	$73.35	1.97	$144.49	$73.35	$80.68
	Kruezer, Robert	Senior Program/ Project Manager	E	$75.76	1.97	$149.25	$75.76	$83.34
	Levi, Murray	Senior Program/ Project Manager	E	$75.38	1.97	$148.50	$75.38	$82.92
	Markowitz, Bernard	Senior Program/ Project Manager	E	$75.43	1.97	$148.59	$75.43	$82.97
	Mascaro, Michael	Senior Program/ Project Manager	E	$79.03	1.97	$155.69	$79.03	$86.93
	Moody, Brian (PMA)	Senior/ Program Project Manager	SC	$42.57	1.97	$83.86	$42.57	$46.83
	Owen, Douglas	Senior Program/ Project Manager	E	$67.68	1.97	$133.33	$67.68	$74.45
	Psillos, George	Senior Program/ Project Manager	E	$77.06	1.97	$151.81	$77.06	$84.77
	Radafshar, Bijan	Senior Program/ Project Manager	E	$79.75	1.97	$157.11	$79.75	$87.73
	Rafat, Mike	Senior Program/ Project Manager	E	$111.59	1.97	$219.83	$111.59	$122.75
	Tilleli, Ralph	Senior Program/ Project Manager	E	$76.40	1.97	$150.50	$76.40	$84.03
	Turton, Peter	Senior Program/ Project Manager	E	$128.67	1.97	$253.48	$128.67	$141.54
	Valdemira, Vincent	Senior Program/ Project Manager	E	$90.62	1.97	$178.52	$90.62	$99.68
	Wagh, Vikas	Senior Program/ Project Manager	E	$91.48	1.97	$180.22	$91.48	$100.63
	Wesolowski, Martin	Senior Program/ Project Manager	E	$69.11	1.97	$136.15	$69.11	$76.02
	Wilson, Ronald	Senior Program/ Project Manager	E	$80.47	1.97	$158.53	$80.47	$88.52
	Yap, Dennis (DY)	Senior/ Program Project Manager	SC	$69.71	1.97	$137.33	$69.71	$76.68

PERSONNEL RATE SCHEDULE

						**Status: E - Employee; SC - Subconsultant		
Firm Name	**LiRo Program and Construction Management, PC**					***Multiplier will = 1 for partners and principals		
PANYNJ Title	**Employee Name**	**Project Title**	**Status****	**Actual Hourly Rate**	**Multiplier*****	**Billing Rate**	**Premium Rate (Actual)**	
							OT	**Night**
	Zanoni, Christopher	Senior Program/ Project Manager	E	$73.48	1.97	$144.76	$73.48	$80.83
Program/ Project Managers	Abdo, Rasem	Program/Project Manager	E	$65.65	1.97	$129.33	$65.65	$72.22
	Achouri, Aomar	Program/Project Manager	E	$50.21	1.97	$98.92	$50.21	$55.23
	Albergo, Michael	Program/Project Manager	E	$74.40	1.97	$146.57	$74.40	$81.84
	Ansari, Abid	Program/Project Manager	E	$66.51	1.97	$131.02	$66.51	$73.16
	Asquith, Steven	Program/Project Manager	E	$62.22	1.97	$122.58	$62.22	$68.44
	Belling, Michael	Program/Project Manager	E	$59.52	1.97	$117.26	$59.52	$65.48
	Byrnes, Michael	Program/Project Manager	E	$45.44	1.97	$89.52	$45.44	$49.99
	Caggiano, Anthony	Program/Project Manager	E	$67.76	1.97	$133.49	$67.76	$74.54
	Colabella, Todd	Program/Project Manager	E	$51.65	1.97	$101.76	$51.65	$56.82
	Comilloni, Eugene	Program/Project Manager	E	$45.55	1.97	$89.73	$45.55	$50.10
	Comunelli, Louis	Program/Project Manager	E	$62.95	1.97	$124.02	$62.95	$69.25
	Daniels Matt (PMA)	Program/Project Manager	SC	$40.00	1.97	$78.80	$40.00	$44.00
	Eckhoff, James	Program/Project Manager	E	$69.94	1.97	$137.78	$69.94	$76.93
	Enang, Joseph	Program/Project Manager	E	$47.27	1.97	$93.12	$47.27	$51.99
	Eskridge, John	Program/Project Manager	E	$52.13	1.97	$102.69	$52.13	$57.34
	Gaspari, James	Program/Project Manager	E	$70.39	1.97	$138.67	$70.39	$77.43
	Gibbons, Thomas	Program/Project Manager	E	$46.46	1.97	$91.53	$46.46	$51.11
	Hakimian, Phillip (WP)	Program/Project Manager	SC	$32.00	1.97	$63.04	$32.00	$35.20
	Iannuzzi, Matthew	Program/Project Manager	E	$58.65	1.97	$115.54	$58.65	$64.51
	Mastropieri, Lisa (DY)	Program/Project Manager	SC	$62.50	1.97	$123.13	$62.50	$68.75
	Mase, Christopher (PMA)	Program/Project Manager	SC	$34.00	1.97	$66.98	$34.00	$37.40
	Sartoris, Edward	Program/Project Manager	E	$65.98	1.97	$129.98	$65.98	$72.58
	Silver, Nancy	Program/Project Manager	E	$51.92	1.97	$102.28	$51.92	$57.11
	Singh, Prem	Program/Project Manager	E	$48.94	1.97	$96.40	$48.94	$53.83
	Smolenski, Steven (DY)	Program/Project Manager	SC	$62.00	1.97	$122.14	$62.00	$68.20
	Sung Hun Cho (WP)	Program/Project Manager	SC	$32.00	1.97	$63.04	$32.00	$35.20
	Swanson, Mark	Program/Project Manager	E	$71.38	1.97	$140.62	$71.38	$78.52
	Venechanos, Leonard	Program/Project Manager	E	$63.15	1.97	$124.40	$63.15	$69.46
	Wall, William	Program/Project Manager	E	$59.63	1.97	$117.46	$59.63	$65.59
Schedulers	Apostolou, Jamie (PMA)	Scheduler	SC	$94.00	1.97	$185.18	$94.00	$103.40
	Barsky, Robert	Scheduler	E	$76.91	1.97	$151.51	$76.91	$84.60
	Chattaway, Andrew (PMA)	Scheduler	SC	$145.00	1.97	$285.65	$145.00	$159.50
	Carrion, Anthony	Scheduler	E	$52.00	1.97	$102.44	$52.00	$57.20
	Gifford, George	Scheduler	E	$47.01	1.97	$92.61	$47.01	$51.71
	Graceffa, Giovanni	Scheduler	E	$56.50	1.97	$111.31	$56.50	$62.15
	Kalmus, Philip	Scheduler	E	$52.53	1.97	$103.48	$52.53	$57.78
	McBaine, Dane (PMA)	Scheduler	SC	$113.00	1.97	$222.61	$113.00	$124.30
	Patel, Purvasha (PMA)	Scheduler	SC	$94.00	1.97	$185.18	$94.00	$103.40
	Junjua, Sadia (PMA)	Scheduler	SC	$120.00	1.97	$236.40	$120.00	$132.00
	Walters, Zach (PMA)	Scheduler	SC	$92.00	1.97	$181.24	$92.00	$101.20

PERSONNEL RATE SCHEDULE

						**Status: E - Employee; SC - Subconsultant		
Firm Name	**LiRo Program and Construction Management, PC**					***Multiplier will = 1 for partners and principals		
PANYNJ Title	**Employee Name**	**Project Title**	**Status****	**Actual**	**Multiplier*****	**Billing Rate**	**Premium Rate (Actual)**	
				Hourly Rate			**OT**	**Night**
Cost Engineers/Estimators	Curran, William	Cost Engineer/Estimator	E	$54.59	1.97	$107.54	$54.59	$60.05
	Daulatani, Prakash	Cost Engineer/Estimator	E	$54.73	1.97	$107.83	$54.73	$60.21
	Egbert, Wayne	Cost Engineer/Estimator	E	$57.00	1.97	$112.29	$57.00	$62.70
	Frysztacki, Edward	Cost Engineer/Estimator	E	$71.82	1.97	$141.49	$71.82	$79.00
	Pagani, Steve (PMA)	Cost Engineer/Estimator	SC	$141.00	1.97	$277.77	$141.00	$155.10
	Paladino, Alfio	Cost Engineer/Estimator	E	$58.74	1.97	$115.72	$58.74	$64.61
	Yong, Mireya	Cost Engineer/Estimator	E	$51.25	1.97	$100.96	$51.25	$56.38

LiRo Policy – Compensation for Premium Pay

employees on the Friday of payroll and will be mailed on the Wednesday following the end of the pay period to the home address of field employees so that they arrive by the pay day.

Forms to authorize direct deposits are available from the Accounting or Human Resources Department.

2.2.3 Calculation of Pay Rate

All salaries quoted, whether for an exempt or non-exempt employee, will be converted to a basic hourly rate in calculating pay. Salaries quoted per week will be divided by 40; salaries quoted per year will be divided by 2,080.

2.2.4 Payroll Deductions

The law requires deductions for federal, state, and local income taxes, Social Security (FICA) and New York State short term disability. Income tax deductions will be made based on properly completed tax withholding forms while statutory deductions will be made automatically in accordance with applicable laws. Other deductions for various insurance and retirement programs will be made upon an employee's written authorization and in accordance with Company policies.

2.2.5 Compensation for Overtime

Overtime is paid based on established LiRo policies and is not paid based on the reimbursement policies of a particular client or project or on a job-by-job basis. In general, to receive compensation for overtime, an employee must have the overtime authorized by their supervisor prior to working it, except for field personnel whose overtime may be necessitated by the schedule requirements of the contractor and/or client.

All employees are classified as either exempt (not entitled to overtime pay) or non-exempt (entitled to time-and-a-half pay for overtime) in accordance with New York State Department of Labor (NYS DOL) regulations. An employee's classification depends on a variety of factors, including job function and predominant type of work to be performed, necessity for a degree, and level of supervisory or managerial responsibilities.

In addition to the exempt/non-exempt designation, LiRo further classifies employees in category "A", "B" or "C". Classification A includes all employees who are considered as non-exempt under NYS DOL rules. For employees exempt from time-and-a-half pay, LiRo has opted to pay certain groups of employees at their straight time rate for overtime hours. These employees are in classification B. All other exempt employees are in classification C and receive no additional compensation for their overtime hours.

employees on the Friday of payroll and will be mailed on the Wednesday following the end of the pay period to the home address of field employees so that they arrive by the pay day.

Forms to authorize direct deposits are available from the Accounting or Human Resources Department.

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All employees are classified as either exempt (not entitled to overtime pay) or non-exempt (entitled to time-and-a-half pay for overtime) in accordance with New York State Department of Labor (NYS DOL) regulations. An employee's classification depends on a variety of factors, including job function and predominant type of work to be performed, necessity for a degree, and level of supervisory or managerial responsibilities.

In addition to the exempt/non-exempt designation, LiRo further classifies employees in category "A", "B" or "C". Classification A includes all employees who are considered as non-exempt under NYS DOL rules. For employees exempt from time-and-a-half pay, LiRo has opted to pay certain groups of employees at their straight time rate for overtime hours. These employees are in classification B. All other exempt employees are in classification C and receive no additional compensation for their overtime hours.

An employee's classification as exempt/nonexempt and A/B/C is determined at the time of hire and is noted on the Payroll Status Change form completed by the employee's supervisor. The classification will be changed only if an employee's job functions change and a new Payroll Status Change form is submitted to the Accounting Department.

Non-Exempt Employees

All non-exempt employees are in Classification A (including but not limited to CADD operators, accounts receivable accountants, clerical employees, inspectors, assistant office engineers, jr. engineers and architects, asbestos monitors and industrial hygienists) and will be paid overtime at the rate of 1½ times their regular rate of pay for all hours worked beyond 8 hours in a workday, including Saturday and Sunday.

Overtime rates will also be paid for any regular hours worked above 40 in a week (the work week runs from Saturday thru Friday). For this purpose, regular hours include hours worked (excluding holiday, vacation, sick and personal time) each day up to a maximum of eight in a day. As an example: If an employee works 10 hours on Monday, Tuesday, Wednesday, Thursday and Friday, he/she will be paid for 40 regular hours and 10 overtime hours (two hours over eight on five days) . Had the employee worked eight hours on each of those days and 10 hours on Saturday, he/she would also be paid for 40 regular hours and 10 overtime hours (two hours over eight on Saturday plus eight hours over 40 regular for the week). If the employee puts in 50 hours by working 11 hours Monday through Thursday and six hours on Friday, the employee will be paid for 12 hours at the overtime rate and 38 regular hours.

Part-time and temporary employees (those who do not routinely work 5 days per week, 8 hours per day) shall only be paid for overtime at 1½ times their regular hourly rate for hours worked in excess of 40 during the workweek. Otherwise, the employee's regular hourly rate will be used. Vacation, holiday, sick or personal time are not considered as time worked for purposes of determining overtime. However, all time worked on a holiday by a full-time employee will be reimbursed at a time-and-a-half rate, in addition to being paid for the holiday.

Exempt Employees

Exempt employees are those who are not required to be paid overtime, in accordance with applicable wage and hour laws. However, exempt employees in Classification B (including but not limited to accountants, administrative managers and assistants, architects, chief inspectors, engineers, marketing specialists, office engineers, resident engineers, sr. engineers, geologists/scientists, project managers and schedulers/estimators) will be paid additional compensation at their straight time rate for all hours worked beyond 8 hours in a workday. All other exempt employees are included in Classification C (including but not limited to Associates and Officers/Principals) and will be paid a fixed salary, regardless of the number of hours worked.

2.2.6 Night Shift Differential

A night shift differential of 10% may be paid to employees in Classifications A and B who work between the hours 8:00 p.m. and 6:00 a.m. and whose normal work hours are between 6:00 a.m. and 8:00 p.m. A night shift differential will not be paid on any hours that are paid at a premium overtime rate. Night shift hours must be segregated on a separate line on an employee's time sheet.

Night shift differential will not be paid to employees who are expected to work evening hours when they are hired. The night shift compensation will be included in the employee's regular pay rate. All time for these employees should be entered on their time sheet as regular hours.

2.2.7 Pay for Working on a Holiday

Non-exempt regular employees (classification A) receive holiday pay plus time-and-a-half for all hours worked on a LiRo holiday. Thus, for each hour worked on a holiday, the non-exempt employee receives a total of 2½ times their regular hourly rate. Exempt regular employees in classification B receive holiday pay, plus straight time for all hours worked on holiday. Thus, for each hour worked on a holiday, exempt employees in classification B receive a total of two times their regular hourly rate. No extra compensation will be paid for working on a client holiday that is not a LiRo holiday (see section III - 1.2 for a list of LiRo holidays).

Non-exempt part-time employees in classification A will receive holiday pay for those hours that they would have routinely worked on the day the holiday falls. Should these employees work on the holiday, they will be paid at time-and-a-half for those hours worked which, when added to the hours they would have routinely worked on that day if not a holiday, exceed eight hours. For example, if a part-time employee who routinely works six hours a day, five days a week, works four hours on a holiday, that employee will be paid for eight hours at their straight time pay rate and two hours at time-and-a-half.

Temporary employees are not entitled to holiday pay and will be paid for time worked on a holiday as if it were any regular workday.

New employees will not be paid for any holiday falling after their date of employment during their first week of work unless they have worked at least two days during that week. Similarly, terminated employees will not be paid for any holiday falling before their date of termination during their last week of work unless they have worked at least two days during that week.

2.2.8 Meal Allowance

If three or more hours of overtime are worked in a day, employees are entitled to receive a meal allowance of $10.00. To be reimbursed for the meal allowance, these amounts should be

M/WBE Participation

G

LiRo's Subconsultants

LiRo's subconsultants and their roles are shown on the Project Team Organization Chart (Section C.) The members of our team include:

1. Subconsultants
2. M/WBE Participation

- ***McLaren Engineering Group*** – providing project management support.
- ***PMA Consultants, LLC (MBE)*** - providing project controls support and construction inspection.
- ***Works-In-Progress Associates, LLC (WBE)*** - providing construction management and administrative support.
- ***DY Consultants (MBE)*** - providing project management support.

The multiplier for each subconsultant on LiRo's Team is shown in Section F. With respect to the percent distribution of hourly participation for our minority-owned and women-owned business enterprises, LiRo will meet or exceed the Authority's-stated goals of 12% for certified MBEs and 5% for certified WBE participation. Technical qualifications of LiRo's subconsultants are provided in Section C which also includes the resumes of their construction professionals.

M/WBE Participation

LiRo is fully committed to meet or exceed The Port Authority's goals for M/WBE participation for Construction Management Services to be provided under this contract.

M/WBE firms have held meaningful roles on LiRo contracts, providing a broad range of technical services including project management, construction management, construction inspection, cost estimating, scheduling, risk analysis, survey, mechanical/electrical design, environmental engineering, community participation, and more.

LiRo's policy is to make a good faith effort to identify meaningful work that will be assigned to certified M/WBE subconsultants as specific tasks are identified.

List of Firm's Affiliates

H

LiRo Engineers, Inc.
EIN: [redacted]
Type of Business: For profit
3 Aerial Way
Syosset, NY 11791
Telephone: 516-938-5476
Fax: 516-938-5491

LiRo Architects + Planners, P.C.
EIN: [redacted]
Type of Business: For profit
111 Broadway – Suite 501
New York, NY 10006
Telephone: 212-563-0280
Fax: 212-563-1841

LiRo Program and Construction Management, P.C.
EIN: [redacted]
Type of Business: For profit
3 Aerial Way
Syosset, NY 11791
Telephone: 516-938-5476
Fax: 516-938-5491

LiRo Consulting Engineer, P.C.
EIN: [redacted]
Type of Business: For profit
3 Aerial Way
Syosset, NY 11791
Telephone: 516-938-5476
Fax: 516-938-5491

LiRo Contractors, Inc.
EIN: [redacted]
Type of Business: For profit
3 Aerial Way
Syosset, NY 11791
Telephone: 516-938-5476
Fax: 516-938-5491

LiRo Architects & Engineers West, P.C.
(New Jersey)
EIN: [redacted]
Type of Business: For profit
111 Broadway, Suite 501
New York, NY 10006
Telephone: 212-563-0280
Fax: 212-563-1841

LiRo Architects & Engineers, P.C.
(Connecticut)
EIN [redacted]
Type of Business: For profit
111 Broadway, Suite 501
New York, NY 10006
Telephone: 212-563-0280
Fax: 212-563-1841

LiRo Architects + Engineers, P.C
(Pennsylvania)
EIN: [redacted]
Type of Business: For profit
111 Broadway, Suite 501
New York, NY 10006
Telephone: 212-563-0280
Fax: 212-563-1841

LiRo Program and Construction Management, Inc. (California)
EIN: [redacted]
Type of Business: For profit
3 Aerial Way
Syosset, NY 11791
Telephone: 516-938-5476
Fax: 516-938-5491

Conflict of Interest

I

At this time, LiRo Program and Construction Management, P.C. does not have any nor do we foresee any potential conflict of interest.

Terms and Conditions

J

LiRo Program and Construction Management, P.C. does not have any exceptions to the standard agreement.

MALCOLM PIRNIE

Malcolm Pirnie, Inc.
17 17 Route 208 North
Fair Lawn, NJ 07030
T: 201.797.7400 F: 201.797.4399
www.pirnie.com

October 20, 2010

The Port Authority of New York and New Jersey
One Madison Avenue, 7th Floor
New York, NY 10010
Attn: RFP Custodian

Re: Proposal for the Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013, and 2014 (RFP #22388)

Dear RFP Custodian:

Malcolm Pirnie Inc. is pleased to submit the enclosed proposal both in hard copy and on compact disk for review and consideration by the Port Authority in evaluating our qualifications for the above referenced services.

We value our long-standing relationship since the late 1980's/early 1990's with the Port Authority and our work with your staff over the years. We have assembled an excellent and motivated team of engineers who have worked on a wide range of environmental projects at locations in New York and New Jersey as well as throughout the United States. Malcolm Pirnie would welcome the opportunity to provide project management services to the Port Authority.

The attached proposal outlines our qualification, rates, multiplier and other requirements outlined in RFP #22388. With respect to Part II.J., Malcolm Pirnie has no objections to the terms outlined in the standard agreement.

Please contact myself (201-398-4405) or Carmine Marra (718-609-8700) if you have any questions or require more information.

Very truly yours,

MALCOLM PIRNIE, INC.

Robert S. Johnston, PE, PG
Vice President

dev
enclosures; A490727

THE PORT AUTHORITY OF NY & NJ

PROPOSAL

Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014

RFP# 22388

October 2010

A490727

Solutions for Life

MALCOLM PIRNIE

The Port Authority of New York and New Jersey

Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014

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Attachment B

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ATTACHMENT B

PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014

AGREEMENT ON TERMS OF DISCUSSION

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority's Freedom of Information Policy and Procedure adopted by the Port Authority's Board of Commissioners on November 20, 2008, which may be found on the Port Authority website at: *http://www.panynj.gov/corporate-information/pdf/Freedom-of-Information-Policy-and-Procedure.pdf*, not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

_____
(Company)

_____
(Signature)

_____
(Title)

_____
(Date)

ORIGINAL AND PHOTOCOPIES OF THIS PAGE ONLY.
DO NOT RETYPE.

The Port Authority of New York and New Jersey

Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014

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ATTACHMENT C

COMPANY PROFILE

REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

1. Company Name (print or type):

   _____

2. Business Address (to receive mail for this RFP):

   _____

   _____

3. Business Telephone Number: _____
4. Business Fax Number: _____
5. Firm website: _____
6. Federal Employer Identification Number (EIN): _ [redacted] _____
7. Date (MM/DD/YYYY) Firm was Established: _____/_____/_____
8. Name, Address and EIN of Affiliates or Subsidiaries (use a separate sheet if necessary):

   _____

   _____

9. Officer or Principal of Firm and Title:

   _____

10. Name, telephone number, and email address of contact for questions:

    _____

    _____

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? ☐ Yes ☐ No

    If yes, please attach **Port Authority** certification as a part of this profile.

    If your firm is an M/WBE not currently certified by the Authority, see the Authority's web site – http://www.panynj.gov/business-opportunities/supplier-diversity.html, to receive information and apply for certification.

The Port Authority of New York and New Jersey

Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014

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Staff Qualifications and Experience

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Staff Qualifications and Experience

Management Approach To "Call-In" Projects

We have assembled a team of experienced program and construction managers who have experience with call in contracts, and have performed thousands of similar projects in the New York/New Jersey area, including program and construction management. Malcolm Pirnie's service with the Port Authority spans the last 15 20 years, resulting in over 100 projects performed for the Port Authority. We have provided a short bio of the proposed Program Manager, Mr. Carmine Marra and Contract Officer, Mr. Robert S. Johnston below. **Professional resumes for Mr. Marra and other key members of the contract team are provided on the following pages as requested in the RFP.** Resumes for additional technical support are available upon request. A majority of the team members have worked on the projects discussed in Section D.

Carmine Marra, PE - Program Manager

The program manager role is critical to the effective functioning of the delivery team for large, complex projects. This individual is the technical and administrative leader for the project staff and is the direct contact person for the client's contract manager. The program manager is responsible for:

- Facilitating communications among the Malcolm Pirnie project team members and between the respective Malcolm Pirnie and client project teams.
- Providing overall technical and administrative guidance and insight on all aspects of project execution.
- Reviewing scoping, staffing, and budgeting for individual project assignments as well as performing conflict of interest inquiries.
- Adherence to project control and QA/QC procedures.
- Disseminating information and lessons learned to task order leaders in the interest of controlling costs and streamlining project activities.
- Maintaining a high level of consistency and quality on all administrative and technical deliverables to achieve client satisfaction throughout the entirety of the contract.

Mr. Carmine Marra, PE will serve as Program Manager for this project. Mr. Marra has more than 35 years in the industry and has extensive experience as program manager supervising the construction and startup of a broad range of engineering projects. Currently, he is the Program/Construction Manager for the Newtown Creek Water Pollution Control Plant, a $4.0 billion dollar construction upgrade, located in Brooklyn, for the New York City Department of Environmental Protection (NYCDEP) which is nearing completion. As the

Program/Construction Manager, he is responsible for all activities associated with the plant's capital improvement program including the management of the resident engineering staff of over 100 engineers and technical assistants. He also administers the priorities and phasing of multidisciplinary activities for NYCDEP to meet New York State Department of Conversation imposed Consent Decree to achieve Federal clean water standards.

Another large project performed for the New York City Department of Environmental Protection includes the Owls Head Water Pollution Control Plant located in Brooklyn NY. As Program Manager, Mr. Marra managed contract administration, project and construction management for $90-million capital improvement project, including powerhouse building renovation on replacing power and raw sewage handling equipment.

Other large projects have included the Cedar Creek Water Pollution Control Plant for Nassau County NY. He was responsible for contract administration and project and construction management for capital improvement projects including a $55 million digested sludge complex, sludge thickening facility, odor control facility, a $20 million primary sedimentation tank including process air blowers, installation of a 96 in force main and odor control facility, a $5 million water analysis laboratory, and a $29 million RAS building with six 110 ft diam final sedimentation tanks.

Robert S. Johnston – Contract Officer

Robert Johnston, PE, PG, Vice President, will serve as Contract Officer, as he has on our current "call in" contracts. Over 25 years, Mr. Johnston has managed hundreds of projects, and provided assistance and consultation during construction. He is familiar with all of the Port Authority's facilities, and with their operating and contracting procedures.

Summary of Project Experience

As requested in the RFP, to the right we have provided a table illustrating our key staff's project experience with respect to number of projects and overall costs.

Staff Name	No. of Projects	Project Costs
Carmine Marra	25+	>$1B
Dinesh Patel	25+	>$500M
Mark Duryea	20+	>$500M
Bob Vargo	20+	>$200M
Tom Husband	25+	>$500M
John O'Sullivan	20+	>$300M
Paul Romano	15+	>$200M
Frank Diffley	15+	>$200M
Jon Westervelt	25+	>$500M
Dan Lopez	20+	>$300M
Craig Murray	25+	>$100M
Steve Thayer	20+	>$500M
Mark DelBove	25+	>$500M
Tricia O'Loughlin	25+	>$500M
Jim Brown	25+	>$1B
Dan Weiss	20+	>$1B

With more than 35 years in the industry, Mr. Marra has extensive experience supervising the construction and startup of a broad range of engineering projects. Currently, he is the Construction Manager for the Newtown Creek Water Pollution Control Plant, a $4.0 billion dollar construction upgrade, located in Brooklyn, for the New York City Department of Environmental Protection (NYCDEP). As the Construction Manager, he is responsible for all construction management activities associated with the plant's capital improvement program including the management of the resident engineering staff of over 100 engineers and technical assistants. He also administers the priorities and phasing of multidisciplinary activities for NYCDEP to meet New York State Department of Conversation imposed Consent Decree to achieve Federal clean water standards. Other large projects include the Cedar Creek Water Pollution Control Plant for Nassau County NY.

Detailed Experience

- **New York City Department of Environmental Protection: Newtown Creek Water Pollution Control Plant / Brooklyn NY.** As Construction Manager since 1998 for the $4.0 billion upgrade of the 310 mgd wastewater treatment plant, New York City's largest, supervises the construction and startup of a broad range of engineering projects. Prepares budgets and billings for construction services as well as the project's staffing plans and forecasting of manpower needs; supervises the staff of 100 engineers, inspectors, and technical assistants; implements electronic document control management and e mail system; sets standards and guidelines for consistent project management among the various projects; is in daily communication with the client, design engineer, plant operations personnel, and the community; and completes monthly reports and presentations to client management.
- **New York City Department of Environmental Protection: Owls Head Water Pollution Control Plant / Brooklyn NY.** Managed contract administration, project and construction management for $90-million capital improvement project, including powerhouse building renovation on replacing power and raw sewage handling equipment. Equipment included engine generators, raw sewage pumps, air blowers,

Carmine A. Marra

Project Role:

Program Manager

Title/Firm:

Vice President
Malcolm Pirnie, Inc.

Years of Experience

36

Education

BS Physics New York Institute of Technology 1974
MS Nuclear Engineering Polytechnic Institute of New York 1979
MBA Finance Pace University 1989

Licenses and Certifications

Professional Engineer
Certified Construction Contract Administrator (CCCA)

Health and Safety Training

Construction Safety Awareness
H & S Orientation NTC

Societies

Construction Management Association of America, Member
Water Environment Federation, Member

Employment History

Malcolm Pirnie, Inc. 1988 to present
Metcalf & Eddy, Inc. 1984 to 1988
Gibbs & Hill, Inc. 1976 to 1984
Stone & Webster Engineering Corp. 1974 to 1976

grit handling equipment, and influent bar screen equipment.

- **Nassau County Department of Public Works: Cedar Creek Water Pollution Control Plant / Wantagh NY.** Construction Manager and Resident Engineer (1988 1998) for the 70 mgd plant, which is located in a residential area on the south shore of Long Island. Because of the sensitivity of the plant's location, it was important to minimize adverse effects of construction activities on the community. Construction had to be carefully monitored and controlled, requiring the implementation of construction modifications in an operating plant and installation of odor control facilities. Responsible for contract administration and project and construction management for capital improvement projects including a $55 million digested sludge complex, sludge-thickening facility, odor control facility, a $20 million primary sedimentation tank including process air blowers, installation of a 96 in force main and odor control facility, a $5 million water analysis laboratory, and a $29 million RAS building with six 110 ft diam final sedimentation tanks. Placed facility and equipment into service. Equipment included primary and recirculation gas compressors, air compressors, hot water pumps, hot water and sludge heat exchangers, thickened sludge equipment, odor control equipment, process air blowers, sludge collection equipment, final tank collection equipment, and WAS and RAS pumps. Other facets of construction included installation of timber piles, grout injected piles, excavation, backfill, steel sheeting, concrete, and HVAC and plumbing systems.
- **Auxiliary Power Plant Systems, Stone & Webster Engineering Corp. / New York NY.** Directed and coordinated engineering analyses for design of system, equipment specifications, and supporting calculations. Supervised mechanical designers in preparation of flow diagrams and for compliance with design documents. Provided field inspection and technical support.
- **Nuclear Power Plant / TX.** Provided technical expertise and guidance to complete critical path method (CPM) activities at Texas facility. Liaison with client and field construction personnel to implement system and equipment design specifications and evaluation of construction modifications. Directed mechanical engineers and designers on design of nuclear facility. Directed computer analyses for special studies and analytical evaluation of data. Implemented government requirements, corporate standards, and QA requirements. Defined scope of work and developed engineering criteria, procedures, and administrative controls.

Mr. Johnston has over 25 years of experience managing large projects, of which over 14 years have been with Port Authority properties and task order contracts. Throughout a career that spans over 20 years, Mr. Johnston has conducted and directed extensive site investigations, developed remedial solutions, and provided oversight of the implementation of these remedies. Mr. Johnston is a PE in NY and NJ, and has conducted and directed over 1000 environmental projects with over 150 No Further Action or closure letters.

Detailed Experience

- **Port Authority of NY & NJ (Eng. Dept): Call-in Contract/ New York/New Jersey.** Principal in Charge/Project Officer for over 30 projects at JFK, Newark, and other Port Authority Locations since 2001. Manages the call-in contract, and provides quality assurance/quality control on the projects to meet or exceed the Port Authority expectations. Assists the Port Authority in regulatory negotiations with NYSDEC and other agencies as required.
- **Port Authority of NY & NJ (Eng. Dept.): BFF and SFF Upgrades Contract JFK-1036 / Jamaica NY:** Mr. Johnston is the engineer of record for the design to further upgrade the Bulk Fuel Farm and Satellite Fuel Farm Remediation Systems. The design drawings and specifications were prepared in accordance with Port Authority CAD Standards and incorporated Port Authority Standard Specifications.
- **Port Authority of NY & NJ (Eng. Dept.): BFF and SFF Construction Services Contract JFK-981A & JFK-981MA / Jamaica NY:** Mr. Johnston is the engineer of record for the design and provided engineering consulting services during the construction activities to upgrade three dual phase extraction systems located at John F. Kennedy Airport. Mr. Johnston attended bi-monthly progress meetings with the Port Authority and the contractor.
- **Port Authority of NY & NJ (Eng. Dept.): Site Closure Workplans / Jamaica NY.** Evaluated historical remedial activities, current site conditions and developed a workplan to achieve site closure for three LNAPL contaminated sites (Terminal 1, Terminal 2, Terminal 4) located within the

Robert S. Johnston

Project Role:
Contract Officer

Title/Firm:
Vice President
Malcolm Pirnie, Inc.

Years of Experience
25

Education
BA English Rutgers University 1982
BS Civil Engineering Rutgers University 1982
MS Civil Engineering University of California 1985

Licenses and Certifications
Professional Engineer
Regist Environmental Assessor
Registered Civil Engineer
Registered Geotechnical Engine

Health and Safety Training
Initial 40 Hour Hazardous Waste Operations Safety Training
Medical

Societies
American Concrete Institute
American Society of Civil Engineers
Association of Firms Practicing in Geosciences, Past President
National Fire Protection Association

Employment History
Malcolm Pirnie, Inc. 2001 to present
Dames & Moore 1995 to 2001
GeoCon Environmental Consultants, Inc. 1987 to 1995
GeoCon Inc. 1984 to 1987
University of California 1982 to 1983
Melick & Tully, Inc. 1977 to 1982

Central Terminal Area of the John F. Kennedy International Airport. The workplans incorporated a combination of remedial activities through vacuum truck extraction, closure sampling plans, and quarterly progress monitoring plans.

- **American Airlines: Terminal-wide Cleanup Program / NY.** Principal in Charge in the evaluation, design, and implementation of $40 million dollar terminal wide clean up program in anticipation of a terminal redevelopment project at JFK Airport Terminals 8 and 9. Negotiated a consent order within a 3 month period; and implemented remedial actions at the site within a 12 month period. Managed an ongoing field staff I at the site for conducting operations and maintenance, remediation, drilling activities, groundwater monitoring, remediation monitoring, and the development of design specifications for the environmental aspects of a $1.5 billion dollar terminal expansion.
- **John F. Kennedy Airport: Terminal 4 Redevelopment Project / NY.** Principal in Charge for all due diligence and environmental oversight for Terminal 4 1AB project. Oversaw range airside investigation. Negotiated with NYSDEC, reviewed existing remediation systems, and provided field oversight during initial construction. Prepared TAAs, implemented badging processes and security program, and oversaw field and laboratory testing program.
- **American Airlines: LaGuardia Airport Remediation Project / NY.** Principal in Charge of investigation and remediation activities relating to underground storage tanks at LaGuardia Airport. Negotiated out requirements for drain investigation and initiated airside soil removal / tank removal program.
- **New Jersey Transit: Environmental Services / NJ.** Principal in Charge for a variety of projects, including the Newark Subway and the Long Slip Canal Project. Project interaction included remediation evaluation, geotechnical analysis and transactional consulting.
- **New Jersey Schools Construction Corporation: Proposed Elementary and Middle School / Gloucester City NJ.** Principal in Charge for geoenvironmental investigation for of a near coastal contaminated site. Installed geotechnical borings, evaluated subsurface meadow mat layer, including consolidation, and provided recommendations for embankments and cut slopes, remedial excavations, dewatering, and site drainage.
- **U.S. Army Corps of Engineers, New York District: NJ Flood Control Studies / NJ.** Principal in Charge of a large economic evaluation for flood control of the River.
- **Consolidated Electrical Distributors: Environmental Site Assessments.** Developed protocols for evaluating the properties with respect to the risk and implemented Phase 2 investigation including regulatory liaison in over 30% of the properties.

Mr. Brown has many years of experience in the management and administration of environmental and civil engineering construction projects. This experience encompasses design, review of contract drawings and specifications, value engineering and analysis, project planning and scheduling, and resident engineering. He manages submittal review, change order preparation, and construction claims evaluation and negotiation. He is responsible for all of Malcolm Pirnie's construction services work, which, during his tenure, has amounted to a total of more than $3 billion of construction.

Detailed Experience

- **Nassau County Department of Public Works: Cedar Creek Water Pollution Control Plant / Wantagh NY.** Responsible for construction administration of $200 million upgrading of a 75 mgd facility
- **New York City Department of Environmental Protection: Coney Island Water Pollution Control Plant / Brooklyn NY.** Responsible for construction administration services for $690 million upgrade of a 110 mgd facility that included 35 construction contracts.
- **New York City Department of Environmental Protection: Newtown Creek Water Pollution Control Plant / Brooklyn NY.** Manager of the Design Services During Construction effort of three joint-venture firms and numerous subconsultants on the upgrade of the Newtown Creek WPCP, a $2.5 billion, multicontract project. Work includes overseeing shop drawing reviews, contract interpretations, change order preparation and negotiations, and claims management. Role includes strong emphasis on the necessary coordination among the multiple engineering contracts and parties.
- **Northeast Ohio Regional Sewer District: Southerly Wastewater Treatment Center / Cleveland OH.** Managed construction of a 200 mgd, $290 million upgrading and expansion of a regional wastewater facility through 64 separate construction contracts.
- **Elizabethtown Water Company: Raritan-Millstone Water Treatment Plant / Bridgewater NJ.** Responsible for

Jim Brown

Title/Firm:
Vice President
Malcolm Pirnie, Inc.

Years of Experience
41

Education
BS Civil Engineering Clarkson University 1970
MS Environmental Engineering New Jersey Institute of Technology 1982

Licenses and Certifications
Professional Engineer
40-Hour Value Engineering
Certified Construction Contract Administrator (CCCA)
OSHA Occupational Safety and Health Training

Health and Safety Training
Health and Safety Orientation

Special Recognition
Former Chair, Engineers Joint Contract Document Committee

Societies
American Society of Civil Engineers
American Water Works Association
Construction Management Association of America
Construction Specifications Institute

Employment History
Malcolm Pirnie, Inc. 1972 to present
Clough Associates 1970 to 1972
Clough Associates 1967 to 1968

construction administration of a $12 million program, including new chemicals and pumping facilities, and modifications to the 150 mgd plant.

- **Erie County Water Authority: Jerome D. Van de Water Water Treatment Plant / Tonawanda NY.** Directed construction management of the $40 million, 50-mgd plant.
- **Liberty Environmental Systems, Inc.: Westchester County Sludge Drying Project / Yonkers NY.** Responsible for construction administration of a sludge dewatering and residue disposal facility.
- **Massachusetts Water Resources Authority: Renovation of North Main Pump Station, Boston Harbor Project / Boston MA.** Managed construction services for $60 million renovation of an 800-mgd pump station.
- **Pequannock, Lincoln Park and Fairfield Sewerage Authority: Two Bridges Advanced Wastewater Treatment Plant / Lincoln Park NJ.** Directed construction management of the $40 million program for the construction of a regional wastewater system, including 16 miles of interceptors and force mains, 7 sewer pumping stations, and a 7.5 mgd treatment facility.
- **Puerto Rico Aqueduct and Sewer Authority: Ocean Outfall for the Ponce Wastewater Treatment Plant / Ponce PR.** Responsible for construction administration phase of a 22,000 feet long, 48 inch diam ocean outfall to depths of 400 feet.
- **Veterans Administration: New Wastewater Treatment Plant / Lyons NJ.** Responsible for construction administration of a 0.5 mgd facility that treats hospital wastes employing the extended aeration activated sludge process with combined single stage nitrification and effluent filtration using automatic backwash sand filters.
- **Washington Suburban Sanitary Commission: Patuxent Filter Plant / Laurel MD.** Coordinated design for rehabilitation of a 65 mgd, all steel construction water plant.
- **Water Works and Sewer Board of the City of Birmingham: Drinking Water Services / Birmingham AL.** Responsible for construction administration of water works system improvements, including a new water treatment plant, modifications and expansions at two plants, sludge dewatering facilities, six storage tanks, and two pumping stations.
- **Westchester County Department of Environmental Facilities: Mamaroneck Outfall Sewer / Mamaroneck NY.** Responsible for construction administration phase of a 7,000-feet long, 60 inch diameter outfall into Long Island Sound.

Mr. Del Bove has extensive experience in the planning and design of environmental facilities, including advanced wastewater treatment and sludge management processes and facilities. He has prepared study and design reports; prepared plans, specifications, and cost estimates for the design of advanced treatment and sludge handling systems; negotiated and reviewed federal and state discharge permits; participated in value engineering studies; designed water, wastewater, storm water, and sludge pumping stations and water treatment facilities as well as sanitary, storm and combined sewer conveyance systems; and acted as resident engineer during the construction of system components.

Detailed Experience

- **Bergen County Utilities Authority: Digestion Facility Upgrade / Little Ferry NJ.** Managed the design and construction phase services for improvements to anaerobic digestion facilities including replacement of gas mixing equipment with new bubble generator mixing systems for four 80 ft diameter digesters, and new sludge recirculation pumping and heat exchanger equipment.
- **Bergen County Utilities Authority: Thickening / Dewatering Improvements / NJ.** Directed and Managed the design and currently the construction of improvements to sludge thickening and dewatering equipment including replacement of existing centrifuges with gravity belt thickener units for waste actuated sludge thickening and three belt combination gravity belt thickener/dewatering units to thicken or dewater digested sludge for a 94-mgd secondary treatment facility.
- **Borough of Edgewater: Edgewater-Marina C/A / NJ.** Provided Program Management services and Construction Management services associated with construction of the new Edgewater Marina, Park and Ferry Landing project. Services included acting as Owner's representative during project design, conducting project management meetings and serving as overall construction manager during project implementation phase.

Mark P. Del Bove

Title/Firm:
Vice President
Malcolm Pirnie, Inc.

Years of Experience
33

Education
BS Civil Engineering The Cooper Union 1976
MCE Civil Engineering University of Delaware 1978

Licenses and Certifications
Professional Engineer
Board Certified Environmental Engineer (BCEE)

Health and Safety Training
Construction Safety Awareness

Special Recognition
Board Certified Environmental Engineer

Societies
American Academy of Environmental Engineers
New Jersey Water Environment Association
Water Environment Federation

Employment History
Malcolm Pirnie, Inc. 1989 to present
Killam Associates, Inc. 1978 to 1989

- **City of Newark: Delancy Street Improvements / Newark NJ.** Managed the design of water, sewer, and storm water improvements for Delancy Street project. Work included investigation and design of infrastructure and traffic improvements, including the use of microtunneling techniques, for new sanitary sewers to support a major new planned distribution and bottling facility.
- **City of Newark: Downstream Improvements to Adams Street, Avenue A and Vanderpool Street Drainage Ditch System / NJ.** Directed and managed improvements to major drainage ditch systems within the City of Newark including debris removal, conduit replacement and sediment removal consisting of ID 27 contaminated material.
- **City of Trenton: Route 29 Sewer System Improvements / Trenton NJ.** Managed the construction phase services for lining 5,300 feet of large diameter brick sewer as a part of the NJDOT Route 29 Sewer System Improvements.
- **Essex County Department of Public Works: Essex County Environmental Center / West Caldwell NJ.** Managed the design of a 10,000 square foot environmental center utilizing sustainable design concepts, as well as reuse of existing materials and complete environmental permitting.
- **Madison Chatham Joint Meeting and Township of Bernards Sewerage Authority: WWTP Construction Management / Chatham NJ.** Construction management for advanced wastewater treatment projects, including pay estimates, contractor coordination, and contract administration.
- **NYCDEP: Zebra Mussel Control / New York NY.** Managed the design and preparation of contract documents for chemical feed systems at over 50 separate City facilities including dams, gatehouses, tunnels, aqueducts, and aqueduct inlet and outlet structures for zebra mussel control. Chlorine gas and hypochlorite are control chemicals with sodium bisulfite being used as dechlorination agent.
- **Ocean County Utilities Authority: Expansion of NWPCF / Bayville NJ.** Managed an expansion feasibility study for the 28 mgd NWPCF. Project involved detailed engineering evaluations of influent and effluent pumping requirements, computer analysis of plant hydraulics, investigation of an effluent equalization basin to accommodate peak hourly flows, analysis of chlorine produced oxidants in the ocean outfall, and investigation of advanced wastewater treatment for a future average flow of 44 mgd. Also, managed the design for improvements to the 32 mgd facility including raw sewage pumping, screening, grit removal, primary clarification, effluent flow equalization, sludge thickening, and electrical improvements and managed construction phase services for all selected system improvements.

Mr. Diffley has over 20 years of experience in the Construction industry with background as a scheduling manager, project manager, project scheduler, office engineer, field superintendent, and inspector. Mr. Diffley also has 12 years experience as a General Construction Field Superintendent. Supervised field operations in Residential, Light Commercial, Specialty Retail and Restaurant construction. Familiar with all trades and construction practices, including excavation, form work and foundations, wood and steel framing, MEP installation and architectural finishes.

Detailed Experience

- **NYCDEP: Newtown Creek WWTP - Contract NC-36G / NY.** Project Manager with overall cost and schedule responsibility for the $225 Million renovation and upgrade of a NYCDEP Wastewater Facility. Responsibilities include, schedule development, schedule maintenance, identification and resolution of schedule issues. Prepared purchase orders to vendors and subcontractors and insured that material and labor were on the job site to support the project schedule. Prepared monthly requisitions to the clients and authorized all payments to all subcontractors and vendors. Supervised a staff of engineers to insure the timely submission of shop drawings, RFI's, change orders and oversaw general administration.
- **American Airlines: JFK Terminal Redevelopment / Jamaica NY.** Developed Detailed Baseline Schedule for new $1.4 Billion Terminal Building at JFK. Employed by owner to monitored work progress and developed recovery plans to regain any work slippage. Provided bi monthly schedule updates while working closely with the all members of the Project Team (Owner, Designer, Contractor and Sub Contractors). Chaired weekly schedule meeting with Project Management and the Sub Contractors to insure project milestones were understood and sufficient manpower was being dedicated to the Project. Project is to be completed in phases and schedule addresses interfaces with new roadway and Air Train construction, new fuel line construction to existing terminals and staged demolition of old terminals while maintaining passenger service.

Francis Diffley

Title/Firm:
Sr. Proj Control Spec
Malcolm Pirnie, Inc.

Years of Experience
20

Education
Program completed in BS Economics Iona College 1974

Employment History
Malcolm Pirnie, Inc. 2009 to present
Malcolm Pirnie, Inc. 2005 to 2007

- **NYCDEP: Newtown Creek WWTP / New York NY.** Schedule Manager for multiple projects in excess of $250 Million. Duties included review and approval of multi prime contract schedules, prepare monthly schedule, cost and delay analysis reports and chair monthly schedule and issues meetings. Additionally, provide analysis and documentation of all contract delay claims and initiate recovery plans. Maintain a strong field presence to provide the client with an accurate assessment of real project progress and issues.
- **NYCDEP: North River WPCP / New York NY.** Project Scheduler for $100M wastewater facility. Duties included review and approval of multi-prime contract schedules; preparation of monthly schedule, cost and delay analysis reports.
- **New York City DOT: Various Projects / New York NY.** Provided scheduling, inspection and office engineering services for high profile infrastructure project in New York City. Projects included the installation of replacement of and distribution and service water mains, sewers, highway, curbs, Sidewalks, traffic signals and street lighting. Developed and monitored construction schedules, Reviewed plans and specifications and reconciled plans to field conditions. Prepared change orders and recorded field measurements tabulated quantities for payment and record drawings. Coordinated the resolution of conflicts between New York City agencies, contractors, public utilities and the public.
- **Fluor Daniel: JFK Airport Terminal 4 / Jamaica NY / Jamaica NY.** Senior Scheduler for a $1.2 Billion air terminal project. Revised schedule logic to recover delays. Expanded and manpower loaded schedule to accurately reflect project conditions. Prepared schedule and labor bimonthly reports for Senior Management. Maintained constant presence in field to monitor progress and appraised Project Management and Field Superintendents for schedule slippage. Developed workable construction sequencing to reclaim lost time and keep project on track. Included $110M highway component of new bridges, bypasses, overpasses, roads and parking.
- **JA Jones - GMO: Continental Airlines Global Gateway Project / Newark NY.** Developed integrated baseline CPM for $350M expansion and renovation of an operation airline terminal. Schedule managed both fast track design and construction of new highway and access toads, major airside site work, construction of new passenger concourse and additions to existing buildings as well as the maintenance of passenger flow and terminal operations during construction. Scheduling addressed new mechanical, electrical, and vertical transportation systems and their integration with existing systems.
- **NYCDEP: Croton Filtration Plant / Bronx NY.** Project Scheduler for $1.8 B water treatment plant. Duties included the development and maintenance of an integrated Project Master Schedule, review and approval of multi-prime contract schedules, prepare monthly schedule delay analysis reports.

Extensive experience with twenty four years P/L responsibility encompassing all areas of management including finance, engineering and operations. Proven track record of success in design, negotiating, organizing and estimating. Demonstrated ability to innovate and produce. P.E. with MBA and BS in Civil Engineering. Hands on management style with superior presentation and communication capabilities.

Directed an estimating staff for major general contractors in New York City in preparation of public and private bids up to $500 million. Selected projects for bidding; managed engineers in preparation of simultaneous project bids; purchased and setup estimating, quantification, cost accounting and project management software; recruited, hired and trained all personnel; finalized all bid and profit computations. Results: Performed in the top three in our market niche for all bids, enabling company to triple volume to over $100 million.
Lead project management staff and oversaw field construction operations. Negotiated subcontracts and purchases; reviewed correspondence and contract changes; directed management controls through use of Critical Path and other methods; oversaw and reviewed preparation of claims; provided direction and support to corporation subsidiaries and insurance, surety and banking institutions.

Results: Consistently outperformed original bid estimates by an average of 5%. Supervised consulting engineering staff in project designs. Initiated and promoted use of first programmable desktop computers; developed programs for project geometry and designs; directed staff in integrating programs into designs. Results: Eliminated need for mainframe computer and technicians and cut turnaround time by 67%. Managed consulting engineering staff in supervision and inspection of multi million dollar projects. Insured contractor compliance with plans and specifications; developed alternative methods of construction for cost and time savings; provided assistance to contractors in design process; reviewed and approved all submittals; directed all activities insuring minimal disruption and timely completion of projects; prepared and processed payment requisitions.

Mark A. Duryea

Title/Firm:
Associate
Malcolm Pirnie, Inc.

Years of Experience
33

Education
Program completed in BSCE Structural Engineering Pennsylvania State University 1976
Program completed in MBA Management St. John's University 1984

Licenses and Certifications
Professional Engineer

Professional Training
Training Course In The Use Of Heavy Construction Software Systems For Professional Estimators
Training Course In The Use Of Paydirt/Sitework A 3d Quantity Takeoff Program For Construction And En
Training Course In The Use Of Primavera Project Planner
Various Training Courses At Saddle Island Institute For Claims Preparation And Analysis

Employment History
Malcolm Pirnie, Inc. 2010 to present
Tully Construction Co. 2009 To 2010
Yonkers Contracting Co Inc 2007 To 2008
Grace Industries Inc 1986 To 2007
Goodkind & O'dea Inc 1983 To 1986
Ammann & Whitney Inc. 1979 To 1983
King & Gavaris Inc. 1976 To 1979

Detailed Experience

- **NYCDEP: Deputy Construction Manager / NY.** In charge of staff for review of most reports; attend all principal meetings; prepare, review and supervise substantial change orders; ensure compliance with all specs and standards; monitor, evaluate and hire for staffing needs; interface with client and construction manager to insure satisfaction of client as well as recommend changes in policies to make project more efficient and effective.

Mr. Husband has extensive experience in the design and construction of a variety of public and private projects. He has worked as the overall construction project director of large industrial projects as well as design engineer for a major environmental consultant. His accumulated work experience with consultant engineering firms, general contractors, and specialty subcontractors on technically diverse projects has provided him with expertise in project controls and scheduling to bringing such projects to successful completion.

Detailed Experience

- **Long Island Railroad: Railroad Bridge Rehabilitation / Long Island NY.** Project Manager on a joint venture for the rehabilitation of 12 main line railroad bridges. Responsible for all aspects of the project, including office administration and field operations. The work required the replacement of bearings, steel repairs, and replacement of abutment seats while maintaining full service across each bridge.
- **NYCDEP Construction: Tallman Island WPCP CM / NY.** Construction Manager overseeing construction of Contract TI 3 contracts for plant upgrades including the provision of biological nutrient removal (BNR) at the Tallman Island WPCP. All work performed under this $300 million project is being constructed within an operating treatment plant while maintaining compliance the wastewater permit limitations. New facilities include 27 kV substation, new RAS pump station, new aeration blowers and main sewage pumps, renovations to existing aeration tanks, and improvements to the solids handling facilities. In his role as CM, Mr. Husband oversees a staff of 15 engineers and inspectors who are responsible for construction inspection, change order processing, schedule monitoring, payment tracking, and startup/operations support.
- **NYCDEP: Flushing Bay CSO, CS-4-4 Combined Sewer Overflow Retention Facility / Flushing NY.** Construction Manager for $160 million project. Responsible to manage contractors in the construction of a major CSO Facility for the NYCDEP. Responsible for the scheduling and coordination of 4 Prime Contractors.

Thomas Husband

Title/Firm:
Senior Associate
Malcolm Pirnie, Inc.

Years of Experience
35

Education
BCE Civil Engineering Manhattan College 1975
MEng Environmental Civil Engineering Manhattan College 1980

Licenses and Certifications
Professional Engineer

Health and Safety Training
Ergonomics
Initial 40 Hour Hazardous Waste Operations Safety Training
Health and Safety Orientation

Employment History
Malcolm Pirnie, Inc. 2005 to present
Tully Construction Co., Inc. 1999 to 2005
Perini Corporation 1998 to 1999
WDF Inc. 1997 to 1998
Arben Corporation 1995 to 1997
JWP, Inc. 1991 to 1995
KSW Mechanical Service, Inc. (Formerly JWP Mechanical Services) 1991 to 1995
Briar Contracting Corporation 1984 to 1991
Malcolm Pirnie, Inc. 1975 to 1984

- **NYCDEP: North River Process Optimization Odor Minimization / New York NY.** Construction Manager providing construction manager services which requires the coordination and maintenance of the existing facilities during extensive upgrading work.
- **New York State DOT: Reconstruction of the West Side Highway, Segment 3 / New York NY.** Assistant Project Manager for the $54 million project, which included work for all major private and public utilities, including a new 48 in water main, fiber optics, electrical services, etc. Responsible for all layout, engineering, utility coordination, material ordering, and scheduling.
- **Port Authority of New York and New Jersey: John F. Kennedy Airport Cogeneration Plant / New York NY.** As Project Manager, coordinated activities of the JWP Companies on this work, producing project scheduling and cost reports. The value of the mechanical contract was approximately $44 million. This project entailed the complete renovation of the heating and air conditioning plant for all of the airport's terminals, with the addition of a cogeneration facility plant to provide electricity and steam. Responsibilities included the development of project schedule and costing.
- **New York State DOT: Gowanus Expressway / NY.** Provided services to the concrete roadway and structural steel for this elevated highway (a $44 million project). Numerous emergency repairs requiring on-site decisions had to be performed on a daily basis.
- **New York State DOT: Reconstruction of the West Side Highway, Segment 2 / New York NY.** Participated in the $90 million project, which includes work for all major private and public utilities. All bonuses for early completion received $2.8 million.
- **Triborough Bridge and Tunnel Authority: Verrazano Narrows Bridge Approach Pavement Rehabilitation / New York NY.** On a project for the reconstruction of the pavement and utilities on the bridge's Brooklyn approach lanes, performed value engineering that saved the TBTA $300,000.
- **Various Clients: Construction Administration / NY.** Construction Project Manager for numerous projects. Responsible for cost controls and project scheduling on multi prime public and private work. Prepared bids for public and private work, and performed over 200 estimates bidding at risk on projects ranging from $300,000 to over $100 million.
- **WDF Inc.: Upgrade of NYCDEP Jamaica WWTP / NY.** As Project Manager on a $10M subcontract for the mechanical work for refurbishing the plant's secondary process system. Design issues caused delay in the performance of the work for over one year.
- **New York Organic Fertilizer Company: Hunts Point Pelletization Project / Bronx NY.** Project Director on the Hunts Point Pelletization Project. Through use of Primavera P3 scheduling and cost controls, the project was successfully completed with all bonuses for early completion received.

Mr. Lopez-Rendon has extensive experience in the design of small and large industrial and municipal wastewater treatment facilities. His work includes all phases of design, including from facility planning, conceptual and preliminary design, final detail design, development of contract specifications, budgetary and construction cost estimating, and construction administration services. He has supervised and coordinated the work of civil, mechanical, structural, electrical, HVAC, and plumbing engineers as well as architects, both among Malcolm Pirnie divisions and with subconsultant firms, during the design of new and existing facilities. He also has ample experience in the solution of hydraulic problems and has participated in problem solving and troubleshooting of hydraulic problems at various treatment facilities. Mr. Lopez-Rendon has also participated in the planning and development of wastewater treatability studies, pilot plant work, and treatment process design.

Detailed Experience

- **New York City Department of Environmental Protection: Wards Island WPCP / Manhattan NY.** As Malcolm Pirnie's Program Manager for the planning and detailed design of improvements at the Wards Island WPCP, a 275 million-gallons per day (mgd) average dry weather flow and 550-mgd wet weather flow wastewater treatment plant in New York City, managed the following: Upgrade Design of Manhattan and Bronx Grit Chambers ($91 million project, completed in 2008). Provided new equipment for the collection and handling of screenings and grit and the upgrade of the physical facilities to restore the buildings and bring them into compliance with current codes, meeting Art Commission of the City of New York and New York City Landmarks Preservation Commission requirements. Plan for Upgrade of Plant Facilities. Developed a comprehensive facilities plan for the phased upgrade of the plant, including the improvements necessary to implement biological nitrogen removal (BNR) treatment. The plan addressed existing conditions of facilities and equipment, the design of new and modified treatment processes, evaluation of alternatives, recommendation of a plan for the upgrade of every existing facility and for the provision of new facilities, preparation of an analysis of deviations from previous plans

Daniel Lopez-Rendon

Title/Firm:
Vice President
Malcolm Pirnie, Inc.

Years of Experience
25

Education
BS Civil Engineering Tecnologico De Monterrey 1984
MS Environmental Engineering University of North Carolina at Chapel Hill 1988

Licenses and Certifications
Professional Engineer

Health and Safety Training
Health & Safety Training for Project Management
Health and Safety Orientation

Special Recognition
Awarded BSA's 2-year Bachelor's studies scholarship, Buenos Aires, Argentina.
Awarded Master's studies scholarship by the World Health Organization, 1986.

Societies
American Water Works Association
Inter-American Association of Sanitary Engineering and Environmental Sciences
New York State Water Environment Association
Sociedad Mexicana de Aguas
Water Environment Federation

Employment History
Malcolm Pirnie, Inc. 1988 to present
University of North Carolina at Chapel Hill 1986 to 1988
Department of Hydraulic Construction and Operation, Mexico DF 1985 to 1986

and other citywide efforts and their associated impacts, overview of other work required for the implementation of the recommended plan (such as environmental assessments, permits, etc.), and a staging plan for the phased implementation of the recommended upgrade. Project Management. Managed various project managers and over 70 design professionals, including engineers, architects, and technicians, for over two years to: [1] design upgrade of the plant's solids handling facilities in support of compliance ($212M); [2] design upgrade of the deteriorated and inadequate plant administrative and personnel facilities and air system ($96M); and [3] design upgrade of the plant's secondary system facilities ($450M).

- **NYCDEP: Grit Chambers Upgrade Design / Bronx NY.** Program Manager for the $91 million project while it was under construction. The project's purpose was to upgrade the Bronx and Manhattan grit chambers by providing new equipment for the collection and handling of screenings and grit, upgrading the physical facilities to restore the buildings and bring them into compliance with current codes, and meeting Art Commission of the City of New York and New York City Landmarks Preservation Commission requirements.
- **NYCDEP: Expansion and Upgrading of the Wards Island WPCP / Bronx NY.** Project Manager for the upgrade design of the 275-mgd plant. Responsible for day-to day management of facility planning, conceptual, preliminary, and detail design, bidding assistance, and startup and operations assistance for the three phase upgrade project, which is estimated at more than $200 million dollars in construction costs.
- **Puerto Rico Aqueduct and Sewer Authority: Program Management for Infrastructure Upgrade / Various Sites PR.** As Design Manager, currently providing assistance to CPM MPPR Infrastructure Managers, PSC on management, planning, design, bidding, construction, and postconstruction projects and activities for multiple capital improvement projects for PRASA. This represents consulting and engineering support to Malcolm Pirnie and MPPR who are currently working on or have recently completed work on over 100 projects, representing consulting services in excess of $4 billion of infrastructure development and service delivery contracts in Puerto Rico.
- **NYCDEP: Various Assignments / Bronx NY.** Managed various project managers and over 70 design professionals, including engineers, architects, and technicians, for over two years to develop the following: Solids Handling Facilities Upgrade Design iV This $212 million upgrade was designed to provide for the general upgrade of the plant's solids handling facilities to support compliance with the PSRP operation necessary to meet Class B pathogen reduction requirements for land disposal of biosolids. Secondary Treatment Facilities Upgrade Design iV Under this $450 million project, the planti+s secondary system facilities (i.e., Aeration Tanks, Final Settling Tanks, return activated sludge pumping system, waste activated sludge pumping system, and the Return Sludge Pump Stations and associated operating galleries) upgrade was designed.

Mr. Murray has a variety of experience in water and wastewater design, construction management and field work, including work chemical addition facilities, pipelines, pump stations, flow splitting and distribution systems, maintenance of plant operations, HVAC and odor control systems.

Detailed Experience

- **New York City Department of Environmental Protection: Design of WWTP Flow Distribution System / NY.** Design leader for a new flow distribution system at the Newtown Creek WPCP. The system consisted of four 96" diameter pipes and a splitter box designed to split 700 mgd 12 ways. Structures had to be constructed on an extremely congested existing site, connections had to be made without shutting down the treatment system, and the system had to be able to accommodate future expansion.
- **Arlington County: Design Project 1, Advanced Wastewater Treatment Upgrade / VA.** Design leader for a $90 million upgrade to a 40 mgd advanced wastewater treatment facility. Design components included new 11 MG equalization tanks, multi point ferric addition system, new denitrification filters, methanol feed system, odor control facilities, large diameter pipelines, demolition activities, and post aeration system. Extensive maintenance of plant operation issues were resolved to allow construction with minimal disruption to the treatment process.
- **City of Hopewell: Regional WWTF - Centrifuge Dewatering Facility / Hopewell VA.** Lead design engineer for a new centrifuge dewatering facility and cake handling system for a 50 mgd regional wastewater treatment facility. Dewatering system consisted of two solid bowl centrifuges, cake pumps, screw conveyors, cake receiving station, truck loadout facility, cake storage pad and incinerator feed piping. The system provided the client with the flexibility to distribute cake to multiple locations within the plant, accept cake from other facilities for incineration, and load trucks to transport cake to other plants or to the onsite storage facility. Design also included polymer feed system, new restroom facility and administration area.

Craig W. Murray

Title/Firm:
Vice President
Malcolm Pirnie, Inc.

Years of Experience
19

Education
BS Mechanical Engineering University of Delaware 1993
MS Environmental Engineering Old Dominion University 1999

Licenses and Certifications
Professional Engineer
Certified Construction Documents Technologist (CDT)

Societies
Water Environment Federation

Employment History
Malcolm Pirnie, Inc. 1993 to present
Irwin-Jurkewiecz Corporation 1992 to 1992
Rockport Construction Company 1991 to 1991
Sterling Steel 1989 to 1990

- **DCWASA: Upgrading of Blue Plains Advanced WWPT / Washington DC.** Assisted with field investigations, cost estimating and detailed design of varying aspects of the rehabilitation of the primary sludge pumping stations including new sludge pumps, HVAC, electrical, piping and valve modifications, and maintenance of plant operations.
- **Tampa Bay Water: Chloramine Implementation Project / FL.** Lead Project Engineer for the design of five separate chemical feed facilities serving the 158 MGD distribution system of Tampa Bay Water, the largest wholesale water distributor in Florida. The new facilities converted the entire Tampa Bay Water surface water treatment system to chloramine disinfection. The design consisted new chemical buildings, storage facilities, and dosing systems for caustic soda, sodium hypochlorite and aqua ammonia feeds.
- **City of Roanoke: Expansion and Upgrading of WPCP / VA.** Civil/Sanitary design for upgrade and expansion. Design items included a new gravity thickener and thickened sludge pump station, 36 mgd primary influent pump station, dredge system, biological aerated filter, polymer system, and hydraulic profile for the plant. Project Engineer for construction administration services during construction. Prepared conceptual and final cost estimates. Developed control strategies and construction sequences to maintain plant operations during construction.
- **Coca-Cola Bottling Company of New York: CCPRB Design / Cayey PR.** Design leader for a new industrial wastewater treatment system utilizing membrane bioreactors with supporting equalization tanks, high strength waste segregation, chemical addition for pH control and nutrient loadings, centrifuge dewatering of waste sludge, and effluent pumping and reuse. In addition to maximizing treatment within a limited footprint, the membrane bioreactor technology provided a high quality effluent suitable for reuse as cooling tower makeup water and other non potable plant uses.
- **Frito-Lay, Inc.: Industrial Waste Treatment Facilities.** Project Engineer for several industrial wastewater design projects. Projects included preliminary and detailed designs for a new primary influent pump station, new oil/water separator, new primary clarifier and various treatment system evaluations at two Frito Lay plants. Conducted site visits, pre bid meetings, pre-construction meetings and site inspections. Performed shop drawing review and construction administration during construction. Prepared conceptual and final cost estimates. Developed process control strategies.
- **Philadelphia Water Department: Fowler Street Pipe Bridge Rehabilitation / PA.** Project Manager for the rehabilitation of an aging pipe bridge that supports two 30 inch raw water transmission mains. Due to the criticality of these mains, the repair work needed to be completed with the pipes in service. A detailed jacking plan was prepared to raise the pipes to allow removal of the existing supports and installation new supports. Grading, retaining walls, painting and environmental permitting were also included.

Ms. O'Loughlin is experienced in all phases of the design of large wastewater treatment plants. Her experience ranges from preliminary layout of facilities, sizing, and selection of equipment and piping, to final design. She has coordinated duties and responsibilities with subconsultants on both new and existing facilities, and has performed problem solving and troubleshooting with field engineers during construction. Ms. O'Loughlin has been involved with the Massachusetts Water Resources Authority Boston Harbor project, and was responsible for overall development of the two million gallon water storage tank at Deer Island as part of the DP 28, CP 205 phase, as well as the addenda phase for CP 205 which included answering contractor questions and developing addenda to revise contract documents as required. The project also involved the coordination of work between the client, subconsultants, internal specialty groups, and outside consulting firms.

Detailed Experience

- **New York City Department of Environmental Protection: Wards Island WPCP Upgrade - Phase 5 / Bronx NY.** Project Manager for the upgrade planning and design of the 70 year old, 275/550-mgd average/peak flow plant. Project included the management of facility planning and the conceptual, preliminary, and detailed design of a $450 million upgrade of the secondary system to meet biological nitrogen removal treatment capabilities.
- **Puerto Rico Aqueduct and Sewer Authority: North Coast Superaqueduct / San Juan PR.** Project Manager for Malcolm Pirnie as a major design subconsultant to Vincenty, Heres y Lauria. Provided detail design and construction administration services for a $300 million, 100 mgd water supply, treatment, and conveyance system to help solve the island's critical water shortage. Project components included an intake on the Rio Grande de Arecibo, a 300 mil-gal reservoir, raw water pumping station, water treatment plant, and 50 mi long transmission main with satellite storage facilities.
- **City of Norwalk: WWTP Upgrade and Expansion / CT.** As Project Manager, designed a comprehensive upgrade for

Patricia A. O'Loughlin

Title/Firm:
Vice President
Malcolm Pirnie, Inc.

Years of Experience
30

Education
BS Civil Engineering Villanova University 1980
ME Environmental Engineering Manhattan College 1989

Licenses and Certifications
Professional Engineer
Board Certified Environmental Engineer (BCEE)

Health and Safety Training
Construction Safety Awareness
Health and Safety Orientation

Societies
Society of Women Engineers
Water Environment Federation

Employment History
Malcolm Pirnie, Inc. 1980 to present

complete BNR and plant expansion from 15 to 20 mgd. Plant upgrade and expansion includes the addition of a 5th primary settling tank modifications to 4 existing primary settling tanks. This brought the plant up to code and current standards. Extensive consideration was given to the maintenance of plant operations to ensure that water quality standards were met at all times during construction.

- **Metropolitan District Commission: Water Pollution Control Solids Handling Facility / Hartford CT.** Managed design review and special inspection at the 80 mgd Hartford Pollution Control Facility. The new brick and block building houses the screens, two 25,000 gal blending tanks with mixers, an odor control system, control room, and sludge transfer pumps.
- **Philadelphia Water Department: Northeast Water Pollution Control Plant - Aeration System Rehabilitation / Philadelphia PA.** Project Manager for aeration system upgrade to the city's largest WPCP. Project consisted of assessing the conditions of the existing installation and designing an upgrade for in tank process equipment and main air header.
- **City of New Haven Water Pollution Control Authority: Morris Cove Pumping Station Upgrade / New Haven CT.** Group manager for the study and design of a new pump station containing five 200 hp variable speed pumps using variable frequency drive technology.
- **City of Norwalk: Main Sewage Pumping Station Upgrade / Norwalk CT.** As Project Manager, designed comprehensive upgrade for complete BNR and plant expansion from 15 to 20 mgd. Included modifications to the main pumping station, primary settling tanks and aeration tanks, addition of new final settling tanks, new return sludge pump station, new chlorine contact tank, addition of dechlorination, and modifications to gravity thickeners.
- **City of Norwalk: Wastewater Services / CT.** As Project Manager for interim modifications, performed a retrofit of the aeration system for partial BNR to achieve interior nutrient reduction quantities set by regulatory agencies.
- **Metropolitan District Commission: Water Pollution Control Facility Gravity Thickeners / Hartford CT.** Managed preliminary design, design review, and construction administration for water pollution control facility gravity thickener addition.
- **Seaman Paper Company: Tertiary Wastewater Treatment Plant / Baldwinville MA.** Managed the design of the company's secondary wastewater treatment facility modifications. Design included converting a clarifier to a third aeration basin pass, converting an effluent chamber into an aeration basin effluent pump station, and design of return and waste sludge systems, together with modifications to associated plant processes.

Mr. O'Sullivan has extensive experience in resident engineering of large construction projects, including CSO facilities, wastewater treatment facilities, bridge and road projects, and other types of heavy construction projects. He has worked with several companies in the supervision, coordination, and administration of construction projects. Mr. O'Sullivan's responsibilities have included project planning, scheduling, estimating, cost control, claims analysis and negotiations, and oversight of construction activities. For the past 17 years, Mr. O'Sullivan has worked exclusively on New York City Department of Environmental Protection projects as Resident Engineer.

Detailed Experience

- **NYCDEP: Flushing Bay CSO Storage Facility - Contract CS4-4 / NY.** Resident Engineer on $180 million project to construct a 28 million-gallon underground CSO storage tank. Project is third phase of $250 million multiphase contract to reduce CSO discharges into Flushing Bay. This phase constructs above grade facilities which will house mechanical and electrical equipment as well as a segregated area for use by NYC Parks Department. New equipment will include main pumps to discharge flow to Tallman Island, new odor control systems, boilers and flushing water systems. Contract is being constructed under Wicks Law arrangement with four (4) separate prime contracts.
- **NYCDEP: Flushing Bay CSO Storage Tank: Contract CS4-3 / NY.** Resident Engineer on the $113 million project to construct a 28 million-gallon underground CSO storage tank. The project is the third phase of a $250 million multiphase contract to reduce CSO discharges into Flushing Bay by capturing the flow which, after the passing of the storm event, is pumped to the Tallmans Island Water Pollution Control Plant for treatment. Located on a 6.7-acre parcel of land in Flushing Meadow Park, the project includes the construction of a state of the art 2,200 ft perimeter excavation support system some 100 ft deep, which also acts as a cut off wall to limit site dewatering requirements.

John J. O'Sullivan

Title/Firm:
Sr. Proj Resident Engineer
Malcolm Pirnie, Inc.

Years of Experience
31

Education
BS Civil Engineering Manhattan College 1979
MS Structural Engineering Polytechnic Institute of Brooklyn 1983

Licenses and Certifications
Professional Engineer

Health and Safety Training
Construction Safety Awareness

Employment History
Malcolm Pirnie, Inc. 1988 to present
basil engineering 1980 to 1988
Ebasco Services 1979 to 1980

- **New York City Department of Environmental Protection: Coney Island WPCP: Contracts 20G, E, H, P / Brooklyn NY.** Resident Engineer for the $70 million project which included the construction of a new odor control building housing 4 wet scrubbers and 11 carbon adsorbers, as well as associated chemical handling systems, reconstruction and covering of the primary settling tanks, installation of new 60-in main sewage pump valves and piping, conversion of a former chemical storage building to a materials storage building, and various site and systems improvements.
- **New York City Department of Environmental Protection: Coney Island WPCP: Contracts 7G, 7E, and 7H / Brooklyn NY.** Resident Engineer on a $63 million dollar project for the construction of two new aeration tanks and an odor control enclosure which housed three wet scrubbers together with associated chemical pumping systems, refurbished the aeration blowers with new 48 in SS aeration piping and valves, and provided covers for the new aeration tanks.
- **New York City Department of Environmental Protection: Coney Island WPCP: Contracts 9G, 9E, 9H, and 9P / Brooklyn NY.** Resident Engineer on a $65 million project to reconstruct two aeration tanks, construct a new plant administration building supported on auger cast piles, construct a new chlorine contact tank and associated hypochlorite building which houses six hypochlorite tanks and four chemical metering pumps, and place a new 48 in underground thickener overflow line.

Mr. Patel has extensive experience in the construction management for wastewater treatment facilities. He has been involved in the construction of facilities for the New York City Department of Environmental Protection for more over 26 years. Currently, he is Construction Manager for the Catskill and Delaware Water Treatment Ultraviolet (UV) Disinfection Facility, a $1.2 Billion construction contract with consent dates, located in Westchester County. The Project includes construction of world's largest Ultraviolet Disinfection Facility as well as two off-site contracts - Installation of water Main for the Town of Mount Pleasant and a Wetland Mitigation project. The UV Disinfection Facility will enhance the disinfection and improve the quality of water supplied to New York City's nine million residents from the Catskill and Delaware watersheds. The project is a multi-prime contractor project that is currently ahead of schedule and all contractors have completed 4 of 9 milestones ahead of schedule.

Detailed Experience

- **New York City Department of Environmental Engineering: Rehabilitation/Reconstruction of the Newtown Creek WPCP / Brooklyn NY.** Responsible for administration of contract documents and management of construction inspection staff, for a construction contract totaling $600 million with a consent decree date. Project includes construction of new north battery, which includes construction of influent conduit with splitter box, grit tanks, aeration tanks, final settling tanks, new north control building; installation of process air blowers and odor control system with carbon adsorber. Project includes construction of eight egg shaped digester, two sludge storage tanks, centrifuge building, and grit building. Also responsible for the inclusion of pre purchased equipment and material, preparing purchase orders, and preparing and negotiating subcontracts for construction contracts of $65 Million. Responsible for administration of contract documents and management of construction inspection staff, for a construction contract totaling $600 million with a consent decree date, includes field inspection, payment processing, change order preparation and negotiation, coordination among other contractors, project planning, and scheduling.

Dinesh Patel

Title/Firm:
Associate
Malcolm Pirnie, Inc.

Years of Experience
30

Education
BS Civil Engineering Sardar Patel University, India 1977

Licenses and Certifications
Professional Engineer

Health and Safety Training
H & S Orientation NTC

Societies
Water Environment Association

Employment History
Malcolm Pirnie, Inc. 2003 to present
WDF Inc., a Subsidiary of KEYSPAN Business Solutions 2000 to 2003
Michael Baker Corporation 1995 to 2000
C.C.Johnson & Malhotra P.C. 1984 to 1994
Earth Engineering & Sciences, Inc. 1983 to 1984
Government of Gujarat, India, Irrigation Department 1978 to 1981

Duties included responsibility for the coordination with Plant Operations to interface between the existing plant and the new expansion. Active with on site design engineer, responses to RFIs, resolution of daily construction issues, and submittal review process.

- **NYCDEP: Construction of Catskill and Delaware Water Treatment Ultraviolet Light Disinfection Facilities / Brooklyn NY.** Construction Manager responsible for administration of contract documents and management of construction inspection staff, for a construction contract totaling $ 1.2 billion with consent dates. Projects includes construction of world's largest Ultraviolet Disinfection Facility and two off site contracts, such as Installation of water Main for Town of Mount Pleasant and Wetland Mitigation. The disinfection facility will enhance the disinfection and improve the quality of water supplied to New York City's nine million residents from the Catskill and Delaware watersheds. Prepares Budgets, staffing plans and forecasting of manpower needs; supervising the staff of 60+ engineers, inspectors and technical assistants, set standards and guidelines for consistent project management the various project, is in daily communications with the client, design engineer, plant operations personnel, and the community; completes monthly reports and presentation to client management.
- **NYCDEP: Rehabilitation/Reconstruction of Coney Island WPCP / Brooklyn NY.** Responsible for supervision of construction, coordination among other contractors, process payments and prepare and negotiate change orders. Projects completed: Construction of seven7 mi long sludge force main including highway crossings and water crossings, sludge pump station, construction of gas holders, and reconstruction of sludge storage tanks. Construction of new sludge thickening tanks, reconstruction of existing sludge thickening tanks and sludge digesters. Reconstruction of existing final settling tanks and sludge thickening tanks.
- **NYCDEP: Rehabilitation/Reconstruction of the Coney Island WPCP / NY.** Project includes construction of recycle flow pump station, skimming removal system and washer and compactor system for primary screening system. Responsible for construction administration and management of construction inspection staff. Also responsible for the management of construction contents totaling over $200 Million, including field inspection, payment processing, change order preparation and negotiation, contract closeout, coordination among other contractors, project planning, and scheduling. Also responsible for the coordination with New York City Plant Operations to interface between the existing plant and the new expansion.
- **Earth Engineering & Sciences, Inc.: Extension of Subway for Mass Transit Administration.** Duties included: Inspection of construction of storm drain and sewer lines, 4 ft-diam steel liner tunnel under railroad, concrete culvert, and open channel with gabions.

Mr. Romano specializes in providing construction management services for facilities including wastewater treatment plants, sludge management systems, and radioactive waste systems.

Detailed Experience

- **New York City DEP Construction: Newtown Creek Sludge Handling Facilities / Brooklyn NY.** Resident Engineer responsible for a $400 million contract to construct NYC's first eight egg shaped digesters. Project includes installation of centrifuges, grit removal systems and supporting structures.
- **New York City Department of Environmental Protection Construction: WP-283 Newtown Creek / Brooklyn NY.** Resident Engineer responsible for A $400 million contract to construct NYC's first eight egg shaped digesters, each digester being approximately 3MG and 140ft tall and two sludge storage tanks each tank being approximately 2.5MG and 110ft tall supported by a 9ft thick concrete foundation. Project included installation of 24 centrifuges, grit removal systems and supporting structures including electrical substation and mechanical piping systems. Recipient of the 2003 Concrete Industry Board Award of NY.
- **NYC DEP: NYC Water Tunnel #3.** Resident Engineer for fast track project to construct two Hypochorite chlorination facilities in NYC to support the startup of NYC Water Tunnel #3
- **NYC Department of Corrections: Steam Tunnel Restoration Project.** Resident Engineer for $20 million project to renovate approximately two miles of utility tunnels in Rikers Island Correctional Facility. Construction included asbestos removal, renovation of existing structures and welding of 14" high pressure steam piping.
- **Nassau County Department of Public Works: Cedar Creek Water Pollution Control Plant: Final Settling Capability / Wantagh NY.** Responsible for the management of a $25 million construction project to increase plant final settling capability. Project included construction of six new 110 ft final settling tanks and return sludge pumping station.

Paul Romano

Title/Firm:
Sr. Proj Resident Engineer
Malcolm Pirnie, Inc.

Years of Experience
32

Education
BS Chemical/Environmental Engineering
Polytechnic Institute of New York 1978

Licenses and Certifications
Professional Engineer
CDT(Construction Document Technologist)

Health and Safety Training
Construction Safety Awareness

Professional Training
Construction Contracting for Public Entities
Overview of New York Construction Law

Societies
Water Environment Federation

Employment History
Malcolm Pirnie, Inc. 1988 to present
Ebasco Services, Inc. 1980 to 1988
Texaco Inc., Port Arthur Plant 1978 to 1980

- **Nassau County Department of Public Works: Cedar Creek Water Pollution Control Plant: Heating / Cooling System / Wantagh NY.** Responsible for the management of a $10 million construction project to increase plant heating and cooling capability. Project included installation of four hot water boilers, four centrifugal chillers, and associated piping.
- **Nassau County Department of Public Works: Cedar Creek Water Pollution Control Plant: Effluent Screening / Wantagh NY.** Responsible for construction management and quality control for the $7 million renovation of the effluent screening facility. Tasks included replacement of effluent screens and odor control facility. Installation of new plant protected water system and fire protection system was also included.
- **Nassau County Department of Public Works: Cedar Creek Water Pollution Control Plant: Sludge Degritting / Wantagh NY.** Responsible for construction management and quality control for $25 million renovation of sludge degritting facility and influent screening building. Work in grit building included addition of new aerated grit tank and renovation of two with pumps, piping, and grit conveyance. Work in influent building included replacement of two screens with four new climber screens and addition of odor control facility. Contract also included construction of separate sodium hypochlorite storage facility to house eight 6,800 gallon hypochlorite storage tanks and provide odor control via scrubber to aeration tanks.
- **Carolina Power and Light: Radioactive Waste Staff Engineer, Shearon Harris Plant.** Responsible for the purchase and installation of a volume reduction and polymer solidification system. Work included preparing process and instrumentation drawings, associated piping drawings, and contract administration.
- **New York City Department of Environmental Protection: Expansion/Upgrade of the Coney Island Water Pollution Control Plant / Brooklyn NY.** As Project Engineer in the headquarters office in White Plains, responsible for construction management for Contract 6 (final settling tanks) and Contract 15 (sludge digesters and sludge thickening facilities). Duties included contract administration, design coordination, and change order proposals.
- **Taiwan Power Company: Radwaste Staff Engineer.** Responsible for the design, engineering, and construction support of radwaste treatment systems. Radwaste systems have included such unit operations as filtration, demineralization, settling, neutralization, evaporation, and solidification. Each system designed specifically to reduce waste volume and return usable water back to plant use.
- **Tennessee Valley Authority: Radwaste Engineer, Watts Bar Nuclear Power Plant / TN.** Responsible for providing engineering support for the design and construction of the plant's radioactive waste treatment systems.

Mr. Thayer has extensive experience in the environmental engineering field, concentrated heavily in the management of municipal and industrial wastewater treatment and disposal projects. His experience includes facilities planning and environmental studies, detailed design, construction administration, and treatment plant operations. He has recently been involved with the South Essex Sewerage District in managing both design and construction activities related to the upgrading of treatment and pumping facilities. He has also been involved with the Massachusetts Water Resources Authority's Boston Harbor Project for the past ten years, serving in a variety of roles related to program planning and management, lead design engineering, detailed design management, and construction-related services. Previously, he engineered and managed a considerable number and variety of both large and small wastewater planning and treatment disposal evaluation studies, as well as subsequent detailed design and construction coordination activities.

Detailed Experience

- **Arlington County: Wastewater Treatment Improvements / Arlington VA.** Project Manager responsible for providing engineering services required to expand and upgrade existing facilities to provide increased levels of treatment. Phases included conceptual design, detailed design and bidding services. Major facilities included screening, grit removal, flow equalization, multi point chemical addition for phosphorus removal, biological nitrogen reduction, effluent filtration, secondary treatment, pumping, effluent water facilities, and chlorination/de chlorination systems.
- **NYCDEP: Newtown Creek / NY.** QA/QC manager/coordinator/participant on quality management reviews for Newtown Creek design contracts in 2007 and 2008. A total of ten reviews of interim submittal documents were organized, managed, and completed on behalf of the Design JV. These submittal packages were as follows:
    - The 60% submittal package for NC 47 and The 90% submittal package for NC 50.
    - A limited package (developed to at least 60% level) for certain NC-47 disciplines.

Steven E. Thayer

Title/Firm:
Senior Associate
Malcolm Pirnie, Inc.

Years of Experience
45

Education
BS Civil Engineering University of Massachusetts 1964
MS Civil and Environmental Engineering University of Maine 1965

Licenses and Certifications
Professional Engineer

Health and Safety Training
Ergonomics

Societies
New England Water Environment Association
Water Environment Federation

Employment History
Malcolm Pirnie, Inc. 1993 to present
Metcalf & Eddy, Inc. 1990 to 1992
Maguire Group, Inc. 1987 to 1990
Briley Wild & Associates, Inc. 1972 to 1987
Metcalf & Eddy, Inc. 1966 to 1972
University of Maine 1965 to 1966

- A construction schedule workshop/review for NC 47and NC 36.
- A final review package for NC 50.
- The 90% (or final) submittal package for NC 47.
- A change order package for NC 41F work in the Kingsland Avenue ROW.
- A pre 90% submittal review on the re packaged contract NC 41.

- **Massachusetts Water Resources Authority: Deer Island WWTP / Boston MA.** For the MWRA's Program Management Division, managed all of the firm's work related to secondary treatment and related facilities over a 10 year span, including managing the ongoing detailed design packages, the bidding services related to contractor procurement, and the engineering services provided by the firm during the construction, testing, startup and initial operation of six separate contract packages. Prior to that time for the same owner and project, worked as design manager for the lead design engineer firm, and managed and guided the detailed designer's preparation of design documents for secondary treatment. Also managed a variety of pre construction activities including permitting, public participation, review and management of designs by others, financial support and value engineering.
- **MWRA: Norumbega Covered Storage Reservoir / Weston MA.** For the MWRA, managed all of the Consultant's services to the MWRA as the owner's representative on this 115 million gallon, $90 million key storage facility component of the potable water system. The project is the MWRA's first utilization of the design/build (D/B) method of project delivery. The project consists of two major tasks: Assistance during the procurement process, including establishment of the RFP and its technical requirements, evaluation of qualifications packages and proposals, and selection of the D/B team. Providing oversight of all D/B activities on behalf of the MWRA during the design and construction periods, including on site representation.
- **City of Newport: Design/Build/Privatized Operation Procurement / Newport RI.** Managed and contributed to most aspects of this project to prepare an RFP and evaluate proposals leading to the selection of a DBO team to improve the wastewater system serving the City, the U.S. Navy, and two neighboring towns. Participated in lengthy negotiations with the preferred vendor, leading to contract execution for an agreement which provides for capital improvements and 20 years of operation.
- **Metropolitan District Commission: Wastewater Facilities and Financial Planning / Hartford CT.** Project Manager responsible for providing an assessment of the capital needs of four wastewater treatment plants over a 25 year planning period. The services included an inventory of all equipment, structure and system assets; an assessment of their condition; a prioritization for their replacement or expansion; and the development of plans for managing the assets themselves, as well as the capital requirements associated with implementation.

As Construction Manager, Mr. Vargo is responsible for overseeing several large, high profile construction management projects for New York City Department of Environmental Protection (NYCDEP) wastewater and water supply projects within the metropolitan New York watersheds. Mr. Vargo's diverse experience in construction management, wastewater treatment plant operations and equipment, and system and process startup enables him to oversee and manage projects from commencement to completion.

Detailed Experience

- **NYCDEP: DEL-159 Construction Management / Carmel NY.** Construction Manager overseeing a multi discipline Resident Engineering Staff for this High Profile, Consent Order Project in the NYC Watershed. Project consists of the rehabilitation and upgrading of three shafts on the NYCDEP aqueduct system. Responsible for budgeting and forecasting, Project Management, project staffing and quality of Construction Management and Resident Engineering services. Oversight responsibilities include review of change orders, reports, scheduling and estimating, inspection services and client service.
- **NYCDEP: Flushing Bay Vortex Facility and CSO Retention Facility-Effluent Channel / NY.** Construction activity oversight included supervision of inspection staffing for Soil Mix Wall installation (first of its kind in NYC), 48 in. diameter microtunneling, steel sheeting installation, compaction and chemical grouting, hazardous and contaminated soil borings, excavation and disposal, pipe pile and minipile installation, concrete and reinforcing steel placement, structural steel, mechanical, electrical, HVAC and plumbing and water main installation, sewer installation and cleaning, dewatering and site restoration. In addition to the field staff oversight, has also been responsible for the overall operation of the field office including record-keeping, overview of CPM scheduling, writing and negotiating change orders, shop drawing review, negotiating monthly payments and writing general correspondence. As Resident Engineer, was responsible for coordination of construction activities with other Intercity

Robert P. Vargo

Title/Firm:
Senior Associate
Malcolm Pirnie, Inc.

Years of Experience
26

Education
BA Physics State University of New York at Geneseo 1984
BS Mechanical Engineering State University of New York at Buffalo 1984

Licenses and Certifications
Professional Engineer
Certified Construction Contract Administrator (CCCA)
Certified Construction Documents Technologist (CDT)
Certified Construction Manager

Health and Safety Training
Construction Safety Awareness
Ergonomics
Medical
Health and Safety Orientation
EPA Resource Conservation and Recovery Act for treatment, storage, disposal of hazardous waste

Employment History
Malcolm Pirnie, Inc. 1990 to present
The Briar Contracting Corporation 1985 to 1990
Star Expansion Company 1984 to 1985

and NYS Agencies including the NYC Department of Buildings, Department of Transportation, Parks, Recreation and Forestry, Department of Sanitation, Department of Design and Construction NYSDEC and other interdepartmental agencies of the NYCDEP.

- **NYCDEP: Coney Island WPCP / Brooklyn NY.** Responsibilities at the 110 mgd facility include: Tracking, scheduling, and expediting of construction activities related to the startup and operation of secondary treatment equipment and systems. Operation of systems and equipment were required for a state mandated consent order date. The systems and equipment were put into operation before the consent order date. Works closely with the scheduling engineer for revising the CPM schedule to show more detailed construction activities, revised scheduled dates, and actual progress made for construction activities related to equipment and systems required to meet the consent order date. Coordinates daily construction activities with plant operation personnel for the operation of the wastewater treatment plant without disruption. Monitors and expedites vendor submittal approvals and contractor equipment delivery. Overall equipment and system training for plant operations and maintenance personnel. Coordinates checkout engineer's, electrical inspector's, and instrumentation and control inspector's daily responsibilities for equipment required to meet the state mandated consent order date. Coordinates equipment checkout, testing, and startup with plant operations personnel. Proctors and evaluates vendor training sessions and authors training reports. Schedules vendor training with contractor, vendor, and plant operations and maintenance personnel. Startup and field testing of three 1,000-hp, two stage aeration tank process air blowers with variable inlet guide vanes. Tracking construction and startup of two 3.5 million gallon fine bubble aeration tanks. Authored technical memos concerning the operation of the aeration tank equipment and process. Authored operator pocket guides for the fine bubble aeration blowers and the fine bubble aeration system. These pocket guides included process overview, startup and shutdown procedures, operator and maintenance duties, troubleshooting, and alarms and emergency response procedures. Trained plant O&M personnel on wastewater treatment equipment, systems and processes. Reviews and approves training lesson plans, vendor trainers, and operation and maintenance manuals. Reviews and approves equipment and system field testing procedures and witnessing of field performance testing. Schedules and coordinates vendor and system training for newly installed equipment and treatment processes. Provides operations and maintenance information feedback on new equipment and processes to design engineers.
- **Construction Activities Coordinator / New York NY.** As resident engineer, responsible for the coordination of construction activities with other Intercity and New York State Agencies. These include the New York City Department of Buildings, DOT, Parks, Recreation and Forestry, Dept. of Sanitation, Dept. of Design and Construction, NYSDEC and other interdepartmental agencies of the NYCDEP.

Mr. Weiss has broad experience in construction and design of municipal and industrial projects with emphasis on environmental facilities. As Deputy Construction Manager/Compliance Manager for Malcolm Pirnie at the Newtown Creek Water Pollution Control Plant, New York City's largest treatment plant, he is responsible for the closeout of projects totaling over $1 billion in construction cost. He is also responsible for resolving problems that arise in the design and construction associated with equipment, instrumentation and control systems, and wastewater treatment processes. In the past he has been manager for all construction services performed by a major environmental engineering firm in New York, New Jersey, Delaware, and eastern Pennsylvania. He has held positions for contractors as project manager, superintendent, and senior/chief estimator, and for engineering companies as construction manager, construction coordinator, resident engineer, and senior engineering project manager. Mr. Weiss has extensive experience in estimating, cost control, CPM scheduling, and the review of project schedules.

Detailed Experience

- **New York City DEP Construction: Newtown Creek WPCP - Construction Management / Brooklyn NY.** As Deputy Construction Manager/Compliance Manager, responsible for the closeout of projects totaling over $1 billion in construction cost. Also responsible for resolving problems that arise in the design and construction associated with equipment, instrumentation and control systems, and wastewater treatment processes. Other responsibilities include: Overseeing the overall project compliance with NYCDEP SOPs and quality control required to meet DEP audit standards for construction management.
- **Camp, Dresser & McKee, Inc.: Construction Manager/Construction Coordinator, Project Manager / Fort Lauderdale.** Construction manager and project manager for a variety of construction service projects throughout South Florida.
    - As project manager, responsible for several million dollars in fees while managing construction services and construction management for more than $200 million

Dan Weiss

Title/Firm:
Associate
Malcolm Pirnie, Inc.

Years of Experience
37

Education
BE Civil Engineering New York University 1973
ME Civil Engineering with Environmental Option University of South Florida 1994

Licenses and Certifications
Professional Engineer

Employment History
Malcolm Pirnie, Inc. 2008 to present
Camp, Dresser & McKee, Inc. 2000 to 2008
Florida Engineering and Design, Inc. 1993 to 2000
Vogel Brothers Building Co. 1987 to 1993
Olson Construction Co. 1979 to 1987
Naclerio Contracting Company 1978 to 1979
New York City Department of Environmental Protection 1973 to 1978

worth of constructed facilities, including upgrades to the GTL wastewater treatment plant in Fort Lauderdale, the Boca Raton water treatment plant membrane softening project ($50 million) sodium hypochlorite generation system project ($4 million), and the Deerfield Beach water treatment plant membrane softening project ($13 million).

- Responsible for construction services for the Fort Lauderdale Water Works 2011 Program, a 10 year, billion dollar program, for which CDM was involved in projects totaling in excess of $125 million.
- Other projects included construction services for the City of Deerfield Beach, the City of Dania Beach, and the City of Pompano Beach in Florida.

- **Camp, Dresser & McKee, Inc.: Group Leader/Senior Project Manager/Resident Engineer / Fort Lauderdale, New Jersey and Woodbury, New York.** Responsible for construction services for CDM for a large portion the North Atlantic Region, supervising all construction managers, resident engineers, and inspectors in the area, as well as being the resident engineer on a 90 million dollar NYCDEP construction project, while supervising the resident engineers on another ($50M) NYCDEP project.
- **Olson Construction Co.: Construction Manager / Denver CO.** Managed construction at a sawtooth fish hatchery in Stanley, Idaho, a hydroelectric power plant in Dillon, Colorado and office buildings in Denver. Also provided estimating services as senior estimator and chief estimator.
- **Florida Engineering and Design, Inc.: Construction Manager, Senior Engineer / Lakeland FL.** Completed projects involving water recycling systems, design, development and installation of sludge collection equipment in wastewater treatment plants, design build sewage treatment facilities, and conveying systems for sludge in water treatment plants.
- **Florida Engineering and Design, Inc.: Construction Manager/Resident Engineer, Chemical Plants / Lakeland FL.** Responsible for design procurement and construction for projects totaling several million dollars at IMC Agrico Company, in their three large chemical plants and washer plants.
- **Naclerio Contracting Company: Assistant Project Manager/Field Engineer / New York NY.** Responsible for quality control, field layout, cost control, and owner liaison on a 14 million-dollar interceptor project. Designed sheeting, shoring, and dewatering systems.
- **New York City Department of Environmental Protection: Design Team Group Leader/Field Resident Engineer / New York NY.** Designed and subsequently supervised teams of engineers and inspectors on various public works projects. Responsible for quality assurance, approving contractors' pay estimates, checking shop drawings, and approving change order requests.

Mr. Westervelt has experience in the design and construction administration of water and wastewater treatment facilities. His design experience includes development of design documents and specifications, construction cost estimation, and project scheduling. His construction administration experience includes project management, resident engineering, construction inspection and material testing.

Detailed Experience

- **City of Phoenix: 91st Avenue WWTP Upgrade and Expansion / Phoenix AZ.** Resident Engineer responsible for coordination of all contract administration and on site inspection activities. Malcolm Pirnie provided construction administration, inspection and commissioning services for the $70M, 40 mgd plant expansion, new headworks odor control system, and new blower building project. The 28 month construction project was constructed at the existing 91st Avenue Wastewater Treatment Plant and increased the plant capacity to 180 mgd. The project included: new headworks facility (bar screens, grit basins and grit pump station); modifications to existing headworks and grit/screenings facility by addition of grit cyclones and grit washers; primary sedimentation basins and pump station; aeration basins; secondary sedimentation basins and RAS/WAS pump station; headworks odor control facilities; blower building; solids handling facility improvements; electrical power improvements; and site work.
- **City of Phoenix: UP01 Field Services / Phoenix AZ.** Project Manager responsible for coordination of all contract administration and on site inspection activities. Malcolm Pirnie is providing construction administration, inspection and commissioning services for the $105M, 25 mgd plant expansion. The 32 month construction project is being constructed at the existing 91st Avenue Wastewater Treatment Plant and increased the plant capacity to 205 mgd. The project includes: new interceptor and junction structure; new influent metering and sampling facilities; new headworks facility (bar screens, grit basins and residuals handling facilities); new primary sedimentation basins and pump station; new aeration basins and blower

Jon W. Westervelt

Title/Firm:
Associate
Malcolm Pirnie, Inc.

Years of Experience
18

Education
BS Civil Engineering University of Arizona 1993

Licenses and Certifications
Certified Construction Documents Technologist (CDT)
Certified Construction Manager

Health and Safety Training
Construction Safety Awareness

Professional Training
Alternate Project Delivery Methods Seminar
Primavera Project Planner Training
Scheduling and Claims Prevention

Societies
American Society of Civil Engineers
Construction Management Association of America
National Society of Professional Engineers

Employment History
Malcolm Pirnie, Inc. 1992 to present
Western Technologies, Inc. 1991 to 1991

facility; new secondary sedimentation basins and RAS/WAS pump station; new headworks odor control facilities (including chemical handling); new centrate facilities; solids handling facility and solids thickening facility improvements; new electrical substation and distribution; and site work.

- **NYCDEP: WP-249 Tallman Island WPCP Upgrade / Queens NY.** As construction scheduling engineer, responsibilities included review and approval of the contractor's monthly schedule updates on the multi prime contract. Project comprised of construction of the $225M conversion of the 120 MGD existing WWTFs. The construction work includes the BNR conversion of the four aeration tanks, a new RAS/Blower building, new 27kV substation and Emergency Power Generation Facility, demolition of the existing blowers and replacement of the existing raw sewage pumps.
- **City of Phoenix: Tres Rios Electrical Substation / Phoenix AZ.** Resident Engineer responsible for coordination of all contract administration and on site inspection activities. The project included the construction of new dual 20-MVA transformers at a new substation site located on the 91st Avenue Wastewater Treatment Plant, and the de energizing of the existing plant substation. The project, with a construction cost of $1.6 million included new transformers, switches, switchgear, ductbank, fencing and lighting.
- **City of Phoenix: 23rd Avenue WWTP Upgrade and Expansion / Phoenix AZ.** Inspector. Responsibilities included as built preparation of existing utilities, inspection of earthwork, structural concrete and piping installation, equipment checkout and system startup, and related work inspection. Prepared field orders, change orders and detailed drawings of Design Review Committee items.
- **City of Phoenix: 91st Avenue WWTP Nitrification/Denitrification / AZ.** Improvements to the 154-mgd capacity plant include chemical handling facilities, secondary facilities and improvements to the existing primary, aeration, and secondary facilities. Responsibilities included review and approval of the contractor's cost and resource loaded schedule, monthly updates to the schedule, design improvements to existing sidestream chlorination system, construction cost estimates, construction sequencing, milestone development, and maintenance of plant operations development.
- **City of Scottsdale: Scottsdale CAP WTP Expansion / Scottsdale AZ.** As construction scheduling engineer, responsibilities included review and approval of the contractor's monthly schedule updates. Project expanded the 50 MGD CAP WTP for the city of Scottsdale by 30 MGD. The Project includes new raw water transmission piping, raw water distribution structures and piping to a new Plant III. The new 30 MGD Plant III facilities will include DAF Pretreatment followed by Pressure Membrane Filtration which will connect to the existing post filter GAC facilities. The project also includes finished water conveyance piping and an additional 6 million gallon storage reservoir.

The Port Authority of New York and New Jersey

Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014

D

Relevant Experience

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Relevant Experience

Experience With The Port Authority of New York and New Jersey

Malcolm Pirnie, Inc (Malcolm Pirnie) has provided a full range of engineering and project management services to the Port Authority in the Metro Area (New York and New Jersey) since the 1980's. These assignments have supported efforts for line departments including Aviation, Tunnels Bridges & Terminals, Port Commerce, and Real Estate & Development. We have worked at all three major airports (JFK International, LaGuardia, and Newark International), the West 30th Street Heliport, and the Goethals Bridge, as well as at other facilities, including tunnels and real estate projects owned, or operated by the Port Authority. To date, we have completed or are working on more than 100 separate assignments and 25+ call in contracts in the New York/New Jersey Area. This is in addition to our environmental support experience for major infrastructure projects by NYCDEP, NJ Transit, NYC MTA, NYC EDC, and NYC DOS. We understand the Port Authority mission is to keep the region moving, and understand that the current contract is to assist with the environmental aspects of infrastructure development, compliance and maintenance.

Our critical differentiator is: our team is familiar with the Port Authority operations and understands Port Authority priorities. As a result of the economic downturn, the Port Authority is taking aggressive action to control operating expenses and prioritize capital spending through a zero growth operating budget in 2009 and a flat 2010 operating budget. Pirnie is sensitive to the Port Authority's fiscal discipline and will continue to assist the Port Authority in reducing consulting expenses for various projects; we have been working on large infrastructure projects in the Metro Area for over 100 years, and have an experienced core team who has worked together on Port Authority projects for the last 6 10 years we have no learning curve, which results in very productive, cost effective project execution.

Malcolm Pirnie, Inc.

Malcolm Pirnie is a 110 year old New York City firm that has focused on large infrastructure projects since its inception. In 2009, Malcolm Pirnie merged with ARCADIS (AUS), a 120 year old Dutch firm, to facilitate global growth we are now a wholly owned subsidiary of AUS. The combined firm's roots are in engineering, project/construction management and consulting. Our early design services for the City of New York water system required all levels of engineering for the water tunnels, waterfront design and infrastructure consistent with the AUS designs in the late 1800's for the various levees and dikes in the Netherlands.

Currently the firm has over 16,000 employees worldwide, with almost 7,000 employees in the U.S. and over 1,100 in the Metro Area to serve the Port Authority. The firm has 12 offices in the Metro Area, with major offices in New York City, White Plains, Fair Lawn, Edison, and Somerset. The firm is well positioned to support the Port Authority due to its unique management structure (no profit centers and experienced core teams centered around the Port Authority) that allow the project managers execute projects with the right professionals without the

obstacles of geographic profit centers.

The firm also has almost 300 professionals committed to environmental engineering in the Metro Area and can draw on technical experience from our 16,000 employees around the world. This access represents world class experience, in an almost unlimited number of technical areas, from air dispersion modeling of vehicular tunnels from our experts in Paris, to the environmental impacts of slurry walls on water quality from our experts in New York.

Relevant Experience

It is understood that the Port Authority Environmental Engineering Department requires project management and related support services for an array of Port Authority capital projects at the various facilities in the Metro area. The current RFP requires experience executing the following types of projects:

- Project/Program Scoping.
- Cost and Schedule Control Oversight from conceptual design through contract preparation.
- Construction Completion.

On the following pages, we provide our qualifications and experience in conducting program management services. Our execution of the above project types have provided us with extensive experience with the core team performing the following tasks:

- Project Initiation Services.
- Project Implementation Services.
- Project Monitoring and Reporting Services.
- Program Level Management Services.
- Program Management Services.

Relevant Experience – Project Type

Program/Project Scoping

Malcolm Pirnie implements project scoping for every program/project regardless of size or scope. A well thought out project plan is paramount for any project to be completed efficiently and cost effectively. For each task order the Port Authority assigns, Malcolm Pirnie first prepares a task based proposal that clarifies the scope and estimates the cost of the task. The project proposal will also provide the Program Manager with the proposed project schedule and project staff. Maintaining open lines of communication with the Port Authority Project Manager throughout a project is a top priority of Malcolm Pirnie, and it starts in the project scoping phase with a clear and concise project proposal.

Cost and Schedule Control Oversight from Conceptual Design through Contract Preparation

Program Management of Indefinite Delivery/Term Contracts. The delivery order type of contract requires a firm with technical expertise in numerous disciplines, experience in managing multiple concurrent activities, and the flexibility and staff resources to undertake several task orders at different sites simultaneously. Malcolm Pirnie has demonstrated these

capabilities on numerous projects for federal and state agencies and for private organizations.

Our client-centered functional organization enables our program management teams to successfully meet project objectives and our responsibilities to our clients. Our program managers have the expectation and the ability to mobilize project teams and individual staff from any location that best satisfies the needs of the client and its project sites. This approach has led to a long history of successful program management on a wide range of environmental term contracts.

Orion Program Management System. Malcolm Pirnie developed the Orion Program Management System to facilitate the management of documents and data in conjunction with a Superfund site remedial investigation and cleanup that was being managed by the United States Environmental Protection Agency (USEPA) and Army Corps of Engineers (USACE). Orion is a web based application that provides a paperless, secure system to manage all aspects of planning, design, construction, and post construction information.

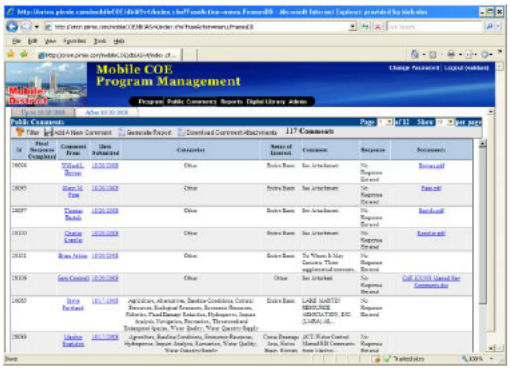
Orion Optimizes Efficiency through Client-oriented Information Management

- Readily adaptable to any program management environment
- Unlimited number of user-configurable workflows
- Enterprise-capable document tracking
- Extensible security module supports complex project roles and role relationships
- Comprehensive reporting tools available within the application
- Individual "portal" view provides immediate access to the most critical summary information

Since its initial implementation in support of the USEPA/USACE Superfund site project data management, Orion has been deployed in support of numerous clients to manage many billions of dollars in capital projects. The system offers efficient information management with the flexibility to accommodate each client's unique needs and goals.

Orion encompasses the features and functional capabilities of both a project and program management system:

- Configurable workflows that proactively manage the routing of documents and information to system users. An unlimited number of workflows and data entry forms can be defined.
- Security restriction on the projects, contracts, menu items, files, folders, reports, and workflows that an individual can view, download, or execute.
- Document management that stores any type of file including spreadsheets, Microsoft Word documents, CADD files, photographs, and scanned documents.
- Tracking of project progress through the project's work phases. Work phase management provides for unlimited phases of activity. Cost estimates, basic schedule dates, and progress by day, week, or month can be managed and monitored for each activity.



- A module for web based scanning. Users have scanners connected to their computers to scan documents directly into the system; the scanning module is fully integrated with workflow routing.
- A bar coding module to support large program and construction management jobs on which the volume of documents dictated the use of bar code detection and routing.
- Automatic e mail notification alerts for workflow items and for submittal of documents through the document management feature.
- Dynamically generated reporting to present up to the-minute information. Reports can have user selectable parameters to enable tailoring of information based on each user's information requirements.
- Information output in either Adobe PDF format (for printed reports) or Microsoft Excel format (for further analysis).
- Automatic generation of letters using Microsoft Word templates.
- A search tool that enables users to search for any document based on contract, project, type of workflow, type of file, date, keywords, or plain text.

Pirnie manages the software, and the Orion program sites are hosted by an off site hosting facility that provides 99.99 percent uptime guarantee and 24x7x365 support. The off-site hosting facility also provides data security and backup. Malcolm Pirnie provides ongoing maintenance and support, as well as development of additional client-specified features.

Primavera Expedition: Project Control for Complex Projects. Malcolm Pirnie uses Primavera Expedition project control software to assist in the management of complex projects. Expedition is a Web browser based program that provides proactive cost control and document management so that projects and programs are successfully executed and completed on time and on budget. The application is easily deployed to all project team members because of its Web interface, which precludes the need to install programs locally on laptops or work stations. The entire project team, including general contractors, subcontractors, engineers, and all other local and remote team members, has immediate access to all project information in a standardized, collaborative environment. Through the use of Expedition, all project information (such as correspondence, design reports, meeting minutes) in the database is accessible and searchable by key words or phrases. Expedition also allows clearly defined responsibilities, due dates, and overdue items, providing the entire project team with up to date status of all open items. The Expedition program is hosted on two Citrix servers located in our White Plains office. Internal access is available over a wide area network, and remote users with intranet connections can access the program and entire database.

Product Functionality. Among many features and functions, Expedition can verify cost categories for existing contracts and related change documents and provide separate modules for budgeted and committed contracts. The program also can verify existing purchase orders and related change documents by automatically converting all purchase orders that are not assigned to a cost category to the commitment side. For example, all change documents linked to the purchase orders also are automatically assigned to the same cost category. Purchase orders that were distributed to the budgeted side of the cost worksheet are converted and

accessible through the application. Expedition also can verify access to existing funding data through the reporting functionality.

The DRAWINGS module provides a user-friendly distribution and tracking process that tracks the distribution of each drawing revision or each drawing set. Existing review revision data are converted and available through drawings reports.

The LETTERS function supports MS Word 2000 and MS Word XP so that Word documents can be created, accessed, modified, and stored.

In brief, Expedition provides visibility into contractor performance, enables timely payment for completed work to avoid claims, facilitates collaboration to minimize surprises, and streamlines contract and document administration.

Security Settings/User Profiles. The Expedition system enables enhanced cyber security through the use of custom security templates. Project managers can assign view, add, edit, delete, and export rights for each module for each user as well as field level security for critical modules such as requests for information (RFIs). The security templates restrict access to private data and ensure that users see only the information they need. The setup is performed by internal IT staff working with the key project team members in order to correctly assign access to applications and different levels of data.

Construction Cost Estimating. Malcolm Pirnie uses Timberline Precision Estimating™ system to prepare detailed construction cost estimates. The software package incorporates a well-recognized spreadsheet interface that allows easy customization of reports or estimate presentations. Estimates may be broken out by location, division or item, takeoff order, assembly, bid item, or other customizable work breakdown structure (WBS) code. "What if" scenarios can be played out quickly and accurately to assist the project team in the decision-making process.

Construction Completion

We have documented construction completion for $1B NYCDEP projects through the use of a dedicated program management staff, and a sophisticated document management system. The system has the capacity for as builts and project completion documents for large $1B+ projects.

Relevant Experience – Tasks

Task A. Project Initiation Services

Develop and Implement Program/Project Management Plans. Malcolm Pirnie's project management process and quality assurance and quality control (QA/QC) procedures are applied and documented through the development of a project specific project management plan. We customize standard processes to accommodate each project's unique technical, environmental, regulatory, and stakeholder considerations so that value is embedded into every aspect of our project deliverables.

Our project managers use the project management plan as a 'living' document that is continuously monitored and updated to achieve the ultimate project goals. If required, on very

large and complex projects, our project managers are assisted in the development and execution of their work by specialists in the areas of cost/schedule, risk management, and subconsultant management. Our subcontractors are usually selected based on their skills, historical insights, and experience that are critical to project success.

Business Analysis / Scope. A primary management responsibility on all Malcolm Pirnie projects is to constantly monitor whether we are "doing the right job" for our clients. We define the right job through strict project scope management that involves identifying all of the elements that are required to achieve an individual client's vision of a successful project while excluding elements that are not relevant to or hinder the accomplishment of the client's stated goals. The primary tool we use in scope management is the development of a detailed WBS, which defines all activities that are required to complete the project. This WBS is utilized by our project managers, the project team, and our clients throughout the project to identify changes in scope and to prompt the authorization of activities to begin at the appropriate time.

Coordinate Project Team / Team Building. Our project managers are used to dealing with multiple design professionals, contractors and subcontractors. Coordination, meetings and allocation of responsibility/accountability are typical for our project managers.

RFP Assistance. Malcolm Pirnie's professionals have extensive experience crafting Request for Proposals to meet the specific needs of various projects. We avoid the "cookie cutter" approach when crafting these documents which ensures the project will receive a thoughtful, detailed proposal that completely meets its unique needs.

Risk Analysis/Management. All projects involve risk to the client and to Malcolm Pirnie. Malcolm Pirnie's risk management process includes risk planning (identification, analysis, and mitigation) and risk monitoring and control. The development of a risk register (a database) in which potential risks and opportunities are identified and qualitatively or quantitatively ranked by the likelihood that they may occur and their likely impact on project scope, schedule, budget, or quality – is one feature of our project management approach. Mitigation measures for high risks are implemented into the project's work breakdown structure (WBS), schedule and budget.

Presentation and Document Preparation. Malcolm Pirnie staff members have successfully prepared numerous documents and presentations for interviews, project status and community related needs

Task B. Project Implementation Services

Manage Project Management Plans (PMPs) and Implementation by other Members. In addition to creating our own PMPs, we have also managed those being performed by others.

Conduct Meetings. Our team attends and assists clients in conducting project meetings. We develop and issue meeting minutes and assist the client in familiarizing the contractor(s) with: project-specific requirements and provisions; departmental procedures associated with the contractor's execution of the work; the project management control systems to be used to administer the work; the responsibilities and interrelationship of the various parties directly associated with the project; routing of shop drawings and correspondence; progress schedule;

payment procedures; mobilization and access to work site; health and safety requirements; Minority/Women owned Business and prevailing wage requirements; criticality of maintaining the operation of vital systems and record drawings.

Preparation of Reports and Contract Documents. Malcolm Pirnie manages the preparation of reports and contract documents. We also develop cost estimates during the course of design and construction management work based on our past project experience, vast databases, and computer programs. Our engineers base their estimates on real feedback received on past projects, enabling us to achieve high precision in our estimates (often within 5 percent of actual costs.)

O&M Constraints. With many projects operational and maintenance constraints need to be established with the project teams. During team meetings these issues are address and recorded so that they are adhered to.

Review Conformance of Documents. Our program managers monitor and control project performance through utilization of Earned Value Management Systems (EVMS). Regular reports document expenditures to date, estimates to complete, estimates at completion, and activity progress.

Our team monitors the shop drawing process for the timely submission and approval of shop drawings and to ascertain the impact of the shop drawing process on the overall project schedule. Typical elements of this role include:

- Review of the schedule of working drawings prepared by the construction contractor for completeness and to ascertain if the submittal dates support the overall project schedule.
- Monitoring of the submittal of working drawings
- Monthly reporting on the progress of the submittal process based on the schedule of working drawings as part of the monthly CPM update process.
- Monitoring of the design engineer's review period and reporting on a monthly basis the average review period as well as any shop drawings that are outstanding > 21 days.
- Monthly review of the schedules and determination of the shop drawings that are required to perform the work scheduled for the next 120 days.
- Review of submitted working drawings for any field conditions or issues that may affect the approval of these drawings.
- Review of all shop drawings returned with comments from the design engineer to determine if the comments on the shop drawings will have potential schedule or cost impacts on the construction contracts. The construction manager establishes a tracking system for such potential impacts from working drawing that involves extra work.

Coordinate Requests for Information. Our team handles the RFI and clarification process, managing the flow of information between the design engineer and the contractors. This task involves:

- Logging and tracking of contractor RFIs.

- Preparation and tracking of requests for clarification (RFCs) to resolve technical questions identified.
- Issuing to the construction contractor the design clarifications prepared by the design engineer.
- Monitoring of the design engineer's review period for RFIs and RFCs and reporting on a monthly basis average turnaround times as well as RFIs and RFCs outstanding > 14 days.
- Establishment of a tracking system within the CMIS for all potential change orders with number and file for each RFI, RFC, or design change that involves extra work.

Post Award Contract Changes (PACC's). Pirnie emphasizes a proactive, collaborative approach with our clients to streamline the process of preparing, approving, and negotiating changes orders in order to minimize delays.

Construction Progress Meetings. Malcolm Pirnie routinely coordinates, schedules, and chairs briefings and progress meetings during projects as well. Our role during these meetings involves:

- Preparing meeting agendas.
- Providing updates on the project schedule, procurement, or other technical aspects.
- Identifying critical issues for each aspect of the project.
- Recommending actions to be taken and securing decisions.
- Issuing minutes of the meetings, including clarification of decisions, action items, and assigned responsibility.

Task C. Project Monitoring and Reporting Services

Update and Review Monthly Actual and Forecasted Project Costs and Schedule(S). As mentioned previously, our program managers monitor and control project performance through utilization of Earned Value Management Systems (EVMS).

Monitor Progress of Construction. Malcolm Pirnie can perform continuous monitoring as required. Continuous monitoring of actual progress against the baseline schedule helps to identify variances early in the project. We have used BIM/4D modeling to demonstrate 3D status and completion and compare it with the projections. We used Building Information Modeling (BIM)/4D Navisworks Scheduling for John Wayne Airport's new $270 million Terminal C project. 4D Modeling allows our team to tie the project schedule into the 3D building geometry and show the 3 dimensional progress of the building construction which corresponds to the schedule progress. Terminal C is being designed using Revit, a premier Building Information Modeling (BIM) software. We have actively provided guidance to the airport on the use of the Revit BIM model to mitigate design and construction conflicts.

Task D. Program Level Management Services

Coordination of Program Level Services. Our primary concern in providing program level services is protection of our clients' interests. We understand that the crucial elements of client satisfaction in construction projects are conformance of the completed work with the contract documents, achievement of the project's intended function, and completion of construction

within the desired schedule. We meet these goals by strictly enforcing the provisions of the contract, carefully monitoring and documenting construction activities, and working closely with owners and contractors to answer the questions and overcome the problems that typically arise during construction.

Resources Requirements / Staffing. Malcolm Pirnie performs analyses on a regular basis so that adequate resources are available for each program. Malcolm Pirnie has built and implemented a project tool that enables our project managers to leverage our resources as required for each task. Our workload management system is fully integrated with both our project management system and our on line system of staff resumes and skill profiles. This tool aids our project managers in the initial staffing of projects as well as in making crucial staffing changes to accommodate the needs of our clients and the changing demands of multiple simultaneous projects. The system also gives us the ability to predict and prevent any potential shortfall in staff resources.

Program Level Schedules. Our program level schedule management approach is based on the use of Primavera or Microsoft Project (or other similar software tools where requested by our clients) to plan, execute, monitor, and control the time management component of project control. Our project managers rely on the knowledge and experience of the project team for the review of an accurate project schedule. Schedule development is an iterative process designed to assure that a realistic schedule that meets the project requirements is adhered to by all parties at the project's outset. As required, our program managers may be assisted by a schedule specialist in identifying schedule variances from the initially proposed plan and in developing strategies to address these variances.

M/WBE Sub-Contractor Goals. Malcolm Pirnie puts diversity into practice on the job. We have awarded millions of dollars in assignments to minority and women owned firms (MBEs/WBEs). We are proud to meet, and often exceed, the minimum established participation goals for local municipal, state, county, and federal projects, even in geographic areas with limited numbers of certified firms.

Task E. Program Management Services

Program Management Services. Malcolm Pirnie has executed large infrastructure programs throughout its 100 year corporate history, including tunnels, terminals and marine facilties. In recent decades, the firm also has provided program management in the environmental restoration arena. Our clients engage our proven program management services to complete large projects or groups of projects efficiently and cost effectively.

To assist our process, we also use BIM in our program management services. BIM is used to graphically demonstrate the processes of construction and facility operation to aid the building process. Systems, assemblies and sequences are able to be shown in a relative scale with the entire structure. The ability to identify areas of potential construction conflicts – detailed in a "clash" report – allow for the design team to correct problems prior to receiving construction bids. The result is a significant reduction in change orders and construction delays.

Malcolm Pirnie is experienced in providing program management for large-scale projects to help clients gain numerous advantages:

- Single source of responsibility (schedule, design, construction, safety, costs)
- Quick mobilization of work forces
- Deployment of both local and national resources
- Wide range of experience at similar facilities
- Delivery of large quantities of work on schedule
- Shifting of risk to others
- Assistance with responsibilities (purchasing, procurement, agency approval)
- Minimal impact on client staffing levels
- Minimal contribution to the base workload of client staff

Malcolm Pirnie's approach is to customize our program management services to each client's specific needs. Our services are scalable, flexible, menu driven, tool supported, staff-supplemented, and environmentally focused. We plan the details of each program with the client and make necessary modifications as the program moves forward in order to maintain schedules, control costs, and deliver projects of the highest quality.

Biddability / Constructability Reviews. Malcolm Pirnie's experience has shown that effective constructability reviews result in clearer contract documents, which in turn promote significant cost savings, smoother construction, and fewer changes and claims. Senior construction personnel assist and direct the constructability review, which is performed by staff who have experience on similar projects. We approach constructability reviews from four points of view:

- *Contractor's Perspective.* We study the design while adopting the contractor's point of view, specifically asking, "How will the project be built?" while examining site layout, equipment use, construction durations, logical construction phasing, and potential delivery and interference conflicts.
- *Operator's Perspective.* We examine the design from an operations standpoint, considering equipment and system requirements, maintenance needs, and ease of operation.
- *Design Efficiency.* We consider the construction efficiency of the design and the materials used in a similar manner as we perform value engineering and life-cycle cost analyses.
- *Construction Sequencing.* We analyze the sequencing of construction to promote the most efficient implementation of resources.

Maintenance of Records and Preparation of Record Drawings. For large, complex projects, Malcolm Pirnie can develop a web based, client-specific construction management information system (CMIS) to be used as a tool to manage the voluminous records for ongoing construction projects. This tool provides the project team with convenient access to pertinent information such as requests for information (RFIs), change orders, reports, permits, and correspondence. The system provides a controlled flow of up to date information to decision makers for timely managerial actions. The control system includes concise and useful action reports that employ "management by exception" concepts to highlight problem areas.

Project Management Manual of Standards and Procedures. Malcolm Pirnie prepares O&M manuals for use in training operations personnel and as reference guides for day to day operation. The manuals include descriptions of assumptions, major system components, and each project. In addition, we provide supervisory training for O&M document management and control. This training covers routine content evaluations, updating and redistribution of training and O&M materials, and re training.

Oracle's Primavera Contract Manager/Portfolio Management Software. Our team is familiar with and able to document and coordinate control through Oracle's Primavera Contract Manager software as well as the portfolio management software currently being used.

Presentations and Public Requests. Public awareness and concern about environmental impacts has increased steadily in recent decades. The viability of many projects that affect the environment now depends greatly on the degree of understanding and cooperation received from the public. Our program managers are prepared to respond to the public's questions and concerns through presentations as well as responding to calls and emails.

Training / Workshop Sessions. Effective, performance based training of management, administrative, operations, and maintenance personnel is an essential element in successful system operations. Our experienced trainers routinely enhance staff competence through development and delivery of customized training programs, integrating classroom, on-the job, and videotape instruction.

Below are some of the large program management projects conducted by Malcolm Pirnie.

PROGRAM MANAGEMENT EXPERIENCE

NYCDEP: Newtown Creek WPCP / Brooklyn, NY

Project Information: Start Date: August 1999; End Date: Ongoing; Total Cost: Engineering Fees, $38,306,640; Construction Cost, $4B; Client Contact: DJ Patel, [redacted]

Malcolm Pirnie is providing construction management services for the $2.4 billion upgrade of New York City's largest wastewater treatment plant. The plant occupies a 36 acre site (being expanded to 53 acres) on Newtown Creek in the Greenpoint section of Brooklyn. The project includes 14 design packages and 14 construction projects to be built over a twelve year period.

Modifications and Additions to the Main Building. The building will be remodeled and major equipment, including raw sewage pumps, process air blowers, and boilers will be replaced.

Three Treatment Batteries of Grit Tanks, Aeration Tanks, and Sedimentation Tanks. The two existing batteries will be upgraded and a new north battery will be built. The new battery will consist of eight new grit tanks, followed by eight aeration and sedimentation tanks with the same layout as the other batteries. Sixteen aerated grit tanks are being upgraded under Phase 3 of the Interim Upgrade program and eight new grit tanks will be constructed at the head of the new north battery.

A New Thickening and Digestion Building. The building will be located on the former Mobil Oil tank farm to the east of the original plant site adjacent to the waterfront. All storage tanks,

piping, and foundations on the site have been demolished. The solids-handling system will consist of gravity thickeners, anaerobic digesters, sludge storage and disposal, and gas handling and odor control facilities. Waste sludge will be pumped to four existing and eight new gravity thickeners. Digested sludge will be stored in two existing and two new sludge tanks and ultimately pumped to the East River sludge-loading dock for marine transport to a dewatering facility.

A New Central Residuals Facility. The new facility will be located in the area between the new central screening facility and existing gravity thickeners Nos. 5 and 6. The central residuals facility centralizes the material handling for plant residual solids (grit, scum, and screenings) in one location.

A New Support Building. The new building containing personnel and administrative facilities as well as the central laboratory will be located on the site of the former Exxon distribution center to the north of the plant and adjacent to Whale Creek Canal.

A New Electrical Substation. The new substation will be located just east of the main building near the existing substation for ease of operation.

Electronic Document Management. Managing a large number of documents is a key function of the construction manager. With input from the NYCDEP, Pirnie developed a program that uses Electronic Document Management (EDM), scanning, and routing of information to users. This "paperless" electronic system allows the team to respond to and route documents quickly, considerably decreasing the response time to the contractor. Filing and retrieval of documents is now completed electronically, reducing the time and resources required. Storing, routing, and retrieving documents electronically increases timeliness and efficiency of the project.

Demolition and Removal of the Former Williamsburg Steel Building. A 120,000 sq ft concrete, brick, and steel frame building was torn down and removed with the use of typical heavy equipment including grapplers, cranes, and bulldozers. The structure contained friable and nonfriable asbestos, lead paint, and fluorescent light fixtures, the latter containing mercury and PCBs in the ballasts.

Demolition and Removal of the Former Mobil Oil Tank Farm. The tank farm had aboveground steel tanks 95 ft in diam, 33 ft high, and painted with lead paint. The tanks were cut with hydraulic shears into pieces of manageable size for loading into trucks off-site removal. The work area was monitored to characterize and quantify the presence of chemical contaminants such as total VOCs, total dust, hydrogen sulfide, and % LEL, and provided construction inspection services to the NYCDEP.

NYCDEP: Flushing Bay CSO / Flushing, NY

Project Information: Start Date: April 1995; End Date: Ongoing; Total Cost: Engineering Fees, $9,229,125; Construction Cost, $166,663,000; Client Contact: Louis Huang, [redacted]

Malcolm Pirnie is providing construction management services for a new vortex and combined sewer outfall retention facilities serving portions of Elmhurst and Corona, Queens, west of

Flushing Meadow Park, and tributary to the Bowery Bay Water Pollution Control Plant. The facility connects to the CS3 outfall. Also included as part of the project is the construction of a 48 in diam sewer and modifications to 14 regulators located along the Long Island Expressway. All flow, including dry weather flow, will be directed through the facility. Dry-weather flow and some wet-weather flow during storm will be conveyed to the Bowery Bay Water Pollution Control Plant via the foul waste sewer and 108th Street pump station.

The CSO retention facility includes the construction of underground tanks that will temporarily store 28 million gallons of storm water and sanitary water during wet weather flows. The waste will be stored until such time after the wet weather when the capacity of the Tallman Island Water Pollution Control Plant becomes available.

Some of the major items of work for these projects are:

Excavation Support System (ESS). The CSO retention facility requires a deep excavation below the water table into soft mud and ash. Excavation support will involve the construction of more than 300 48 in diam reinforced concrete caissons. Jet grouting will be performed between the caissons to cut off the groundwater.

Permits. Malcolm Pirnie is responsible for obtaining permits from the New York State Department of Transportation (for traffic control and structural design) and the Department of Environmental Conservation (for dewatering).

Hazardous Soils. Soil boring and sampling will identify materials requiring special disposal.

Sheeting/Dewatering/Underpinning. The project has stringent dewatering requirements with major impact on excavation procedures and sheeting design. Construction will require excavation 80 ft wide, 40 ft deep, and 200 ft long, with sheeting to restrict dewatering to 150 gpm maximum. Dewatering restrictions are primarily employed to minimize settling of structures. Extensive underpinning may be required, which analysis has yet to determine.

Microtunneling. Over 1,500 ft of 48 in foul waste sewer is to be installed by micro tunneling technology, a laser guided system of installation which provides extremely accurate line and grade tolerances, criteria critical to the success of this project.

Pipe Jacking. The foul waste sewer is divided into two separate 36 in lines for approximately 125 ft of length where it passes under the CS3 outfall sewer. This portion of the sewer is to be installed within 48 in casings which are jacked below the outfall.

Utilities. Close coordination between the contractor and public utilities will be required to provide for the relocation of utilities within the area of the vortex facility with minimal disruptions in service to the local residents.

CS3 Connection. The live tie in and connection of the diversion chamber to the CS3 sewer will be affected by the tidal fluctuations to which this line is subject.

NYCDEP: Croton Filtration Plant / Bronx, NY

Project Information: Start Date: October 2003; End Date: Ongoing; Total Cost: Engineering Fees,

$12M; Construction Cost, $2,001,870,000; Client Contact: Gerard Cox, [redacted]

Malcolm Pirnie is providing management services for the construction of New York City's 290 mgd Croton Water Treatment Plant. The entire Croton WTP will be constructed underground, with the exception of a small entry building and chemical unloading station. Construction of the plant at the Mosholu site will include a new raw water tunnel to convey untreated water from the New Croton Aqueduct to the water treatment plant; a raw water pumping station; a main treatment building located underground which would house all the process elements, administrative offices, a conference room, a small process laboratory, maintenance and storage facilities, electrical and heating installations, ventilation and air conditioning (HVAC) rooms; a treated water pumping station; and a new tunnel to convey treated water from the proposed plant back to Jerome Park Reservoir and the city's distribution system. During construction, an approximately 800 ft long ornamental wall to be built along Jerome Avenue would provide a visual barrier and aid in noise attenuation. Construction of the proposed plant would also require the rehabilitation and stabilization of several off site Croton system facilities, including Gate House No. 1 and modifications to the facilities in and around the Jerome Park Reservoir, both in the Bronx. The Mosholu Golf Course will be kept in operation during the construction of the WTP.

Phase 1, Site Preparation (Contract CRO-311, currently in progress). Removal of 200,000 cy of soil and 950,000 cy of rock, leaving a 40 ft to 60-ft deep footprint. Construction cost is approximately $130 million.

Phase 2 (Contract CRO-313). Construction of a raw water tunnel connecting the plant to the New Croton Aqueduct and a finished water tunnel connecting the plant to Jerome Reservoir. The project has a construction cost of about $200M and began construction in August 2006.

Phase 3 (Contract CRO 312). This project will provide the complete build-out of the facility, and will be constructed under four separate prime contracts (G, E, H, & P). The current estimated cost for this phase of work is over $1.4 billion.

Consent Order Compliance. The construction of the plant is being performed under a strict Consent Order schedule. The Consent Order includes over 20 separate milestone dates which impact each of the construction contracts. Work for the first two milestone dates was completed on or ahead of schedule.

Community/Agency Relations. Sensitivity to the surrounding community is considered to be of utmost importance. Because of the large volume of soil to be removed and corresponding quantities of concrete needed for the construction of the plant, the construction contract includes a number of obligatory "quality-of-life" measures. Stringent directives relating to dust, emissions, noise, vibration, and water levels for wetlands must be followed and enforced. Monthly outreach meetings, open to the public, are to be held in the local community to address the issues raised by community members. A community outreach center has been constructed at a central location to provide assistance to community members seeking education and

employment, as well as additional information regarding the project.

Nassau County DPW: Cedar Creek WWTP / Wantagh, NY

Project Information: Start Date: July 1985; End Date: 2005; Total Cost: Engineering Fees, $49,170,509; Construction Cost, $250M; Client Contact: Richard Webber, [redacted]

Malcolm Pirnie has been providing a wide range of engineering consulting services on a continuous basis since 1984 for the $250 million upgrading of the 75 mgd Cedar Creek facility. Our services have included all phases of work--studies and investigations, permitting, detailed design, construction administration, resident engineering, O&M manuals, startup assistance, and operator training.

Wet-Stream Facilities. Wet-stream facilities include new influent screens and grit chambers, new primary tanks and retrofitting of existing tanks, new aeration tanks and blowers, replacement of aeration system in existing tanks with fine bubble diffusers, replacement of final clarifiers with six new tanks, a new 25 mgd return activated sludge pumping station, centralized skimmings and scum handling facilities, a new hypochlorite storage and distribution system, and modified effluent screening facilities.

Solids Handling Facilities. New facilities include four dissolved air flotation thickeners and five anaerobic digesters; four existing digesters were renovated. Malcolm Pirnie also designed a 40 tpd sludge pelletizing facility that was not built when Nassau County decided to transport dewatered sludge out of state.

Other Facilities. In conjunction with the new and upgraded wet stream and solids handling facilities, Pirnie has upgraded the plant's computer and instrumentation/control systems. We designed a new 15 mw cogeneration plant capable of operating on digester gas and natural gas that produces both electricity and steam for in plant use. We also rehabilitated the plant's ocean outfall which had been damaged by a passing vessel, and expanded and upgraded the laboratory with state-of the art analytical equipment.

NYCDEP: Upgrading of WWTPs in the Catskill Watershed / Catskills, NY

Project Information: Start Date: May 1992; End Date: 2005; Total Cost: Engineering Fees, $10,255,287; Construction Cost, $93,744,000; Client Contact: Emory Chase, [redacted]

With the first stage of a massive watershed-wide wastewater facilities upgrade project, the NYCDEP has taken the leading role in protecting one of the city's most critical resources – the water quality of the Catskill reservoir system, which supplies a portion of New York City's 1.4 bil-gal drinking water supply to nearly nine million people in the New York City area. As an initial task under the project, Malcolm Pirnie provided engineering services for the upgrading of four small sewage treatment plants to the highest level of treatment feasible. The plants are: Grand Gorge (0.5 mgd), Tannersville (0.8 mgd), Pine Hill (0.5 mgd), and Chichester (0.06 mgd). Malcolm Pirnie's services included facility planning, environmental review, nutrient removal pilot

studies, preliminary engineering, final design, cost estimates and construction management.

Construction Management Services. The contracts for the plants included the construction of completely new treatment facilities as well as operator support facilities. The staging of the projects required the construction of a temporary treatment plant at Grand Gorge in order to allow demolition of the existing plant and construction of new facilities.

Construction management services provided included:

- Construction inspection services for each of the four Wicks Law contracts (CAT 132G, 132E, 132H, 132P) with a combined construction value of more than $60,000,000.
- Concrete testing and quality assurance.
- Conducting regular construction progress meetings.
- Review/processing of contractor payment requests.
- Preparation and tracking of construction change orders.
- Review of CPM scheduling and monitoring compliance with Consent Order milestone dates.
- Operations assistance, startup assistance and O&M preparation.
- Maintenance of as built contract drawings.

UV Disinfection Systems. All three plants were originally designed and constructed with chlorination/dechlorination systems, however, ultraviolet disinfection facilities were also constructed as primary disinfection systems at each of the treatment plants.

Project Complexity. Although the plant capacities are small compared to larger downstate plants operated by the NYCDEP, the Catskill facilities are as or more complex, because the process train includes 10 major processes to achieve the strict effluent limits, producing effluent that is "tap water" clean.

The projects were constructed under tight consent order driven schedules, meeting each required milestone date. Even when major design changes were made after construction had begun at the Tannersville and Grand Gorge plants, and severe winters hindered construction activities, the project achieved all milestone dates.

Community Relations. The Tannersville and Grand Gorge plants are constructed within village limits, and access to the plants by construction vehicles, personnel, and equipment delivery were a daily occurrence. Malcolm Pirnie, working with the DEP, kept the community informed and actively pursued mitigative actions for common problems associated with such activities (i.e., noise, dust, etc.).

NYCDEP: Construction Management and Liaison Services at North River WPCP / New York, NY

Project Information: Start Date: August 1991; End Date: Ongoing; Total Cost: Engineering Fees, $32,515,118; Construction Cost, $116,554,270; Client Contact: Mike Dastparvardeh, [redacted]

The 170 mgd North River plant on the Hudson River in upper Manhattan is one of New York City's most unusual wastewater treatment facilities. A 28 acre, $130 million park, offering every

major indoor and outdoor sporting activity, was built on the roof to make the facility more attractive to its host neighborhood. Unfortunately, the plant was plagued by odor problems when operation began in 1986. The NYCDEP was under pressure from the local community to mitigate the odor problem. Malcolm Pirnie was contracted to provide engineering design, design services during construction, and on site liaison assistance to the NYCDEP in order to successfully reduce the odor emissions at the plant as well as implement several important process improvements. Additionally, we are also providing comprehensive construction management services for two construction phases currently underway at the plant. Work being performed under these two phases includes the following:

- Replacement of existing and installation of new chemical metering equipment and installation of new chemical storage tanks and fill stations.
- Resident engineering and inspection services for revisions to existing chemical disinfection system for future total chlorine residual TRC management. Revisions include installation of induction mixing units to reduce chemical consumption and improve chlorination effectiveness as well as revisions to provide uninterrupted operation of the disinfection system in the event of failure of the primary disinfection system.
- Rehabilitation of wet scrubber and carbon adsorber odor control systems under Contract 33 and installation of additional odor control systems under Contract 35.
- Replacement of air diffusers, associated piping, dissolved oxygen monitoring system and controls in the Aeration Tanks.
- Installation of a new process air blower for the Aeration Tanks, including associated piping and controls.
- Replacement of the plant's water booster system.
- Installation of covers on the Final Settling Tank launders and connection to the plant's odor control system.
- Upgrade of the plant's emergency generator system.
- Construction Management Services

Malcolm Pirnie is presently providing the following construction management services for construction contracts NR 33 and NR 35:

- Resident engineering services
- Inspection of construction work activities
- Facilitating communication and coordination among the NYCDEP, the design joint venture, contractors, utility companies, and other affected agencies
- Review and monitoring of CPM construction schedules
- Responding to contractor's requests for information (RFIs)
- Preparation of field condition change orders
- Negotiation of all change orders (field and design conditions).
- Markup and maintenance of as built drawings.
- Resolution of field issues.
- Specialized inspection and field support services (electrical and I&C work).
- Monitoring of hazardous material remediation

- Startup and commissioning of processes and new equipment.
- Liaison Services during Construction. The joint venture is also providing the following liaison services during construction.
- Coordination of schedules for equipment orders, shop drawings, acceptances, turnover, and occupancy.
- Review of city procedures, property acquisition and leases, permits, insurance, and utility agreements.
- Review of working drawings and shop drawings.
- Preparation of design condition change orders.
- Startup and commissioning assistance for new odor control equipment.
- Review and approval of permanent record microfilming.

NYCDEP: Coney Island WPCP / Brooklyn, NY

Project Information: Start Date: January 1979; End Date: Ongoing; Total Cost: Engineering Fees, $95,698,963; Construction Cost, $607,238,131; Client Contact: Reza Marandi, [redacted]

Malcolm Pirnie provided Construction Management services on a continuous basis since 1984 for the upgrading of the 110 mgd Coney Island Water Pollution Control Plant. The upgraded plant provides treatment for 110 mgd of wastewater at average conditions. Peak capacity was increased from 140 to 220 mgd. All flows receive primary treatment. Full secondary treatment is provided for all flows up to 165 mgd. Treatment processes consist of screening, raw sewage pumping, grit removal, primary settling, air-activated sludge (capable of operation in the step-aeration mode), final settling, and chlorine disinfection. Sludge treatment at the plant site consists of degritting of primary sludge, screening of waste sludge, gravity thickening, and high-rate anaerobic digestion. Project Include:

- New sodium hypochlorite disinfection facilities and modifications to outfall structure, including construction of chlorine contact tank and hypochlorite storage building.
- Six new motor driven Main Sewage Pumps as well as the reconstruction of the entire main sewage pump station.
- Installation of five new process air blowers with associated large diameter SS aeration piping.
- Reconstruction of two existing aeration tank and construction of two new aeration tank including the installation of new aeration piping and diffuser systems.
- Construction of a new Return Activated Pump (RAS) station.
- Construction of a new 27 kV Substation and switchgear.
- New covered primary settling tanks and sludge removal system.
- New final settling tanks to supplement the existing settling tanks which were reconstructed.
- Six new gravity thickeners to supplement existing thickeners, all enclosed in a new building. Ventilation air is treated for odor control.
- Rehabilitation of the digesters in stages to maintain the digestion system in continuous operation including new digester covers.
- Four new engine generators.

Construction Management Services. A full range of construction management services was provided for the upgrading of the Coney Island WPCP. This includes Project Administration as well as Resident Engineering Inspection. Our responsibilities included: Preparation, review and monitoring of CPM construction schedules. Resident Engineering Inspection. Permitting and Certificate of Occupancies. Mark-up and maintenance of as built drawings. Resolution of field issues. Preparation and negotiation of construction change orders. Preparation of Fixed Asset Surveys. Preparation of Color Flow Diagrams. Review and approval of microfilm records and Project Closeout.

Operator Training and Startup Services. Operations services included preparation of written operation and maintenance (O&M) materials, startup assistance, training videotapes, training lesson plans, vendor training overview, and delivery of training to operations staff. Operations specialists coordinated all new facility and equipment startups including the preparation of startup plans, coordinating staffing requirements and providing 24 hour on-site assistance as needed. Following successful startup, we continued to provide process performance evaluation and assistance, working with the plant supervisory staff and operators to optimize process operations. We also prepared one year operations performance certification reports for each major contract.

John Wayne International Airport: Terminal C Const. Program / Irvine, CA

Project Information: Start Date: 2007; End Date: Ongoing; Total Cost: Engineering Fees, $14M; Construction Cost, $207M; Client Contact: Larry Serafini, [redacted]

The passenger volume at John Wayne Airport (JWA) has been increasing at a steady 6% per year since 1982. John Wayne Airport's last expansion program was completed in 1991 and included the construction of two terminals that totaled 435,000 SF with 14 bridged aircraft gates to support 12 commercial carriers. JWA will construct a third 300,000 SF Terminal C that will provide an anticipated capacity of 10.8 million air passengers (MAP) by 2011.

ARCADIS is providing all Construction Management services, including Building Information Modeling (BIM)/4D Navisworks Scheduling, during the design and construction of John Wayne Airport's new $270 million Terminal C program. Terminal C is being designed using Revit, a premier Building Information Modeling (BIM) software. ARCADIS is actively providing guidance to the airport on the use of the Revit BIM model to mitigate design and construction conflicts.

The program begins with the controlled demolition or "de construction" of a 4 level, 1,200 space, post tensioned concrete parking structure to facilitate the construction of the new Terminal C. The cost of this "de-construction" is estimated at approximately $10 million. This is a controlled demolition project as the existing TSA baggage screening room is located inside of the existing parking structure, which requires the TSA baggage screening room to be isolated during demolition activities to maintain screening operations. The construction of the new $270 million Terminal C will begin after the demolition of the parking structure. Terminal C includes the construction of 6 new bridged aircraft gates that will increase JWA's commercial passenger gate capacity to a total of 20, and will provide new facilities for the 7 commuter/regional jet carriers at the north and south ends of the terminals.

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Management Approach

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Project Management Approach

Management Approach To "Call-In" Projects

The "Call In," delivery order type of contract requires a firm with the capabilities of managing multiple, concurrent activities, and the flexibility and personnel resources to undertake task orders on short notice. Perhaps our best demonstration of these capabilities is the service we have provided to the Port Authority under our "call in" contracts from 1993 to the present.

Since March 1993, Malcolm Pirnie engineers, and consultants (and administrative support staff) from our Northern New Jersey, New York City (Queens/Long Island City) and White Plains, New York offices have provided thousands of hours of service on almost a 100 projects, from JFK, LGA to tunnels and dredging. We understand the Port Authority system and approach.

Malcolm Pirnie's approach to managing work assignments maximizes the use of our experienced and qualified project team members to provide the Port Authority with cost-effective and responsive results. We also have extensive program management experience on "on call" contracts for NYCDEP, MTA and NJ Transit. Our management team's experience with the Port Authority provides us with the opportunity of providing you the quality of service and personal relationship that you have enjoyed for the past seventeen years.

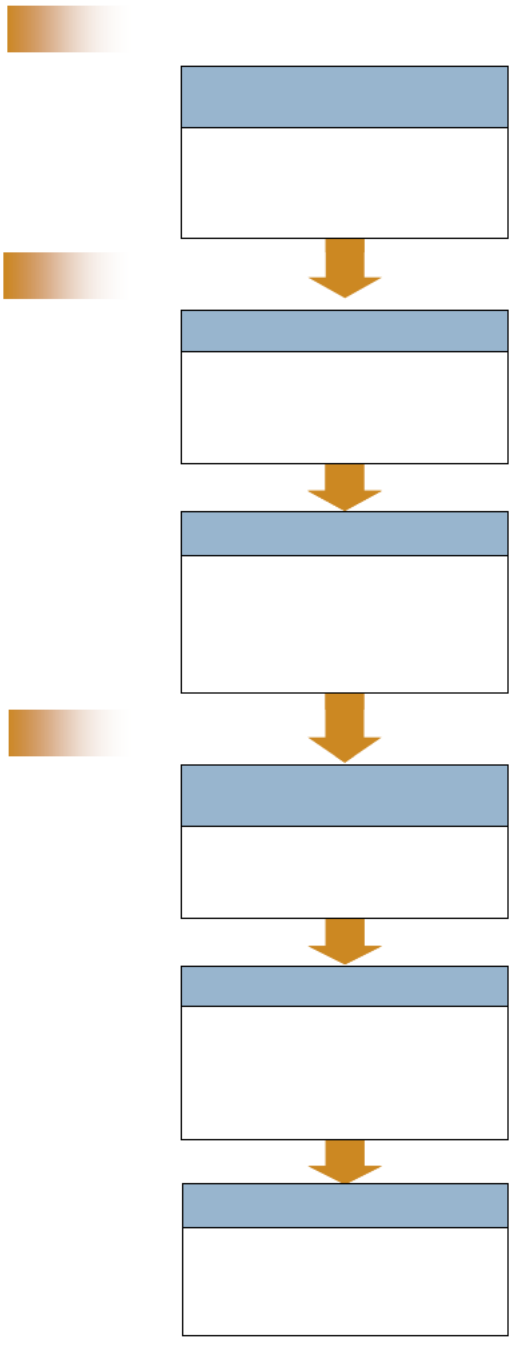
A general services, or call in, contract is built on the ability of the management team to form a close working relationship with its client. Our management team strategy will:

- Encourage communication between Malcolm Pirnie and the Port Authority and maintain a pro active pursuit of strengthening the partnership between the Port Authority and the management team.
- Provide committed, experienced personnel capable of performing routine consulting services; especially tasks requiring immediate response.
- Provide personal Principal in Charge service, especially with quality control/quality assurance of the documents along with value added consulting.
- Maximize the advantages gained by Malcolm Pirnie staff relationships with regulatory agency personnel in New York and New Jersey to gain support from them on critical issues pertaining to regulatory negotiations, and obtaining grants and/or loans for work assignments where appropriate.

Project Management Approach

Malcolm Pirnie's approach to Program Management is to generally organize the Program Management Team into two groups. The first group is organized around program level tasks. These include tasks such as General Program Management, Master Program Activity Schedule, and Budget and Cost Control, which impact the overall coordination and delivery of all of the Program's projects. The second group is organized around the delivery of the

projects. The delivery of each project will be different to accommodate the specific characteristics of the project. Our typical Project Delivery Model (shown on the side panel) shows the phases that most of the design and construction projects will go through for delivery and final completion, and as detailed below.



Program Management Plan

As noted above, the Port Authority is requesting assistance with their Program Management Program. The Program Management Plan will serve as a detailed guide to the development of the Projects Program and will include a Mission Statement and Guiding Principles developed specifically for this Program. The Plan will also include a description of the Program Organization and Coordination and Support Activities. The individual Project Management Plans will be attached to the Program Management Plan.

Master Activity Schedule

A master program schedule will be used for scheduling, coordination and tracking of the Port Authority Projects. The master program schedule is a critical part of and will be included in the Program Management Plan.

The Port Authority Program is made up of multiple separate but potentially interrelated projects. In order to create a program schedule showing the critical path of tasks and activities, each project must be broken down into its own interrelated tasks with appropriate durations and predecessor/successor relationships. Since each project is critical to the successful completion of the Program, the interrelationship between projects or project tasks will be established with predecessor/successor relationships.

One integrated master program schedule will be prepared, which includes activities for permitting, engineering design, procurement, construction, commissioning, and initial operation activities of all the program projects. The schedule will be prepared in the Port Authority's standard format, and could be viewed in any of several formats.

Individual project schedules drive the master program schedule. The Project and Task Managers will closely monitor detailed project schedules and report summarized progress and status to the Program Manager each month for inclusion in the master program schedule.

The Program Manager will identify and proactively manage critical path tasks so that corrective actions at the project level can be identified and implemented before the program schedule is delayed. The master program schedule will be validated each month as individual project schedules are finalized and/or updated.

The master program schedule is a dynamic working document and will be used to track progress and forecast schedules on a monthly basis.

Budget and Cost Control

Updated project budget information is needed for the Port Authority's fiscal planning activities. One of our first priorities will be to review the project budgets for each of the Port Authority Projects and coordinate to provide updated cost information. If necessary, an independent estimate of the project cost would be obtained.

Budget and cost control is integral to the success of any project. Over the years Malcolm Pirnie has managed thousands of design and construction projects for our clients, ranging in size from small projects to large programs. We understand the intricacies of managing budgets and controlling costs. Our approach to controlling cost is two fold: addressing design elements prior to design and implementing good management systems during construction.

Change orders are typically the biggest contributor to cost overruns on projects. Change orders result from several types of situations, most of which are controllable. Some of the specific activities or initiatives that the Program Manager will implement for reducing change orders are development of well defined plans and specifications through design reviews, and owner involvement in the design review process.

In addition to minimizing change orders, the use of effective cost control policies and procedures are critical throughout the life of the program and on each project. Our Program Management system includes effective management tools such as Microsoft Project Primavera for scheduling, project assessment via Monthly Status Reports, a Policies and Procedures Manual, and promotion of strong communication amongst stakeholders.

Monthly Status Report

A Monthly Status Report will be prepared for Port Authority Management. The report will summarize and compile project progress reports on each active project and include an overall Program summary page. The individual monthly project progress reports will include:

- Project Description
- General Project Information
- Schedule of key milestones
- Recent Progress/Current Status
- Critical Activities/Matters

In Progress Review Meetings

We will assist the Port Authority in organizing and preparing for In Progress Review (IPR) Meetings. The purpose of these meetings is to provide an overview of the Program progress and discuss activities affecting the development and implementation of the Port Authority

Projects. The IPR Meetings also provide an opportunity to request guidance and direction from the Port Authority's Management Team on critical matters. The IPR meetings would be held 1 week after submission and distribution of the Monthly Status Reports.

Obtaining Federal, State, and Local Permits

Permitting is one of the major areas that the Program Manager and the Port Authority must effectively and efficiently address in order to maintain the Projects Program schedule and budget. Although the responsibility to apply for individual permits lies with project engineers and contractors, a coordinated effort is required. Our approach to permitting is to make it an integral part of project delivery. The project permitting strategy must be flexible to accommodate inevitable changes to project design, feedback from the public, and comments from regulatory agencies.

Proactively Identify Issues and Develop Creative Solutions

The Port Authority is seeking a Program Manager that will be proactive and take a leadership role in identifying issues and new approaches. Our entire Program Management system is designed to identify and resolve issues at a project level before they can adversely affect the Program. Each Program Management activity, including contract administration, public information, scheduling, budget and cost control, and particularly communications, lead to identification and response to issues arising during the development of each project in the Program. Malcolm Pirnie's position as a leader in both transportation and Program Management make us uniquely qualified to proactively identify issues and new ideas, and develop creative solutions and implementation strategies.

The initial approach to problem solving is problem avoidance. We are reminded that "an ounce of prevention is worth a pound of cure". Problem prevention through proper planning is the first step in the quality assurance process, consisting of up front decision making and early reviews to identify and resolve potential problems.

When issues do arise, which is inevitable on every project, the Program Manager typically uses the five step "engineering approach" to resolve the issue:

- Understand the Problem
- Identify alternative solutions
- Evaluate the alternatives
- Select the best value solution
- Implement the recommended resolution

Not all problems require this process. Many issues are resolved by merely clarifying the issue. With effective, on going communication between the project delivery team members, most issues are resolved before they amount to any more than a question and an answer.

The skill and experience of the program management staff goes a long way toward resolving issues and minor disputes before they grow into a problem. It is in the best interest of every project team member to identify and resolve issues at the lowest level and with the least effort possible so the project focus can remain on delivery.

The Port Authority of New York and New Jersey

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Technical Rates and Multiplier

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Technical Rates and Multiplier

The expanded technical personnel schedule is included on the following pages. As requested, the personnel schedule lists the name, job title, and hourly rate of personnel expected to work on the Geotechnical Engineering Services Port Authority projects. Resumes for these individuals have been provided in Section D as requested in the RFP.

Company Policy

It is the company's policy to compensate certain employees for time worked in excess of 40 hours in a work week as follows:

Non-exempt employees (scientist or engineer) are paid time-and-one-half for time worked in excess of 40 hours in a work week, except as otherwise required by law. Employees may make up for hours missed by working additional hours within the same work week, as defined previously. Exempt employees (project scientist/engineer, senior project scientist/engineer) are paid straight-time for time worked in excess of 40 hours in a work week. There is no overtime provision for Associates, Senior Associates and Officers, unless there is a special condition (i.e. extended duration due to project requirement).

The following provisions apply in computing overtime:

- Time-off for meals do not count as time worked.
- Paid absence and/or PTO- paid time off do not apply to overtime computations as time worked.
- Holidays are included in overtime computations.
- Time absent from work for any other reason, is not included in computing overtime.

Travel time on company business in excess of normal commutation time is considered time worked.

All other full and part-time salaried (not hourly) employees who are required to work on a Malcolm Pirnie designated holiday receive credit for the holiday plus applicable overtime pay for time worked in excess of 40 hours in a work week.

Key Personnel Schedule

Name	Title	Hourly Rate
Carmine Marra	Principal	$230.00
Jim Brown	Principal	$230.00
Mark DelBove	Principal	$230.00
Frank Diffley	Sr. Project Control Specialist	$65.00
Mark Duryea	Associate	$80.00
Tom Husband	Senior Associate	$85.00
Dan Lopez	Principal	$230.00
Craig Murray	Principal	$230.00
Tricia O'Loughlin	Principal	$230.00
John O'Sullivan	Sr. Project Resident Engineer	$69.90
Dinesh Patel	Associate	$79.60
Paul Romano	Sr. Project Resident Engineer	$68.20
Steve Thayer	Senior Associate	$73.00
Bob Vargo	Senior Associate	$82.00
Dan Weiss	Associate	$77.50
Jon Westervelt	Associate	$65.90

Call-In Services Multiplier

Malcolm Pirnie proposes to perform services on a "call-in" basis during 2011 using a 2.89 multiplier on the actual salaries of "professional and technical personnel (but not partners or principals)." The Multiplier for work performed at Port Authority offices shall be 2.20. The back-up data is provided below.

Costs for allowable expenses are as follows:

Transportation: $0.50/mile for vehicles

Reproduction: $0.76/direct labor hour

Equipment: a schedule for usage rates for specialty equipment is available for field assignments.

Malcolm Pirnie Full Overhead Costs-Summary 2011 Projection (In Thousands)

Direct Labor	$95,337
General & Administrative	
Employee Benefits	$48,253
Management Costs	42,590
Office Operations	38,904
Marketing	23,123
Human Resources	13,865
Financial Services	4,993
	$171,728
Overhead Rate	1.80
Direct Labor	1.00
	2.80
Profit@3.39%	0.09
Multiplier	2.89

Full Overhead Costs- Details 2011 Projection (In Thousands)

Employee Benefits	
Employers FICA	$11,651
Optional Holiday Payout	341
Paid Time Off (PTO)	13,311
Group Coverages	9,839
Pension	7,180
401K Plan	4,134
Unemp Dbl Wc	818
Overtime Differential	389
Overtime Offset	(609)
Licenses and Dues	537
Tuition	306
Employee Activities	314
Paid Absence	288
Short Term Disability	290
Benefits Allocation	(536)
	$48,253
Management Costs	
Incentive Compensation	$13,320
Insurance Costs	2,985
General Management	11,228
Legal Costs	2,499
Technical Services	7,134
Amortization of Intangibles	323
Management Costs Continued:	
Contributions	371
Corp. Computer Operations	1,302
Corp. Computer Depreciation	667
Management Fee - AUS	3,296
Other	(535)
	$42,590
Office Operations	
Rent & Utilities	$14,157
Office Services/Supplies & Maint	5,951
Computer Services	10,239
Communications	2,326
Administrative Reproduction Costs	773
Library	419
Expendable Off Furn & Suppl	48
Automobile Expenses	2,854
Automobile (Contra)	(1,943)
Deprec-Off Furn & Fixt	1,830
Amortization of	1,587

Leaseholds	
Archiving	265
Postage	398
	$38,904

Marketing

Proposals & Marketing Labor	$15,787
Proposals & Marketing Exp.	3,771
Project Contracts	572

Marketing Continued:

Corporate Communications	423
Mktg Admin & Support	1,579
Advertising	271
Entertainment	720
	$23,123

Human Resources

Moving Expenses	$1,203
Human Resources Admin	3,628
Employment Costs	1,885
Learning	2,131
Personal Development	694
Professional Activities/Leadership	2,599
Employee Partnerhip/Perf Reviews	852
Employee Orientation	59
Health and Safety	814
	$13,865

Financial Services

Accounting & Auditing	$3,719
Billing Rate Variance	(806)
Interest Expense	646
Amort. Deferred Loan Costs	93
Payroll Variance	253
Miscellaneous Taxes	753
Bank Service Charges	228
Bad Debts	0
State Income Taxes	107
	$4,993

Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014

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M-WBE Participation

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M/WBE Participation Plan

If subcontractor or sub consultant assistance is required on a project, Malcolm Pirnie will contact the Port Authority's Office of Business and Job Opportunity to obtain a list of certified MBE/WBE firms. We will determine if we have worked with any certified MBEs in the required area of expertise and, where possible, we will attempt to subcontract with certified firms that have worked with us on other projects. We maintain ongoing working relationships with several local MBE/WBE firms. Firms are chosen for their ability to augment Malcolm Pirnie's in-house technical resources and typically provide specialized services for discrete tasks such as laboratory analysis, surveying, drilling, and reproduction. To further our efforts, we are in routine contact with Affirmative Action bureaus, which maintain listings of Small, Minority and Women Business Enterprises (SBE, MBE and WBE). The RFP states that the Authority has set a goal of 12 percent participation by qualified and certified MBEs and 5 percent by qualified and certified WBEs. We are confident that we can easily meet this goal.

The Port Authority of New York and New Jersey

Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014

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Affiliations

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Affiliations

Ownership Interests in Other Firms

Malcolm Pirnie is a wholly owned subsidiary of ARCADIS US, Inc. Malcolm Pirnie or its officers have an ownership interest in several other firms including:

- **ARCADIS U.S., Inc.**
  630 Plaza Dr.
  Highlands Ranch, Colorado 80129
  EIN: [redacted]
- **HaulPass. L.L.C.**
  104 Corporate Park Drive
  White Plains, NY 10602
  Owners: Malcolm Pirnie, Inc. (100%)
  EIN: [redacted]
- **Rostan Solutions, L.L.C**
  1300 E. 8th Street, Suite F100
  Tampa, FL 33605
  Owners: Malcolm Pirnie, Inc. (100%)
  EIN [redacted]
- **Malcolm Pirnie of Michigan, Inc.**
  645 Griswold Street, Suite 1950
  Detroit, MI 48226
  Owners: Malcolm Pirnie, Inc. (100%)
  EIN: [redacted]
- **Malcolm Pirnie Consulting Engineers India Private.**
  Limited"Trade Center"
  306, 3rd Floor, "C" Wing
  North Main Road, Koregaon Park
  Pune 411001, Maharashtra, India
  Owners: Malcolm Pirnie, Inc. (99%) / Mr. K. Sridhar (1%)
  India Corporate Identity Number: [redacted]
- **Malcolm Pirnie Engineers, PLLC**
  3101 Wilson Boulevard, Suite 550
  Arlington, VA 22201
  Owners: Millard Robinson (50%) / James Noonan (50%)
  EIN [redacted]
- **Malcolm Pirnie - Middle East FZC**
  PO Box 27471
  Abu Dhabi, UAE
  Owners: Robert McCollum (50%) / Mohsen Mortada (50%)
  Ras Al Khaimah Free Trade Zone
  Registration: [redacted]
- **Malcolm Pirnie Australia Private, Limited**
  Level 29 Saint Martins Tower
  31 Market Street
  Sydney NSW Australia 2000
  Owners: Malcolm Pirnie, Inc. (100%)
  Australian Corporate Number: A.C.N. 127 906 030
- **InfraMetrix, LLC**
  9208 Florida Palm Drive
  Tampa, FL 33619
  Owners: Malcolm Pirnie, Inc. (72%) / Aqua Data, Inc. (28%)
  EIN [redacted]
- **MP Engineers of Puerto Rico (MPPR)**
  Las Vistas Shopping Village Ste 23
  300 Av Felisa Rincón de Gautier
  San Juan, PR 00926
  Owners: Raul Torres (90%) / Guillermo Marxuach (10%)
  EIN: [redacted]

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Conflict of Interest Statement

To the best of our knowledge, Malcolm Pirnie, Inc. has no current assignments with or obligations to other clients and no contracts or property interests which will conflict with the interest of The Port Authority of New York and New Jersey with respect to the services we propose to perform for The Port Authority of New York and New Jersey.

Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014

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Terms and Conditions

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Terms and Conditions

Malcolm Pirnie has reviewed the Terms and Conditions as presented in the RFP.

17-17 Route 208 North
2nd Floor
Fair Lawn, NJ 07410
Office: (201) 797-7400 Fax: (201) 797-4399

Offices Worldwide
www.pirnie.com

MALCOLM PIRNIE

Solutions for Life™

THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY

Request for Proposals

PROFESSIONAL PROJECT MANAGEMENT SERVICES

AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013, AND 2014

Presented to:

THE PORT AUTHORITY OF NY & NJ
ONE MADISON AVENUE, 7TH FLOOR
NEW YORK, NEW YORK 10010

Attention:

RFP CUSTODIAN

Reference Number:

22388

Submission Deadline:

OCTOBER 21, 2010 2:00PM

Presented by:

MAST
CONSTRUCTION SERVICES

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ATTACHMENT B

PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014

AGREEMENT ON TERMS OF DISCUSSION

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority's Freedom of Information Policy and Procedure adopted by the Port Authority's Board of Commissioners on November 20, 2008, which may be found on the Port Authority website at: *http://www.panynj.gov/corporate-information/pdf/Freedom-of-Information-Policy-and-Procedure.pdf*, not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

MAST Construction Services, Inc.
(Company)

(Signature)

President
(Title)

10.19.10
(Date)

ORIGINAL AND PHOTOCOPIES OF THIS PAGE ONLY.
DO NOT RETYPE.

ATTACHMENT C

COMPANY PROFILE

REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

1. Company Name (print or type):

   MAST Construction Services, Inc.

2. Business Address (to receive mail for this RFP):

   96 East Main Street

   Little Falls, New Jersey 07424

3. Business Telephone Number: 973-837-1515

4. Business Fax Number: 973-837-1517

5. Firm website: www.mastconstruction.com

6. Federal Employer Identification Number (EIN): [redacted]

7. Date (MM/DD/YYYY) Firm was Established: 06 / 01 / 2001

8. Name, Address and EIN of Affiliates or Subsidiaries (use a separate sheet if necessary):

   MAST Construction Services, Inc does not have any affiliates.

9. Officer or Principal of Firm and Title:

   Theodore Domuracki, President/Principal in Charge

10. Name, telephone number, and email address of contact for questions:
    Susan DiGiacomo (973) 837-1515 Extension #234

    sdigiacomo@mastconstruction.com

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? ☒ Yes ☐ No

    If yes, please attach **Port Authority** certification as a part of this profile.

    If your firm is an M/WBE not currently certified by the Authority, see the Authority's web site – http://www.panynj.gov/business-opportunities/supplier-diversity.html, to receive information and apply for certification.

THE PORT AUTHORITY OF NY & NJ

Anthony R. Coscia
Chairman

Christopher O. Ward
Executive Director

Certified

by

Office of Business & Job Opportunity

MAST Construction Services, Inc.

Certificate PA-27263

This certificate acknowledges that the above named firm is certified as a **Small Business Enterprise (Architectural and Engineering Program).** This company has met the criteria for ownership and control as established by the Port Authority Policy for Revised Minority, Woman and Small Business Enterprise (M/W/SBE) Programs, dated June 10, 1993.

This certification will remain in effect for five years from the date of notice and may be extended only upon submission by you, and acceptance by the Port Authority of a recertification application attesting that the ownership and control of the business, on which this certificate is granted, has not changed. This office must be notified within 30 days of any material changes in the business which affect ownership and control. Failure to do so may result in the revocation of this certification and/or imposition of other sanctions.

Lash Green
Director
Certified: July 17, 2009

Rosemary Jenkins-Varela
Manager, Certification
Scheduled Re-evaluation: July 16, 2014

Form: 6/10/93

Ted Domuracki
President, Principal in Charge

Richard Brown
Project Executive

Michael J. Palumbo, P.E., A.S.C.E.
Director of Technical Services

John A. Delutis
Project Executive

Gerard Carbone
Senior Project Manager, LEED Green Associate

Troy Marzziotti
Senior Project Manager

Jim Napolitano
Project Manager

Paul Skabich
Project Manager

Sean Edmonds
Assistant Project Manager

Nick Lucarelli
Assistant Project Manager

SUMMARY OF PROJECT EXPERIENCE

NAME	TITLE/POSITION	YEARS OF EXPERIENCE	RELEVANT PROJECT	PROJECT COST
Ted Domuracki	President, Principal in Charge	35+	• World Trade Center Transit Hub, One World Trade Center, Towers 2, 3 and 4	$ 19 B
			• Newark Housing Authority Downtown Core District Redevelopment & NJ Devil's Arena	485 M
			• Harrison Waterfront Redevelopment Roadwork	30 M
			• DPMC – DMAVA Park & Walkway	16 M
			• Bergen County Juvenile Detention Center & Youth Shelter	30 M
			• Jersey City Annex & Parking Garage	120 M
			• Atlantic City Convention Center Corridor	35 M
			• Cape May Ferry Terminal	21 M
Richard Brown	Project Executive	25+	• DPMC – DMAVA Park & Walkway	$16 M
			• Building 77 Adaptive Re-use	24 M
			• Union County Courthouse Fire Code Renovations, New Court Building and Parking Deck	32 M
			• Jersey City Annex & Parking Garage	120 M
			• South Ward 5th Police Precinct	60 M
			• Bergen County Juvenile Detention Center & Youth Shelter	30 M
			• Harrison Waterfront Redevelopment Roadwork	30 M
			• NHA Downtown Core District	485 M

			Redevelopment & NJ Devil's Arena • NJ Turnpike Authority Widening Program • Atlantic City Convention Center Corridor	 85 M 35 M
John Delutis	Project Executive	27	• Union County Courthouse Fire Code Renovations, New Court Building and Parking Deck • Jersey City Annex & Parking Garage • Hudson County Plaza • Secaucus Recreational Center • Burlington County Library Addition • Pulte Homes Fulton's Landing • Atlantic City Convention Center Corridor	$32 M 120 M 11 M 7 M 25 M 35 M
Gerard Carbone	Senior Project Manager, LEED Green Associate	30+	• Building 77 Adaptive Re-use • Harrison Commons Parking Garage • Bijou Properties – Garden Street Lofts • Montclair Bay St. Parking Garage • East Orange Police Facility	$24 M 45 M 26 M 8 M 19 M
Troy Marzziotti	Senior Project Manager	17	• The Actor's Fund Assisted Living Facility • Hudson County Community College: North Hudson Campus, 2 Enos Pl., New Welcome Center, New Library, Culinary Art Institute & Conference Center, Culinary Park Plaza, Administration Center and various renovations. • Flatrock Residential Complex • Hudson County Correctional Center	$8M 104 M 25 M 40 M

Jim Napolitano	Project Manager	13	• Bergen County Juvenile Detention Center & Youth Shelter • DPMC – DMAVA Park & Walkway • Harrison Waterfront Redevelopment Roadwork • HCCC College Facilities Management & Renovations • NHA Downtown Core District Redevelopment & NJ Devil's Arena	$30 M 16 M 30 M 14 M 485 M
Paul Skabich	Project Manager	12	• South Ward 5th Police Precinct • City of Newark Parks Initiative • Newark Arena Roadwork Completion • HCCC: Culinary Art Institute & Conference Center, Culinary Plaza Park, Renovations	$60 M 10 M 55 M 38 M
Michael J. Palumbo, P.E.	Director of Technical Services	42+	• Visy Paper Complex • Par Pharmaceutical • 220-5th Avenue • Colgate-Palmolive Company • Tweed Courthouse • High School of Performing Arts • Hackensack Childcare Center • Warlaw-Hartridge School • Avalon Cove • Port Liberte	$125 M 5 M 10 M 35 M 8 M 25 M 3.5 M 6 M 35 M 115 M

MAST CONSTRUCTION SERVICES, INC.

TED DOMURACKI

PRESIDENT, **Principal in Charge**

PROFILE

Ted has worked as a real estate and Construction professional for more than **35** years and has held senior executive positions at some of the nation's largest construction management firms. In 2001, Ted founded **MAST Construction Services, Inc.**, a construction management consulting firm offering construction management, owner's representation, project management and distressed project consulting. The firm is dedicated to providing senior level hands on services to public entities, institutions, corporations and developers.

Currently, Ted serves as General Manager of Program Integration for the World Trade Center Downtown Restoration Program in the capacity of liaison between The Port Authority of NY & NJ and Silverstein Properties Inc. In this role he facilitates communications and identifies and solves project interface issues for the rebuilding of the $19 Billion, 16 acre World Trade Center site, specifically, One World Trade Center, the Transportation Hub, and Towers 2, 3, and 4.

Ted is personally responsible for heading Distressed Projects Intervention and Consulting at **MAST Construction Services, Inc.**; his service to one of our Fortune 500 clients recently earned him a position on their corporate oversight risk assessment committees for project management and bid review. Ted also serves on the Blue Ribbon Committee and the AD HOC Committee for Hudson County Community College.

EDUCATION

1974 – Penn State University, BSCE in Civil/Structural Engineering
1983 – Rutgers University, MBA Finance/Management

PROFESSIONAL ASSOCIATIONS

- USGBC
- Boy Scouts of America
  Executive Board Member, Northern New Jersey Council, 1992 – 2002
- Eagle Scout

AWARDS

- 2000 – Good Scout Award, New Jersey Construction Industry Luncheon
- 1995 – Construction Manager of the Year, New Jersey BCA

EXECUTIVE COACHING

1996 - 2000 Oher & Associates
ITT – Innovative Information Techniques

EMPLOYMENT HISTORY

June 2001 – Present
Founded **MAST Construction Services, Inc**

1984 to June 2001 **York Hunter, Inc.**
President

1981 – 1984 **Lehrer McGovern, Inc.** *New York, NY*
1984 Vice President
1981-1984 Project Manager

1979 -1981 **Philip Morris, Inc.** *New York NY*
Senior Auditor Construction Specialist

1977 - 1979 **Research Cottrell** *Somerville, NJ*
Construction Estimator

1974 - 1977 **Bechtel Power Corp.** *Gaithersburg, MD*
Structural Engineer

MAST CONSTRUCTION SERVICES, INC.

CAREER HIGHLIGHTS

INDUSTRIAL/SCIENCE/TECHNOLOGY

- South Ward Industrial Park
- MetroNexus Data/Telecom
- Davis Besse Nuclear Power Plant
- Cleveland Cliffs Power Plant
- Miller Brewery
- Cabarrus Cigarette Manufacturing Facility
- KeySpan Business Solutions

CULTURAL AND FINE ARTS

- Newark Symphony Hall
- Lambert Castle
- Light keeper's House at Absecon
- New Jersey Historical Society
- New Jersey Vietnam Vets Memorial
- New York Public Library
- St. Peter Rectory – 18 Vesey Street

TRANSPORTATION AND INFRASTRUCTURE

- World Trade Center Transit Hub
- Atlantic City Roadways, Utilities, Landscape/Streetscape
- Cape May Ferry Terminal
- Colgate-Palmolive Waterfront
- MSU Infrastructure/Roads
- Tower Hill Parking Garage
- Montclair Bay Street Parking Garage
- Newark Housing Authority – Downtown Core
- Harrison Redevelopment
- Prudential Center Arena

GOVERNMENT AND JUSTICE

- Jersey City Garage and Annex
- City of Newark City Hall
- DPMC: DMAVA Park and Walkways
- Bergen County Juvenile Detention Center
- MSU Police Facility
- Northwestern Academy Juvenile Detention Facility
- Sunset Park Patrol Boro Command
- Tweed Courthouse
- Wilentz Court Complex
- East Orange Police Facility
- Hudson County Correctional Center

HOSPITALITY AND RECREATION

- AmeriSuites Hotel
- Atlantic City Casino Reinvestment Development Authority Hotel Expansion
- County College of Morris Natatorium
- Holiday Inn
- Stevens Institute of Technology Recreational Facilities
- Town of Harrison – Red Bull NY Soccer Stadium
- Secaucus Recreational Center
- Alpine Country Club
- Newark Downtown Core Redevelopment Corporation
  - Prudential Center *Devil's Arena*
  - Arena Asset Management
- City of Newark, Multiple Parks Projects

COMMERCIAL

- One World Trade Center, 3 Office Towers
- Bank of America Madison Avenue, NY
- 744 Broad Street Newark, NJ
- Lanidex Center, NJ
- Allendale Industrial Park, NJ

INTERIORS

- Gateway Center
- JM Huber
- Bank of America
- Tenant Work Bank of America
- Allendale Industrial Park
- 345 Adams Street
- Bank of Bavaria
- Bloomingdales

MAST CONSTRUCTION SERVICES, INC.

RICHARD BROWN
PROJECT EXECUTIVE

PROFILE
A program management and civil construction expert, Richard has garnered more than **25 years** of experience at some of the region's top construction firms. Richard joined **MAST Construction Services, Inc.** in 2002. Richard's expertise in phasing and staging complex projects offers a great asset to both our public and private clients. He is currently involved in several large scale high profile projects in the State of New Jersey.

Today, Richard is Senior Vice President and serves as Operations Manager and Project Executive of all of **MAST Construction Services, Inc.** projects, including some of great significance such as South Ward 5th Police Precinct, valued at $60 million for the City of Newark, Hudson County Community College, collectively worth an approximate $150 million, Harrison Waterfront Redevelopment valued at $1.3 Billion. In this capacity, he oversees program management services, develops value-engineering concepts to meet owner budgets, creates and manages overall project schedules, helms owner/architect meetings, reviews bids, and negotiates contract awards.

EDUCATION
Burlington County College
A.S. Engineering - 1985

PROFESSIONAL CERTIFICATIONS
- National Institute for Certification in Engineering Technologies Level IV [redacted]
- Environmental and Occupational Science Institute for Hazardous materials [redacted]
- American Red Cross First Aid

PROJECT EXPERIENCE AT MAST:
- Department of Military & Veteran Affairs Park & Walkway, DPMC, *Jersey City, New Jersey* $16M
- Building 77 Improvements *Kearny, New Jersey* $24M
- Union County Courthouse Fire Code Renovations, New Court Building and Parking Deck $25M
- Jersey City Annex with approximately 120,000 SF of office space, 50, 000 SF of retail space and a Parking Garage for 1200 vehicles $120M
- South Ward 5th Police Precinct with Office of Emergency Management *Newark, NJ* $60M
- Bergen County Juvenile Detention Center and Youth Shelter - *Teterboro, NJ* $30M
- City of Newark Arena Area Road Network Completion - $55 Million
- The City of Newark –complete renovation of 8 Parks scattered throughout the City of Newark valued at $15 Million
- St. Peter's College *Jersey City, New Jersey* New Student Center valued at $40 Million
- Town of Harrison Waterfront Redevelopment with Red Bulls Stadium $1 Billion over 15 years
- Newark Housing Authority - Downtown Core District Redevelopment & NJ Devil's Arena $485M
- Hudson County Community College *Jersey City, New Jersey*:
  - New North Hudson Campus $40M
  - Culinary Institute & Conference Center – 73,000 SF, $25M
  - 70 Sip Street, Interior Renovations $10M
- Hudson County Correctional Center *Kearny, New Jersey* $45M
- Montclair Bay Street Parking Garage $8M

EARLIER CAREER HIGHLIGHTS:

Senior Project Manager

Capital Health System FULD Campus *Trenton, New Jersey*
$17 million, 70,000 SF addition and renovation to house a new emergency room, psychiatric screening, and outpatient center; Project was split into three phases to allow emergency room and trauma center to remain in service during construction.

Granville Charter High School *Trenton, New Jersey*
$7 million gut renovation and conversion of the Schriner's Building into a charter High School.

Project Manager

Rutgers University *Piscataway, New Jersey*
$42 million Higher Education Capital Improvement: Project (HECIP) included new roofing, windows, ADA upgrades, HVAC/plumbing and electrical work on Bush and College Avenue Campuses. Work was performed to minimize class interference.

Atlantic City Convention Center Corridor Projects *Atlantic City, New Jersey*
$35 million roadway, infrastructure, and landscape improvements: this project included relocation of overhead, high-pressure steam, water and sewer utilities as well as construction of a lighthouse and several parks.

Colgate Palmolive Site Redevelopment *Jersey City, New Jersey*
$35 million waterfront restoration project that included permit procurement from government agencies installation of 1100 LF of bulkhead of bulkhead construction in the Hudson River, and 84' sanitary/storm combined sewer outfall with tide gate construction.

Cape May Ferry Terminal *Cape May, New Jersey*
$21 million, 40,000 SF construction of a new ferry terminal with an elevated 600 LF connected pedestrian bridge equipped to meet boat-docking requirements. The building was complete with high end materials. Project included creation of wetland retention basin.

West New York Public Schools *West New York, New Jersey*
$5 million gut renovation of 20,000 SF building, plus construction of a 10,000 SF addition. Project included construction of 10 classrooms, Multipurpose Room and Kitchen.

Project Engineer

New Jersey Turnpike Authority Widening Program
Five-year $85 million program to widen five miles of highway in each direction: 12 bridge structures were realigned to accommodate construction.

East Penn School District *Lehigh Valley, Pennsylvania*
$20 million program management project to renovate various schools within East Penn School District.

Massachusetts Turnpike Authority Rehabilitation Program
$7 million pump station and water main project to include installation of eight miles of water main.

Garden State Parkway, New Jersey
Program included bridge and road widening, ramp realignment, and several construction projects on the Garden State Parkway.

MAST CONSTRUCTION SERVICES, INC.

MICHAEL J. PALUMBO, P.E., A.S.C.E.

DIRECTOR OF TECHNICAL SERVICES

PROFILE

Michael has over **42** years experience in the construction industry. He has designed and managed the construction of major residential, commercial, educational, and governmental projects in New York and New Jersey. As a Structural engineer for a major New York City Structural Engineering Design firm, he designed and inspected the construction of numerous buildings. His experience encompasses the construction of reinforced concrete and structural steel buildings, including local Law 10 inspections, structural failure reports and load tests. Michael holds a degree in Civil Engineering from City College of New York and is a licensed Professional Engineer in New York and New Jersey, as well as a member of ASCE.

As project executive, Michael is responsible for direct project supervision; interfacing with prime contractors, reviewing and negotiating bid packages, reviewing estimates/schedules/contracting plans, reviewing progress payments, bidder qualifications with emphasis on pre-construction value engineering, constructability review and conceptual estimating. Specialist at conceptual system alternative studies; foundation, structural façade and mechanical systems.

EDUCATION

1976 - City College of New York New York, NY
B.S. in Civil Engineering
1968 – New York City Community College
New York, NY
A.A.S. in Construction Management

EMPLOYMENT HISTORY

2001 – Present
Glenwood Management *New York, NY*
Vice President of Construction

1987 – 2001 **York Hunter** *Newark, NJ*
Director of PreConstruction/Project Executive

1984 - 1987 **Sordoni Construction Company**
Parsippany, NJ
Sr. Project Manager/Purchasing Manager

1974 – 1984 **Pike Construction** *Paterson, NJ*
Project Manager

1970 – 1974 **HRH Construction** *New York, NY*
Assistant Supervisor/Project Manager

1968 – 1974 **Robert Rosenwasser** *New York, NY*
Structural Engineer

CAREER HIGHLIGHTS

INDUSTRIAL/SCIENCE/TECHNOLOGY

- **Visy Paper** Staten Island, NY
  $125 Million, 550,000 SF paper recycling plant complex

- **Par Pharmaceutical** Spring Valley, NY
  $5 Million, 100,000 SF structural steel/masonry/aluminum panel pharmaceutical manufacturing facility.

- **220-5th Avenue** New York, NY
  $10 Million restoration of a 19-story office building, including a rehabilitation of the lobby to its original 1911 condition.

- **Colgate-Palmolive Company**
  Jersey City, NJ
  $35 Million infrastructure project, the first phase of a $2 Billion redevelopment of Colgate's industrial facility.

- **375 Pearl Street** New York, NY
  The renovation and restoration of a 21-story office building.

MAST CONSTRUCTION SERVICES, INC.

GOVERNMENT AND JUSTICE

- **Tweed Courthouse** New York, NY
  $8 Million rehabilitation and restoration of 52 Chambers Street, NYC & National Historic Landmark

EDUCATIONAL/INSTITUTIONAL

- **High School for the Performing Arts** New York, NY
  $25 Million restoration of 1894 NYC landmark. 80,000 SF, 6-story building damaged by fire, completely gutted and restored.

- **Hackensack Childcare Learning Center** Hackensack, NJ
  $3.5 Million, 35,000 SF childcare center built as a free standing, self-contained facility on the Hackensack Medical Center Campus.

- **Warlaw-Hartridge School** Edison, NJ
  $6 Million Phase I, 44,000 SF expansion of the School's Edison campus.

RESIDENTIAL

- **London Terrace** New York, NY
  $7 Million conversion of 120 apartments into condominium units.

- **Avalon Cove** Jersey City, NJ
  $35 Million waterfront apartment tower consisting of 269 apartment units, 300 car parking garage, 1,000 SF of bulkhead and waterfront walkway.

- **Port Liberte** Jersey City, NJ
  A new $115 Million, 363-unit condominium/luxury townhouse complex complete with yacht club and marina.

- **Essex and Phoenix Mills** Paterson, NJ
  A HUD funded $6.2 million project consisting of the renovation and restoration of two 159 year old historic landmark silk mills into a 150-unit, low income housing project.

- **2 Lincoln Square, 65th Street and Broadway** New York, NY
  A new 730, 000 SF, 42-story, 600 unit condominium building.

- **Harlem River Housing** New York, NY
  A 4800 SF intermediate abutment, structural steel and concrete pedestrian/vehicular bridge over the Major Deegan.

- **1930 Broadway** New York, NY
  $88 Million, 460,000 SF, 29-story, 229 Unit High Rise Apartments

- **10 Liberty Street** New York, NY
  $79 Million, 387,000 SF, 4-story, 287 Unit High Rise Apartments.

- **10 Barclay Street** New York, NY
  $168 Million, 560,000 SF, 60-story, 396 unit High Rise Apartments.

- **320 West 38th St.** New York, NY
  $220 Million, 715,000 SF, 2-24-story, 569 unit High Rise Apartments.

Michael J. Palumbo

MAST Construction Services, Inc.

John A. Delutis

PROJECT EXECUTIVE

PROFILE

John is a **27 year** veteran of the construction industry and has been with **MAST Construction Services, Inc.** since its inception. His past work ranges from Project Engineering for luxury residential communities to Program and Construction Management for medical, educational and municipal facilities.

John oversees **MAST Construction Services, Inc.** Construction Management projects from the pre-construction phase through owner occupancy. His responsibilities include interfacing with clients and prime contractors; analyzing estimates, schedules, and contracting plans; negotiating bid packages; and reviewing bidder qualifications. John is currently overseeing the adaptive reuse of Building 77, a 4 acre site in Kearny, NJ, home to an existing dilapidated 80,000 SF warehouse. This building will be brought down to its steel and rebuilt to serve the shared storage, office and vital technological needs of the Hudson County Office of Emergency Management Command Center, record storage for the Hudson County Prosecutor's Office and record storage, secure storage and general warehousing for the Hudson County Department of Corrections. The goal for this building is to achieve LEED Silver Certification. As such, the components encompass the following: geothermal wells, a photovoltaic roof system, a green roof, radiant heat flooring, 3 wind turbines and bioswales for collection and control of storm water runoff.

John proves to be an invaluable asset to each of the clients he works with. With a strong handle on financial impact in design and construction, design details and solution driven temperament, John is a successful overall project manager, working with owners, client representatives from inception through project completion; ensuring a success, delivered on time and within budget.

EDUCATION

Moravian College – 1983, B.A. Accounting
Minor: Business Administration

PROFESSIONAL ASSOCIATIONS

Construction Management Association of America

PROJECT EXPERIENCE AT MAST:

- Union County New Court Building & Parking Deck *Elizabeth, New Jersey* $25M
- Jersey City Annex and 1200 car Parking Garage *Jersey City, New Jersey* $120M
- Burlington County Library Addition & Renovation *Westhampton, NJ* $7M
- Hudson County Plaza *Jersey City, NJ* $45M
- East Orange Police Facility *New Jersey* $19M
- St. Peter's Rectory, 18 Vesey Street *NY, NY*
- Hudson County Correctional Center *Kearny, NJ* $42M
- Columbus Towers, *Jersey City, NJ* $108M
- Secaucus Recreational Center *Secaucus, NJ* $11M
- Pulte Homes Fulton's Landing *Jersey City, NJ* $25M
- Jewish Home of River Vale *New Jersey* $20M
- Alpine Country Club *Demarest, NJ*$15M
- Bay Street Parking Garage *Montclair, NJ* $5M
- Memorial High School Grandstands West New York, NJ $2.3M

EARLIER CAREER HIGHLIGHTS

Project Executive/General Project Manager

University of Medicine and Dentistry of New Jersey, *Piscataway/New Brunswick, New Jersey*
$43 million seven-project plan of construction and renovation which included a new laboratory research annex; 20,000 SF, $5 million RWJ Medical School/School of Public Health; and 120,000 SF, $36 million standalone building with vivarium, NMR and 32 wet labs.

Jewish Home Rehab Center
Rockleigh, New Jersey
$28 million gut renovation and retrofit of 180,000 SF into a 181-unit skilled nursing facility Equipped with kosher kitchen.

West New York Early Childhood Center
West New York, New Jersey
$5 million gut renovation of 20,000 SF and construction of a 10,000 SF addition. Project included installation of 10 classrooms, a Multipurpose room and a kitchen.

Senior Project Manager

Atlantic City Convention Center Corridor
Atlantic City, New Jersey
$35 million roadway infrastructure and landscape improvements. Included relocation of overhead, high-pressure steam, water and sewer utilities; as well as construction of a lighthouse and several parks.

Montclair State University
Montclair, New Jersey
$34 million Master Plan expansion targeting new construction and renovation over a five-year period. Included a new 94,000 SF academic building, a 40,000 SF addition to the library, expansion/renovation to three buildings of the Fine and Performing Arts Center, and a new 5,000 SF campus safety facility.

New York Public Library Central Research Branch, 5th Avenue, *New York, New York*
$8 million infrastructure rehabilitation. Included new emergency generator, storm leaders, security
system, and fire alarm/protection systems. Special
care given to the historic landmark interior and exterior.

Gladys Hillman Jones Model Middle School
Newark, New Jersey
$7 million conversion of a historic school in to a model educational facility.

Brooke Astor Rare Books Reading Room, New York Public Library, New York, New York
$3.5 million phase gut renovation of 5,000 SF space
to create the new Reading Room; custom monumental bookcases with state-of-the-art security and fire alarm systems, HVAC systems with extra filtration, humidification control, and extensive marble
and oak millwork.

New Jersey Institute of Technology
Newark, New Jersey
$2.8 million gut renovation of 20,000 SF Cullman Hall, plus other fast-track interior renovations throughout campus over a four-year duration.

Project Engineer/Assistant Superintendent

Port Liberte *Jersey City, New Jersey*
$115 million construction of 363-unit luxury condominium and townhouse complex including Yacht Club and Marina. Project also included major infrastructure work, such as a manmade island and timber bridge.

MAST CONSTRUCTION SERVICES, INC.

GERARD CARBONE

SENIOR PROJECT MANAGER, LEED GREEN ASSOCIATE

PROFILE

Gerard has been working in the construction industry for over **30 years**, and he has been with **MAST** since April of 2003. Gerard's active day to day management on projects over the past three decades has resulted in his expertise in technical aspects, constructability, phasing and logistics. He is very well versed in all trades and has forged strong relationships with multiple contractors.
At **MAST**, Gerard has completed the construction of a parking garage which consisted of a three and one-half level precast structure for both a private developer and the Parking Authority in Montclair, New Jersey. He has also completed the rehabilitation of 15 South Munn Street and other adjacent properties to serve as the Headquarters for the East Orange Police Department in East Orange, NJ.

Gerard has recently completed an adaptive reuse project for Hudson County Community College. A former Welfare building has been transformed into a thriving educational environment. The 20,000 SF, 3 story building with basement, now offers 10 classrooms, a computer testing lab, administrative offices including the Dean of Instruction and a Student Lounge.

At the present time, Gerard is overseeing the adaptive reuse of Building 77, an 80,000SF warehouse on a 4 acre site in Kearny, NJ. This building will be brought down to its steel and rebuilt to serve storage, office and vital technological needs of the Hudson County Office of Emergency, Management Command Center, record storage for the Hudson County Prosecutor's office and record storage, secure storage, and general warehousing for the Hudson County Department of Corrections. The goal for this building is to achieve LEED Silver Certification. As such, the components encompass: Geothermal Wells, a Photovoltaic roof system, a green roof, Radiant Heat, 3 Wind Turbines and Bioswales for collection and control of storm water runoff.

AFFILIATIONS

- LEED Technical Committee
- LEED Material and Resources; Technical Advisory Group
- USGBC Government Correspondence Committee
- USGBC Codes Correspondence Committee
- United Brotherhood of Carpenters and Joiners of America – Member

PROJECT EXPERIENCE AT MAST:

- 2 Enos Place – Education Building J, Hudson County Community College *Jersey City, NJ* $5M
- Building 77 Adaptive Reuse, Hudson County, NJ $24M
- Redevelopment of 7 Public Parks for the City of Newark $9.8M
- Harrison Commons 1500 car Parking Garage $45M
- Bijou Properties - Garden Street Luxury Condominiums *Hoboken, NJ* LEED Certified Gold, **SBIC Beyond Green High Performance Building Award** $26M
- Montclair Bay Street Parking Garage $8M
- East Orange Police Facility $19M
- St. Peter's Rectory 18 Vesey Street *New York, New York* $6M
- West New York Board of Education $8M
    - Memorial Field upgrades: grandstands, paver installation and windscreen installation
    - School #4 chimney restoration
    - On Call services for the District; cost estimating, deficiency reports, etc.

EARLIER CAREER HIGHLIGHTS:

491 Greenwich Street Condominiums New York, New York
$14 million gut renovation of an existing six-story brick warehouse capped with a four glass and steel addition along with a new 11-story structural steel building with 8,300 SF of architecturally detailed glass curtain wall.

West New York Early Childhood Center West New York, New Jersey
A $5 million gut renovation to an existing 20,000 SF building with a new two-story addition including all new mechanical systems and the installation of one new elevator.

Haagen Dazs Warehouse Expansion Bronx, New York
New construction of an 11,200 SF sub-zero freezer along with a 1,700 SF office addition. All work performed within a fully functional warehouse.

Dylan Hotel New York, New York
$9.5 million 65,000 SF gut renovation of an existing landmark quality ten- story hotel (formerly The Chemist Club) and a four-story addition to create a new 14-story, 108 key boutique hotel in Midtown Manhattan. Construction included a complete interior demolition of the existing 10 story structure and a four story addition with refurbishment of the marble staircase, reuse of the existing millwork throughout the new dining area and the restoration of plaster columns and ceiling.

Avalon Willow Mamaroneck, New York
$28 million 268,000 SF new 227 residential rental units in three 4 ½ story buildings. Buildings were framed using light gauge metal framing throughout, including a very complicated roof and wind bracing system, installation of six new elevators and extensive millwork in the main lobby.

Saint Barnabas Medical Center MOB

Sussex County Courthouse

Courtyard Marriott

Saint Josephs Hospital nursing residence

Hyatt Regency Restaurant renovation

Datascope Corporate Headquarters

Cost Estimating, coordination and scheduling of Manpower and materials for projects such as:

UMDNJ Martland Building Newark, New Jersey
A complete renovation of four floors within an operating 15-story building.

NJIT Cullimore Hall Newark, New Jersey
Renovations

Rutgers University Newark, New Jersey
Classroom ceiling replacement, lecture hall ceiling renovation.

Ameri-Suites Hotel Secaucus, New Jersey
New construction of a nine-story luxury hotel.

TROY MARZZIOTTI

SENIOR PROJECT MANAGER

PROFILE

Troy joined **MAST** Construction Services in June of 2004. With **17 years** of experience in construction management, Troy has a keen ability to succinctly move a project through to completion. His technical expertise and attention to details proves him an asset on distressed projects, in particular. Expertise gained from institutional and corporate projects, he is detail oriented; he mobilizes team members, especially in the construction phase to accomplish goals and milestones.

Troy has been responsible, in the field, for various renovations, additions and new construction for Hudson County Community College in Jersey City and in Union City, New Jersey for the past 3 years. Currently he is working on the new North Hudson Campus in Union City; a Welcome Center at Journal Square; and new Educational building in Jersey City. He is also overseeing the construction of Flatrock Residential Complex in Englewood, New Jersey, a four-story, 126 new luxury condominium residence community. In the private sector, Troy recently closed out the addition and renovation of the Englewood, NJ Assisted Living facility for the Actors Fund.

EDUCATION

Stevens Institute of Technology
Masters of Science Construction Management
New York University
Diploma in Building Construction Management
Iona College
Bachelor of Science Business Administration

PROJECT EXPERIENCE AT MAST:

- The Actor's Fund Assisted Living Facility *Englewood, New Jersey* $8M
- Hudson County Community College *Jersey City, New Jersey*
  - North Hudson Campus $40M
  - 2 Enos Place Education Building J $5M
  - New Welcome Center $1.2M
  - New Library 65-79 Sip Avenue $19M
  - Culinary Institute & Conference Center $25M
  - Culinary Park Plaza $1.8M
  - Administration Center 70 Sip Street, Interior Renovations; 40,000 SF on four floors $9.5M
  - Renovations to 25 Pathside, 87 Sip Avenue & 870 Bergen Street $1.5M
- Flatrock *Englewood, New Jersey* mixed use residential that includes 126 new luxury residences $25M
- Hudson County Correctional Center *Kearny, New Jersey* $40M
- Multiple projects in the *NY Metro area* for Fortune 500 companies (confidential): Size of projects range from $2M to $55M

EARLIER CAREER HIGHLIGHTS

Dormitory Authority State of New York
Brooklyn College Library, Brooklyn, New York
$12 million 450,000 SF rehabilitation and expansion to create the library.

State University Construction Fund
Student Union at Old Westbury, Old Westbury, NY
$13 million 180,000 SF three story new construction.

Albert Einstein College of Medicine
Bronx, New York
$3 million mechanical upgrade including two 850 ton liquid absorption chillers, three cooling towers and installation of structural steel for sound attenuators for cooling towers.

Pratt Institute Library
Brooklyn, New York
$3 million renovation of MEP systems of historical landmark building including three new architectural skylights and replacing and reappointing brick façade.

Pratt Institute ARC Building
Brooklyn, New York
$1 million HVAC upgrade of an existing including demolition and installation of two new air handling unites (50 ton and 80 ton Trane units).

IBM, 320A
East Fishkill, New York
$3 million HVAC upgrade of an existing building including phased construction for office space, renovations and temporary office for worker relocation.

MAST CONSTRUCTION SERVICES, INC.

JIM NAPOLITANO

PROJECT MANAGER

PROFILE

Jim joined **MAST** Construction Services in 2002. He has approximately 13 years of experience working on construction projects. His responsibilities include complete Project Management Services during preconstruction and construction phases of the project: preparation of preliminary schedules and budgets; reviewing/negotiating bid packages; project schedules; review/coordinate/maintain shop drawing and request for information logs; initiate/respond to all project correspondence; review/negotiate change orders; review of contractor monthly applications for payment.

Jim's strengths in technology provide an invaluable asset to **MAST** and to each of its clients. His technical expertise in Prolog, Suretrak, Microsoft and Mac based programs enable a smooth process for the connectivity and flow of information allowing for project success.

Currently, Jim is serving as Senior Project Manager for the new Juvenile Detention Center & Youth Shelter for the County of Bergen and the Department of Military and Veteran Affairs Bulkhead & Waterfront Walkway project for the New Jersey Department of Property Management and Construction.

EDUCATION

Manhattan College
B.S. Civil Engineering 1998

PROFESSIONAL ASSOCIATIONS

Construction Management Association of America

PROJECT EXPERIENCE AT MAST:

- Bergen County Juvenile Detention Center, Youth Shelter *Teterboro, NJ* $30M
- Department of Military & Veteran Affairs Park & Walkway *Jersey City, NJ* $16M
- Town of Harrison Waterfront Development & Red Bull Stadium *Harrison, NJ*
  $1 Billion over 15 years
- Hudson County Community College *Jersey City, NJ* $14M
  - College Facilities Management
  - 70 Sip Street Renovations
  - Renovations at 25 Pathside, 87 Sip Avenue & 870 Bergen Avenue
- St. Peter's Rectory 18 Vesey Street *New York, NY* $6M
- Newark Housing Authority – Downtown Core District Redevelopment & NJ Devil's Arena:
  - Arena and Infrastructure $485M
  - Parks $9.8M

EARLIER CAREER HIGHLIGHTS:

Project Manager

Rye Country Day School Rye, New York
An $18 million project that included 20,000 SF, 2 Story addition. The project also included a gut renovation of an existing kitchen and cafeteria that serviced the entire school K-12.

West New York Early Childhood Center West New York, NJ
A $5 million gut renovation to an existing 20,000 SF building with a new two-story 10,000 SF addition including all new mechanical, sprinkler, HVAC, roof and electrical work.

Assistant Project Manager/Assistant Supervisor:

Jewish Home and Rehabilitation Center Rockleigh, New Jersey
$28 million gut renovation and retrofit of an existing 2-story, 180,000 SF building into a 181 unit Skilled Nursing Facility on a 16-acre site, producing a comfortable atmosphere within a state-of-the-art sub-acute care facility.

744 Broad Street Newark, New Jersey
$8 million multi project renovation of the Bank Hall (Mezzanine) level and lobby and a loading dock addition.

South Ward Industrial Park Newark, New Jersey
$13 million construction of a 100,000 SF light industrial building and associated on and off-site development.

New Jersey Institute of Technology – Cullimore Hall Newark, New Jersey
$1 million gut renovation of two 16,000 SF floors for faculty and administrative office space. The 20,000 SF interior renovation includes all new mechanical, electrical, plumbing and fire/life safety systems.

MAST CONSTRUCTION SERVICES, INC.

PAUL SKABICH

PROJECT MANAGER

PROFILE

Paul has worked at **MAST** for 5 years and is responsible for Project Management Services during the preconstruction and construction phases of projects which include preparation of preliminary schedules and budgets; review/negotiate bid packages; develop project schedules; review/coordinate/maintain shop drawing and request for information logs; initiate/respond to all project correspondence; review/negotiate change orders; and review contractor monthly applications for payment.

Prior to joining **MAST**, Paul was a staff engineer/field engineer. His responsibilities included: performing and preparing geotechnical investigation feasibility reports; design and inspection of shallow and deep foundations; investigating and reporting existing utilities locations for facility expansion; design and inspection of mechanically stabilized earth walls; submitting dam breach inundation studies to municipalities for emergency action plan approvals; analyzing sites for storm water management, submitting analysis reports for municipal approval and providing engineer costs estimates for proposed development.

Paul is currently overseeing the construction of the new Newark 5th Police Precinct Building which has been designed to be LEED Silver, four stories, 75,000SF building situated on 1.7 acres in urban Newark, NJ, anticipated completion July 2011. Paul is also involved in the close out stages of two of the six remaining parks in the City of Newark Park Redevelopment Initiative.

EDUCATION

New Jersey Institute of Technology; MS Civil Engineering 2003
Manhattan College; B.S. Civil Engineering 1998

PROJECT EXPERIENCE AT MAST:

- The new Newark 5th Police Precinct with Office of Emergency Management $60M
- City of Newark, Parks Initiative $9.8M
  - St. Peter's Park
  - Hays Park East
  - Boys Park
  - Kasberger Field
  - 1st. Steet, 3rd Street & Thomas Silk Park Project
  - Pre-School/Garden Spires Park
- Newark Arena Area Road Network Completion - $55M
- Hudson County Community College:
  - Culinary Institute and Conference Center $25M
  - Culinary Arts Plaza Park $1.8M
  - 70 Sip Street Renovations $10M
  - Renovations at 25 Pathside, 87 Sip Avenue & 870 Bergen Avenue $1.5M

EARLIER CAREER HIGHLIGHTS:

Staff Engineer/Field Engineer

Rikers Island Correction Facility New York, New York
$3 million 50,000 SF Building

Target Mount Vernon, New York
$2.5 million 250,000 SF Building

Wal-Mart Neptune, New Jersey
$500K 150,000 SF building

Modular Block MSEW Bethel, Connecticut, Christiana, DE, Clifton, NJ
$50K

MTA West End Line Signal Modernization
New York, New York

SEAN J. EDMONDS

ASSISTANT PROJECT MANAGER

PROFILE

Sean, in his third year here at **MAST**, has proven to be an invaluable asset to the **MAST** team. Serving in the role of Project Manager, Sean has worked in the field to push towards completion of various Hudson County Community College projects. Recently completed, Education Building J, located at 2 Enos Place in Jersey City is the adaptive reuse of an existing former Welfare building into a thriving educational environment. This 20,000 SF, 3 story building with basement, now offers 9 classrooms, a writing center, a computer testing lab, administrative offices including the Dean of Instruction and a Student Lounge. Currently, Sean is involved in the conversion of approximately 2000 SF of retail space into a prominent new Welcome Center and public accessible Computer Lab offering 30 computer stations for the college and the expansion of the North Hudson Campus for the college. This project is the new construction of a 7 story, 92,000 SF facility to be located adjacent to the Hudson Bergen Light Rail Station. The new facility will house all programmatic space for the North Hudson Campus. With direct access to the Light Rail and bus transportation, this is an ideal location to appropriately serve the community. Sean's project experience includes Higher Education new construction and renovation, public parks, and mid to high-rise mixed-use residential.

EDUCATION

Stevens Institute of Technology
Master of Science Construction Management

Saint Thomas Aquinas College
Bachelor of Science Social Sciences

PROJECT EXPERIENCE AT MAST:

Hudson County Community College, North Hudson Campus *Union City, NJ* $40M

Hudson County Community College, Welcome Center *Jersey City, NJ* $780,000

Hudson County Community College, 2 Enos Place *Jersey City, NJ* $5M

Bijou Properties, Garden Street Lofts *Hoboken, NJ* $26M
Project Manager
This project is the conversion of an 80 year old, seven story warehouse building into loft-style residential condominiums. This redevelopment also includes 7,744 SF of ground floor retail space. LEED Gold certified and USGBC Award winner, this project offers 30 new residences. Located on the corner of 14th and Garden Streets, this prized location in uptown Hoboken has direct access to all modes of transportation including ferry, bus and PATH. Neighborhood amenities include boutiques, parks and upscale dining.

Hudson County Community College, Culinary Arts Plaza *Jersey City, NJ* $25M
Project Manager
MAST served as Construction Manager for the conversion of a 13,025 SF commercial parking lot into a new plaza. Located directly across from Hudson County Community College's new Culinary Art Institute and Conference Center, the new Plaza offers green space in this urban center Students, faculty and visitors are provided with a sense of place via the new plaza with its tree lined setting, water feature walls and a circular designed paving area with seating. A portion of the Park will also be available for private College events.

NICK LUCARELLI
ASSISTANT PROJECT MANAGER

PROFILE

Nick joined **MAST** this year in the role of Assistant Project Manager on projects during construction. Project experience includes public parks, recreational facilities and the construction of the new Newark 5th Precinct Police building which consists of a LEED Silver, four story, 74,980 SF building situated on 1.7 acres in urban Newark, New Jersey.

EDUCATION

Temple University; Bachelor of Science Architecture

PROJECT EXPERIENCE AT MAST:

The New Newark 5th Police Precinct with Office of Emergency Management $60M
Assistant Project Manager
This project is the first new police station for the City of Newark. It is a Prototype design for the facilities. Special to this location in the South Ward is the incorporation of Office of Emergency Management Services. The building will be located at Clinton Avenue between Bergen and Hunterdon Streets. Three stories with a full basement totals approximately 74,000 SF. The basement will house holding cells. The first and second floors are for the Police while the third floor will be dedicated to the Office of Emergency Management and Communications.

City of Newark, Redevelopment of Public Parks $9.8M
Assistant Project Manager
MAST is serving as Construction Manager for the renovation of seven (6) public parks throughout Newark. Most parks will offer new playing fields for soccer, baseball and volleyball along with walking paths, landscaping and lighting.

- *Hayes Park* will offer a new swimming pool with the renovation of existing Bath Houses, a new children's playground area, new public seating area, new synthetic turf soccer field, volleyball and basketball courts and new prominent park entry features.
- *St. Peter's Park* includes upgrades to the current Little League Filed with new synthetic turf, Field House, scoreboard and lighting. A new playground area, renovated swimming pool and new basketball court surfaces.
- *Kasberger Field* includes a new Senior League baseball field and little league fields, new Field Houses and new prominent park entry features.
- *First Street Park* includes a new water spray feature, playground and basketball court and community garden area.
- *Thomas Silk Park* includes community gardens.
- *Newark Pre-School Park* will have a new playground and basketball court

Hudson County Community College, North Hudson Campus *Jersey City, NJ* $40M
Assistant Project Manager
MAST is serving as Construction Manager for the expansion of the North Hudson Campus for Hudson County Community College. This project is the new construction of a 5 story, 92,000 SF facility to be located adjacent to the Hudson Bergen Light Rail Station (at 48th & 49th Street along Kennedy Boulevard). The new facility will house all programmatic space for the North Hudson Campus. With direct access to the Light Rail and bus transportation, this is an ideal location to appropriately serve the community.

EARLIER CAREER HIGHLIGHTS

Assistant Superintendent
D. Haller, Inc. 350 West Broadway *New York, NY* $40M
This project was the construction of a Green 10 story luxury condominium with 1st & 2nd floor retail space, seven full-floor residences and penthouse in an international style new building in the heart of Soho. Downtown loft living and park avenue-inspired layouts.

Intern
MAST Construction Services, Inc. *Little Falls, NJ*

- Assisted Project Manager in overseeing daily on-site construction activities
- Drafted monthly progress reports
- Documented meeting minutes for several projects

Provided herein is a listing of project experience with which **MAST Construction Services, Inc.** has had contracts similar to the work that may be required in New York & New Jersey for the PANYNJ:

The Port Authority of NY & NJ

WORLD TRADE CENTER DOWNTOWN RESTORATION PROGRAM

MAST's responsibilities for this comprehensive redevelopment in Downtown Manhattan include facilitating communications to identify and solve project interface issues for the rebuilding of the $19 Billion, 16 acre World Trade Center site, specifically, One World Trade Center, the Transportation Hub, and Towers 2, 3, and 4.

The WTC Memorial and Memorial Museum will incorporate the box beam footprints of the original WTC North and South Towers and the construction of the 1,776 foot tall, 104 story, 3 million SF One World Trade Center, formerly known as the Freedom Tower. Construction of this high-rise tower has a completion date targeted for 2013. Steel and concrete work below grade has been completed along with framing of the podium. Construction is proceeding on the office level above the podium at a rapid pace of approximately one floor per week. Topping out of the steel frame at the 1368 foot level is scheduled for fall 2011.

The complex infrastructure involves the construction of a new Port Authority Trans-Hudson Terminal, which will feature 10-car platforms, updated signal systems, fare collection equipment, and new lighting and finishes, and provide intermodal connections to a variety of subway lines, other modes of transportation and connections to surrounding buildings.

Contact:	**Alan Reiss, Deputy Director WTCC**	**Start Date:**	**September 2008**
	212.435.5530	**End Date:**	**TBD**
	areiss@panynj.gov	**Cost:**	**$19 Billion**

The Newark Downtown Core Redevelopment Corporation (NDCRC)

THE NEWARK ARENA REDEVELOPMENT $430 Million major redevelopment in Newark, including the construction of the following: 17,500 seat professional sports arena for New Jersey Devils and Entertainment Center, 300 room Hotel, 40 story residential tower, mixed-use buildings, retail and residential facilities, realignment of streets and utilities, construction of new public parks and plazas, reconnect Newark Penn Station Rail system, relocation of businesses, new Board of Education Headquarters Building. The new Prudential Center has become the centerpiece of all New Newark and was awarded the **New York Construction magazine's Project of the Year, Best of 2008 Award.**

NEWARK HOUSING AUTHORITY (NHA)

ARENA AREA ROAD CIRCULATION PROJECT INFRASTRUCTURE IMPROVEMENT

MAST, Owner's Representative for the Newark Housing Authority, oversaw the arena redevelopment project. This major redevelopment and infrastructure improvement in Newark is of great significance. **MAST** took on the additional role of Construction Manager, responsible for the completion of the infrastructure surrounding Prudential Center. The cost of the project is in excess of $55M, which is part of the $430M redevelopment plan. The project included roadway realignment reconstruction, utility relocations and coordination with all of the developers.

Contact: **William Crawley, COO**
[redacted]

Start Date: **December 2005**
End Date: **January 2008**
Cost: **$485 Million**

Town of Harrison

HARRISON WATERFRONT REDEVELOPMENT

Valued at $1Billion over 15 years, this redevelopment is 250+ acres in the southern portion of Harrison, in a formerly industrial waterfront area. The area represents approximately 32% of the towns 1.2 square miles. The plan calls for the following elements: 18,000 seat professional sports arena for Red Bull Soccer, a public waterfront walkway and green area, structured parking facilities, an urban entertainment center, a street oriented 4 to 5 story mixed use, boulevard, with ground floor retail and upper floor for office/residential waterfront corporate center, residential opportunities, large scale movie production studio, improvement of the Harrison Path Station, public street improvements, expansion of exits off of Route 280.

Contact: **Mayor Raymond McDonough**
[redacted]

Start Date: **June 2002**
End Date: **TBD**
Cost: **$1 Billion over 15 yrs.**

NJ DEPARTMENT OF PROPERTY MANAGEMENT & CONSTRUCTION

DEPARTMENT OF MILITARY AND VETERAN AFFAIRS PARK AND WALKWAY

The DPMC has embarked on the stabilization of waterfront in Jersey City. The team is responsible for stabilization of structure, development, pedestrian concourse and DMAVA Park Installation in Jersey City. Fronting the Morris Canal Basin (from Green Street) down to Goldman Sachs at the Hudson River is approximately 1500 linear feet that will be redeveloped into a pedestrian walkway. This project includes a kayak launch and open space of approximately 105,000 SF that will become green with various paths to serve the office complexes and residential developments in the area. This site may become the new home for The Colgate Clock.

Contact: **Leonard D. Savino,**
Senior Associate
[redacted]

Start Date: **March 2009**
End Date: **2011**
Cost: **$16 Million**

JERSEY CITY REDEVELOPMENT AUTHORITY (JCRA)

JERSEY CITY ANNEX & PARKING GARAGE

The City of Jersey City and the Jersey City Redevelopment Agency have embarked on an ambitious project to provide for a new Parking Garage and Annex for the City of Jersey City. The site is located adjacent to the existing Jersey City Medical Center which is at the intersection of Grand Street and Jersey Avenue. This new mixed-use project includes; a parking garage for 1200 vehicles to be shared amongst city employees, school staff, hospital employees and visitors, an Annex (Administration Complex) and 120,000 SF of office space to serve various City entities including but not limited to: Department of Housing and Economic Development, Health and Human Services, Engineering and Architecture. The ground floor of approximately 50,000 SF will be dedicated to retail. This site is part of a larger Redevelopment Area that requires environmental cleanup and new infrastructure including utilities, roadways and rail access.

Contact: **Gregory J. Corrado, Assistant Business Administrator**
[redacted]

Start Date: **November 2008**
End Date: **On Hold**
Cost: **$120 Million**

NEWARK HOUSING AUTHORITY

SOUTH WARD 5TH POLICE PRECINCT

This project is the first new police station for the City of Newark. It is a Prototype design for the facilities. Special to this location in the South Ward, is the incorporation of Office of Emergency Management Services. The building will be located at Clinton Avenue between Bergen and Hunterdon Streets. Three stories with a full basement totals approximately 74,000 SF. The basement will house holding cells. The first and second floors are for the Police while the third floor will be dedicated to the Office of Emergency Management and Communications.

Contact: **Morris Warner, Assistant Director**
[redacted]

Start Date: **January 2009**
End Date: **June 2011**
Cost: **$60 Million**

THE COUNTY OF HUDSON

BUILDING 77 ADAPTIVE REUSE

In close proximity to the Hudson County Correctional Facility, this 4 acre site in Kearny is home to an existing dilapidated 80,000 SF warehouse. This building will be brought down to its steel and rebuilt to serve the shared storage, office and vital technological needs of the Hudson County Office of Emergency Management, record storage for the Hudson County Prosecutor's office and record storage, secure storage, and general warehousing for the Hudson County Department of Corrections. The building will include a new HVAC system, plumbing, electrical and a new façade along with a roof replacement. The site will receive a complete development and upgrade including paving, parking striping, concrete curbing, landscaping and site grading, filling and raising above the flood plain and constructing wetlands, and bioswales for storm water management.

The building has been designed and will be constructed for LEED Silver Certification. Some highlights of Green components incorporated within this project include: wind turbines, solar panels, geothermal system, and radiant heat.

Contact: **Abraham Antun, County Administrator** [redacted]

Start Date: **December 2009**
End Date: **October 2011**
Cost: **$24 Million**

COUNTY OF BERGEN

BERGEN COUNTY JUVENILE DETENTION CENTER AND YOUTH SHELTER

The County of Bergen has embarked on an ambitious project to provide for a new Juvenile Detention Center. To be located at 200 North Street in Teterboro, New Jersey, the proposed new Juvenile Detention Center will be progressive and provide for a safe and secure environment. The new center will provide for a dormitory; two pods to house the male population, one pod to house the female population and one pod for youths who are medically ill and those with psychiatric emergencies, lavatories, indoor and outdoor recreation areas, a cafeteria and kitchen, classrooms, outpatient facility, administration offices and guard facilities.

A new Youth Shelter will be designed to be located at the same site, The JDC and the shelter will share common functions and operations such as the kitchen, medical personnel, outdoor recreation area and gymnasium.

Contact: **Timothy J. Dacey, County Administrator** [redacted]

Start Date: **March 2008,**
End Date: **April 2012**
Cost: **$28.5 Million**

Hudson County Community College:

CULINARY ARTS INSTITUTE AND CONFERENCE CENTER

This new 73,000 SF, 5 story expansion of the College includes, eight state of the art teaching kitchens, a Production Kitchen, Line Kitchen, Bakery, Hot Foods, Garde Manager, Pastry/Finishing and Ice Carving/Fish Butchery Area, a 300 person banquet facility, 5,000 SF conference facility, 7 general classrooms and facilities offices and a small library. The College can now expand its culinary program from 250 students to 500 students. The total project cost was $25 Million.

NORTH HUDSON CAMPUS

The $35 Million project provides for the expansion of the Community College, offering a location in Northern Hudson County. The new campus will offer a 5 story 85,000 SF facility adjacent to the Hudson Bergen Light Rail. Space is dedicated to filling programmatic needs and shared spaces including an auditorium and conference rooms.

CULINARY PARK PLAZA

MAST served as Construction Manager for the conversion of a 13,025 SF commercial parking lot into a new plaza. Located directly across from Hudson County Community College's new Culinary Art Institute and Conference Center, the new Plaza offers green space in this urban center. Students, faculty and visitors are provided with a sense of place via the new plaza with its tree lined setting, water feature walls and a circular designed paving area with seating. A portion of the park is also available for private College events.

VARIOUS RENOVATIONS

Ranging in size from 6,000 SF to 40,000 SF totaling $11 Million, this work includes renovations into offices for staff and administration at four different locations.

Contact: **Frank Mercado, VP of Operations** [redacted]

Start Date: **February 2004**
End Date: **June 2011**
Cost: **$71 Million**

THE COUNTY OF UNION

UNION COUNTY COURTHOUSE

The County of Union has embarked on an extensive renovation program of the County Courthouse in Elizabeth in order to provide for the safety of its employees and visitors. The Tower will be renovated to meet fire code for egress. In addition to this the County will move forward with the design of a new Parking deck and New Facilities to house courtrooms, creating an extension of the Courthouse Campus down to Cherry Street.

Contact: **Joseph Graziano, Director**
Department of Works & Facilities
[redacted]

Start Date: **July 2010**
End Date: **August 2014**
Cost: **$32 Million**

Actor's Fund

LILLIAN BOOTH ACTOR'S HOME

The Lillian Booth Actor's Home was designed and constructed in 1961 to accommodate 109 senior Screen Actor's Guild professionals and their families. The facility housed 42 seniors that required Assisted Living and provided 67 seniors with Extended Care. This project is a vital expansion to meet the needs of this growing community. Significant in meeting the growing needs of the Lillian Booth Actor's Home; is the network expansion which includes the following: an additional 15 beds to the skilled nursing facility, increasing capacity from 67 to 82, the expansion of sub-acute care, offering more residents IV therapies, wound care, pain management, and hospice, the creation of a progressive rehabilitation and activities wing to provide physical, occupational and speech therapies, and the renovation of the lobby to enhance security, improve reception services and promote access to management and staff.

Contact: **Joe Benincasa, Executive Director**
[redacted]

Start Date: **October 2007**
End Date: **April 2009**
Cost: **$10.8 Million**

Phoenix Realty LLC (Equity Partner)

MIXED-USE REDEVELOPMENT

A portion of this redevelopment that includes 126 new luxury residences; the condominiums include one and two bedroom units in a four story construction with the convenience of above ground parking garages that will accommodate 400 vehicles and are centrally located and shared by each building.

Contact: **Brian Desiderio, VP Asset Management**
[redacted]

Start Date: **February 2008**
End Date: **September 2010**
Cost: **$25 Million**

The **MAST Construction Services, Inc. Team** brings several advantages to PANYNJ that are demonstrated throughout our proposal. We understand our role as an extension of your staff, and can hit the ground running with no learning curve; Our management philosophy is based on the following principles:

CLIENT SATISFACTION is paramount in our business. To remain successful and stay ahead of our competition, our commitment to exceeding client expectations guides our services. We continue to challenge ourselves to improve and excel through training, implementing lessons learned and keeping abreast of new technologies. Our organization structure, our team professionals, and the controls that we put in place during each project phase are designed to ensure that we meet your goals to:

- Manage and monitor a complete and well defined project scope before design begins to prevent misunderstanding, disputes, changes, and claims;
- achieve design excellence within budget, with the flexibility to accommodate future needs, and be energy efficient and respectful of the environment;
- create livable, healthy, productive environments;
- review and monitor that work conforms with contract requirements, is completed on time, and within budget.

TEAMWORK & RESOLVING ISSUES We work together with the owner and design team to foster teamwork by developing a shared understanding of and commitment to the project goals. We manage a process for efficient decision-making, dispute resolution and regularly conduct risk analyses with stakeholders to address potential issues before they arise. By focusing on developing and sustaining our relationships with local firms throughout the project life cycle, we promote an improved working climate of mutual trust and respect, establish a win-win relationship, and achieve mutually beneficial goals.

Our team spends much of their day solving problems and making decisions. We define our effectiveness based upon our ability to predict, prevent, and resolve problems. Throughout the project, our team will be looking ahead to identify potential risks that might impact schedule, cost or quality and we will develop alternatives, mitigation or workarounds to reduce or eliminate their probability or impact.

Our involvement may be thought of as a second set of eyes or compared to an insurance policy. The intent is to eliminate design/scope and/or quality ambiguities that could result in higher than expected bid results and/or unforeseen cost overruns. We establish quality objectives, minimize quality deficiencies & non-conformances, properly identify deficiencies when they occur, properly track deficiencies and provide for corrective action, verify contract compliance, and provide detailed reports. We establish protocols for inspecting work-in-progress and work in-place, delivered materials and equipment; submittals review, approval, and management; documentation procedures, proposed report formats; and procedures to identify, record, track and complete non compliant work and rework.

SCHEDULE CONTROL in concert with cost control is paramount to the success of every project. Our Master Schedule and Phasing Plan incorporate program requirements, key dates and milestone information. Utilizing Microsoft Project and Primavera, we prepare CPM Milestone

Schedules to track project activities, dates and the party responsible for accomplishing an activity. We have successfully used this management software to organize numerous projects with a challenging number of moving parts.
We will be responsible for monitoring and analyzing the contractor monthly progress schedules, recording items such as new activities, deleted activities, float, changes in the critical path(s), milestone completions, material deliveries, acceptance testing, etc. To ensure schedule compliance, the team will prepare a monthly schedule narrative report; maintain a current monthly as-built project schedule; review/analyze contractor change orders, fragnet schedules for time impact; provide notification to contractor of schedule slippage and review/analyze submitted recovery schedules; review/analyze on any other contract required schedules such as submittal schedules, area schedules, look ahead schedules, etc.

COST CONTROL AND ESTIMATING We will review estimates of construction used to assist in evaluation, confirmation and revision of project budgets as a baseline throughout each project. Following approval of the budget, we will monitor a uniform cost estimating framework through design, procurement, and construction phases. As design drawings and specifications are developed, our multi-disciplinary professionals will review value engineering reports, taking into account capital, operating, and maintenance costs, to verify that the most cost effective design solution has been incorporated and achieved.

ORGANIZATION, DEPTH & RESOURCES OF THE TEAM: We operate out of one main office, our headquarters, which is based in Little Falls, New Jersey. With the progression of technology, we are able to manage projects valued at hundreds of millions of dollars in value. Personnel at different sites communicate and share information with ease due to our network system, monitoring progress and channeling communication 24 hours a day, 7 days a week, from any secure internet connection. These resources allow the team the ability to effectively respond to workload fluctuations and maintain continuity of personnel assigned to projects from beginning to end over the term of the contract.

RESPONSIBILITIES & LINES OF COMMUNICATION OF DEDICATED PERSONNEL: Ted Domuracki is the President & Principal in Charge at the firm. Leading the team for these projects is Richard A. Brown, Project Executive. He is responsible for overall management, direction and satisfaction of contract requirements including assignment of staff. All communication will flow through Mr. Brown, who will oversee the Project Managers and be the point of contact to PANYNJ. We develop effective communications among our team, key stakeholders, the designers, and contractors using project directories, communications flow charts, correspondence files, written lines and levels of authority, partnering and coordination meetings. The Project Managers are responsible for management of the team in delivering the services required for a project on time, on schedule meeting quality requirements. The PM interacts with the PANYNJ PM and the GC and AE and other consultants for coordination, work progress, issues and corrective actions.

PROPOSED PROJECT METHODOLOGY
Electronic Project Management (ePM) We will fully integrate the use of Prolog in the oversight of

the project. Our personnel are trained in all of the popularly used software systems. Our team is also familiar with the use Buzzsaw and Constructware, and can easily work with these applications if so required. The ePM system will include all project documentation: written, drawn, and photographic. Project documentation and filing will be retained and maintained by the project team in the internet-based information and project communication system.

Budget Control We will monitor the budget and report on the status in the monthly progress reports advising the CO of observed or potential shortfalls. The monthly report includes design and construction costs and related administrative costs. We will track PANYNJ Shell Cost, Tenant Allowance Improvement Costs, and Tenant Reimbursable Improvement Costs separately for each change order. Our budget and cost control management includes; updating and distributing cost reports; reviewing contractor requests for payment; preparing PANYNJ forms for processing; monitoring project financial data and budgetary cost accounting maintaining spread sheets indicating project fund allowances, PANYNJ obligations, payments, balances, planned expenditures, and anticipated costs to complete; administrate construction change orders including; issuing RFPs, preparing cost estimates, assisting in negotiations, and preparing change order packages for processing.

Financial Records We will maintain financial records and budgetary information, for all disbursements, payments, cash flow for contractors, project team and others as required and provide regular status reports to PANYNJ.

Change Order Tracking The effective management of changes is key to avoiding potential dispute and delay to the project. If changes are required, whether PANYNJ or Contractor initiated, we will work to resolve them quickly and completely. We will assure the scope of work is specific and precise and then prepare a detailed and accurate independent estimate of both the cost and time impact of the change. Reconciliation between the estimate and contractor's proposal will be prepared and documented in our findings. We will support PANYNJ in negotiations and prepare a complete record of all negotiations along with the appropriate modification documentation. We will also be prepared to identify changes or issues which might escalate to a claims situation. All such issues will be monitored with a separate log for "potential claims" and tracked and updated regularly. We will manage the Construction Contingency funding, and will maintain the contingency balances at all times We will also prepare change order proposal requests as needed.

Record Keeping, Progress Reports We will prepare and/or review periodic reports for PANYNJ, document project actions and keep PANYNJ apprised of progress. The progress reports include the schedule, budget, submittals, modifications, clarifications, meetings, etc. Throughout the project, monitoring, interpreting, forecasting, and reporting of project activities and progress will be conducted by our project site team. The Monthly Progress Report will present the current project status and include an Executive Summary, correspondence, change and submittal log and other documentation.

Schedules: Computer Software The Team will use MS project to prepare CPM milestone schedule 30 days after award and update monthly. We will provide diligent monitoring of the contractor's progress as an effective means to identify and preclude delays which often impact

project time and cost. From initial schedule review and analysis, we place emphasis on the logical and accurate network structure, ensuring that such items as submittals and long-lead items have been addressed. We will produce and submit an As Built Schedule.

Meetings We will attend meetings with stakeholders including, PANYNJ staff, tenants, A/E, and the GC to prepare for the project start. We will also organize, conduct, and record both regularly scheduled meetings, and issue specific meetings. Regular Owner/Architect/ meetings to cover issues such as open issues and pending matters, new items; shop drawing submittal/approval status; RFIs, clarifications and supplemental instructions, QC, and safety. We will also attend community meetings as needed.

Sustainable Design We will assign our LEED® Accredited Professionals to facilitate exploration of LEED® Sustainable opportunities for achieving sustainability goals with the AE, PANYNJ and other relevant stakeholders. Based on the project objectives and constraints, various strategies will be analyzed and compared to identify and integrate sustainable building technologies into building systems and features.

Alternative Disputes Resolutions We have extensive experience in resolving differences through Alternative Dispute Resolution (ADR) practices. This experience includes: negotiation, facilitation, mediation, fact-finding mini-trial, arbitration, or any combination thereof. ADR practices will be integrated into our Partnership efforts to facilitate the furthering of successful project completion

Supplemental Services We will provide supplemental services as requested that may include: additional design reviews; claims processing; testing; Surveys; studies; expert testimony; tenant relocation; a qualified partnering facilitator; and other services as needed.

Hourly Rate Schedule

Name	Title	Billing Rate	Actual Hourly Rate
Ted Domuracki	President, Principal in Charge	$243	
Richard A. Brown	Project Executive		$108.94
John A. Delutis	Project Executive		$95.48
Michael J. Palumbo, P.E.	Director of Technical Services		$95.48
Gerard Carbone	Senior Project Manager		$85.06
Troy Marzziotti	Senior Project Manager		$82.38
Jim Napolitano	Project Manager		$70.27
Paul Skabich	Project Manager		$63.87
Sean J. Edmonds	Assistant Project Manager		$37.99
Luisa Santos	Clerical		$39.34

MAST's company policy for compensation for pemium pay (i.e. holidays, shift differentials, regular days, weekends and night work or union required payments must be included) is as follows:

MAST recognizes 11 paid holidays for full time employees.

The hours worked by salaried/exempt employees are often irregular, begin and end beyond the normal workday. Salaried employees that are exempt from the overtime provisions of the Federal Wage and Hour Law do not receive overtime pay.

Shift differentials, weekends, night work and union required payments are not applicable.

MAST Construction Services, Inc.

Description		Multiplier
Direct Personnel Expense		
Paid Time Off (sick, vacation, holiday, personal)	11.48%	
Workers' Compensation	0.52%	
Payroll taxes (SUI, FUI, FICA, DIS,UI, WF)	7.72%	
401(k)	5.00%	
Bonuses	4.85%	
Health, Dental, Vision, Life, LTC	10.28%	39.86%
Overhead		
Rent, Utilities, Janitorial	7.50%	
Automobile and Travel	7.61%	
Telephone	3.50%	
Professional Fees/Accountant & Legal	4.00%	
Professional Fees/Consultants	8.00%	
Office Supplies	5.00%	
PC support/computer exp	2.50%	
Furniture and Fixtures	2.00%	
Depreciation	1.10%	
Dues,Subscriptions, Contributions	7.50%	
Licenses, etc.	4.80%	
Training, Education, Seminars	6.50%	
Advert. & Business Development	6.50%	
Liability Insurance	15.50%	
Fair Profit	15.00%	97.01%

MAST Construction Services, Inc. (MAST) is a Small Business Enterprise. We have, since our inception in 2001, had the opportunity to work as the construction manager/project manager responsible for the success of millions of dollars worth of design and construction in both the private and public sectors.

While we may fit into a title of "SBE" and our team may be small in quantity of staff, we are large in capacity; we have seasoned experts and eager professionals who utilize the technological resources such as Prolog, Primavera Suretrak, Microsoft Project, Timberline and WinEstimator in order to provide our clients with projects that are completed within schedule and on budget.

Since the founding of our firm in 2001, MAST has continued the practice of incorporating the services of skilled Women and Minority owned Business Enterprises as part of our team. Some of the firms we have worked with on a regular basis over the years include those firms that are prequalified with the PANYNJ such as Dack Consulting, KS Engineers and YU Associates.

We will work towards achieving the set aside goals of the PANYNJ by adding firms such as these to our team in order to provide services such as cost estimating and inspection.

MAST Construction Services, Inc. does not have any affiliates.

MAST Construction Services, Inc. does not have any conflict of interest.

MAST Construction Services, Inc.

MAST Construction Services, Inc. is in agreement with the standard agreement and its terms and conditions.

MAST Construction Services, Inc.

MAST CONSTRUCTION SERVICES, INC.
96 East Main Street
Little Falls, NJ 07424
973-837-1515
Facsimile 973-837-1517
www.mastconstruction.com

MWH

BUILDING A BETTER WORLD

October 21, 2010

Tim Volonakis, Manager
The Port Authority of New York and New Jersey
One Madison Avenue, 7th Floor
New York, NY 10010

Reference: Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis during 2011, 2012, 2013 and 2014 (RFP Number 22388)

Dear Mr. Volonakis:

MWH is ideally situated to provide the PANY&NJ, the Authority, with Expert Project Management Services for the Authority's facilities or other locations, within New York and New Jersey. MWH is one of the world's premier full-service program management, construction and engineering management firms, with more than $1 billion in annual revenues. With 6,000 employees in 156 offices worldwide, including Offices in New York and New Jersey MWH brings 150 years of expertise and a full range of professional talent in program and project management.

A privately held, employee-owned company, MWH has completed billions of dollars of infrastructure and building projects for private and public companies, as well as government agencies throughout the world. Through this experience, MWH has developed the expertise and project management systems to ensure that quality, safety, budget, and schedule goals are met on projects. MWH offers clients a global network of resources, local responsiveness, advocacy, innovative technical solutions, a broad range of services and products, and flexible project delivery systems and approaches.

As this proposal will demonstrate, we have not only a wide range of experience performing Project Management and Program Management Services, but also direct relevant experience on similar efforts for the Authority as well. This experience drives our commitment to operate independently of other project participants, so that we can represent clients objectively and without conflicting priorities. By focusing on managing project activities, expectations, and, most importantly, risk, we lead, support, and advise clients throughout the project's lifecycle.

1412 Broadway
Suite 1620
New York, NY 10018

TEL 646 827 4100
FAX 646 827 4101
www.mwhglobal.com

Why Chose MWH?
Our clients choose MWH to provide project management solutions because:

MWH Represents the Client
MWH's program and project management group aims to be the client's trusted advocate on all project matters, representing them to consultants, stakeholders, contractors, and outside agencies. While we take ownership of projects as if they were our own, our approach strikes the right balance between project leadership and support. This enables clients to stay involved at the level they desire while giving them the tools needed to make informed project decisions.

MWH Complements Existing Staff
One myth of independent project management is that it threatens the reputation and authority of the client's project team. The reality is that MWH's approach complements and enhances the client's staff without aiming to replace them. By building relationships based on trust and respect, we work collaboratively with the client, creating an integrated Client-MWH team that is truly greater than the sum of its parts.

MWH is Flexible
Our aim is to build the most effective project team possible. As a result, we listen carefully to our clients' needs before suggesting appropriate services and personnel. From advisory and support services to program and project management leadership, our level of involvement is determined by what's best for the client and their project.

We look forward to the opportunity to develop a relationship with the Authority and assisting you in achieving your goals.

Please do not hesitate to call should you have any questions regarding our submission or require further information.

Sincerely,

Jerry Notte

Jerry Notte, PE
President
MWH Americas, A New York Corporation

Contents

Cover Letter

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Attachment 1 – Resumes

ATTACHMENT B

PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014

AGREEMENT ON TERMS OF DISCUSSION

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority's Freedom of Information Policy and Procedure adopted by the Port Authority's Board of Commissioners on November 20, 2008, which may be found on the Port Authority website at: *http://www.panynj.gov/corporate-information/pdf/Freedom-of-Information-Policy-and-Procedure.pdf,* not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

MWH AMERICAS
(Company)

(Signature)

VICE PRESIDENT
(Title)

Oct 21, 2010
(Date)

ORIGINAL AND PHOTOCOPIES OF THIS PAGE ONLY.
DO NOT RETYPE.

ATTACHMENT C

COMPANY PROFILE

REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

1. Company Name (print or type):

   _____

2. Business Address (to receive mail for this RFP):

   _____

   _____

3. Business Telephone Number: _____
4. Business Fax Number: _____
5. Firm website: _____
6. Federal Employer Identification Number (EIN): [redacted]_____
7. Date (MM/DD/YYYY) Firm was Established: _____/_____/_____
8. Name, Address and EIN of Affiliates or Subsidiaries (use a separate sheet if necessary):

   _____

   _____

9. Officer or Principal of Firm and Title:

   _____

10. Name, telephone number, and email address of contact for questions:

    _____

    _____

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? ☐ Yes ☐ No

    If yes, please attach **Port Authority** certification as a part of this profile.

    If your firm is an M/WBE not currently certified by the Authority, see the Authority's web site – http://www.panynj.gov/business-opportunities/supplier-diversity.html, to receive information and apply for certification.

Section B

Company Profile

Additional Information: ATTACHMENT C

Question #8: Name, Address and EIN of Affiliates or Subsidiaries:

Affiliates	EIN#	Address
MWH Architects & Engineers of New York, P.C.	[redacted]	1412 Broadway., Ste 1620 New York, NY 10018
Montgomery Watson Engineers of New York, P.C.	[redacted]	1412 Broadway., Ste 1620 New York, NY 10018
Harza Associates of New York, PLLC	[redacted]	1412 Broadway., Ste 1620 New York, NY 10018
MWH Constructors, Inc.	[redacted]	370 Interlocken Blvd., Ste 300 Broomfield, CO 80021
MWH Europe Limited	[redacted]	370 Interlocken Blvd., Ste 300 Broomfield, CO 80021
MWH Asia Limited	[redacted]	370 Interlocken Blvd., Ste 300 Broomfield, CO 80021

Section C

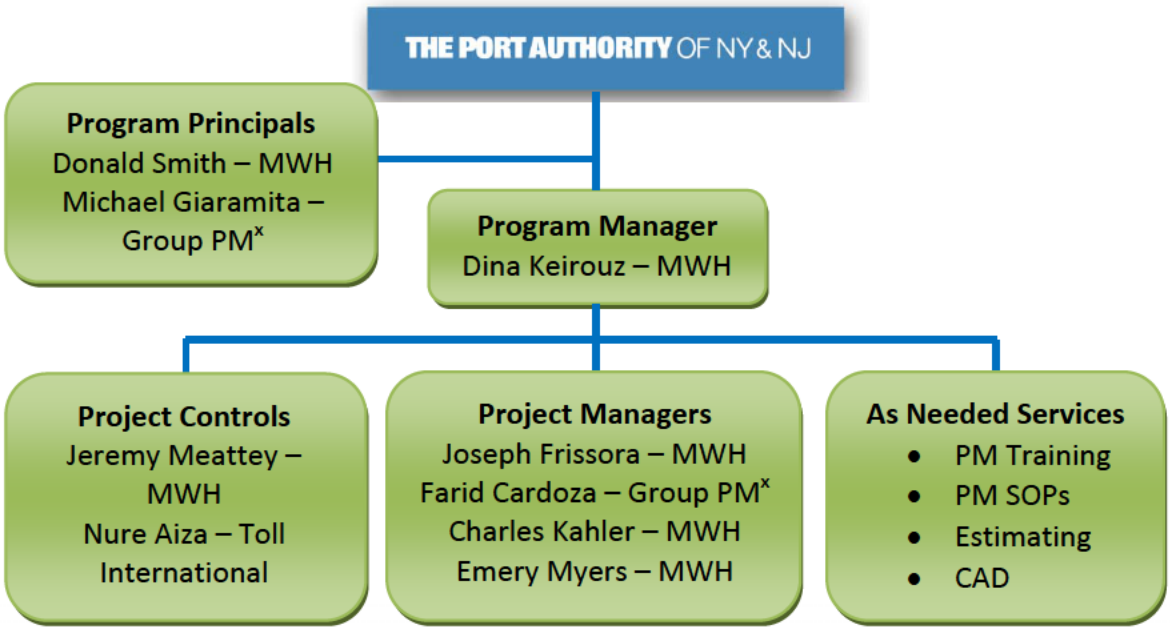
Qualifications and Experience of Staff

The MWH approach to providing the Authority with the highest level of professional services starts with staffing the program with outstanding local individuals with a proven track record of performance on similar programs and the availability to engage immediately.

The knowledge and experience possessed by the MWH Team provides the Authority with local talent and experience, accompanied by proven, industry-leading approaches to managing programs of work.

In addition, the MWH Team has access to technical experts in all relevant fields at a moment's notice via our internal communications and technology network, KNet. MWH's award-winning KNet helps our Program and Project Managers develop effective solutions to managerial and technical challenges. KNet is a single portal from which all information at MWH may be accessed. It links project teams together through knowledge centers that connect staff with other employees with professional expertise and similar project experience. These centers are central repositories for project and technical knowledge, and enable teams to collaborate and share lessons-learned.

An organizational chart showing our project team members and their responsibilities and reporting structure is provided below, and resumes for all proposed personnel are provided in Attachment 1.



1. Profile of Program and Project Managers

Below we provide highlights of the Program and Project Managers' project experience. **Full resumes are in Attachment 1**.

Donald Smith, PE – MWH

Program Principal

Mr. Smith has over 33 years of experience and serves as the Chief of Strategy and Implementation. Mr. Smith is one of MWH's most seasoned experts in the areas of utility-wide wastewater planning and strategy development. He continues to maintain executive level relationships with key clients including Los Angeles, San Diego, Atlanta, Houston, Singapore, the United Kingdom, Australia and New Zealand.

Michael Giaramita – Group PM[x]

Program Principal

As a project management industry leader, Mr. Giaramita has over 30 years of experience in the fields of project management, program management, construction management, and general construction. He specializes in bringing off schedule, off budget projects back on-line by efficiently expediting design and construction problems. From highway construction to airport improvements and major facility renovations, he possesses an invaluable ability to direct a project through all of its phases. Prior to founding Group PMX, Mr. Giaramita served as Senior Vice President/Managing Principal/ Regional for Jacobs/Carter+Burgess and a Vice President for Stantec.

Dina Keirouz, PMP – MWH

Program Manager

Ms. Keirouz has 19 years of progressively responsible experience in program, project and construction management. Her project experience includes airports, major transit facilities, professional athletic facilities and water and wastewater programs. Ms. Keirouz is an expert in project controls and the implementation of program/project management information systems. She has successfully delivered numerous design and construction projects on time and within budget and has expertise in completing large construction projects with challenging sites conditions and within operational facilities. Some of Ms. Keirouz's relevant experience includes Landside and airside projects at all three of the Authority's airports; LGA, JFK and Newark airport and program management support services for NYC Department of Environmental Protection.

Joseph Frissora, PE – MWH

Senior Project Manager

Mr. Frissora has 22 years of experience in planning, design and construction of large environmental, drinking water, sanitary wastewater, stormwater, and industrial projects. He is a senior project manager for MWH in the Northeast region, responsible for leading various water and wastewater design projects, including several phases of the NYCDEP

Citywide Collection Facilities SCADA System, the distributed control and instrumentation system for the Delaware River Water Treatment Plant; and a pretreatment and facilities improvement project for the Trenton Filtration Plant in Trenton, NJ.

Charles Kahler, PE – MWH

Senior Project Manager

Mr. Kahler has 15 years of experience in project management of Dam Engineering focusing on hydrology, hydraulic, stability, settlement and seepage analyses. Project management tasks have included management of scope, schedule and budget as well as the preparation and implementation of Project Management Plans and Quality Management Plans. Additional project management tasks include the assistance in the management of the preparation of technical reports, contract documents, and construction cost estimates and the procurement and administration of subcontracts.

Farid Cardozo, CCM – Group PM[x]

Senior Project Manager

Mr. Cardozo has 15 years of experience in various aspects of pre-construction, design, construction, and program and project management with a strong background in project controls and scheduling. Mr. Cardozo has worked on a variety of projects and for different clients; including Airports, Government, Highway, Environmental, Colleges and Universities, and research / development facilities. Mr. Cardozo has proven that even the most challenging projects can be accomplished successfully when the right project controls tools and a proactive, collaborative approach is used.

Emery Myers, PE, PMP – MWH

Project Manager

Ms. Myers has 11 years of experience in project and program management of environmental and civil engineering projects. Her project management experience includes development and implementation of project management plans; the preparation of technical memorandum, studies and master plans, including construction cost estimates. As a part of the Post-Hurricane Katrina recovery efforts in New Orleans, Ms. Myers was responsible for the coordination of program resource needs, recruitment, and on-boarding and development and implementation of quality assurance and quality control programs.

Nure Aiza – Toll International

Project Controls Specialist

Mr. Aiza has more than 14 years of experience in delivering professional and technical services to public and private clients. Mr. Aiza has assisted the Port Authority's Engineering Department in several cost and schedule project control technology initiatives and has helped the School Construction Authority to streamline its project delivery practices and internal business processes.

2. Experience of other Key Personnel (Resumes)

Staff resumes are included in Attachment 1 and provide educational background, chronological history of employment, relevant licenses and certifications

3. Summary of Project Experience for Key Personnel

Personnel (Subconsultant)	Relevant Project Experience, Project Cost
Donald Smith	• United Utilities, Asset Management Program 3, Warrington, United Kingdom, $3.5 B • City of Los Angeles, Hyperion Wastewater Treatment Plant Energy Recovery System Program, Los Angeles, CA, $200 M • City of Los Angeles, Clean Water Program, $4.3 B
Michael Giaramita (Subconsultant, Group PM[x])	• City of New York, American Airlines Terminal, JFK International Airport, Jamaica, $1.3 B • City of New York, World Trade Center Recovery Project Site Restoration, $100 M • City of New York, Path Station Reconstruction, $350 M
Dina Keirouz, PMP	• New York City Department of Environmental Protection, Capital Program Management, $14 B • US Airways Terminal, Philadelphia International Airport, PA, $550M • Continental Global Gateway Program, Newark International Airport, New Jersey, $1.3 Billion
Joseph Frissora, PE	• New York City Department of Environmental Protection, System-wide SCADA, $80 M • City of Trenton, New Jersey, Trenton Filtration Plant Pre-Treatment and Facilities Improvement Project, $62 M • Lackawanna County, Pennsylvania, Lackawanna Watershed 2000 CSO Program, $50 M
Charles Kahler, PE	• New York City Department of Environmental Protection, New Croton Dam, Croton Falls Dam and Croton Falls Diverting Dam, $230 M • Cobb County Marietta Water Authority, Hickory Log Creek Dam Design, $70 M • Walton County Water Authority, Hard Labor Creek Dam, $15 M
Farid Cardozo, CCM (Subconsultant, Group PM[x])	• City of New York, American Airlines Terminal, JFK International Airport, Jamaica, $1.3 B • New York City, Long Island Expressway Rehabilitation, $157 M • New York City, Williamsburg Bridge Rehabilitation, $200 M

Personnel (Subconsultant)	Relevant Project Experience, Project Cost
Emery Myers, PE, PMP	• New York City Department of Environmental Protection, Program Management Information System, $9.4 B • New York City Department of Environmental Protection, System-wide SCADA, $80 M • City of New Orleans, Office of Recovery and Development and Administration Program, $1 B
Nure Aiza (Subconsultant, Toll International)	• World Trade Center Department at The Port Authority of New York and New Jersey – WTC Memorial $800 Million • MTA Capital Construction Corporation / East Side Access Project - $1.2 Billion • New York City Department of Environmental Protection – Capital Program $14 B
Jeremy Meattey	• New York City Department of Environmental Protection, Capital Program Management, $14 B • New York City Department of Environmental Protection, Program Management Information System, $9.4 M • Cameron Parish, Disaster Recovery Program, $400 M
Other Key Staff	
Michael Musgrave	• City of Denver, Redevelopment of the Former Stapleton International Airport, $1 B • City of Denver, Denver International Airport Construction, $300 M • San Francisco International Airport, LAX International Airport, Dulles International Airport, Washington, D.C., Airport Tenant Improvements, $1 B
Gavin Gilchrist	• City of New Orleans, Office of Recovery and Development and Administration Program, $1 B • New York City Department of Environmental Protection, Capital Program Management, $25 B • City of Kansas, Program Management and Integration of Capital Improvements, $1.2 B
Seth Yoskowitz, PE	• City of New Orleans, Office of Recovery and Development and Administration Program, $1 B • New York City Department of Environmental Protection, Capital Program Management Training, $14 B • City of Kansas, Program Management and Integration of Capital Improvements Program and Project Management Training, $1.2 B

Section D

Relevant Experience

The MWH Team is fully qualified to meet the technical requirements for the program's scope of services. Specializing in the planning, evaluation, design, management, and construction of all sizes of various infrastructure, MWH not only has some of the best project managers in the industry, but also the collective knowledge and best practices from years of experience performing similar work. The projects described on the following pages highlights our Team's qualifications for providing the required scope of services.

BEDC Capital Program Management (Phases 1, 2 and 3)

New York Department of Environmental Protection, Flushing, NY
Phase 1: 2006 – 2007; $25 B;
Phase 2: 2007 – 2009; $13 B;
Phase 3: 2010 – ongoing

Client Contact: Jim Mueller, Deputy Commissioner, Bureau of Wastewater Treatment
NYC Department of Environmental Protection, BEDC
[redacted]

Summary

The New York City Department of Environmental (DEP) is experiencing challenges in cost control, resourcing, meeting schedule milestones and prioritization for capital projects because of $8 B in projects currently underway, and another $17 B in investments planned for the next 10 years. Phase 1 of MWH's invovlement was a study which included: review of DEP's existing organizational structures, processes and procedures; benchmarking against best industry standards; identifying the capital program's strengths/ weaknesses; and providing recommendations.

During Phase 2 of the Capital Program Management, MWH assisted DEP with implementation of the Phase 1 recommendations which included: implementation of program governance; workforce development; program controls and systems set up; and business process improvements.

In Phase 3, MWH continues to provide the Bureau of Engineering, Design and Construction (BEDC) program management services support to include: workforce development; engineering; permitting; cost estimating; schedule controls; information technology; and in-house design support services.

Program Features

- Developed and implemented a Program Delivery Manual with program management improvements.
- Worked closely with senior staff from the City Commissioner's Office and eight City bureaus to provide strategic direction.
- Communicated with 400 members of DEP staff who are involved with delivery of DEP's capital program.
- Implemented Program controls and estimating groups and systems.
- Streamlined key BEDC processes and Implemented a permitting tracking and management system.

American Airlines Construction Program

American Airlines, JFK International Airport, NY

2000 – 2001; $1.3 B

Client Contact: Ken Bower, Managing Director of Corporate Real Estate, American Airlines

[redacted]

Summary

Group PM[x] personnel served on the Owner-led Program Management Team responsible for managing American Airlines' approximately $1.3 B capital construction program at New York's JFK International Airport. This multi-year project involved the demolition of facilities within existing Terminals '8' and '9' to allow for construction of concourses, a new terminal, a new roadway system, a federal inspection station, 36 jet gates and expanded retail and support space. Group PM[x] staff implemented innovative owner-controlled change order and scheduling management which resulted in owner savings of over 30 percent (worth tens of millions of dollars) on change orders submitted.

Program Features

- $1.3 Billion new terminal building.
- Maintained operations during construction.
- Maintained Program continuity during several major devastating events (9/11, AA plane crash off of JFK Airport).

Newark Airport Monorail Design/Build Project

AEG Monorail, Newark, NJ

1996 – 1997; $350 M

Client Contact: Ray Betler, President AEG Monorail
Now Group Executive, Wabtec Corporation. [redacted]

Summary

Group PM[x] personnel were brought on to this $350 M design/build airport monorail project at the request of the NYNJ Port Authority, when the project was approximately 70% complete, to assist in putting this troubled project back on track. The project was more than one year behind schedule and $150 million over budget. He assumed the role as Assistant Site Manager for the design/build Team. He managed various problem areas on this automated people mover project; directed engineering, procurement, management and field construction forces to meet project goals, managed the automated train control hardware/ software subcontractor, and directed scheduling effort to complete this project on the completion date established over 14 months earlier.

Program Features

- $350 M grass roots monorail airport people mover.
- Implemented successfully full schedule and cost control systems at the field level.
- Opened new technology project on established schedule date.

Construction Management for the Port of Long Beach Pier S Terminal Optimization Project

Port of Long Beach, Long Beach, CA

2005 – 2007; $27 M

Client Contact: Doug Thiesen and Gary Cardamone, Director of CM

[redacted]

Summary

Civil-site construction includes storm water systems; demolition and relocation of existing infrastructure, grading and pavement, roadways, street lighting, a railroad-grade crossing warning system; and a design/construct element of a mechanically stabilized earth retaining wall. The MWH team provided comprehensive construction management and support services including constructability reviews; master project schedule and cost planning; weekly meetings; change order costing; progress payments; environmental mitigation monitoring and permit compliance. Team member IEM provided resident engineering, project controls, and inspection services for development of the Pier S Shipyard Facility.

Program Features

- MWH cost estimating department prepared Change orders cost estimates and schedule impacts to be used in evaluating alternative solutions to construction problems and for negotiating change orders.
- The MWH CM Team performed closeout procedures for all tasks. This

was done very efficiently using the project's computerized document tracking system, Primavera's Expedition.

Kansas City Revitalization Program

City of Kansas City, Kansas City, MO

2004 – 2006; $1.2 B

Client Contact: John Franklin, Assistant to the City Manager, City of Kansas City

[redacted]

Summary

MWH served as program manager for this capital infrastructure improvement program that involved planning, project control, project management, organizational development/training and program management for more than 300 City projects. The capital spending progressed in less than three years and saved the City more than $70 M in management costs and avoided cost of inflation. Projects included streets, bridges, storm/sanitary sewer, traffic signalization, and construction of several City facilities such as police and fire stations, museums, parking garages, training facilities, convention center expansions, arena infrastructure, building renovations and downtown redevelopment projects.

MWH brought the City proven programmatic tools and processes in the areas of project management, project controls, contracting, communications, construction management, quality management and health and safety. Our project delivery system provides tested procedures for managing all aspects of projects from initial planning; risk management; contracting strategies to reduce management costs, liability and risk; design management; and construction management.

Program Features

- Saved the City more than $70 M in management costs and avoided cost of inflation.
- Created a program management office with MWH and City staff focused on the planning, management and control, and expediting delivery of multiple complex projects.
- Provided a proven project delivery system and a continuous improvement model for managing all aspects of projects from initial planning to construction management.
- Developed an integrated programmatic project controls system to provide control and forecasting for more than 200 projects simultaneously.

O'Hare International Airport Terminals 1, 2, and 3 Modifications and Up-Grades *And* Modernization of Project Design of South Airfield Drainage System

City of Chicago, Chicago, IL

Terminal Upgrades: 2003–2007; $300 M; Modernization of Drainage System: 2007–2013; $1.2 B

Client Contact: Christopher P. Arman, Deputy Director, OMP
[redacted]

Summary

MWH provided the City of Chicago with preconstruction services for the modifications and upgrades of Terminals 1, 2, and 3 at Chicago's O'Hare International Airport.

The project included the construction of 3,600 linear feet of steel and glass canopy to be connected to each terminal, modifications to the terminals' facades, and the improvement of user circulation with the addition of two elevator cores and escalators at each of the terminals.

After completion of the terminal upgrades, MWH was retained to complete the hydrologic and hydraulic modeling, and design of hydraulic conveyance and storm water detention system for the 2700 acre area located south of O'Hare Airfield. The project includes detail design engineering of nearly 8 miles of new large diameter storm sewers, several junction chambers, two major storm water detention basin facilities (total of 2400 acre-feet), eight hydraulic / energy dissipation structures, eight large size oil water separators, two major storm water pump stations (total capacity of 10,000 gpm), two intake structures, and an overflow structure for major 100-year flood events. The storm water is contaminated with deicing chemicals, salts, oils and other chemicals from the airport operation.

Program Features

- A new canopy at Terminals 1, 2, and 3 will provide O'Hare's terminals with a unified image.
- Terminals 2 and 3 will extend 20 feet toward the roadway providing new space for circulation elements, such as elevators, escalators, and stairs.
- Other public areas of Terminal 3 will be updated utilizing new technologies to achieve energy and efficiency.
- Detailed site investigation to characterize the subsurface soil, rock, and groundwater aquifers. The investigation included several deep angle holes, large diameter pump test holes, a geophysical study, and grout test sections.

Redevelopment of the Former Stapleton International Airport

City and County of Denver, Denver, CO
2000 – 2003; $1 B
Client Contact: Turner West, Director of Aviation, City and County of Denver
[redacted]

Summary

MWH served as program manager and overall coordinator for redevelopment of the former Stapleton International Airport, ensuring that all activities are completed without interruption or conflict. The complex redevelopment project represented a 10- to 15-year redevelopment of the former 4,700-acre airport site and is the largest urban infill project in the nation. This high-profile sustainability project is transforming the site into a mixed-use master planned community with residential neighborhoods; 1,180 acres of parks, trails, recreation facilities and natural areas; and more than 13 million square feet of commercial, industrial, and institutional space. Prior to MWH's involvement, the schedule had slipped, contractors were defaulting, the local economy was softening, and the developers' constraints and requirements had not been addressed in the overall redevelopment schedule. MWH developed a program and construction management plan, created a master schedule and budget, and a document control system to address issues that were slowing the project. MWH improved coordination and communication between customer agencies and stakeholders by developing progress meetings, an open action item report system, and implementing effective cost control and forecasting methods. Additionally, to improve the City's coordination efforts across departmental lines, MWH formed an integrated public/private team to manage the City's site preparation duties to a successful completion. The MWH program management team set the project on track for build-out in less than the original 20 years predicted prior to our involvement.

Program Features

- Collaborated with neighborhood leaders along with the City and the Stapleton Development Corporation.
- Supported the City's successful public finance initiatives and successful funding of more than $300 M in infrastructure projects.
- Coordinated all City responsibilities as a single point of contact for the developer.
- Managed an extensive community outreach program to seek input from a broad spectrum of Denver residents.

Section E

Management Approach

MWH's project management approach could be summed up, in a nutshell, as proactive anticipation.

Leadership, teamwork, responsiveness, transparency, collaboration, and effective communication are the cornerstones of MWH's Project Management philosophy. The MWH Team's mission is to facilitate the thorough, cost-effective, coordinated program/project management activities required to successfully complete the program/projects elements for the Authority. We will accomplish this as an extension of the Authority's staff and our key staff will apply best practices and lessons learned from years of working in this type of collaborative environment.

MWH's organization and strategy will focus around the project manager as lead delivery manager. MWH Team will be responsible for managing the entire project life cycle process from pre-construction through commissioning, occupancy, and close-out. Project managers will be responsible and accountable for leading and managing their projects from the initial planning stages, through to commissioning and closeout. MWH project managers will be responsible for leading a multi-disciplinary team to successful project completion and for ensuring appropriate communication with the Authority's staff; providing detailed up-to-date information on their projects and implementing standard project management procedures.

TASK A - PROJECT INITIATION SERVICES

Develop and implement program/project management plans

The MWHproject manager (PM) will work with the Authority's project management department early in the project to develop a comprehensive project management plan (PMP), which will be presented to the Authority for review and approval. Upon approval, the document becomes the blueprint for the successful delivery of the project and is used as the baseline against which all progress and deviations will be monitored and controlled. It is a living document, as it is periodically reviewed and updated as required through the course of the project. The document defines/confirms the project objectives in terms of total scope, budget, schedule and quality/functionality, in addition to developing contracting strategies best suited for executing the specific project. Key components of the plan may include:

- Project goals and objectives
- Team member roles and responsibilities
- Master schedule, including milestones, and master budget
- Risk mitigation protocols
- Work flow planning
- Work breakdown structure
- Safety, health and environment
- Project controls procedures
- Change management procedures
- Project reporting requirements
- Quality assurance procedures
- Design criteria requirements
- Communication protocols

Provide business analysis services, as required to identify owner's project requirements and define/document project scope

MWH has managed planning and design programs all over the world. We have developed industry-leading design and planning management processes as well as the tools that will ensure project quality and minimize risk. Our design philosophy is founded on the principle that a formal process that emphasizes close attention to detail during the planning and design phases of a project will have a lasting impact to the cost and performance lifecycle of the facility. Our project team will utilize our value management approach to ensure a balance of value, cost and facility performance.

Prior to the start of the formal planning process, the MWH project team will coordinate a value scoping exercise with the major goal of formalizing the desired project outcomes. Critical components of this exercise include:

- Need confirmation
- Solidify process design
- Design criteria consensus
- Identification of alternate solutions

At the completion of the planning phase, the MWH team will perform a value analysis with the major goal of formalizing the design criteria with respect to desired quality, schedule and budget and includes the following key components:

- Alternative review
- Final alternative selection
- Establish design criteria (30-percent design level)
- Formalize project risks and formulate mitigation plan
- Preparation of construction cost estimate
- Preparation of detail construction master schedule

Coordinate project team alignment and team-building activities

The MWH PM will enable project team alignment with project goals and objectives by creating a cooperative relationship between all stakeholders, contractors, subcontractors, vendors, etc. The project team is there to serve the best interest of the project/program, meeting or exceeding project goals and objectives. Team Building is based on mutual trust, open communication, and a desire to have all members of the team win. Elements of Team Building include:

- Early preparation and education
- Clear lines of authority
- Management commitment
- Team Building workshop
- Team Building charter
- Issue resolution process

- Joint evaluation process
- Regular communication
- Final evaluation and celebration

Assist in the preparation of Requests for A/E Proposals (RFP's)

The MWH PM will assist the Authority in the development of design contract scope statements and documents in accordance with the Authority's standard contract protocols and preparation of RFP's for A/E consultant services in accordance with standard Authority procurement policies.

Coordinate project related risk analysis and management activities

The MWH PM will work with the Authority to develop a Risk Management Plan (RMP) at the onset of each project. The RMP will be included as an attachment to the Project Management Plan. This typically involves identifying all potential risks that may impact design, construction, commissioning or operations; qualifying and quantifying identified risks and their potential impacts; developing strategies for risk mitigation; and translating those strategies into tangible avoidance techniques. The MWH PM will monitor compliance with the RMP throughout the entire project life cycle - design development, contract document, tender, construction, and commissioning stages of the project to ensure that the Authority is not inadvertently put at risk. The Project Manager will also report on the effectiveness of the plan via monthly project status reports.

Prepare presentations, documents and conduct presentations

When requested by the Authority, MWH will prepare and make presentations to communicate project information and provide briefings on special issues related to the project. We will utilize electronic media and meaningful distribution documents to support these presentations. All presentations will be forwarded to the Authority for review and approval prior to use or disclosure. Depending on the Authority's particular need, presentations may be led by our program manager or the respective project manager, if authorized by the Authority.

TASK B - PROJECT IMPLEMENTATION SERVICES

Manage the implementation of the project management plans and the work performed by all of the program and/or project members

The MWH PM will take the PMP one step further and convert it into an actionable plan with deliverables due, budgets for each deliverable, time frames and person(s) responsible for completing each item, etc. This actionable plan will be managed daily and updated weekly at each progress meeting. One of the important roles of the program manager is to assess the status of the plan and assist in removing obstacles from affected team members so they can complete their deliverables as intended.

Conduct meetings (including project kick-off and progress meetings) with the project team, record all minutes, distribute for review and revise as necessary

MWH will promote communication through well-planned, productive, documented meetings. As a general rule we will identify working groups with proper representation from the Authority and each of the stakeholders. Each meeting will be scheduled to include all required stakeholders without encumbering the decision process with a "cast of thousands." An agenda will be emailed to all attendees at least 48 hours prior to the meeting. Minutes and action items will be recorded and distributed by the Project Manager and logged through the document control process.

Manage preparation of study reports, construction cost estimates and preliminary and final contract documents

MWH often plays a key role in managing the design process on behalf of the client as part of their overall project management role. In this capacity, the MWH team can coordinate with the Authority's in-house staff and monitor the performance of the A/E consultant team to facilitate the completion of all design related tasks and deliverables in accordance with the project scope, schedule, and budget. The MWH PM will:

- Manage consultant contracts on behalf of the Authority
- Establish design milestones/dates and monitor design progress against baseline schedule
- Coordinate and chair consultant team meetings
- Coordinate final drawings and specifications prepared by the consultant team
- Review drawings and specifications with the Authority for Authority approval
- Review and/or if required, prepare cost estimates at various stages of the design process
- Coordinate and facilitate value engineering workshops
- Coordinate and manage user group and stakeholder input as required
- Review, evaluate, and recommend change orders submitted by consultants
- Review/evaluate billings from consultants and submission to Authority of appropriate updates

Establish, through meetings with facility personnel, staging restrictions/ requirements based upon operational and maintenance constraints

Phasing and scheduling are the heartbeat of every project and maintaining safe operations for NY/NY residents, passengers, tenants and personnel is the top priority of the MWH Team. Through meetings with line department, facility and operations personnel, we will evaluate the operating environment and develop staging requirements that will be incorporated into the contractor's schedule submission and phasing plans.

As a proactive measure, the MWH PM will conduct a pre-scheduling workshop with the Authority's operations, the design team, the construction management team and the successful bidder to review the staging restrictions and establish a workable construction schedule at the beginning of each project. Outcomes from the pre-scheduling workshop will be:

- Identifying and quantifying staging needs, including construction support facilities, lay down areas, dump sites, and batch plant sites.
- A staging site plan, locating staging facilities, access routes, and security fencing. Indicate utility sources and temporary construction utility routing
- Develop access/security plan and site management procedures as well as coordination with the Public Safety personnel and/or the Authority Police

Review studies, preliminary designs and contract documents for conformance to approved scope and budget

The MWH PM will provide a clear and concise definition of the scope of work to be included and provide a list of "assumptions" or other caveats/details required to support the proposed scope of work.

MWH will work with the Authority, Authority Counsel, and the design consultant in the review of the construction documents at agreed-upon completion levels. At each design milestone (preliminary, 30%, 60%, 100%) or as designated by the Authority, the construction scope, budget, and schedule will undergo a reality check before advancing into the next design milestone for completeness and compliance, and specifically to ensure that it conforms to the original scope intent and budget. At each of the design milestones, the MWH PM will meet with the design team to:

- Reconcile estimates and resolve discrepancies in costs, scope, or quantities
- Confirm consistency with packaging and delivery strategy
- Provide a review of the construction phasing and validate same with operations
- Support the Authority in the preparation of draft construction agreements for review
- Support the Authority in the preparation of standard front-end bid documents (including General Conditions)

Prepare project documentation, correspondence and maintain project file

Maintaining good documentation is paramount to reducing claims on a project. The MWH PM, working with the Authority's assigned Document Distribution Specialist (DDS) will use a thorough, efficient process for collecting, organizing and disseminating data related to their respective projects. Our approach will be streamlined to conform within the Authority in-house document control system as well as industry standards and will allow for rapid retrieval and use. Should any of the project team members or any of the Authority stakeholders need access to the project files, the electronic documents as well as the hard copies will be filed with an identical filing system that facilitates their retrieval and accurate record-keeping. In addition, during the construction phase, procedures will be provided so that the GC also conforms to the uniform filing system.

Coordinate bidding and award of construction contracts

During the Bidding and Negotiation Phase, the MWH Team will develop a procurement strategy that follows all the

Authority's procurement requirements and provide the best competitive bids from the best responsive and qualified contractors and construction managers in the industry. MWH will manage the process so that it is fully transparent and auditable.
The MWH PM will:

- Develop Bid Strategy.
- Manage Bid Document Preparation and Process.
- Support the Authority in implementing procurement strategies
- Manage the bidding/selection process including preparation of addenda if necessary.
- Negotiate contracts with successful bidders.
- Prepare award authorization documents and briefing materials for Authority executive staff.

Coordinate and monitor shop drawing review process and respond to contractor's (RFI's)

The MWH PM will coordinate and monitor shop drawing, submittal review and processing of Contractor's RFIs paying particular attention to turnaround time. Outstanding submittals and RFIs that are approaching the specified review time limit will be flagged and the responsible reviewer(s) notified that their immediate action is required with special attention given to submittal/RFI turnaround times exceeding the allowed range and that impact critical path activities. In those cases where submittals are complex or where review time is critical to the project schedule, The MWH PM will hold a submittal conference to discuss and expedite the approval process with meeting minutes prepared to document it. The submittal conference can be an effective way to review long-lead equipment or discuss complex submittals that might involve several re-submittals. The MWH PM will use the Authority's Primavera Contract Manager to track Submittals and RFI. Submittals and RFI exception reporting logs will be addressed at the weekly construction progress meetings.

Coordinate preparation of Post Award Contract Changes (PACC's)

The MWH PM will follow the Authority design and construction change order processes and protocol to coordinate the preparation of PACC's and to ensure that changes are incorporated into the monthly progress schedule updates as they occur so that any requests for time extensions can be equitably assessed.

The PM will:

- Coordinate with the appropriate design task leaders or Engineer/Architect (L/EA) for in-house projects (or Consultant as appropriate) to prepare revised drawing(s), specification(s) changes and cost estimate, for changes that involve changes to the drawings or design intent.
- Review the change with the task leader and Resident Engineer (RE) from the Engineering Department's Construction Management Division before finalizing.
- Coordinate review of the final PACC and associated drawings, specifications and construction cost estimate with the lead task leader and

forwards to the Engineering Program Manager, or designated Engineer of Projects for signature.

- Ensure accurate routing of the documents based on the required signature authority.
- Ensure that the appropriate funding is available and entered into the financial system (SAP).

Attend construction progress meetings and coordinate facility force account work, as required

During the construction phase, effective communication must be timely, clear and frequent and consists of weekly (if not daily) communication between the project manager, resident engineers, project inspectors, the contractor and the Authority. The MWH PM will attend weekly construction progress meetings attended by the Authority, contractor, design engineer and impacted agencies, where he/she will address the scheduled work, safety, submittal and RFI status, potential change orders, shutdowns/ interconnections, potential delays and resolution of construction problems, which may affect the overall project objectives. The MWH PM will coordinate any facility Force account work to ensure efficient scheduling and execution of that work so as to minimize cost and schedule impact to the project.

TASK C - PROJECT MONITORING AND REPORTING SERVICES

Monitor and report on the actual consultant/contractor/staff performance, comparing the approved management plan versus the recommended corrective action, when required

The MWH PM will, in alignment with the Authority's existing implementation, create a comprehensive project master schedule, utilizing the established Work Breakdown Structure (WBS) and the necessary activity detail to ensure all tasks have been identified. The master project schedule will incorporate more detailed schedules provided by architects, engineers, and contractors for their particular portions of the work. This allows for a comprehensive view of the entire project and clear visibility into the overall progress of the project. A project baseline schedule will be created and maintained, according to the Authority's approved management plan.

Project progress, Actual and Remaining Work, will be recorded and tracked against the approved baseline. In case of schedule slippage or delays, correction action plans will be developed and corrective actions recommended to the Authority for implementation. Reports and presentations will be utilized to clearly and effectively communicate schedule and cost performance to various levels of stakeholders.

Update and review monthly actual and forecasted project costs and schedule(s) on an earned value basis in a manner consistent with the Authority's project management methodology

On a monthly basis, current project status will be compared to the current approved baseline. Actual progress, including resource units, costs, activity durations and percent complete, will be recorded according to data collected from the

consultant/contractor/staff. In addition, remaining effort projections, from the project teams, will be compared against the remaining effort, as calculated from the project plan, in order to verify the collected data.

The Project Management Institute (PMI) Earned Value Management standard will be followed in order to develop Performance Measurement Baseline curves using the Master Schedules, which will then be used to track cumulative Planned, Actual and Earned Value metrics, by Project, Portfolio and Program. Key Performance Indicators (KPIs) such as Cost Performance Index and Schedule Performance Index will be calculated and reported monthly.

Monitor progress of construction, including review of actual and forecasted construction in place (CIP) and schedule versus authorized contract budget and schedule

The MWH PM will monitor construction progress for authorized construction projects. MWH's PM will conduct weekly and monthly construction schedule progress meetings attended by the Authority, contractor, design engineer, and impacted stakeholders. These periodic meetings will address the scheduled work, submittal and RFI status, potential change orders, potential delays, and resolution of construction problems. The MWH PM will prepare and distribute meeting minutes.

Monthly updates will be examined for accuracy and estimates to complete evaluated for reasonableness and to ensure that potential change orders and other risks are included in the calculation of the Estimate at Completion (EAC). Tracking the EAC and reporting on budget variances will be done monthly and negative budget variances will be brought to the immediate attention of the Authority. Additionally, the PM will perform routine site inspections to verify the accuracy of construction contractor reporting. Any discrepancies or other findings will be reported immediately to the Authority and resolved with the construction contractor. Should the project fall behind schedule the contractor will be requested to submit a recovery schedule. In addition to being a key management tool, the schedule is also a key to resolving claims and disputes. MWH staff is available to support the Authority in resolving claims and disputes.

Prepare monthly status reports addressing accomplishments, issues, schedule and budget status, including corrective actions, if required

MWH has significant experience developing Project and Program Reports to communicate Performance, Status and Path Forward and believes strongly that the 'exception reporting' philosophy should guide the construction of management reporting. Exception reporting focuses attention on areas of deviation from plan that require management's attention or intervention. The MWH PM, in coordination with the Authority's reporting requirements, will prepare, a set of monthly reports which will provide essential project information, including, project narratives, KPIs/metrics, cost and schedule variances, and issues and action item logs. The reports will be

standardized using a reporting tool, such as Crystal reports, in order to deliver project data from the Authority's data repositories if needed.

Evaluate design consultant invoices for earned value and recommend payment

Earned Value is a proven method for planning and managing project performance. The MWH PM will evaluate the consultant invoices against the cost and schedule status updates submitted by those consultants. Earned Value will be calculated according to the Percent Complete or Milestone Achievement method, as appropriate, with the status updated and verified by the MWH PM. Any discrepancy between Earned Value-to-Date and the Consultant's Invoiced-to-Date amount will be immediately reported to appropriate Authority personnel and recorded for publication during the Monthly Reporting Cycle.

Evaluate impact of changes on approved scope, schedule and budget and obtain approval for the change

We understand that an affective change order management process is vital to the success of the project and as such the accuracy and timeliness of this information is essential. Our approach to change management is tailored to meet the specific client and project needs and the goal is always to proactively manage each change in order to minimize the effect on both the project budget and the schedule. The MWH PM will minimize the potentially adverse effects of such changes by following the five-step approach described in detail below:

Accurate Documentation of Design Baseline. The accurate documentation of a project's starting point is essential to acknowledging actual changes that may occur in the future, as well as in evaluating potential impacts. The as-contracted scope of work must be clearly captured and concurrence must be obtained with respect to its authenticity. It is against this baseline that any and all variations will be measured in order to establish the value of the associated impacts to the project in the terms of cost or time, or both. An in-depth scope review workshop will be conducted prior to construction contract execution. The product of this workshop will be an integrated WBS that is recognized as the baseline against which all modifications will be compared.

Identification/Documentation of Potential Contract Impacts (PCI). Any potential increase or reduction in contract scope of work needs to be appropriately documented and processed through the potential change evaluation procedure. The assignment of a PCI number initiates the evaluation procedure.

Impact Assessment. Once identified as a PCI, the consequences of this possible modification need to be established. First the impact to project cost and/or project schedule is determined. If no impact to the contract or baseline cost or schedule results, then the work is incorporated into the management system by modifying the WBS. If an impact is identified, we will conduct a Recovery

Plan Analysis and develop a recovery plan.

Recovery Plan Analysis. As soon as it is determined that a PCI will negatively impact the baseline schedule and/or affect the baseline cost, a recovery plan is developed to minimize the impact of the change. Recovery plans may include acceleration of construction forces (via extended work hours, additional crews, weekend work, etc.), re-analysis of work sequence and critical path logic, modification to change scope, and/or the use of value engineering efforts. At all times, our first approach will be to value engineer the change to produce a zero-dollar impact to the contract, if at all possible.

Incorporation of Changes into a WBS and updating the Budget and Schedule baselines. If the work represents a contract-changed condition, a written notice is prepared and forwarded to the Authority in accordance with the time requirements and defined procedures of the contract documents. If the Authority approves this change, then a change order with all appropriate documentation will be executed following the Authority's internal standard process and procedures. In addition, the change is incorporated into the contract work breakdown structure, reflected in the project schedule and revised budget thus updating the project baseline. This will ensure that progress and resources associated with this new work can be tracked and analyzed in similar fashion as the original baseline work activities. The MWH PM will also ensure that field as-built drawings are red-lined to reflect these changes.

Schedule and organize briefings for executive staff on status of projects, as required

The MWH PM will report on the status of projects using a template presentation format that is approved by the Authority. This will ensure standard and consistent reporting on all the projects. The PM will organize and schedule briefings, as needed and required, to communicate project status to Executive staff.

TASK D - PROGRAM LEVEL MANAGEMENT SERVICES

Assist Authority staff in the scheduling and implementation of selected programs and/or group of projects including coordinating and managing the activities of subordinate Project Managers

The Program Management Team will provide expert scheduling services to plan, schedule, and monitor performance of implemented programs as requested by the Authority. We will develop schedules that breakdown the scope into manageable tasks to be accomplished, identify dependencies and interrelationships between tasks, and identify the person responsible for accomplishing each task by incorporating an Organizational Breakdown Structure (OBS). This will allow us to monitor the performance of each project manager

and/or responsible entity and in turn maintain overall schedule performance.

Establish annual and/or program level resources requirements

The MWH Program manager will develop the annual and/or program level resource requirements based on the information provided in the Summary Task Card. The Summary Task Cards are used to aggregate or compile the cost and schedule information prepared by the project team members. In conjunction with the Program Level Schedules and Engineering Estimates, an annual awards plan and construction in place forecast will be developed consisting of a list of projects and their corresponding engineering estimates for projects in construction and their corresponding construction in place (CIP) amounts. Based on this workload, enterprise resource planning will take place across the different Authority Line Departments and a staff (In-House and Consultant) budget will be prepared along with funding for the Construction Awards.

Ensure that selected projects and/or programs are staffed and started as planned

Each month current projects will be reviewed as well as projects scheduled to start within a 12 month timeframe. When future project starts are within the upcoming quarter, weekly notice will be given to the affected providers of staff, both internally and externally. Ample notice of scope, schedule, budget and staffing plans will be given to the Authority and outside consulting firms in order to ensure successful startup of new projects/programs.

Update program level schedules

On a monthly basis program level schedules will be updated to reflect progress and/or hindrances to progress from each project. Progress on Projects will be summarized to produce Program Level Schedules. The MWH Program Manager will coordinate with the Engineering Department's project control process of communicating project commitments and follow the internal guidance documents provided in the Authority's Program Management Manual, to update program level schedules in an efficient fashion.

Evaluate and recommend appropriate M/WBE sub-contractor goals

The Program Manager will maintain an active list of approved M/WBE sub-contractors and their capabilities. As new projects are developed and projects are scheduled to begin, realistic goals will be established based on current capacity to avoid over or under commitment of the M/WBE community.

TASK E - PROGRAM MANAGEMENT SERVICES

Provide ancillary program management support services

In 2007, MWH performed $458M of program management services in the US and $743M worldwide. This encompassed the management of capital improvement programs with a total value of over $15B.

One of the major benefits of that global program management experience is our knowledge of the development and deployment of program management tools and best practices that we can apply to individual, local projects as well. One of the keys to MWH's continued success is the ability to tailor our services to each program based on the specific needs of the client, minimizing challenges and exploiting opportunities that save time and money.

Although the sophistication of any given program management approach can be tailored from client to client—from a simple project control function to a centrally-governed, decision making process—MWH's substantial experience in this field has allowed us to identify a number of core program management support services that are largely consistent across program types, clients served and delivery methods employed.

Figure E-1 represents a myriad of program management services MWH has provided on program. Key elements of MWH's programs include:

- Overall program strategy and schedule development
- Coordination with multiple stakeholders, including federal, state, and local funding agencies
- Management of multiple, simultaneous projects performed by a variety of local firms. In many cases, we provide both design and construction oversight
- Reporting of key program status information to the client, other companies, and the public

Figure E-1 - Program Management Services

Recent examples of similar MWH program management jobs are shown in Section D.

Coordinate biddability and/or constructability reviews with the Authority's in-house or externally retained technical staff

Constructability and biddability reviews offer key opportunities to control cost, verify schedule and ensure quality of construction. Goals of a constructability review include ensuring clarity of the construction documents, that specifications define roles clearly, that space and time constraints are minimized and that there is a focus on reducing bid contingencies and project risks. By including field personnel on the constructability review team, staff will become thoroughly familiar with each project and the associated construction issues prior to the start of work. Ownership of the project is therefore reinforced. The MWH PM will coordinate biddability and constructability reviews with the Authority's in-house or externally retained technical staff, ensuring that these reviews are properly and timely

scheduled and that findings and comments from these reviews are incorporated into the final design documents or incorporated via addendum prior to bid opening.

Maintain records for and preparation of Record Drawings

The MWH philosophy emphasizes the continuous updating of construction drawings so that the production of record drawings is accurate and timely. The Contractor's Record drawing updates will be included as a requirement for his monthly progress payment submittal and approval to ensure that the Contractor keeps his records drawings updated with the latest information. Throughout the construction phase, the MWH PM will also maintain a redline markup set of contract drawings, which incorporate clarifications, design revisions and as-installed information. This is used to compare against the Contractor's record drawings for completeness and accuracy as well as in the preparation of the final project record drawings.

Provide support services for the following:

a. **Updating of the Agency's project management manual of standards and procedures including development of new modules and/or procedures, as requested**

MWH's own PM and CM project delivery systems are built on a model that combines industry best practices with our own lessons learned delivering program, project management and construction management services. Our industry practices are based on standards as defined by the Project Management Institute's (PMI's) PMBOK, CMAA's Standard of Practice as well as those specific technical disciplines such as estimating and scheduling. MWH will use that knowledge and skill set in assisting the Authority with updating their own project management manual of standards including development of new modules and procedures as requested.

b. **Document control including, tracking and expediting shop drawing process through the use of Oracle's Primavera Contract Manager software currently used by the Authority**

MWH has deployed and implemented Primavera Contract Manager on many of our program management and construction management assignments. Regardless of which system is used for tracking RFIs and Submittals, being an excel spreadsheet maintained by in-house design or Primavera's contract manager, the focus will be to ensure that submittals and RFIs from the Contractor are reviewed and responded to in accordance to the time limits stipulated in the contract requirements.
We often coordinate and facilitate submittal review workshops with the Design Consultant, the contractor and the owner (if necessary) to expedite shop drawing reviews that are on the critical path and which may affect project schedule. We will provide similar support in this area to the Authority.

c. **Coordinate project control functions through the use of Oracle's Primavera project portfolio management software currently used by the**

Authority and as assisted by the PMO's Project Control staff

The Program Manager will utilize the WBS to organize programs/projects/tasks to enable progress to be reported at the project, portfolio and program levels. Once the project is under way, the Project Manager will meet with the designated Project Control Specialist (PCS) to provide him/her with actual and forecasted dates and relevant cost information that should be updated by the PCS on a monthly basis or as required utilizing the Authority's Oracle Primavera P6 V7.0 platform. The program level schedules will be updated based on the detailed information received from designers when in Stage III (Contract Documents) and from contractor schedules when the project advances to Stage IV (Construction).

d. Prepare technical presentations and assist in responding to inquiries from outside entities and the public, as requested

The Program Manager will assist in the preparation of technical presentations to aid the Authority in communicating to outside entities and to the public. In addition, through the Authority, the PM Team will respond appropriately to inquiries.

Provide Project Management training/workshop sessions, as requested

MWH will coordinate with the Authority to design and customize an educational training course focused on the Fundamentals of Project Management.

The overall objective of the course is to establish a base line level of consistent project management skills to the Authority's Project Managers to enhance performance through standard work processes.

Our MWH University is the heart of the learning community for the company. With campuses in the Unites States, Europe and Asia, MWH University provides creative educational opportunities for our staff to develop and enhance skills in the areas of Leadership, Communications, Pricing and Negotiations, Finance and Administration, a variety of different technical specialties, and Project Management. The Authority's course participants have the option of receiving fully accredited Continuing Education Units (CEUs) for the course through the International Association of Continuing Education and Training (IACET).

Section F

Billing Rates and Compensation

This section provides the required information for billing rates of MWH and subconsultant personnel.

MWH Multiplier Breakdown

The multipliers proposed for this project are shown with a breakdwon requested below. They are to be applied to all full-time personnel listed in all classifications below with the exception of Partners/Principals of the firm. Consultant staff assigned project management responsibilities will be provided office accommodations and necessary equipment by the Port Authority for the performances of said services as appropriate.

Office Multiplier Breakdown

Labor Portion of Multiplier	1.00
Overhead Rate Portion of Multiplier	1.59
Labor Plus Overhead	2.59
Profit of Labor Plus Overhead	1.10
Total Office Multiplier	**2.85**

Field Multiplier Breakdown

Labor Portion of Multiplier	1.00
Overhead Rate Portion of Multiplier	1.29
Labor Plus Overhead	2.29
Profit of Labor Plus Overhead	1.10
Total Office Multiplier	**2.52**

Group PM^{x} Multiplier Breakdown

Labor Portion of Multiplier	1.00
Overhead Rate Portion of Multiplier	1.00
Labor Plus Overhead	2.00
Profit of Labor Plus Overhead	1.10
Total Office Multiplier	**2.20**

Toll International Multiplier Breakdown

Labor Portion of Multiplier	1.00
Overhead Rate Portion of Multiplier	1.14
Labor Plus Overhead	2.14
Profit of Labor Plus Overhead	1.10
Total Office Multiplier	**2.35**

The following listing of personnel is representative of the rates and classifications anticipated for the "Call-in" agreement. Specific names and rates will be provided once each work order has been identified and the scope of work and estimated effort is negotiated with the Port Authority.

Name	Company, Business Title	Billing Rate for Partners / Principals	Actual Hourly Rate
Donald Smith	MWH, Program Principal	$300	
Dina Keirouz	MWH, Program Manager		$77.84
Michael Musgrave	MWH, Sr. Program Manager		$92.73
Cynthia Collyard	MWH, Program Manager		$66.05
Charles Kahler	MWH, Sr. Project Manager		$64.38
Joseph Frissora	MWH, Sr. Project Manager		$69.16
Christopher Porcello	MWH, Sr. Project Manager		$74.29
Gavin Gilchrist	MWH, Program Manager		$59.52
Emery Myers	MWH, Project Manager		$54.37
Kevin Ellenwood	MWH, Project Manager		$44.64
Jeremy Meattey	MWH, Project Controls		$37.87
Seth Yoskowitz	MWH, Project Manager		$56.25
Subconsultants			
Michael Giaramita	Group PM[x], Program Principal	$275	
Farid Cardozo	Group PM[x], Sr. Project Manager	$200	
Nick Haralambidis	Group PM[x], Project Manager		$ 57.69
Nure Aiza	Toll International, Project Controls	$165	
Felicia Pittman	LPE, Administrative Assistant		$28.39

Compensation for Premium Pay

The MWH company policies are included below with a detailed description of working hours and pay administration as well as paid time off.

Working Hours and Pay Administration

General

Regular working schedules are provided whenever possible and employees are compensated for authorized overtime in accordance with applicable federal and state laws. Compensation is provided to employees on a regular schedule.

Policy

- **Work Schedule** – Regular business hours may vary by department and/or location. Supervisors will advise employees of the regular business hours for each department and/or location, as well as individual work schedules. Schedules may change due to business needs and employees will be given as much notice as possible when this is necessary. The Company has the sole authority to assign duties according to need, to change starting and stopping times, and to alter the size of the work force. Generally:
    - A typical workweek consists of forty (40) hours. The typical work schedule consists of eight (8) hours per day for five (5) consecutive days, Monday through Friday. For payroll purposes, the workweek begins at 12:01 a.m. on Saturday and runs through 12:00 midnight the following Friday.
    - A workday is typically from 8:00 a.m. to 5:00 p.m. with minor variations at some locations: subject to management approval.
    - While in the field, the regular daily work period shall conform to the work schedule of the contractors on the projects concerned.
    - Employees are neither paid for travel time between his/her residence and the regular job site nor for the return trip.

  Federal and state law requires accurate recording of the time worked in order to calculate employee pay. Time worked is all of the time actually spent on the job performing assigned duties. Employees are required to complete time entry each day summarizing, by job number, the amount of time worked on each project. Timecards are to be approved by supervisors at the end of each week.

- **Notification of Absences** – An employee must notify his/her supervisor as soon as possible, should s/he have to be absent from work. Failure to provide proper notification when absent from work for three (3) consecutive workdays may be treated as job abandonment and result in employee termination. Additionally, in order for employees to be reached immediately in the event of family and business emergencies, and for proper scheduling and coordination, the Company requires employees to provide updated contact information and emergency contact information.
- **Lunch Periods and Breaks** – It is Company policy to provide breaks from work during the regularly scheduled workday. Supervisors will inform employees of the length of their regular lunch period as this can vary depending on the position. One (1) hour is normally allowed for lunch, to be taken on the employee's own time and is non-compensable. Employees should coordinate their lunch period and breaks with their supervisor to ensure proper coverage. Employees are encouraged to leave their work area during their lunch period.

  Non-Exempt Employees are required to take a minimum of a thirty (30) minute non-compensable lunch break after working a five (5) hour shift unless their workday is six (6) hours or less. Non-Exempt employees are also allowed one (1) fifteen (15) minute break in the morning and another in the afternoon in an eight (8) hour workday, these are taken on Company time. No additional break time is provided beyond the two (2) fifteen (15) minute breaks. Break time that is missed may not be "banked" in order to take a longer break, a longer lunch or to leave work early.

- ***Travel*** *– While traveling on business, employees should record all time spent traveling.*
  - *During normal working hours, time should be charged to jobs or indirect, depending on the reason for the travel.*
  - *Time spent traveling outside normal business hours should generally be recorded as excess travel time. However, if the employee works while traveling that time should be charged to the activity the employee is working on.*
  - Some Non-Exempt Employees, as classified under the Fair Labor Standards Act (FLSA), may be required to travel, and are eligible for compensation for the time spent traveling during normal business hours. Any portion of authorized travel time that takes place within normal work hours (defined as 8:00 a.m. to 5:00 p.m.) on any day of the week, including Saturday and Sunday, is treated as work hours to be paid at the employee's regular hourly rate and will be factored into overtime calculations.

- ***Overtime*** *– Employees must record all hours worked, including any overtime, in accordance with Company Labor Charging Guidelines.*

    - For the purposes of determining overtime pay, paid time off (PTO) will not be used in calculating the hours worked in excess of eight (8) hours per workday or forty (40) hours per workweek. Paid time off (PTO) for holidays will NOT be used in calculating hours "worked".
    - All Employees at Career Level Five (5) or Senior Level and below will need to obtain prior approval from their supervisor to record more than forty (40) hours per week or more than their normal work schedule per week.

    Exempt Employees

    - Exempt Employees, as defined under the Fair Labor Standards Act (FLSA), are exempt from the overtime provisions of the FLSA.
    - Exempt Employees are expected to work the hours necessary to meet the requirements of their jobs, with a minimum of forty (40) hours (or their standard scheduled hours) per week. In general, employees also must be present during normal business hours each day.

Non-Exempt Employees

- *Non-Exempt Employees are eligible for overtime pay as defined under the Fair Labor Standards Act. Non-Exempt Employees should report to their work area no more than ten (10) minutes prior to their scheduled starting time and not stay more than ten (10) minutes after their scheduled stop time without expressed, prior authorization from their supervisor.*
- *Non-Exempt Employees are entitled to overtime pay for all overtime worked. Overtime work should be performed only with pre-authorization from the employee's supervisor. Failure to obtain pre-authorization for overtime work could result in disciplinary action.*
- *The Company does not permit employees to take time off in lieu of receiving overtime pay.*
- *Overtime is paid to Non-Exempt Employees for hours worked in excess of forty (40) hours in the workweek and in accordance with any other state requirements. For purposes of calculating overtime, the workweek begins at 12:01 a.m. on Saturday and ends at 12:00 midnight on Friday. Employees are required to work overtime as requested by their immediate supervisor or department manager.*

- *Employees should not request, and supervisors should not grant the opportunity to make up time for time missed if the make-up time will result in overtime work.*
- *Approved overtime for Non-Exempt Employees will be compensated in accordance with the requirements of the Fair Labor Standards Act (FLSA), state laws, and the Company's compensation policies as follows:*
  - ❖ In California, Non-Exempt Employees will be paid at the rate of one and one-half (1½) times their regular rate of pay for all hours worked in excess of eight (8) hours in a workday, up to and including twelve (12) hours in any workday, and for the first eight (8) hours worked on the seventh (7th) consecutive day worked in a workweek. Employees will be paid at the rate of two (2) times their regular rate of pay for all hours worked in excess of twelve (12) hours in any workday and for all hours worked in excess of eight (8) hours on the seventh (7th) consecutive day worked in a workweek.
  - ❖ In locations outside of California, unless state laws dictate otherwise, non-exempt employees will be paid at the rate of one and one half (1½) times their regular rate of pay for all hours worked in excess of forty (40) hours in a workweek.
  - ❖ Minor employees shall not work in excess of eight (8) hours per day or forty (40) hours per week.

- **Pay Administration -** Employees of MWH are typically paid bi-weekly with paychecks being distributed on Fridays. Unless prior arrangements are made, paychecks will be delivered to employees located in Company offices. Paychecks will be mailed to all other employees, including those on field assignments. Paychecks are not released to anyone other than the employee for whom it is intended unless prior written authorization has been provided to the Payroll Department.

  To avoid any potential problems with the timely delivery of paychecks, all employees are encouraged to arrange for automatic electronic ("direct") deposit of their paychecks. The Payroll Department should be contacted to make arrangements for this service.

  MWH does not allow deductions that violate the Fair Labor Standards Act (FLSA). If an employee believes that an improper deduction has been made to his/her salary, this should immediately be reported the employee's direct supervisor or Human Resources. Reports of improper deductions will be promptly investigated. If it is determined that an improper deduction has occurred, the employee will be promptly reimbursed for any such improper deduction.

Unpaid absences are deducted from a Non-Exempt Employee's base pay at the straight-time rate. Exempt Employees are not docked for a partial day's absence, but are to charge such partial day absences to an overhead account.

Deductions from pay for Exempt Employees are permissible to offset amounts employees receive as jury or witness fees or for military pay and for unpaid disciplinary suspensions of one (1) or more full days imposed in good faith for workplace conduct infractions.

For Exempt Employees, an employer is not required to pay the full salary in the initial or terminal week of employment; for penalties imposed in good faith for infractions of conduct or safety rules, or for weeks in which an Exempt Employee takes unpaid leave under the Family and Medical Leave Act (FMLA) or state-mandated leaves. In absences under the FMLA or other state-mandated, either partial day or full day deductions may be made.

- **Employees Covered Under Labor Union Agreements** - Employees covered under labor union agreements will be compensated in accordance with their appropriate written contracts.

Paid Time Off

General

MWH values its employees and recognizes that time away from work plays an important part in maintaining personal well being. It enables employees to balance the demands on their time between work and other life events. These time off programs include:

- Paid Time Off (PTO)
- Holidays
- Bereavement
- Jury Duty
- Time Off to Vote
- Maternity/Paternity
- Others, as required by law

Policy

If an employee is classified by MWH as a regular employee who is scheduled to work 24 or more hours a week, s/he is eligible to participate in the MWH paid time off programs. Employees scheduled to work between 24 and 40 hours per week, receive holiday, paid

time off, and bereavement leave as described in this Policy, except such benefits will be accrued at a rate that corresponds with their regularly scheduled work hours.

- **Paid Time Off** - PTO can be used for any reason by employees. Reasons may include vacations, volunteering, school events, personal illness, health needs of a family member, personal appointments, religious observations, and any other circumstances whether foreseen or unforeseen, that may cause an employee to need time off from work. Employees begin to accrue PTO credits the first of the month following date of hire. PTO accrues as follows:

Length of Service	**Annual Days Accrued**
Less than 5 years	15
Years 5 – 10	20
Year 11	21
Year 12	22
Year 13	23
Year 14	24
Year 15 and Beyond	25
Level	**Annual Days Accrued**
Lead/Supervisor	17
Principal/Manager	20
Fellow/Regional Chief/Director Executive Officer	25

*Employees hired prior to December 30, 2006 will be “grandfathered” to accrue PTO credits at the previously effective rate, if that rate provides a higher PTO accrual than the current effective rate.

PTO should be prearranged with employees' manager when possible. Employees should ask for approval for the time off as far in advance as possible, especially if s/he is considering extended paid time off. This will give managers time to manage project workflow.

- **Accrual Parameter** - An employee accrues time off based on his/her years of service, the number of hours worked and job classification. Part-time employees receive a pro-rated amount of PTO according to the number of hours worked per week. Accruals are reflected each pay period on employee pay statements. Employees do not accrue PTO while out on a paid or unpaid leave of absence.

  If an employee needs time off before s/he has accrued any PTO, s/he may use his/her available floating holiday. An employee may not use unpaid time off until floating holidays and paid time off have been exhausted. Unpaid time off must be requested with as much notice as possible, and used at the discretion and approval of the employee's manager for emergency purposes only.

  Non-Exempt employees may take and charge PTO in increments of a tenth of an hour (i.e. 0.2). PTO is not paid at an overtime premium rate nor is it considered time worked for the purpose of calculating overtime premium pay.

  The Company will not reduce an exempt employee's pay for any day in which s/he works some part of the day. Exempt employees may take and charge PTO in half-day or full-day increments (depending on employee's regular work schedule). However, if an exempt employee works part of a day and elects to take the rest of the day off as PTO, but lacks sufficient PTO credits, the time off in excess of the available PTO credits must be charged to an overhead account. A part-time exempt employee's PTO increment will be equal to their prorated work schedule.

- **PTO Balance and Carrying Forward Limits** - MWH will maintain a PTO account for each eligible employee and track the beginning balance, current balance, accruals, and usage on a calendar year basis. Limits are imposed on the amount of PTO that can be maintained as a balance and on the amount of PTO that can be carried forward at any time during the year.

  Employees' PTO account balances may not exceed 50 days or 400 hours at any time during the year. Once an employee has reached this maximum, no further PTO credits will be accrued until the PTO balance falls below the maximum. After the employee has either taken PTO or

participated in the Buy-Back Program and the balance has dropped below the maximum, PTO credits will begin to accrue again.

- **PTO "Buy-Back" Program** - While the Company strongly urges employees to use PTO, it recognizes that there may be circumstances under which an employee may prefer to be paid for a portion of his/her paid time off accrual as follows:

Employee's Annual Accrual Rate	**Maximum Allowable Buy-back per 12 month Period**
≤ 19 days	10 days
20 + days	15 days

The employee must concurrently take or have taken a minimum of five days PTO during the preceding 12 months, and the employee's PTO balance must remain above 40 hours after the "buy-back" is completed. The employee must send a memo of request to the Benefits department at least three weeks before the anticipated payment date.

- **Separation of Employment** - If an employee has unused PTO that has formally posted to his/her PTO balance when s/he leaves the Company, it will be paid to him/her upon termination. An employee may not use accrued PTO to extend his/her employment with MWH.

- **Holidays** - The Company recognizes certain days as paid holidays for Regular Full-Time Employees. These holidays may vary from year to year and from office to office. Employees scheduled to work part time over 24 hours per week are eligible to receive reduced holiday benefits.

  The following holidays will be observed as paid time off for the full day (except December 24, which is treated as a half-day holiday when it falls on Monday through Thursday):

January 1	New Year's Day
January (third Monday)	Martin Luther King Jr. Day

May (last Monday)	Memorial Day
July 4	Independence Day
September (first Monday)	Labor Day
November (fourth Thursday)	Thanksgiving Day
December 24 (afternoon)	Afternoon of Christmas Eve
December 25	Christmas Day
Floating Holiday	(See Below)

- **Exceptions and Clarification of Holidays**
  - The half-day holiday preceding Christmas Day will be observed as a paid holiday (4 hours) if December 24th falls on Monday through Thursday.
  - If New Year's Day, Independence Day or Christmas Day falls on a Saturday, the preceding Friday will be observed as the paid holiday.
  - If New Year's Day, Independence Day or Christmas Day falls on a Sunday, the following Monday will be observed as the paid holiday.
  - Field employees who are required to work on-site with contractors or other outside groups, or agencies, that observe holidays different from those listed above, will observe the holidays of the outside group or agency in lieu of the holidays on the above list; provided, however, that the employees will be entitled to a total of at least eight holidays a year. Domestic field employees will be limited to a maximum of nine paid holidays per year.
  - Overseas employees will observe the holidays of the local office or group.
  - Employees who are eligible for paid time off and hired on, or before June 30 of the current calendar year, may be granted one Floating Holiday per year, which may be requested at any time during the calendar year, subject to prior approval of their

supervisor and based upon company business needs. Employees must request approval a minimum of one week prior to the date requested. The Floating Holiday must be taken as a full-day holiday and may not be carried over into the subsequent calendar year.

- **Holiday Pay Provisions** - In the event it is necessary for an employee to work on a holiday, and such work is properly authorized, s/he is compensated in a manner determined by his/her classification:
    - Holiday benefits are paid at an employee's straight-time rate of pay.
    - Paid holiday time off will not be considered as time worked for the purpose of calculating overtime premium pay.
    - Exempt employees who are eligible for straight-time overtime will receive their regular wages for the holiday, and in addition, may be compensated for such holiday work at his/her straight-time rate of pay if such compensation is pre-approved by the employee's Business Unit Leader. Exempt employees, however, do not earn additional compensation when working on a holiday.
    - Non-exempt employees will receive their regular wages for the holiday, plus their straight-time hourly rate for each hour worked on the holiday.
    - Employees whose employment is governed by a union contract will receive the holiday pay in accordance with their contract.
    - In order to receive holiday pay, employees must record paid time (regular pay or paid time off pay) on the employee's scheduled workday before and after the observed holiday.
    - Employees on leave of absence for any reason are ineligible for holiday pay for holidays that are observed during the period they are on leave of absence.

- **Religious Holidays** - The Company recognizes that some employees may want to observe various religious holidays. Supervisors will attempt to grant any reasonable request for time off for matters of personal religious conviction. Such time off is without pay unless the employee chooses to use his/her floating holiday or available paid time off credits.

- **Bereavement** - In the event of a loss of a family member, Regular Full-Time Employees are granted paid bereavement leave of up to three (3) regularly scheduled work days whenever there is a death in the employee's immediate family. Eligible employees who are normally scheduled to work on the days covered by the leave will receive their normal pay for the workdays missed.

  In addition to the normal bereavement leave, an employee on overseas assignment at the time of the funeral will also be authorized three (3) additional working days off with pay for round-trip travel purposes if the death is in a country other than the one in which the employee is working.

  Immediate family is defined as a spouse, child, parent, brother, brother-in-law, sister, sister-in-law, grandparent, grandchild, stepfather, stepmother, stepchild, mother-in-law, father-in-law or legal guardian. Immediate family also includes a registered domestic partner, or the child, parent, brother, sister of the domestic partner. Employees must request bereavement leave from their supervisor. The Company reserves the right to require acceptable evidence of death as a condition of approval under this policy.

- **Jury and Court Duty** – Regular Full-time Employees who receive a court summons for jury duty are eligible to be paid for time off, not to exceed five days, as a result of these events. The payment is the difference between the employee's base pay and the compensation received from the Government for participating in this capacity. Written verification of the jury summons must be given to your supervisor with the date(s) and times of court as soon as they are established. Supervisors are responsible for notifying Human Resources of these absences.

  Employees should report to work when their presence is not required by the Court, unless distance or time makes this impractical. Payment for jury duty requiring more than two weeks will be reviewed by management on a case-by-case basis.

  All employees will be paid their normal wage or salary if required by a subpoena to appear in court on Company business. Non-exempt employees will not be paid for their time if summoned to appear in court on matters not pertaining to Company business or on personal matters. Exempt employees who have exhausted all PTO credits must be paid for such absences, if they work during the week in which the court appearance occurs for which they are summoned.

- **Time Off To Vote** - Employees should normally have sufficient time to vote outside of working hours. Any request for paid time off to vote, therefore, must always have the prior approval of the employee's supervisor.

  The Company will provide each employee who is a registered voter sufficient time off from work, without loss of pay in accordance with all applicable laws, to allow such employees to vote in a statewide or national election under the following conditions:

  - Work schedules are such that the employee must be allowed time off in order to vote.
  - Not more than two hours of paid time is taken off from work.
  - The voting time off is taken only at the beginning or end of the regularly scheduled work shift, whichever allows for the most time for voting and the least time off from the regular work shift.
  - The employee has given his/her supervisor not less than two work days notice that s/he will required time off for voting, unless the employee did not know or have reason to believe that such time off was necessary.

- **Maternity/Paternity Leave** - MWH also offers eligible employees three (3) additional paid days off for the birth and bonding of a newborn child(ren) or the adoption of minor child(ren). The additional days should be taken within 6 months of the birth or adoption of the child.

Section G

MBE/WBE Participation

MWH has read paragraph 20 of the attached agreement and understands the Minority /Women-Owned Business Enterprise (MBW/WBE) goals that the Port Authority has established for this contract. MWH intends to meet those goals by using the following MBE/WBE firms in the following capacity:

Subconsultant Name	Certification	Anticipated participation	Area of Expertise
Group PM[X]	MBE*	7%	Project Management Support
Toll International	MBE	5%	Project Controls Support
LPE Enterprises, Inc	WBE	5%	Administrative Support

* In the process of getting certified. All paperwork has been submitted and was reviewed with the EDC.

Section H

Complete List of Firm's Affiliates

The following table summarizes the complete list of MWH's affiliates.

MWH Entities *(not including General Partnerships or Joint Ventures)*		***as of 10-19-10***
Entity Name	**Domestic Jurisdiction**	**Formation Date**
Dhamwari Holding Company, Inc.	Mauritius	02-15-1995
Harza Engineering Company International S.A.	Panama	02-03-1977
Harza Environmental Services, Inc.	Illinois, US	01-15-1986
Harza Hydropower, Inc.	Delaware, US	04-20-1989
Harza Northwest, Inc.	Washington, US	12-26-1990
MCapitol Management, Inc.	Illinois, US	02-02-1995
Montgomery Engineers Limited (Bermuda)	Bermuda	09-27-1977
Montgomery Watson (Bermuda) Ltd.	Bermuda	09-14-1993
Montgomery Watson Engineers of New York, P.C.	New York, US	03-16-1983
MW Brasil, Ltda.	Brazil	01-26-1998
MWH Americas of Costa Rica, S.A.	Costa Rica	09-09-2003
MWH Americas, A New York Corporation	New York, US	02-16-1910
MWH Americas, Inc.	California, US	10-08-1954
MWH Architects and Engineers of New York, P.C.	New York, US	06-22-1979
MWH Architects and Engineers, Inc.	Delaware, US	05-18-1999
MWH Argentina, S.A.	Argentina	05-27-1993
MWH Canada, Inc.	Federally Chartered, Canada	05-18-2006
MWH Constructors Holding B.V.	Netherlands	02-26-2003
MWH Constructors Limited	United Kingdom	01-14-2003
MWH Constructors, Inc.	Delaware, US	07-20-1993
MWH Corporation (Malaysia) Sdn Bhd	Malaysia	01-10-1995
MWH ednolichno druzhestvo s ogranichena otgovornost	Bulgaria	01-10-2000
MWH Energy Solutions, Inc.	Delaware, US	08-09-2000
MWH Engineers of D.C., P.C.	District of Columbia, US	02-09-1984
MWH Enterprises, Inc.	Delaware, US	10-14-1997
MWH Europe Limited	United Kingdom	10-31-1989
MWH Geologists of North Carolina, PC	North Carolina	12-11-2006
MWH Global, Inc.	Delaware, US	11-27-1970
MWH Holding B.V.	Netherlands	06-30-1992
MWH Holdings, Inc.	Delaware, US	04-06-1992
MWH India Private Ltd.	India	09-09-1985
MWH Integrated Project Solutions, Inc.	Washington, US	10-22-1996
MWH International, Inc.	Delaware, US	06-30-1988
MWH Michigan, Inc.	Michigan, US	10-01-1993
MWH Overseas Fiduciary Corporation	Delaware, US	12-03-2001
MWH Pakistan (Private) Limited	Pakistan	07-12-2007
MWH Panama, S.A.	Panama	06-12-2001
MWH Pardevo societe anonyme	Belgium	04-15-1987
MWH Peru, S.A.	Peru	11-24-1997
MWH Programme Management Limited	United Kingdom	08-13-1999
MWH Societe Anonyme	Belgium	03-06-1997
MWH Soft Americas Inc.	Texas, US	09-06-2001
MWH Soft Australia Pty Limited	Australia	03-14-2003
MWH Soft Malaysia Sdn. Bhd.	Malaysia	01-01-1993
MWH Soft, Inc.	California, US	02-29-1996
MWH UK Limited	United Kingdom	10-22-1974
MWH Venezuela C.A.	Venezuela	06-06-2007
MWired, Inc.	Delaware, US	03-31-2000
Nam Mo Development Company	Cayman Islands	02-17-2000
Northern EnviroSearch (NWT) Ltd.	Federally Chartered, Canada	09-13-2006
Philadelphia Corporation	New York, US	11-15-1984
Philaqua Consultants Inc	Philippines	03-10-2000
Servicios de Infraestructura SDI C.A.	Venezuela	08-28-1997
Konsultan MWHC	Brunei Darussalam	07-22-1975

MWH Entities *(not including General Partnerships or Joint Ventures)*		***as of 10-19-10***
Entity Name	**Domestic Jurisdiction**	**Formation Date**
CICP Consultores Internacionales, LLC	Delaware, US	12-21-2009
Companhia Ambiental de Canarana Ltda.	Brazil	06-02-2000
Ecologic, LLC	Delaware, US	12-03-1997
Harza Associates of New York PLLC	New York, US	06-23-1999
Harza Engineering Company International S de RL	Honduras	05-05-1997
Harza International Development Company, LLC	Delaware, US	01-09-1998
HTC Infrastructure Management Limited	New Zealand	07-01-1997
JMM Environmental Enterprises, Limited	Taiwan, Province of China	12-16-1991
Montgomery Watson Asia Limited	Hong Kong	07-07-1989
MWH (DRC) S.P.R.L.	Congo, The Democratic Republic of the	09-11-2008
MWH Americas Inc. Chile, Limitada	Chile	08-17-1995
MWH Asia Limited	Hong Kong	07-14-1999
MWH Australia Pty Limited	Australia	02-22-1977
MWH B.V.	Netherlands	11-24-1999
MWH Brasil Engenharia e Projetos Ltda.	Brazil	10-10-1996
MWH Constructors Australia Pty Limited	Australia	01-07-1999
MWH Constructors Holdings Limited	Hong Kong	07-14-1999
MWH Constructors NZ Limited	New Zealand	07-01-1997
MWH Consultants (Singapore) Pte Limited	Singapore	04-22-1986
MWH Consulting (Shanghai) Co., Limited	China	10-22-1998
MWH Delaware, LLC	Delaware, US	04-24-2001
MWH Environmental Asset Management Pte Limited	Australia	
MWH Environmental Engineering (Shanghai) Co., Limited	China	07-13-2005
MWH Holdings Limited	New Zealand	09-25-1995
MWH IFI Limited	Hong Kong	05-10-2000
MWH Muhendislik ve Musavirlik Limited Sirketi	Turkey	03-15-1999
MWH New Zealand Limited	New Zealand	07-30-1979
MWH NZ International Limited	New Zealand	06-09-1993
MWH ResourceNet (India) Private Limited	India	02-07-2008
MWH Romania SRL	Romania	02-16-1999
MWH Soft Limited	United Kingdom	07-29-2009
MWH Venezuela (SA), LLC	Delaware, US	06-16-2000
MWH Venezuela (VE), LLC	Delaware, US	06-16-2000
R.G. Consulting Group Limited	New Zealand	01-21-1992
RDC of Nepal	Cayman Islands	02-15-1996
Royds Resource Consultants Limited	New Zealand	02-20-1991
Soils & Foundations 1973 Limited	New Zealand	11-12-1973
Bhote Koshi Power Company Private Limited	Nepal	
Dhamwari Power Company Private Limited	India	
MWH Societa' Per Azioni	Italy	05-09-1973

Section I

Statement of No Conflict of Interest

MWH confirms no conflict of interest with the Authority.

Section J

Agreement Exceptions

Enclosed with this proposal is a letter with the exceptions and clarifications to the agreement provided in the RFP.

Attachment 1

Resumes

Charles Kahler, PE

MWH, Senior Project Manager

Relevant Project Experience

Assistant Project Manager, New Croton Dam, Croton Falls Dam and Croton Falls Diverting Dam, NYC

Assistant Project Manager for an $18 million design services contract requiring rehabilitation designs of four dams in the New York City Watershed System. Responsibilities included the preparation and implementation of a Project Management Plan and Quality Management Plan for the rehabilitation of New Croton Dam, which is 103-year old, 140-foot high rubble masonry dam with a 1000-foot long side channel spillway. Assisted with the monitoring of project scope, schedule, and budget on a routine basis. Conducted monthly progress meetings with NYCDEP and routinely coordinated workshops and other meetings with various project stakeholders for the benefit of the project. Solicited proposals from potential subconsultants, administered the subcontracts, and managed the preparation of the work product by the subconsultants. Technical responsibilities included the management of the subsurface exploration of the existing rubble masonry weir at New Croton Dam using a barge located on the reservoir side of the weir, while water was discharged over the spillway weir at a rate of approximately 700 cfs. Assisted in the management of the preparation of technical reports, contract documents, and construction cost estimates

Assistant Project Manager, Hickory Log Creek Dam Design, City of Canton, Georgia

Assistant Project Manager and Design Engineer for a $42 million, 180-foot high RCC dam in Canton, Georgia. The new dam now impounds a 411-acre pump-storage reservoir for the Cobb County Water Authority and the City of Canton. A very aggressive project schedule was implemented to design and construct the dam within three years. Responsibilities included monitoring the

Educational Background

- BS & MS, Civil Engineering, Villanova University

Chronological History of Employment

- MWH since 2008
- Schnabel Engineering 1997 - 2008

Relevant Licenses and Certifications

- Professional Engineer – PA, MD,GA,
- Engineer of Record-GAEPD Safe Dams Program

project scope, schedule, and design budget on a routine basis. Conducted progress meetings with the client. Administered the subcontracts, and managed the preparation of the work product by the subconsultants. Technical responsibilities included performing a RCC mix design using available local aggregates, dam type alternatives analysis (preliminary study), hydrology and hydraulics analysis, stability analysis, geotechnical analysis and design of the dam and appurtenances as the civil design engineer. Other technical responsibilities included the preparation of contract drawings and numerous engineering reports. Also performed the role of on-site construction manager during construction of the dam and responsibilities included the management of an on-site staff of 10 employees for a construction schedule that included a five month period of 24-hours workdays for 6 to 7 days a week.

Project Manager, Hard Labor Creek Dam, Walton County, Georgia

Project Manager and assistant lead geotechnical engineer for a geotechnical engineering study of a proposed 92-foot high, Category I earth embankment dam in Walton County, Georgia. The proposed dam will impound a 1900-acre water supply reservoir for the Walton County Water Authority. Managed and coordinated the subsurface exploration, soil laboratory testing, slope stability analysis, seepage analysis, and settlement analysis.

Feasibility Study and Preliminary Design, Houston County State Park Dam (Andel Dam) State of Georgia Department of Natural Resources

Performed a preliminary site investigation for the proposed dam site on an intermittent stream owned by The Georgia Department of Natural Resources. The feasibility study included subsurface exploration, soil laboratory testing, and a water balance analysis. Utilized field data obtained from an existing lake on-site to enhance the water balance analysis. The preliminary design included sizing the principal and emergency spillways, establishing the top of the dam, and preparing a cost estimate for construction of the dam. Results of feasibility study and preliminary design were published in two separate reports.

RCC Quality Control Ghatghar RCC Dam, Ahmanadgar Irrigation District, India

Instituted RCC quality control testing program and established frequency of testing for the construction of three hydroelectric dams ranging in height from 11 m to 85 m (279 ft). Trained contractor's engineers on performance of RCC quality control tests, including mixer performance testing, nuclear density testing of RCC, thermal readings, moisture contents, vebe times, unit weights, aggregate gradations, and specific gravity and absorption of aggregates. Provided review of contract specifications as they related to RCC construction for completeness and constructability.

Christopher Porcello, PE

MWH, Senior Project Manager

Relevant Project Experience

NY/NJ Port Authority – Newark Airport

Mr. Porcello was part of the project team in the design and management with respect to the environmental remediation in all three of the main baggage and handling terminals. The project included a close coordination of remediation with terminal activities in facilities with thousands of travelers per hour and the retro-fitting of new computerized handling systems

Project Manager, NYC Department of Transportation, NY,NY

Project Manager for multi-year and multiple locations for consulting engineering and materials testing for the Dept. of Transportation for major arterial roadways, bridges and concrete structures managed by NYCDOT. Project also included oversight of bridge rating, evaluation and re-construction programs for capital improvement projects.

Project Manager, NYC Department of Sanitation, NY,NY

Project Manager for design of pre-engineered steel structure to house the Solid Waste Transfer Station in Staten Island NY. This project involved one of the largest solid waste transfer stations in the US and handles nearly 80% of all NYC's solid waste transfer for disposal

Program Manager, City University of New York (CUNY)

Program Manager for multiple planning, design and renovation projects at CCNY, Baruch College, Queens College, Hunter College, College of Staten Island, Hostos Community College and John Jay College of Criminal Justice. Projects consisted of interior redesign, structural and environmental evaluations and oversight of construction work.

Educational Background

- BS, Civil Engineering, University of Colorado

Chronological History of Employment

- MWH since 2008
- PEI Consulting Engineers 1996-2008
- TCL, NY & Boston, 1987-1996

Relevant Licenses and Certifications

- Professional Engineer – HI, NC, WY, LA, NE, UT, MD, MO, SD, KS, PA, ID, AZ, CO
- Asbestos Inspector, NY

Cynthia Collyard, PE, PMP

MWH, Program Manager

Relevant Project Experience

Program Manager, Plant Enhancement Program, City of Cleveland, OH

Ms. Collyard is currently the Program Manager for the City of Cleveland's Plant Enhancement Program (PEP) which is a $750M program to upgrade three of the City's four water works plants and their serving pump stations. As Program Manager, Ms. Collyard works as the owner's representative to oversee commercial terms and conditions of the various consulting engineering firms and construction contractors. In this role she works to ensure that clear, effective and timely communications occur among the various project stakeholders and team members. During design efforts, Ms. Collyard works as the owner's representative to oversee the scope, schedule, budget and quality of designs performed by various consulting engineering firms. In addition to overseeing the commercial terms and conditions of the various professional service contracts, she is responsible for ensuring that the technical aspects of the various design deliverables conform to the City's engineering and project standards and accepted engineering practices, and that the overall projects are cost-effective relative to capital, operating and maintenance costs.

Principal Construction Manager, ORDA Recovery Program, City of New Orleans, Louisiana

MWH was hired by the City of New Orleans to manage the Recovery of Municipal sites. There are over 200 recovery projects ranging in scope from total rebuild to minor modifications. Sites range from Fire Houses and Court Houses to Playgrounds and Golf Courses. The recovery of these sites include repair and restoration to Pre-Katrina conditions, as well as additional modifications that enhance the functionality of the site and bring it up to current code requirements. As Project Managers, MWH oversaw all

project activities from start-up through completion including the direction of A+E and General Contractor activities. Ms. Collyard's

Educational Background

- BS & MS, Civil Engineering, Case Western Reserve University

Chronological History of Employment

- MWH since 1990

Relevant Licenses and Certifications

- Professional Engineer – IL, OH
- Project Management Professional, Project Management Institute

role initiated as Principal Construction Manager with initial responsibility to work with architectural firms defining scopes and managing design efforts and development of construction documents and with responsibility for the development and execution of the Program Construction Plan and subsequent project plans, and to direct and manage the activities of all Construction Managers assigned to ORDA. Ms. Collyard's role grew to encompass the program's schedule and control group, contracting and invoicing group, and data management group in full support of project delivery from planning through construction completion.

Project Manager, O'Hare Modernization Program-South Airfield for the MWH/Delta Joint Venture, Chicago, Illinois

The project includes the design of 8 major drainage systems from 60-inch to 144-inch diameter RCP totaling 36,000 linear feet and two detention basins with pump stations with a storage capacity over 1800 acre-feet. The pump stations were comprised of 80' deep by 62' diameter structures with control and electrical buildings. The design criteria were based on maintaining field operations at a 50-year one hour storm and to this end MW provided existing conditions and final conditions hydraulic models as well as 8 interim conditions models. Ms. Collyard led a technical design team of engineers and modelers for MWH. MWH scope included development of detailed cost estimates and reconciliation processes with the OMP to maintain budget, pre-bid/pre-award meetings and bid evaluations as part of design bid phase services. Ms. Collyard also acted as Project Manager during the construction phase to cover a scope including both engineering services during construction and resident engineering services. OMP has successfully awarded construction contracts for $600 million with four additional construction contracts to be bid. Phased design was scheduled to be complete in early 2009 and construction complete in 2011. Construction costs are estimated at $500 million. Ms. Collyard led a 35-person in-house design team, which is joint ventured with two Chicago-area MBE firms. The total South Airfield Modernization Program represents nearly $3 Billion in construction.

Project Manager, City of Sandusky Filter Improvements Projects.

This was a set of 3 multi-prime contracts for the rehabilitation of the filters and the installation of a plant control system. The work was based in a five story building for filters systems, electrical and controls. Work included structural, process/chemical, mechanical, electrical and control designs. The construction value was approximately $8.5 million. Ms. Collyard also performed the Primavera scheduling for the project. The project completed in December, 2004 and was performed without any disruption to the water quality or delivery to the City of Sandusky or Erie County systems.

Dina Keirouz, PMP

MWH, Program Manager

Relevant Project Experience

Director of Construction Management – MWH Americas

- Providing leadership, vision and strategic direction for a newly created Estimating Group with the objective of improving estimating quality and process and reducing risk to the company
- Responsible for growing the CM Practice at MWH
- Responsible for establishing and implementing a CM delivery framework to include CM Standard Operating Procedures and best practices
- Responsible for the development and execution of quality control procedures on CM projects
- Responsible for CM staff career development and training

City of New York, DEP – Bureau of Engineering Design and Construction (BEDC) Program Management Services

Program Controls, Management Systems and Tools Manager - Provided leadership and management of 9 controllers, schedulers and IT Staff on the implementation of Program Controls, Systems and tools for BEDC's $14 billion Capital Program. This effort included the creation and implementation of a new Program Controls Team and processes at BEDC.

Project Delivery Manual (PDM) and Project Management Training -Task Lead - Responsible for the development of the project controls sections of the PDM, and establish standard processes and tools based on the industry's best practices for project execution at DEP's Bureau of Engineering, Design and Construction. Responsible for the PDM roll out and training of about 85 Project Managers of all different skill level.

Project/Construction Manager Multiple Airlines

As Owner's Representative, provided project and construction management activities to include: Design management, bid phase assistance, contract administration and inspection services. Responsible for projects at LaGuardia (LGA), JFK International,

Educational Background

- BS, Construction Management, University of Washington
- BA, Architecture, University of Washington

Chronological History of Employment

- MWH since 1999
- Gilbane Company 1998-1999
- O'Brien Kreitzberg, 1991-1996

Relevant Licenses and Certifications

- PMP Certified
- In the process of getting CCM certified

Philadelphia (PHL), Baltimore (BWI) and Newark (EWR) Airports. Responsibilities included program planning and development, design management and oversight, coordination with Local authorities, permitting process, construction bidding, and the construction oversight.

Resident Engineer - Gilbane Company,US Airways Terminal A1, Philadelphia International Airport, Pennsylvania

The $550 million project consisted of a 780,000 SF, four-story terminal and a concourse with 13 gates, accommodating 777-Boeing aircraft. The schedule was fast track and included 24 bid packages. Pre-construction responsibilities included contracting strategy development, scheduling and construction phasing, permits acquisition and regulatory agency coordination. As Construction Manager was responsible for construction bid packages bid-outs, bid phase management and bid award and contract administration and inspection services oversight.

Project Manager – Continental Airside Baggage Room, Newark International Airport, New Jersey

This was a 45,000 SF steel frame structure housing a permanent tilt-tray system with 66 baggage piers. Challenges included a tight schedule, tight staging and lay-down areas, and maintaining gate aircraft capabilities and operations during construction. Innovative workarounds during both the design and construction were used to fast track the schedule for a completion of Phase I on time. Responsible for managing and administering Design and CM contracts; cost and schedule control and coordination with Port Authority of New York & New Jersey, Continental airlines operations, and end users.

Project Manager - Wide Body Hangar Newark International Airport, New Jersey

This project included a 90,000 SF-Widebody Hangar for 737 and DC-10 Aircrafts, and a fire protection pump house. Challenges included a tight site with confined airside access and staging areas; a fast track schedule where different construction trades had to be overlapped; and double/triple shifts were used to complete the steel erection and the full interior fit-out of the hangar in five months. Activities included construction oversight, schedule development and updating, change order negotiations, sequencing and work-arounds to maintain the tight schedule, and project close out.

Project Engineer – METRO Transit Facilities Improvements, Seattle, WA

Involved in both the design and construction phases of the project. During design, helped owner coordinate and schedule design activities and develop the specification section on scheduling and construction phasing for a 24-hour operational facility. During construction, provided contract administration and project control services. Activities included schedule development and tracking, change order estimating and negotiating, submittal review and processing, and cost and document control.

Donald L. Smith, PE

MWH, Program Principal

Relevant Project Experience

Plant Manager, Hyperion Solids Handling Program

Mr. Smith served on a contracted basis for 2-1/2 years as manager of the 400-mgd Hyperion Treatment Plant. Major effluent quality improvements resulted from initiation of an interim improvements program that increased primary treatment removal efficiencies from approximately 45 percent to almost 80 percent. This effort resulted in the facility receiving the Outstanding Performance Award from the Water Environment Federation.

Program Director, Asset Management Program 3

Mr. Smith was the program director for this five-year, $3.3 billion program consisting of over 1,000 individual projects associated with water and wastewater services to a service area population of 7 million domestic users and 200,000 business customers in a 14,000-square-kilometer area. The system includes 147 water treatment works, 617 wastewater treatment plants, 25,000 miles of water mains, 18,000 miles of sewers and 600 miles of aqueduct. This effort included the mobilization and development of a delivery team of over 800 people. MWH continues to provide comprehensive program management, optioneering, design, procurement, construction management and commissioning services.

Supervising Operations Engineer, Water Pollution Control Plant, Los Angeles, CA

As supervising operations engineer for the County Sanitation Districts of Los Angeles County, Mr. Smith was in charge of solids disposal at the Sanitation Districts' 350 mgd joint water pollution control plant in Carson, California.

Manager, Management and Coordination of Numerous Projects in the Southwest

As manager of the Wastewater Department of MWH's Southwest Regional Office, Mr. Smith was responsible for the management and coordination of numerous projects in the Southwest. As

Educational Background

- MS/MSc Environmental Engineering, California Institute of Technology
- BS/BSc, Engineering, California Institute of Technology

Chronological History of Employment

- MWH since 1977

Relevant Licenses and Certifications

- Professional Engineer – CA
- WWTP Operator V, California

design engineer with the County Sanitation Districts of Los Angeles County Mr. Smith was responsible for design activities associated with solids dewatering, advanced primary treatment, and digester cleanings treatment.

Deputy Manager, Hyperion Energy Recovery System Program

Mr. Smith served as deputy manager for the construction of the $200 million Hyperion Energy Recovery System program, which incorporated over 20 separate contracts. Major process contracts included digester renovations, centrifuge dewatering, materials storage and handling facilities, sludge drying and combustion, and energy production using steam and gas turbine technology. The scope of this facility provided for the processing of 2,000 gpm of digested sludge and over 6.0 mcf/d of digester gas.

Principal-in-Charge, Clean Water Program, Los Angeles, CA

As principal-in-charge, Mr. Smith provided technical and managerial guidance for this $4.3 billion wastewater program. He was responsible for program organization, development of the CIP (including prioritization of over 300 separate contracts), research, planning, supervision of professional consultants, and program implementation. In addition, he represented the City of Los Angeles, regularly interfacing with regulatory agencies, construction firms, environmental organizations and members of the public.

Manager, Hyperion Treatment Plant Solids Handling, Energy Recovery, and Interim Improvements Program

Mr. Smith served for two years as manager of the 400 mgd Hyperion Treatment Plant. An Interim Improvements CIP was developed which, once implemented, resulted in major improvements in effluent quality by increasing primary treatment removal efficiencies from approximately 45 percent to almost 80 percent. Through a combination of improved primary effluent quality and the emergency conversion of the coarse-bubble, air-activated sludge system to fine-bubble technology, the quantity of flow receiving secondary treatment at this partial secondary facility increased from 90 mgd to 180 mgd.

Principal-in-Charge, Wastewater Capital Improvement Program, San Diego, CA

Mr. Smith headed a strategic transition team for the City of San Diego Wastewater Capital Improvements Program. Its purpose was to develop an initial organizational framework for the program, and to guide the City through the first few months of implementation. A comprehensive framework plan was developed to fulfill the facility and operational objectives of complying with federal and state standards for the metropolitan area, including the reclamation of 45 mgd of water by the year 2010. Under his guidance, the organizational structure evolved into a new City department, the Metropolitan Wastewater Department.

Emery Myers, PE, PMP

MWH, Project Manager

Relevant Project Experience

Technical Support, Panama Canal Design and Construction of the Third Set of Locks, Panama Canal Authority

Serving as manager for GlobalSCAPE, the document control system for the ongoing Panama Canal Design and Construction Project. Providing overall management and maintenance of GlobalSCAPE, coordinating between 6 global design centers located in Europe, North America, Central America and South America. Set-up and maintenance of high-level folder structures, overall coordination of set-up and maintenance of local folder structures through liaison with Document Controllers in the design centers. Coordination and liaison with technical IT support and general communication of GlobalSCAPE issues.

Assistant Project Manager, Citywide SCADA, New York Department of Environmental Protection

Serving as assistant Project Manager for an ongoing SCADA project that was initiated in 2002 and is projected for completion in 2011. The project involves planning, design, construction management, and implementation services for SCADA installation on the citywide sewer collection system in New York City. The project was initiated in response to a Consent Order for New York City to address combined sewer overflows. Project management tasks include management of budget, scope and schedule including internal MWH monthly reporting, external (client) monthly reporting, project invoicing, and monitoring of risks and issues.

Assistant Project Manager, Program Management Information System (PMIS), New York Department of Environmental Protection

Served as Assistant Project Manager for a technology project that was initiated in 2008 and completed in 2010. The Program Management Information System (PMIS) involved planning, design, configuration, and training for a computer based Dashboard reporting application and Workflow application. The PMIS integrates information on cost, schedule and scope of projects in planning, design and construction. Project management tasks included

Educational Background

- BS & BSc Environmental Engineering, Tulane University
- MS & MSc Environmental Engineering, Tulane University

Chronological History of Employment

- MWH since 1999

Relevant Licenses and Certifications

- Professional Engineer – LA
- Project Management Professional, Project Management Institute

management of budget, scope and schedule including internal MWH monthly reporting, external (client) monthly reporting, project invoicing, and monitoring of risks and issues. In addition, served as team lead for technical training. The technical training tasks included management of budget, scope and schedule specific to training tasks, supervision of 2 to 3 staff, interaction with the client, and development and review of training materials including Training Manual, Systems Manual, User's Manual and web-based training.

Project Manager, Florida Avenue Transfer Station Improvements, City of New Orleans, LA

Served as project manager for the design and construction management for structural rehabilitation of an existing facility. The project was initiated in response to the facility damage incurred by Hurricane Katrina in 2005 and the project was a part of the New Orleans Recovery Program managed by MWH. The design and construction included structural, electrical and architectural repairs and improvements. Project management tasks included management of budget, scope and schedule including internal MWH monthly reporting, project invoicing, monitoring of risks and issues, and management of 2 subconsultants.

Project Manager, Recycling Request for Proposals (RFP), Department of Environmental Affairs, Jefferson Parish, LA

Served as project manager for the Recycling Request for Proposals (RFP) for a municipality in Southeast Louisiana. This project was a direct result of the project previously performed by MWH for the client for the evaluation of the Jefferson Parish recycling program. The residential curbside recycling program in Jefferson Parish was suspended in response to the Hurricane Katrina disaster. The evaluation project concluded with the recommendation to re-instate and improve the curbside residential recycling and set a future goal for curbside collection of compostable waste. The Recycling RFP project included development of an RFP for Jefferson Parish, establishment of evaluation criteria for the proposals, coordination of a pre-proposal conference, and evaluation of the proposals.

Recruiter, New Orleans Recovery Program, City of New Orleans, LA

Served as the recruiter for the New Orleans Recovery Program which entailed program delivery for 352 building projects valued at $817 M for Post-Hurricane Katrina rebuilding efforts. Coordinated hiring needs for the program, scheduled and lead interviews for potential candidates and provided on-boarding for new hires. The program was a quick-start with over 60 engineers, architects and support staff hired over the course of 6 months.

Farid Cardozo, CCM

Group PM[x], Senior Project Manager

Relevant Project Experience

Senior Scheduler, American Airlines Terminal, JFK International Airport, Jamaica, NY

This project included a complete replacement of terminals 8 and 9 with a single-terminal complex. The entire complex encompassed approximately 2.3 million square feet of floor space and 54 fixed aircraft gates. As Scheduler, part of the Program Management team, responsible for developing and updating the master baseline design, construction and procurement schedules, preparing monthly narrative reports and progress schedules, coordinating, phasing, logistic, and scheduling issues with the client, contractors, designers and the facilities.

Resident Engineer, 92nd Street Ramp at FDR Drive, NY, NY

Project included the construction of the 92nd Street ramp on the FDR Drive. As a resident engineer and a member of the scheduling and project controls group, developed and maintained project data using Primavera software. As Scheduler, developed and updated master construction and procurement schedules, prepared monthly narrative reports, prepared progress schedules, developed and prepared performance and delay analysis.

Resident Engineer, LIE Rehabilitation, NY, NY

Project included the rehabilitation of the Long Island Expressway from the Midtown Tunnel to the Maurice Avenue Exit in Queens, NY. Work included the resurfacing and repair of the entire roadway, the installation of a smart traffic system and work related to the entry and exit ramps of the Expressway. As a Resident Engineer and a member of the scheduling and project controls group, developed and maintained project data using Primavera software. Developed and updated master construction and procurement schedules, prepared monthly narrative reports, prepared progress schedules, developed and prepared performance and delay analysis and when required evaluated schedules in support of claims.

Resident Engineer, Mineola Boulevard Bridge, Mineola, New York

Project included various maintenance repairs to the bridge structure.

Educational Background

- Bachelor of Science, Building Construction, University of Florida

Chronological History of Employment

- Group PM[x] since April, 2010
- Stantec, 2008 – April 2010
- Jacobs/Carter & Burgess,2001 – 2008
- FAI Management, 1999 – 2000
- O'Brien Kreitzberg, 1996 – 1999

Relevant Licenses and Certifications

- Certified Construction Manager, CMAA 2006

As a resident engineer and a member of the scheduling and project controls group, developed and maintained project data using Primavera software. As Scheduler, developed and updated master construction and procurement schedules, prepared monthly narrative reports, prepared progress schedules, developed and prepared performance and delay analysis and when required evaluated schedules in support of claims.

Claim Consultant, Wall Street Esplanade and Ferry Pier, NY, NY

Project included the reconstruction of the Wall Street esplanade along the East River and the access routes to the Ferry Pier. Working as a claim consultant for the contractor was responsible for the review and analysis of all project documents. The schedule analysis included the preparation of an as-built schedule, comparison of the baseline and allocation of responsibility for delays in support of a claim presented by the contractor.

Resident Engineer, Williamsburg Bridge Rehabilitation, NY, NY

Project included various maintenance repairs to the bridge structure. As a resident engineer and a member of the scheduling and project controls group, developed and maintained project data using Primavera software. As Scheduler, developed and updated master construction and procurement schedules, prepared monthly narrative reports, prepared progress schedules, developed and prepared performance and delay analysis and when required evaluated schedules in support of claims.

Scheduler, New York Advance Wastewater Treatment Program, NY, NY

As Scheduler, serving as a sub-consultant to the joint-venture team of Montgomery Watson / Hazen & Sawyer to perform master scheduling services for the construction of five new water pollution control plants for New York City's DEP as a part of the City's Advanced Wastewater Treatment Program. Responsibilities included master scheduling, construction scheduling analysis, coordination and detailed construction review.

New York Department of Environmental Protection, NY, NY

This program included the development of a comprehensive nitrogen management and implementation plan, the implementation of a pilot BNR program that included a sampling and analysis program, to allow NYCDEP to develop the most cost-effective and technically feasible methods for meeting current and anticipated nitrogen discharge permit limits. Provided program management and scheduling support to Metcalf & Eddy on the New York City Biological Nitrogen Removal and PO-55A test pilot programs. Responsible for the development and monthly maintenance of the program master schedule, using Primavera software; development and updating of project-specific design, analysis and construction schedules, and reporting requirements.

Felicia Pittman

LPE Enterprise, Administrative Assistant

Relevant Project Experience

Project Assistant, LPE Enterprise for MWH

- Provide administrative support to six Professional and Civil Engineers.
- Record and transcribe meeting minutes, prepare agendas, reports and files for meetings.
- Compose correspondence; prepare letters, memoranda and forms for general instructions.
- Print weekly and monthly reports specific to various project deliverables.
- Make sure budgets and scope of work is in accordance with city and state guidelines.
- Review/approve office and project related invoices.
- Monitor overhead and direct cost for multiple projects as well as office related expenses.
- Review weekly and monthly financial reports for errors that may delay our invoice/payment process.
- Submit change orders, proposals and general specifications to clients for review/comments.
- Organize an electronic and hardcopy filing system for project managers and engineers.
- Other responsibilities include scheduling meetings, conferencing calls via telecom, managing calendars, reviewing emails, travel arrangements, expense reports and other general administrative duties.

Administrative Assistant ,Geller Group Ltd

- Heavy and timely processing of 401k contribution/distribution for trading
- Prepared hands on tutorial material for weekly executive meetings.
- Create pie charts, fund comparison and scatter plots for use in sales meetings
- Draw proposals and fiduciary reviews for Ceo/Directors.

Educational Background

- Interboro College, 2001

Chronological History of Employment

- LPE Enterprise for MWH since 2005
- Geller Group, 2002-2005
- City Spring, 1999-2002
- Fidelity Investments 1997-1998

Relevant Licenses and Certifications

- Notary Public, New York State

- Prepare termination, loan, liquidation distributions packages for participants
- Daily calculation of trade agents (Schwab, Fidelity, Schwab Trust and Matrix) to match accuracy of buy/sell report before trading.
- Reconcile participant balances, provided reruns for quarterly statements
- Coordinate travel, answer phones and trained new employees

Administrative Assistant, City Sprint

- Resolved customer related issues concerning lost, Stolen or delayed packages
- updated the tracking system for all documentation received from clients
- Intake three hundred phone inquires daily for clients needing delivery services.
- Trained and monitored new employees to insure customer satisfactory

Administrative Assistant, Fidelity Investments

- Maintained spreadsheets for beneficiary changes for participants
- Retrieved fiche for employees from archive dept for quarterly update
- Intake Initiated calls to participants concerning basic application errors.

Jeremy Meattey

MWH, Project Controls

Relevant Project Experience

Project Controls Lead, Lima, Peru

- Develop Program Schedule, including bottom-up budget development from Resource-Loaded Schedule.
- Managed and provided Quality Assurance review for schedule and budget updates from Technical Teams.
- Assist with development of what-if acceleration schedules on Report Delivery projects.
- Coordinate international Project Controls Team from Broomfield, CO.

Project Controls Specialist, Broomfield, CO

- Provides portfolio management support for Management Consulting and Technology including resource and cost planning, budgeting and scheduling at the portfolio level.
- Provides BSG Management Consulting with project control support on their projects including client-specific reporting and analysis.
- Provide direct Project Control support to the emerging programs.
- Providing support to BSG business development pursuits and proposals.

Program Controls Lead, NYCDEP, New York, NY

- Coordinated management of NYC DEP Bureau of Engineering Design and Construction (BEDC) project portfolio (168 active projects, $15B Capital Plan) Master Schedule through complete lifecycle (Planning through Closeout).
- Coordinated management of NYC DEP BEDC project portfolio (168 active projects, $15B Capital Plan) Master Schedule through complete lifecycle (Planning through Closeout).
- Individually maintained a Master Schedule portfolio of 89 active projects including $1.6B Croton Water Treatment Plant and $1.3B Cat/Del UV Disinfection Plant in Primavera P6.2.1.
- Managed tasks and roles for Program Controls team of 4 members, served as primary client interface for team, and developed Program Controls position/strategy for Bureau.

Educational Background

- BS & Mechanical Engineering, University of Florida

Chronological History of Employment

- MWH since 2008

- Contributed to development of the BEDC Interim Cost Control Database to manage lifecycle Program/Project budget and cost performance utilizing Microsoft Excel, SQL Server 2005 and Crystal Reports.
- Developed Interim Schedule Control System for rollout of Program Master Schedule processes, Agency-wide. System consists of web-based end user interface, virtual MySQL database and Crystal Reports tool. System is to be rolled-out in June 2010.
- Coordinated with multi-disciplinary team for DEP PMIS, completed gap-analysis for BEDC Dashboard, completed final approved Dashboard wireframe mockups, helped define/evaluate/optimize BEDC Business Processes for workflow integration, including: Monthly Progress Update, Project Schedule/Cost Baseline, and Schedule Re-Baseline.
- Implemented "Interim Business Processes" for BEDC Project Management, including Schedule Re-Baseline, Delay/Gain Tracking, and Schedule Variance Issue/Risk Description.
- Produced Monthly Schedule and Cost Summary reports by Portfolio/Program/Stage.

Program Controls Specialist, Lake Charles, LA

- Produced an internal Monthly Program Report, in addition to a published Quarterly Program Report, utilizing Crystal Reports XI with data gathered from multiple sources, including Primavera P6 and Microsoft Excel/Access.
- Developed/monitored/controlled the Cameron Parish Disaster Recovery Program, consisting of 111 individual projects in various stages of start-up, design, construction and closeout.
- Engaged in monthly status meetings with 4 Project Managers.
- Performed daily upkeep of Program Schedules with Primavera P6, maintained and expanded Program Document Control Database with Microsoft SharePoint and assisted in the development of the Master Program Financial Database.
- Assisted with Program Financial analysis for Earned Value budget analysis.

Joseph Frissora, PE

MWH, Senior Project Manager

Relevant Project Experience

Project Manager, SCADA Task 1, NYCDEP, New York, NY

Mr. Frissora managed several phases of the NYCDEP Citywide Collection Facilities SCADA System, including implementation planning, conceptual design, and preliminary design. The project consisted of the four different design/construction contracts. When completed, the SCADA system will provide monitoring and control from wastewater pollution control plants and crew quarters for over 250 facilities, including pump stations, regulators, and flow monitoring sites. Mr. Frissora has returned to this project as project director, and will oversee design services during construction and construction management for three of the four construction contracts. Mr. Frissora is now the Project Director for the ongoing Design Services During Construction for the SCADA Project.

Project Manager, Trenton Filtration Plant Pre-Treatment and Facilities Improvement Project, City of Trenton, NJ

Mr. Frissora managed a multidisciplinary team for the design and construction of this project which involves implementing the results of a master plan and facility audit. He is providing coordination with the New Jersey Department of Environmental Protection and permit assistance. Major improvements include demolition of clarifiers, replacement of raw-water pumps and force main, new flash mixers and Superpulsator clarifiers, conversion of sedimentation basins to chlorine contact chambers, and replacement of existing high-service pumping equipment.

Project Manager, Pumped Storage Reservoir System, Brick Township Municipal Utilities Authority, Brick, NJ

Mr. Frissora managed design and construction of this new raw-water reservoir, including modifications to an existing pump station/intake; a new 5-mile, 42-inch-diameter pipeline; and conversion of a sand quarry into a 900-MG raw-water storage reservoir. He oversaw a multidisciplinary team of engineers, and provided coordination with NJDEP and permit assistance during design. This project was financed through the New Jersey

Educational Background

- BS & Electrical and Computer Engineering, Clarkson University

Chronological History of Employment

- MWH since 1998

Relevant Licenses and Certifications

- Professional Engineer – NY, NJ, DE

Infrastructure Trust Program.

Project Manager, Lackawanna Watershed 2000 CSO Program, Lackawanna County, PA.
Mr. Frissora managed this Program from 2008 through 2010. Lackawanna Watershed 2000 is a watershed improvement program that was undertaken in the anthracite region of Northeastern Pennsylvania to mitigate Acid Mine Drainage (AMD) and Combined Sewer Overflows (CSOs) polluting the Lackawanna River. The Program, funded by a grant from the USEnvironmental Protection Agency to Lackawanna County, entailed planning, design, and implementation of solutions to restore the environmental vitality of the Lackawanna River basin

Project Manager, Carl J. Olsen Water Treatment Plant Upgrade and Expansion, Middlesex Water Company, Edison, NJ.

Mr. Frissora managed the startup and closeout of the construction phase of this project. The project included increasing plant capacity from 30 to 45 mgd, four Superpulsator clarifiers, four filters, a chemical and lab building, pumping upgrades, backwash clarifiers, and a distributed control and SCADA system. He oversaw design services during construction, including a multidisciplinary team.

Project Manager, SCADA System Design, Ocean County Utilities Authority, Bayville, NJ.

Mr. Frissora managed installation of a new SCADA system at three wastewater pollution control facilities. The project included replacement of control systems, demolition of programmable logic controller and local control panel equipment, and modifications to motor controls for interface to a new plant-wide control system.

Project Manager, SCADA System at William Miller Water Treatment Plant, Brick Township Municipal Utilities Authority, Brick, NJ.

Mr. Frissora managed design and construction of a SCADA system and 33 remote sites, including booster stations, storage tanks, interconnections, and sewage pumping stations. Spread-spectrum, random-frequency radios were used to communicate between the remote sites and the plant, while fiber-optics were used to communicate between remote terminal unit's at the plant. The control room included four computers and a projection system. The SCADA system was networked into the plant's computer system.

Kevin Ellenwood, EIT

MWH, Project Manager

Relevant Project Experience

Project Manager, NYCDEP, Program Management Support

Mr. Ellenwood is currently assisting in the management of the Program Management Support project with the NYCDEP. His responsibilities include earned value management of the $11M budget, managing subcontractor invoices, and managing project scope, schedule and budget.

Mr. Ellenwood is managing the design of an electrical upgrade of a water pump station, including replacement of switchgear, motor control centers, and electric motor. His responsibilities include overseeing Bureau of Engineering Design and Construction (BEDC) engineers, reviewing contract drawings and specifications, and interfacing with the client Bureau.

Mr. Ellenwood is assisting in the management of the construction of mechanical and electrical equipment at ten riser shafts located in mid and downtown Manhattan, and the coordination with a City agency responsible for installation of water trunk mains at six of the shaft sites for connection to the City distribution system. His responsibilities include coordination of shop drawing review, processing of change orders, and management of project issues.

Mr. Ellenwood participated in the re-writing of the BEDC Project Delivery Manual (PDM). His responsibilities included issuing new standard operating procedures (SOPs), flowcharts, and forms related to monthly progress reporting, schedule and budget development, quality management, and project management plan development.

Project Manager, NYCDEP, Capital Program Management

Mr. Ellenwood assisted in the management of the Capital Program Management Support project with the NYCDEP. His responsibilities included earned value management of the $8.9M budget, managing subcontractor invoices, and preparing monthly reporting (progress reports, scope change management, estimate at completion).

Mr. Ellenwood helped coordinate a series of 10 training modules

Educational Background

- BS/BSc, Environmental Technology, Cornell University
- MS/MSc, Environmental Engineering, Cornell University

Chronological History of Employment

- MWH since 2004
- Parexel, 2001-2002
- Cu-Tech, 1997-2001

Relevant Licenses and Certifications

- Engineer in Training, NY 2005

related to project delivery and standard project management practices, delivered to municipal project managers, executive project managers and division chiefs. He also helped coordinate a series of 5 technical modules focused on discipline reviews and coordination. Specifically, Mr. Ellenwood helped develop module content, coached content experts on delivery of the modules, and facilitated training sessions.

Mr. Ellenwood coordinated subconsultant development of Permit Resource Division guidelines and templates, and staff augmentation. He contributed to the development of Permit Tracking Database (PTD) training for BEDC project managers, In-House Design staff, and consultants, improvements to PTD reports and tools, and improvements to PTD business processes.

Project Manager, St. John's Creek Restoration, PA

Mr. Ellenwood led an evaluation of the St. John's Creek watershed. Results of the evaluation were used to design the repair and relocation of the creek, which loses baseflow to underground mines, and to design the relocation of a combined sewer and improvement of a combined sewer overflow which discharges untreated combined sewage to the creek. Repair of the creek will reduce the amount of abandoned mine drainage impacted flow entering downstream water courses. Mr. Ellenwood worked cooperatively with the regulatory agencies including the US Environmental Protection Agency and the Pennsylvania Department of Environmental Protection to work through the permitting of the project. His responsibilities included coordination of two design teams and two modelling teams, schedule and budget development and oversight.

During the preliminary phase of this project, Mr. Ellenwood led the modeling effort to convert, update, and calibrate a hydraulic model for seven CSOs in a combined collection system. He incorporated geographic information system (GIS) and survey information into building of model. Model results will be used to design a sewer sized to accommodate combined flow from three combined sewer overflow (CSO) facilities, and to determine chamber dimensions for a relocated CSO facility.

Project Manager, TWW Asset Valuation, City of Trenton, NJ

As project manager, led effort to evaluate the City of Trenton distribution system and associated assets as part of an initiative to manage City of Trenton assets and provide an opinion of value for possible sale. Assets included in valuation were 250 miles of pipeline and appurtenances, elevated storage tanks, booster stations, City-owned property and service connections.

Michael Giaramita

Group PM[x] , Program Principal

Relevant Project Experience

Principal-in-Charge, Logan International Airport, Boston, MA

Principal-in-Charge of the Owner-led Program Management Team responsible for managing a host of projects, including new terminal building, parking garage, roadways, and various airside and landside improvements. Successfully completely all projects on time and on budget.

Principal-in-Charge, American Airlines Terminal, JFK International Airport, Jamaica, New York

Principal-in-Charge of the Owner-led Program Management Team responsible for managing American Airlines' $1.3 billion capital construction program at New York's JFK International Airport. This multi-year project involved the demolition of facilities within existing Terminals '8' and '9' to allow for construction of concourses, a new terminal, a new roadway system, a federal inspection station, 36 jet gates and expanded retail and support space. Mr. Giaramita implemented innovative owner-controlled change order and scheduling management which resulted in owner savings of over 30 percent (worth tens of millions of dollars) on change orders submitted.

Denver International Airport, Denver, Colorado

Mr. Giaramita was requested to join the project team when the project was approximately 50% complete. He reorganized several departments and instituted the Department of Program Management Services to facilitate a proactive and collaborative work environment. He supervised a staff of over 80 in scheduling, time-impact schedule analysis, estimating, negotiations and claims analysis. Mr. Giaramita provided leadership to settle over 22,000 change issues worth in excess of $350 million. He developed integrated construction schedules to identify potential conflicts and aid in their management. Also, Mr. Giaramita was responsible for the development and implementation of a program-level change tracking system, the central repository and reporting mechanism for the more than 35,000 change issues worth over

Educational Background

- Bachelor of Science, Colorado State University

Chronological History of Employment

- Group PM[x] since January 2010
- Stantec, 2008 – January 2010
- Jacobs/Carter & Burgess, 2000 – 2008
- O'Brien Kreitzberg, 1992 – 2000
- Barba Int., 1991 – 1992
- S&B Engineers, 1990 – 1991
- Metropolitan Transit Authority of Harris County, TX, 1983 – 1990

Relevant Licenses and Certifications

$520 million. Was one of four senior staff members involved in directing the Airport to completion.

Project Director, New Jersey Department of Transportation, Analysis of Capital Program Delivery, Trenton, New Jersey

Project Director responsible for the initial phase of this project, directed the project team in analyzing the effectiveness of existing processes and systems. The team made recommendations to move projects more expeditiously through the identification, evaluation, planning, design, bid/award and construction cycles, at the lowest possible cost and least amount of time, with each step developed under optimum control and sound management practices.

Principal-in-Charge, World Trade Center Recovery Project, New York, New York

Principal-in-Charge. Served as a member of the Plaza/Turner team, which was assigned a portion of the World Trade Center recovery work following the attacks of September 11, 2001. Work focused on the removal of the debris field at and around WTC 7, a 47-story, 2 million-square-foot steel frame structure. WTC 7 recovery work initially ran 24 hours / day, 7 days / week, comprised of two 12-hour shifts per day. Mobilized personnel and began on-site coordination with all subcontractors, general contractors, and all local, state and federal agencies.

Principal-in-Charge, Path Station Reconstruction, New York, New York

Principal-in-Charge of the Owner-led Program Management Oversight (PMO) Team working directly for the FTA overseeing the reconstruction of this facility which was fallen from the September 11, 2001 attack. Our role was to review and report on a host issues, mostly related to cost and schedule performance by the grantee.

Principal-in-Charge, MTA ($16 billion Capital Program), New York, New York

Principal-in-Charge of the Owner-led Program Management Team responsible for overseeing the MTA's $16 billion capital program spanning seven years. Answering directly to the MTA Chairman of the Board, reporting any deviations on projects which varied from best practices with respect to cost, schedule and quality management. During the seven year term the MTA awarded more projects than any other time in history.

Michael Musgrave, JD

MWH, Senior Program Manager

Relevant Project Experience

Project Principal, Denver International Airport, Construction and Claims Management, Denver, CO.

As Project Principal, Mr. Musgrave led the O'Brien Kreitzberg team assisting the airport on several projects. Projects included the fuel farm, automated people mover, and parking structures. O'Brien Kreitzberg worked directly in support of the engineering and legal staffs in areas of procurement, construction management, and claims support.

Account Executive, O'Brien Kreitzberg Inc. Airport Tenant Improvements, San Francisco International Airport, San Francisco, CA; Los Angeles International Airport, Los Angeles, CA; and Dulles International Airport, Washington, D.C.

As Account Executive, Mr. Musgrave served United Airlines in support of its installation of a new baggage system at three international airports. Assignments included the development of a new procurement process that requires greater contractor performance and higher accountability, review of bid specifications and the negotiation of final construction contracts, contract administration, schedule review, and on-site inspection.

Manager of Public Works, Denver International Airport, Denver, CO.

As Manager of Public Works, Mr. Musgrave was responsible for the successful completion and opening of the Denver International Airport. Mr. Musgrave managed the airport's program management team and was personally responsible for the negotiation of over $100M in change orders, design, and construction of an Alternate Baggage Handling System. In addition, Mr. Musgrave represented the City during audits and reviews of the airport project conducted by the U.S. General Accounting Office, Federal Aviation Administration, Department of Transportation, and congressional subcommittees. Mr. Musgrave served as a member of the airport's financial team who successfully marketed over $3B in revenue bonds. Mr. Musgrave was also responsible for public construction and operation of

Educational Background

- JD, Law Ohio Northern University, Petit School of Law
- BA, Political Science, Business, University of Northern Colorado

Chronological History of Employment

- MWH since 1998

Relevant Licenses and Certifications

- Attorney at Law, CO

Stapleton International Airport in the delivery of basic services.

Program Manager, Redevelopment of the Former Stapleton International Airport, Denver, CO.

Mr. Musgrave managed this $1B project, which converted a former airport site into a mixed-use master planned community. The project is the largest urban infill project in the nation, and ultimately will include 12,000 homes, a senior housing project, more than 13 million sf of commercial, industrial and institutional space, and 1,180 acres of parks, trails, recreation facilities and natural areas.

Nick Haralambidis, LEED AP

Group PM[x] , Project Manager

Relevant Project Experience

Senior Project Manager, Bronx Commmunity College, Bronx, New York

As a Senior Project Manager, oversees Construction Management services for this $75 million Campus Wide Utility Upgrade. The upgrade includes removal of existing boilers, chillers, cooling towers, and distribution pumps in the Selective Energy Plant and two stand-alone buildings. The campuses twenty-two existing buildings and one new building will receive new power distribution, steam, hot and chilled water (new 4pipe system) through heat exchangers and steam generators, BAS data loop, and campus internet distributed throughout the campus in 6,000 LF of new utility distribution system. This upgrade will convert the old Selective Energy Plant into a Central Plant. The two stand-alone buildings will also receive new equipment and be tied-in to the CP. Several of the old boilers required asbestos abatement of insulation and built-up brick. Replacement equipment will include new energy efficient, chillers, cooling tower, steam generators, boilers, and emergency generator.

Senior Project Manager, Sky Ute Casino-Resort, Ignacio, Colorado

Senior Project Manager for a 320,000 sq ft casino-resort with 160 key hotel, consisting of three new buildings, RV park, new site amenities and rework of existing highway totaling $180 million with $131 million in construction. Supervisor for a field staff of five. Oversight of estimating department in reviewing all bid packages and negotiations with general contractor. Responsible for budget, monitoring schedule, monthly reports, coordination of end users, and all owner contractors/consultants (low voltage, surveillance, audio/visual, commissioning agent), review of all payment applications. Managed bidding, selection, installation, and coordination of FF&E/OS&E design team. Prepared RFP's, PCO review/negotiations, design review, coordination with public utilities, and other surrounding projects.

Educational Background

- Bachelors of Architectural Science, New York Institute of Technology, Islip, NY
- Various courses in Construction Management, Arizona State University, Tempe, AZ

Chronological History of Employment

- Group PM[x] since October 2010
- Stantec, 2008 – October 2010
- Parsons – 3D/International, 1999 – 2008
- Durrant Architects, 1998 – 1999
- Structural Development, 1996 – 1997

Relevant Licenses and Certifications

- Leadership in Energy and Environmental Design (LEED) Associate Professional, US

Maintained internet based project management software and responsible for updating finance management system.

Project Manager, Apache Boulevard Police Substation and Evidence Facility, Tempe, Arizona

Project Manager from pre-design phases throughout construction for an area redevelopment project of multiple buildings totaling 80,000 sq ft and $23 million total project budget with $19 million in construction costs. Created preliminary budget estimate and design specifications prior to selection of CMAR firm. Created questionnaire for CMAR interview and presentation process. Managed design, value engineering, design review, end user needs/wants, and FF&E/OS&E design. Reviewed RFI's, and submittals prior to architect review for completeness. Responsible for tracking contractors progress with project schedule, reviewed all invoices, budget control, PCO review/negotiations, and QC. Responsible for civil installation review per plan and specifications. Created move/orientation package for Police Department. Negotiated demolition of neighbor's existing property fence and relocation of neighboring non-code compliance trailer park. Maintained internet based project management software.

Mohave Educational Cooperative Job Order Contract Program, Various Cities/Public Entities, Arizona

Involved in starting and incorporating policies of a Job Order Contracting program providing at-risk construction services for small to medium size projects covering a wide variety of trade disciplines. At inception of program responsibilities included Estimator, Project Manager and Superintendent for all projects. Construction responsibilities included scoping out work, RS Means estimating, and buyout.

Estimator, Scottsdale Unified School District No. 48, Scottsdale, Arizona

Estimator for $120 million, three-year bond program consisting of renovating, remodeling and retrofitting 29 existing campuses, replacement of one elementary school and the new construction of a middle school and an elementary school.

City of Phoenix 2000 Bond Election, Phoenix, Arizona

Created cost models and budget sheets based on historical project information for various facilities (police, fire, library, office, recreation centers and others) to assist in the establishment of the $754 million 2000 Bond Election. Trained City of Phoenix and 3D/International staff to use and update cost modeling database.

Nure Aiza

Toll International, Project Controls Specialist

Relevant Project Experience

Primavera Expert

- Implemented Primavera Project Manager for Construction and delivered CPM scheduling, P6 and Earned Value Management training for a variety of clients including Sciame Construction, Microdesk, CPM Consultants.
- Served as scheduler for the Madison Yard structures in Manhattan. Chaired weekly schedule meeting, prepared and presented six-week look ahead schedule for Madison Yard structures to the construction management team. Collected monthly progress from contractor team project engineers and updated monthly schedule for submission to the client. Conducted time-impact analysis for construction schedules and assisted the project manager in the preparation of recovery schedules to ensure milestones will be achieved as expected by re-sequencing the job and updating productivity of resources. Prepared construction schedule graphs for presentation at executive meetings and evaluated liquidated damages and penalties based on contract documents and potential delays.
- Served as an expert in Capital Program Management support for New York City Department of Environmental Protection. He collaborated with client staff in optimizing project management databases and internal project management processes for New York City School Construction Authority. He is an expert in benchmarking and workflow design and collaborated in the change order management initiative for New York City wide Advanced Water Treatment and Bionutrient Removal Projects. He is an independent advisor in budget management and capital program planning. Developed and conducted training programs for over 50 professionals in Critical Path Method (CPM) scheduling and in the use and implementation of enterprise project management systems that utilize Primavera P6 V7.0
- Served as management liaison for interdepartmental operating analysis of design and construction management

Educational Background

- Masters of Science Construction Management, MIT
- Masters in Project Manager, Northwestern University
- Bachelor of Science in Civil Engineering, University of the Americas, Mexico

Chronological History of Employment

- Toll Int'l LLC since 2007
- PMA Consultants LLC 2002-2007
- MCI Worldcom 2000-2002
- Modern Continental Construction 1999-2000

Relevant Licenses and Certifications

- Professional Engineer – Mexico

at Port Authority (P.A.). Represented P.A. at Interagency Benchmarking Collaborative with NYCT, GSA, Amtrak, DDC and DOT in the development of comparative construction management practices and scheduling metrics. Implemented monitoring of design staff budgets for new $2 billion downtown transportation center at Port Authority. Introduced monthly workload analysis of design projects by combining SAP financial data with Primavera schedules. Implemented Primavera web-based project management system at Columbus Regional Airport Authority in Ohio.

In 2003, he was the key expert consultant in award winning Primavera P3e/c implementation and migration at Port Authority. Also volunteered in the organization of first international conference for PMI-College of Scheduling in Montreal, Canada. Implemented web-based integration of capital planning budget project management at Port Authority as part of operating efficiencies initiative to save Port Authority $100 million out of its $1.7 billion 2006 capital plan. Retained by Primavera Systems to develop sample construction industry schedules included with P3e/c software

Senior Project Controls Specialist

Corporate Scheduler for construction of data centers to house telecomm switching equipment in ten major cities. Delivered project management training based on PMI's Project Management Body of Knowledge (PMBK). Facilitated meetings to develop new service delivery methods and documented enterprise wide business processes

CPM Scheduling Engineer

Main project scheduler and cost control specialist for Ft. Point Channel underground water tunnel for MBTA. Project planner and construction estimator for highway projects and construction bid support.

Design Lead Engineer

Coordinated substructures design and monitored construction for mass transit projects in Mexico City and Puerto Rico and provided geotechnical and structural engineering support services for underground construction activities.

Seth Yoskowitz, PE

MWH, Project Manager

Relevant Project Experience

Program Training Manager – Client: Panama Canal Third Set of Locks Project

Mr. Yoskowitz currently serves as the Training Manager for the Panama Canal Third Set of Locks Project and developed the Quality Management Training Program. The purpose of the QMP Training Program is to provide key training on processes and critical skills to team members located in geographically disperse design centers. Training is delivered on a wide range of topics to six infrastructure design centers spread across North America, South America and Europe.

Task Leader, Capital Program Implementation –City of New Orleans

Mr. Yoskowitz served as a Task Leader in the City of New Orleans Recovery Program. In this capacity, Mr. Yoskowitz lead the team charged with helping the City of New Orleans Office of Recovery map out key project management-related business processes that exist for Hurricane Katrina related reconstruction and restoration projects. Mr. Yoskowitz worked with the Executive Council to the Mayor of New Orleans developing the process for quarterly reporting of the Capital Budget to City Council. Mr. Yoskowitz also worked with the City to refine the processes for establishing prioritization schemes for the various Recovery Program project opportunities. Key recent business process mapping and evaluation efforts on behalf of the City include: Procurement, Project Closeout, Invoice Payment and Change Order Processing

Asset Management Program and Training Leader – United States Air Force

Mr. Yoskowitz worked with the United States Air Force developing an asset management program for all civil engineering and base infrastructure related functions for all bases and installations across the Air Force. Mr. Yoskowitz served as the Training Task Leader and On-Base Workshop Facilitator for Air Force personnel participating in the asset management program providing instruction on how project participants will lead others in

Educational Background

- Master of Science, Civil Engineering, Stanford University
- Bachelor of Science, Civil Engineering, Stanford University

Chronological History of Employment

- MWH since 1998

Relevant Licenses and Certifications

- Professional Engineer – MD

gathering and utilizing existing asset data. The Air Force maintains infrastructure-related data in many separate databases. Because decisions need to be made at the base-level, Major Command level and the Air Force HQ level, collecting all of the required data is difficult. The overall goal of the effort was to define a set of data processes and supporting data infrastructure that will allow easier summary reporting of past, present and future facility and civil engineering needs and expenditures. Mr. Yoskowitz worked with the team to map out the required data processes and flows that will enable the Air Force to manage asset data at the base, command, and HQ levels.

Project Management Training – NYC Dept. of Environmental Protection

Mr. Yoskowitz worked with the New York City Department of Environmental Protection (NYCDEP) on their organizational assessment and strategic transformation of their capital program. NYCDEP was seeking ways to improve how its capital program, one of the largest in the world, is planned and executed. Mr. Yoskowitz was part of the assessment team that conducted benchmarking against other infrastructure entities, developed options for organizational structures, evaluated business process improvements, and assisted with strategic planning. This organizational assessment study led to the implementation of the NYCDEP Capital Program Workforce Development task for which Mr. Yoskowitz served as the Workforce Development Task Leader. In this implementation capacity, Mr. Yoskowitz lead the team charged with helping NYCDEP establish a workforce development program to provide project and construction management training to key staff involved in the capital program.

Program and Project Management Training – City of Kansas City, MO

Mr. Yoskowitz worked with the City of Kansas City's Capital Improvement Management Office (CIMO) to develop and implement their organizational goals around workforce development and leadership training. The client was a new department responsible for managing the capital improvements projects for the City's aviation, downtown redevelopment, utility, and recreation entities with a goal of developing into a first-class project management organization. Mr. Yoskowitz worked with Kansas City to identify specific skills as the core competencies targeted for improvement. The implementation involved development of a series of inter-related courses geared for PMs and other leaders in the organization. Mr. Yoskowitz developed and delivered the following course topics: project management, construction management, quality management, negotiations, communications, and leadership skills.

MWH

BUILDING A BETTER WORLD

October 21, 2010

Tim Volonakis, Manager
The Port Authority of New York and New Jersey
One Madison Avenue, 7th Floor
New York, NY 10010

Reference: Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis during 2011, 2012, 2013 and 2014 (RFP Number 22388)

Dear Mr. Volonakis:

In response to Section III, Item J of the Request For Proposal for the above referenced solicitation, MWH offers the following clarifications with the form of agreement provided in the RFP.

1. Paragraph 6, Page 2: If selected, MWH would request clarification relative to the Standard of Performance required. To remain in compliance with our insurance coverage, MWH will provide the standard of performance normally employed by professional consultants providing similar services.

2. Paragraph 8, Page 2: MWH understands the intent of this paragraph to mean that the Authority can request a different level of personnel based on a specific employees salary or the Authority may impose a cap on a level of personnel provided with these services. If selected, MWH request clarification on this paragraph.

3. Paragraph 10, Page 5: Our understanding is that billing for services would be based on a hourly rate for each hour of service provided. If selected, MWH would request clarification of portion of this paragraph that states that the Authority will estimate the amount of compensation earned.

4. Paragraph 12 and 13, Page 6: MWH would take exception to these paragraphs to the extent that MWH's communication of information related to the Services are compelled by law or valid order of any court of other tribunal or agency having jurisdiction over the matter in question.

1412 Broadway
Suite 1620
New York, NY 10018

TEL 646 827 4100
FAX 646 827 4101
www.mwhglobal.com

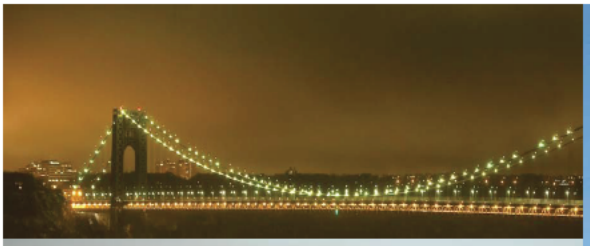
5. Paragraph 22, Page 9: If selected, MWH would request clarification that indemnification and limitation of liability throughout subparagraphs A-D applies to the extent that such claims result from Consultant's negligent performance of the Services.

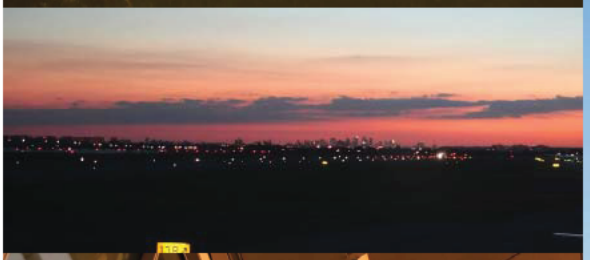
6. Paragraph 23, Page 10: MWH does not carry $5 Million in auto liability insurance, but can offer excess coverage and umbrella coverage that meets the $5 Million requirement. This also applies to the $25 Million auto liability insurance requirement for airside services.
   MWH considers its insurance policies to be proprietary and does not provide copies of such information to our clients. MWH can provide evidence of insurance in the form of certificates and copies of endorsements as necessary.

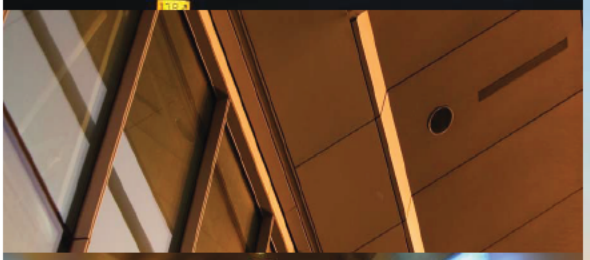
7. Paragraph 28, Page 16: Similar to comment number 4 above, MWH would take exception to this paragraph to the extent that any disclosure of information is required by law or valid order of a court or other tribunal having jurisdiction over the matter.

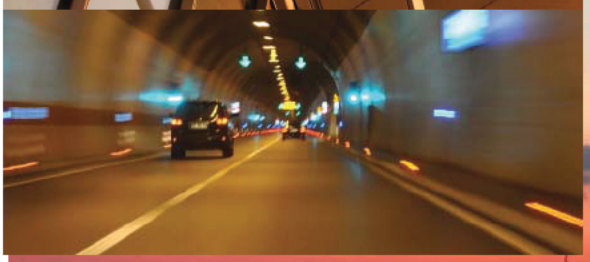
Sincerely,

Jerry Notte, PE
President
MWH Americas, A New York Corporation









Request For Proposal

Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014
RFP #22388

Submitted to:

RFP Custodian
The Port of Authority of NY and NJ
One Madison Avenue, 7th Floor
New York, NY 10010

Submitted by:
Netta Architects
25 Route 22 East, Suite 290
Springfield, NJ 07081
T: 973-379-0006
F: 973-379-1061

NettaArchitects

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Introductory Letter

October 20, 2010

The Port Authority of NY and NJ
One Madison Avenue, 7th Floor
New York, NY 10010
Attn: RFP Custodian

RE: RFP #22388
Request for Proposals for the Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014

Dear RFP Custodian:

The firm of **Netta Architects** is submitting the following Request for Proposal for your consideration to provide Professional Project Management Services on a "Call-In" Basis during the years of 2011 through 2014.

Netta Architects, established in 1993 and located in Springfield, New Jersey is a successful award winning public sector architectural firm that holds an excellent reputation, with an impressive client list on a growing portfolio of complex projects as evidenced by our experience, knowledge and attention to detail creating superior, sustainable architecture through innovative thinking and exceptional design paired with unmatched client service.

Netta Architects has provided a full range of professional services to a large number of Government Agencies. Additionally, the firm has provided design services for the Authority's New York Airport Group. Currently, we are involved in a variety of projects for the following agencies: The Port Authority of New York and New Jersey, New Jersey Transit, the Counties of Union, Essex, Passaic, Middlesex and Somerset as well as the local municipalities of Newark, Elizabeth, Linden, Roselle, Roselle Park, Union, Piscataway, Berkeley Heights and the Union county Improvement Authority.

Netta Architects has thoroughly reviewed this Request for Proposal, and we are confident that we can handle any potential assignment. In addition to our diverse project experience, Netta Architects is intimately familiar with all Port Authority Standards. We have developed a strong relationship in the past and would welcome the opportunity to continue that relationship. We look forward to your favorable response.

Respectfully submitted,

Nicholas J. Netta, AIA, NCARB
Principal

Submission Requirements

Firm's Information and Key Contact Person

Firm Name:

Netta Architects
25 Route 22 East
Suite 290
Springfield, New Jersey 07081
Phone: (973) 379-0006
Fax : (973) 379-1061
Email: Info@nettaarchitects.com

Netta Architects has been in business for a total of 17 years under the direct management of Nicholas J. Netta, AIA, NCARB as described below:

Netta Architects, LLC (for 8 years) is a Limited Liability Company, designated as an S-Corp registered in the State of New Jersey, effective June 3, 2002 Nicholas Netta is 100% stockholder); previously d/b/a

Nicholas J. Netta Architects and Associates, (for 2 years) a Limited Liability Company as a sole proprietor holding 100% ownership; since February 1, 2000; and previously d/b/a

Nicholas J. Netta, R.A., (for 7 years) a sole proprietor, since 1993 holding 100% ownership

Key Contact Persons:

Nicholas J. Netta, AIA, NCARB
Principal of the Firm
Email: Nnetta@nettaarchitects.com

Francisco J. Melendez, AIA
Vice President of Operations for the Firm
Email: Fmelendez@nettaarchitects.com

Netta Architects
25 Route 22 East
Springfield, NJ 07081
Phone: (973) 379-0006
Fax: (973) 379-1061

ATTACHMENT B

PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014

AGREEMENT ON TERMS OF DISCUSSION

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority's Freedom of Information Policy and Procedure adopted by the Port Authority's Board of Commissioners on November 20, 2008, which may be found on the Port Authority website at: *http://www.panynj.gov/corporate-information/pdf/Freedom-of-Information-Policy-and-Procedure.pdf,* not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

Netta Architects
(Company)

(Signature)

Principal
(Title)

October 20, 2010
(Date)

ORIGINAL AND PHOTOCOPIES OF THIS PAGE ONLY.
DO NOT RETYPE.

ATTACHMENT C

COMPANY PROFILE

REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

1. Company Name (print or type):

   Netta Architects

2. Business Address (to receive mail for this RFP):

   25 Route 22 East, Suite 290

   Springfield, NJ 07081

3. Business Telephone Number: (973) 379-0006

4. Business Fax Number: (973) 379-1061

5. Firm website: www.nettaarchitects.com

6. Federal Employer Identification Number (EIN): [redacted]

7. Date (MM/DD/YYYY) Firm was Established: 02 / 01 / 2000

8. Name, Address and EIN of Affiliates or Subsidiaries (use a separate sheet if necessary):

   Not Applicable

9. Officer or Principal of Firm and Title:

   Nicholas J. Netta, AIA, NCARB Principal

10. Name, telephone number, and email address of contact for questions:
    Francisco J. Melendez, Sr., AIA, Vice President of Operations (973) 379-0006

    Fmelendez@nettaarchitects.com

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? ☐ Yes ☒ No

    If yes, please attach **Port Authority** certification as a part of this profile.

    If your firm is an M/WBE not currently certified by the Authority, see the Authority's web site – http://www.panynj.gov/business-opportunities/supplier-diversity.html, to receive information and apply for certification.

Key Personnel Resumes

Nicholas J. Netta Resume

Nicholas J. Netta, AIA, NCARB
Principal

Professional Registrations: New York, New Jersey, Florida, Pennsylvania, Kentucky, Oklahoma

Professional Experience: 23 years

Education:
New Jersey Institute of Technology
School of Architecture
Bachelor of Architecture, 1986

Professional Affiliations:
American Institute of Architects
National Council of American Registration Boards
Restore National Trust for Historic Preservation
Board Member - New Jersey State Board of Architects

Background: Mr. Netta is an Architect with over twenty years experience in the architecture and construction industries. Mr. Netta is the principal of Netta Architects. He has shown a unique ability to network his firm by offering personalized performance based service; He maintains an efficient team of architects, planners and designers; under his direction, Netta Architects strives to manage and deliver projects within budget and on schedule. Mr. Netta has gained an excellent reputation in managing various types of projects for a large number of public and private clients including public safety, transportation, historic restoration, medical, education, commercial and residential project types.

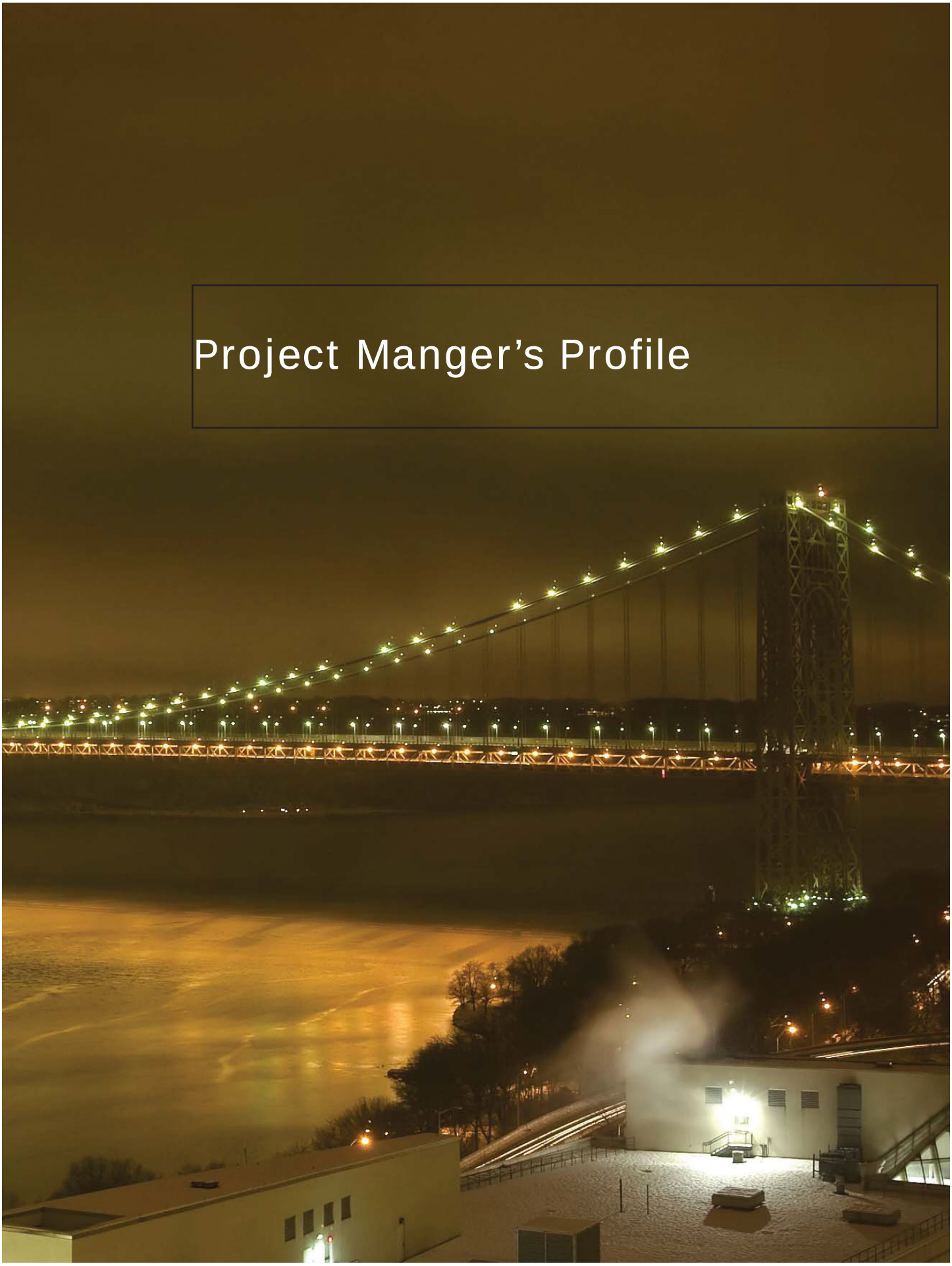
Neville G.W. Crooks Resume

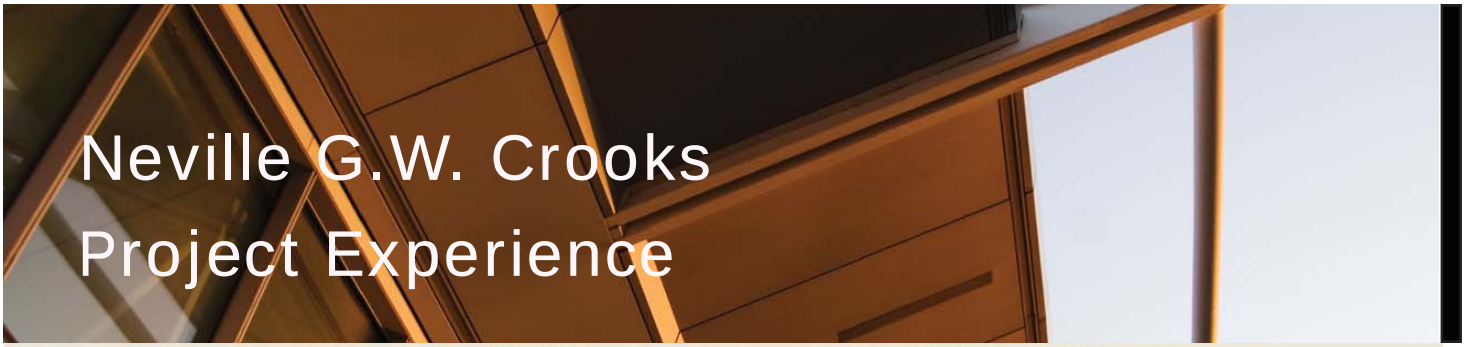
Neville G.W. Crooks.
Director of Construction Services

Professional Registrations:	New Jersey
Professional Experience:	33 Years
Education:	New Jersey Institute of Technology Bachelor of Science Civil Engineering Technology Construction and Contracting Construction Engineering Technology - NICET - Associate Engineering Technologist New York Community College A.A.S. Construction Technology

Background: Mr. Crooks has over 30 years of experience in consulting engineering with extensive experience in construction management, project and resident engineering for new construction, rehabilitation / replacement of various infrastructures. His expertise encompasses multi-disciplinary technical inspection of construction for compliance with contract documents and staff supervision. Mr. Crooks has a very strong background in airport projects, runway / taxiway expansion, replacement and rehabilitation, wastewater and city water treatment plant design & construction, bridge construction and rehabilitation, utilities and micro-tunneling.

Project Manger’s Profile





Neville G.W. Crooks
Project Experience

JFK International Airport Redevelopment Program, Jamaica, NY (2007 - Present) - $10 Billion: (TFO Project Value $60M) As a senior airport engineer/project manager in the Tenant Facilities Office**,** manages the Airport Tenant Alteration Applications process for construction, renovation and improvements and issuance of approvals for Tenant Maintenance. Handles several Federal Aviation Administration Projects, including ASDE-X, Baseline and Gate coverage, ATCT generator replacement, flight simulator system D & C, Phase 1 (Airport Surface Detection Equipment – Model X), ATCT EMG. Power critical bus circuit breaker sub panel and other special projects. All FAA Systems maintenance and improvement projects at JFK. Buckeye Pipeline leak remediation, 110,000sf $25M Flying Food Group Kitchen Facility, Install 1 mile+ 500MCM Electrical Cable from Sub-station to S&C switch-gear & transformers etc. Construction of the first Shell Hydrogen Fueling Station at JFK, Clean & TV major sanitary lines etc,

John F. Kennedy Airport, Jamaica, NY (2001 – 2005) – (TFO Project Value $55M): Airport Engineer in the Tenant Facilities Office – Projects included: New Large Aircraft (NLA) R/W & T/W Rehabilitation, & Improvements, New 30” Sanitary Sewer Main Design and Construction (Micro-tunneling), Airport Bridges Replacement & Repairs, R/W & T/W Drainage, Storm Water Outfall Rehabilitation/Replacement, Knee Wall Demolition & Construction, Alternate Source of Landscape Water Supply, Terminal 4 Compound Remediation, Satellite & Bulk Fuel Farm LT Remediation, Stairs to Snow Desk/Equipment Area Design and Construction, Butler Building/#215 Design & Construction, Pump Stations Rehabilitation, Underground Storage Tank Removals, Building #14 Parking Lot Site Drainage Improvements and Fencing, Airport Security Projects, ILS Improvement, UMS (PA–AOA Security Clearance).

Baltimore PWD (2005 - 2006) - $21,000,000: Construction of New Interceptor Sanitary Sewer for the City of Baltimore MD. The construction methods used was Open-cut and micro-tunneling including bypass pumping and construction of diversion structures, Relocation / Restoration of Utilities, Roadway & Curb, and Park Areas.

City Infrastructure & City Water - $46,000,000: New water mains and sewer lines and appurtenances for the Borough of Staten Island, NY – micro-tunneling. Responsibilities included establishing contract quantities and payment, change order negotiations, sketches, liaison between Homeowners and Contractor and Contract coordination, bridge replacement and expansions, etc. New water main for Borough of Staten Island, City of New York, City DEP - Bureau of Water Supply and Wastewater Collection. Installation of new water main on Richmond Avenue, Forest Avenue and Clove Road. Included all appurtenant work. Installation of 48”, 20” and 12” diameter pipe and appurtenances, e.g., valves, regulators, hydrants, manholes and chambers, etc. Interface with all existing utilities, design changes and sketches, change orders, reports and record keeping, construction inspection, testing and restoration, etc.

Neville G.W. Crooks

Project Experience

New Sewer System & Pump Station & Waste Water Pollution Treatment & Air Quality - $11,000,000: East Millstone Sewer Project, Somerset, New Jersey – Construction inspection of 3.5 miles of local sewer lines, two pump stations & main force, liaison between the community, contractor, utility companies and various agencies. Handled contract compliance, shop drawing reviews, job meetings and records, correspondence, progress update, work sequence coordination, pavement of roads and restorations, etc. Evaluate claims and negotiate change orders, start up operations, etc. Water Pollution Control Plant, Hamilton Township, New Jersey - Chemical Storage Tank Replacement at $1.3M in March of 1993. Electrical Substation Modification and Expansion - $3.4M in April 1992. Phase II Primary Clarifiers and Trickling Filter Odor Control Facilities -$1.13M in February 1992. Rotating Biological Contactors Supplemental Aeration System and Crane Storage $1.81M in July 1992. Modification to 1954 and 1968 Digester Facilities $4M in September 1990. Construction inspection, cost estimating, change order approval and negotiations, review and approval of shop drawings, approval of progress payments, approval of contract modifications, job
meetings and records, progress update, contract compliance and record documents, etc.

City Water $1,500,000: Old Croton Aqueduct, Village of Ossining, NY - Cleaning, repair and bulkhead construction. Reviewed and approved shop drawings and inspected the meter chamber and pump station. Installation of large valves and meters.

Waste Water Treatment $2,000,000: International Flavors and Fragrances, Union Beach, NJ – Additions and Modifications to the existing Aroma Ingredient Plant Construction inspection cost estimating and change order approval and negotiations etc.

Waste Water Pollution Control Plant - $4,000,000: Water Pollution Control Plant, Hamilton Township, NJ - 16mgd plant; construction inspection, cost estimation, and change order negotiations for the primary sludge force main and pump station, head-works and odor control system, and hypo chlorite systems modifications.

Waste Water Pollution Control Plant - $40,000,000: Waste Pollution Control Plant, Brooklyn, NY - 100 mgd plant; construction of primary clarifiers and modernization of the degritter building. Partial payment approval, estimating, field orders, change order, job meetings and records progress update, shop drawing reviews, liaison between community and contractor, inspection, contract compliance and contractor claim negotiation.

Waste Water Pollution Control Plant - $42,000,000: Coney Island Water Pollution Control Plant, Brooklyn, NY – Engineering coordination and approvals for construction of sludge thickening and digestion facilities. Coordinate four prime contractors, submittals, shops drawing reviews, correspondence and approvals and problem resolution.

Neville G.W. Crooks

Project Experience

Waste Water Pollution Control Plant - $98,000,000: Phase II Primary Treatment Systems, Passaic Valley Sewage Commissioners, Newark, NJ - Civil and mechanical inspection for construction of primary clarifiers. Storm and sanitary sewer installation, road and bridge construction, storm drain cleaning, creek drainage and cleaning, demolition of structures, modernization of wet weather pump station, mass excavation, shoring and bracing, pile driving, testing, extracting and pay length estimating, reinforced concrete construction.

Waste Water Pollution Control Plant - $350,000,000: Phase I Secondary Treatment System, Passaic Valley Sewage Commissioners, Newark NJ - Construction inspection of oxygenation tanks, return and waste sludge pump station for the 300 mgd sewage treatment plant. Pile driving, pile pay-length calculations, rock anchor layout, drilling, grouting and testing. Reinforced concrete and masonry construction structural steel erection, HVAC installation and insulation, mechanical piping systems for oxygen, potable and non-potable water lines, and sludge, storm drains, sewer and sanitary piping. Installation of large pumps, including screw pumps

Building Renovation - $3,000,000: Hall Neighborhood House Childcare Facility, 430 and 500 Street, Bridgeport, CT -renovation/conversion of 42,000 sq. ft. Office space into a childcare facility. Job duties included efforts to negotiate sub-contracts, secure permits, negotiate change orders, attend progress meetings, correspondence, demolition and removal. Other tasks included remediation of contaminated soil, asbestos removal, project planning and sequencing, process payments, estimating, procurement of labor, material and equipment and coordination of the various trades.

Horseneck Road Bridge, Morris and Essex County, New Jersey - $3,200,000: Construction of a New Bridge over the0 Passaic River between Montville and Fairfield Township. Responsible for material purchases, equipment procurement, labor force and work crews. Coordinate utility relocation, traffic controls, etc. Other tasks included process payment and change order negotiations, updating the progress schedule, project planning, coordination of subcontractors and project staging. Also negotiated and represented contractor at all meetings related to the project. Jersey City Path, Journal Square - Railroad Yard Improvements.

3.5 Miles Pipeline Contraction - $4,000,000: Mad River Interceptor Sewer Project, Town of Wolcott, City of Waterbury, CT - Coordination between utility companies and contractor on relocation of utilities, job meetings and records, progress reports, liaison between municipalities and contractor, inspection, contract compliance, estimates and partial payments, change orders and claim negotiation, permits, etc.

Neville G.W. Crooks

Project Experience

30K sq. ft. Lab Construction $1,400,000: Malcolm Prime Environmental Laboratory and Equipment Facilities, Tarrytown, NY - Construction and Renovation of an existing building (approx.30,000 sq. ft.) into laboratory facility of 14,000 sq. ft, office facility of 4,000 sq. ft. and equipment facility of 12,000 sq. ft. Purchased and installed all necessary equipment negotiated all subcontractors' contracts, electrical, plumbing, carpentry, and HVAC. Directed the installation of equipment and services. Approved progress payments and change orders.

Solid Waste & Air Quality Control - $26,000,000: Betts Avenue Incinerator, New York City Department of Sanitation, Woodside, NY - Rehabilitation, modernization and general construction of the air pollution control facilities. Estimating, quantity take-off and pricing, change orders, vendors and suppliers, inspection, job records and progress update.

Contracting $1,400,000: M W Contracting, Inc., New Jersey Transit Project - Subway station improvement/renovation for Norfolk Warren Street stations.

Project Experience

Port Authority Project Experience

1. Terminal - 6 - JFK International Airport Jamaica, New York

Completed terminal renovations including new automatic entrance doors, restrooms, elevators, fire alarm systems, lighting upgrades and interior design.

Owner: Port Authority of New York and New Jersey
Project Manager: Kim Nguyen
Cost: $3.5 Million

2. Building 254-269 - High Speed Roll Up Doors - JFK International Airport

Jamaica, New York

Design the installation of (9) new F.A.A. compliant high-speed hydraulic overhead roll-up doors.

Owner: Port Authority of New York and New Jersey
Project Manager: Rochelle Joyner
Cost: $850,000.00

3. Building 78 - Roof Repair - JFK International Airport Jamaica, New York

Prepared designs for the stabilization of an existing metal roof by using a liquid ceramic coating system.

Owner: Port Authority of New York and New Jersey
Project Manager: Rochelle Joyner
Cost: $500,000.00

4. Bulk Fuel Farm - Tank Stabilization - JFK International Airport Jamaica, New York

Prepared design for the painting and stabilization of bulk fuel storage tanks.

Owner: Port Authority of New York and New Jersey
Project Manager: Rochelle Joyner
Cost: $500,000.00

Port Authority Project Experience

5. Hangar 15 - Chimney Stack Replacement - JFK International Airport
Jamaica, New York
Designed new chimney breach connection from existing boiler to a new pre-fab metal chimney stack.

Owner:	Port Authority of New York and New Jersey
Project Manager:	Rochelle Joyner
Cost:	$85,000.00

6. Sodium Acetate Facility - JFK International Airport Jamaica, New York
Designed various building modifaications including new push walls, overhead roll-up doors and electrical service relocation.

Owner:	Port Authority of New York and New Jersey
Project Manager:	Rochelle Joyner
Cost:	$185,000.00

7. Farmers Substation - JFK International Airport Jamaica, New York
Designed a new pre-cast concrete screen wall around an electrical substation project is part of over airport security program.

Owner:	Port Authority of New York and New Jersey
Project Manager:	Rochelle Joyner
Cost:	$2.4 Million

8. Satellite Fuel Farm - JFK International Airport Jamaica, New York
Designed of a new masonry screen wall along the south service road with entrance control systems around Satellite Fuel Farm.

Owner:	Port Authority of New York and New Jersey
Project Manager:	Rochelle Joyner
Cost:	$2.25 Million

Port Authority Project Experience

9. LRS Substation - JFK International Airport Jamaica, New York

Prepared Stage-1 outline conceptual designs and estimates for a proposed screen wall along with entrance control system.

Owner: Port Authority of New York and New Jersey
Project Manager: Rochelle Joyner
Cost: $3.0 Million

10. Storage Building No. 14 - JFK International Airport Jamaica, New York

Designed a complete lighting upgrade for the Port Authority vehicle storage facility.

Owner: Port Authority of New York and New Jersey
Project Manager: Rochelle Joyner
Cost: $750,000.00

Port Authority Tenant Alteration Application Experience

1. Flying Foods - Building 146 - JFK International Airport Jamaica, New York
Prime design consultant on the complete renovation and upgrade of a 84,573 square foot building into a new state of the art flight kitchen facility. Coordinated all TAA applications, Rider Responses and performed all required administrative duties.

Owner: Port Authority of New York and New Jersey
Cost: $33.0 Million

2. Airport Plaza - Building 125 - JFK International Airport Jamaica, New York
Prime design consultant for the complete alteration of Building 125 into a new 20,000 square foot Airport Plaza Facility.

Owner: Port Authority of New York and New Jersey
Cost: $15.0 Million

Active Municipal Projects

1. Union County Court Building and Parking Deck Elizabeth, NJ

Prime design consultant on a new 45,000 sf Court Facility and 350 Car Parking Deck. Proposed building will be a Platinum Leed Rated Building.

Owner: County of Union
Contact: Niel Palmieri, Director of Facilities
Estimated Construction Cost: $16 Million
Project Completion Date: August 2011

2. Galloping Hill Golf Club House Kenilworth, NJ

Prime design consultant on a new 34,000 sf Golf Club House located a Union County Public Golf Course. Facility will be run by Kemper Sports and will contain locker facilities, pro-shop, banquet facility grill and New Jersey Golf Association offices and museum.

Owner: County of Union
Contact: Armando Sanchez, Director of Golf Operations
Estimated Construction Cost: $11 Million
Project Completion Date: June 2011

3. HACE Senior Housing Building Elizabeth, NJ

Prime Design Consultant for the development of an affordable senior housing project in the Elizabeth Port neighborhood.

Owner: City of Elizabeth
Contact: Jorge W. Valencia
Estimated Construction Cost: $10 Million
Project Completion Date: April 2011

Active Municipal Projects

4. Oriscello Correctional Facility Elizabeth, NJ

Prime Design Consultant for the addition and interior alterations to the 225,000 sf, 14-story detention facility. Scope of work includes the design of a new control room, installation of 400 camera surveillance system, new communication system, elevators along with upgrades to all detention pods.

Owner: County of Union
Contact: Niel Palmieri, Director of Facilities [redacted]
Estimated Construction Cost: $8.0 Million
Project Completion Date: Phased - September 2011

5. Women's Detention Facility Elizabeth, NJ

Prime Design Consultant on a new 34,000 sf, 150-person facility, which will serve as a satellite for the Oriscello Detention Facility which will house only a female population.

Owner: County of Union
Contact: Niel Palmieri, Director of Facilities [redacted]
Estimated Construction Cost: $5.8 Million
Project Completion Date: April 2011

6. Community Center / YMCA Piscataway, NJ

Prime design consultants on a new state-of-the-art 65,000 sf, one-story community center. Building program includes a competition aquatic center, gymnasium, health club, recreation center along with computer training areas and associated office space. The building's structural system is a hybrid of a structural steel space frame and poured-in-place concrete.

Owner: Township of Piscataway
Contact: Mayor Brian Wahler, [redacted]
Construction Manager: Joseph Jingoli and Son
Estimated Construction Cost: $18.5 Million
Project Completion Date: May 2011

Active Municipal Projects

7. South Ward Police Precinct Newark, NJ

Prime design consultant for a new 74,000 sf, state-of-the-art police facility located in the City of Newark's South Ward. The proposed station will contain the Office of Emergency Management, a 100-persondetention facility, three sally ports and will serve as a designate command vehicle location in the City.

Owner: City of Newark
Contact: Robert G. Dooley, Jr., Chief Architect, [redacted]
Estimated Construction Cost: $24.0 Million
Project Completion Date: November 2011

8. North Ward Police Precinct Newark, NJ

Prime design consultant for a new 36,000 sf, state-of-the-art police facility located in the City of Newark's North Ward. The proposed station will be incorporated into a site which includes the city's new heliport and the Housing Authority's new community center.

Owner: City of Newark
Contact: Robert G. Dooley, Jr., Chief Architect, [redacted]
Estimated Contract Value: $24.0 Million
Project Completion Date: June 2011

9. Union County Courthouse Tower Elizabeth, NJ

Primary design consultant of the complete exterior restoration and stabilization of the Elizabeth Public Library Building. Scope of work to include installation of a new slate roof, exterior veneer replacement and stabilization of the stone veneering system, exterior lighting and full cornice replacement.

Owner: City of Elizabeth
Contact: John Papetti, Director of Public Works, [redacted]
Estimated Construction Cost: $3.2 Million
Project Completion Date: May 2011

Active Municipal Projects

10. Historic Restoration of the Free Public Library Elizabeth, NJ

Primary design consultant of the complete exterior restoration and stabilization of the Elizabeth Public Library Building. Scope of work to include installation of a new slate roof, exterior veneer replacement and stabilization of the stone veneering system, exterior lighting and full cornice replacement.

Owner: City of Elizabeth
Contact: John Papetti, Director of Public Works, [redacted]
Construction Manager: TBD
Construction Cost Estimate: $3.2 Million
Project Completion Date: May 2011

11. New Fire Station No. 1 Linden, NJ

Prime design consultant on the new 21,000 sf, main headquarter building for the City of Linden Fire Department. Proposed station includes 5 vehicle bays, office of the Fire Chief and plan review.

Owner: City of Linden in association with the Union County Improvement Authority
Contact: Mike Burdalski, [redacted]
Construction Manager: Joseph Jingoli and Son
Estimated Contract Value: $6.8 Million
Project Completion Date: July 2010

Active Municipal Projects

12. New Fire Station No. 3 Linden, NJ

Prime design consultant on the new 15,000 sf, main headquarter building for the City of Linden Fire Department. Proposed station includes 4 vehicle bays and houses the department's main training facility.

Owner: City of Linden in association with the Union County Improvement Authority
Contact: Mike Burdalski, [redacted]
Construction Manager: Joseph Jingoli and Son
Estimated Contract Value: $3.5 Million
Project Completion Date: May 2010

13. Interior Modernization of the John F. Kennedy Library Piscataway, NJ

Primary design consultant on the interior modernization of the 25,000 sf, main public library building in Piscataway. Design program includes a full lighting upgrade, space re-allocation along with the full upgrade of all interior floor, wall and ceiling finishes.

Owner: Township of Piscataway
Contact: Mayor Brian Wahler, [redacted]
Contract Value: $3.2 Million
Project Completion Date: June 2011

14. Middlesex County Adult Correctional Facility North Brunswick, NJ

Prime Design Consultant on the complete upgrade of the facility's food preparation kitchen along with the replacement of mechanical systems.

Owner: County of Middlesex
Contact: Lino DeAlmeida, CCMS, [redacted]
Estimated Construction Cost: $1.4 Million
Project Completion Date: April 2011

Management Approach

As an organization, we employ a creative management approach to each of our projects. **Netta Architects** will assign the right project manager for the particular task based on their expertise in the building type. The project manager then becomes the single point of contact for the client –we call it the Single Point of Responsibility system (SPR).

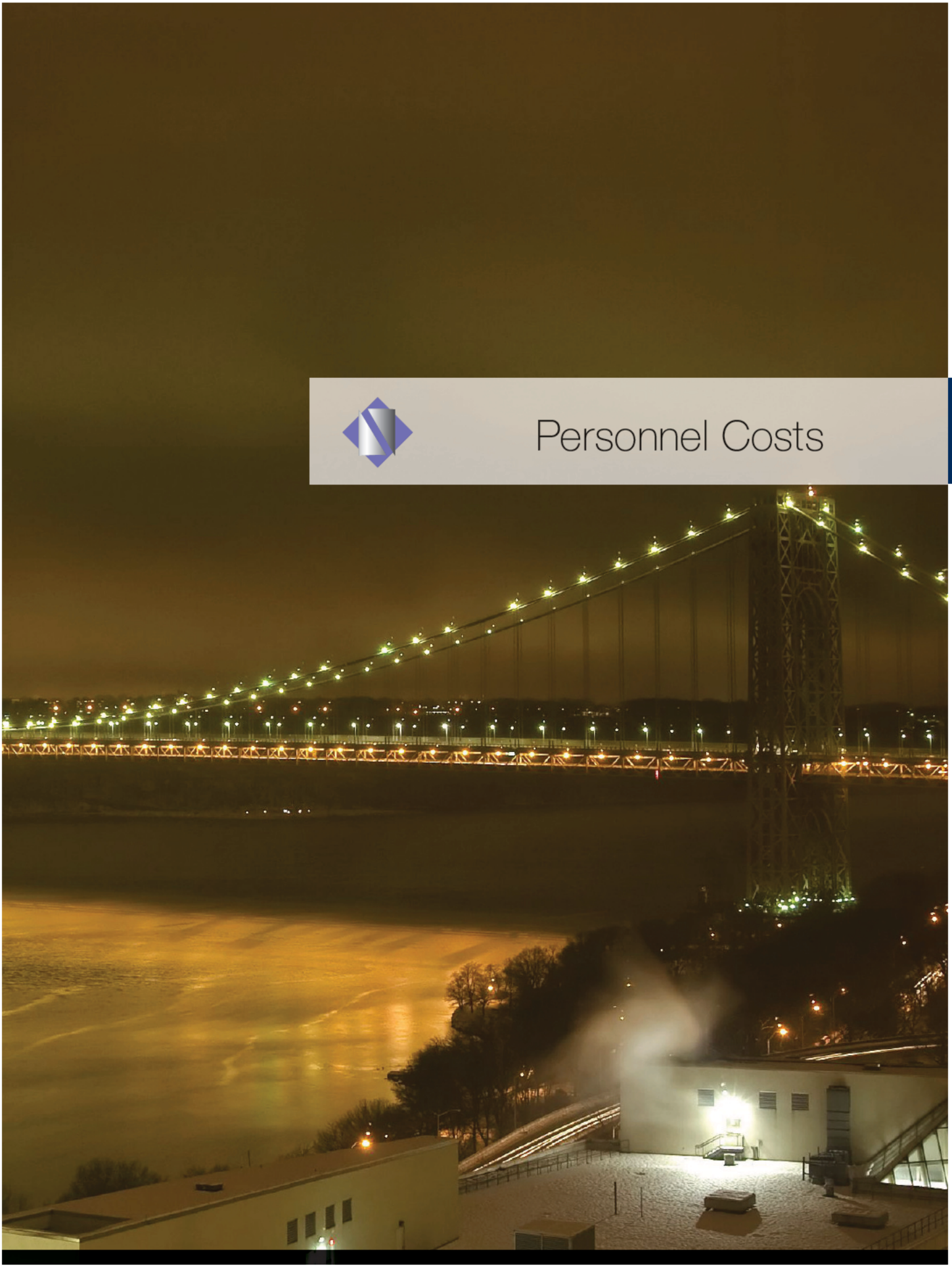
We realize that the relationship between the client and our firm is very personal in nature. The SPR system ensures personalized service and communication throughout the project life cycle, including daily updates to the Port Authority and our consultants.

As a public sector firm, we fully understand that our services need to be innovative as well as cost-effective. Netta Architects prides itself on tight project coordination and the adherence to deadlines. We make sure our clients are fully apprised and engaged throughout the project process.

Our experience as a full service firm specializing in governmental projects has given our management team the ability to control projects throughout the full design and construction process.

Our construction services division routinely manages our projects throughout the building process, we have proven ourselves through our long standing client relationships and by our track record of successfully delivering projects on-time and within budget.

Personnel Costs



Key Personnel Costs

Nicholas J. Netta, AIA, NCARB
Principal .....$ 225.00

Neville G.W. Crooks
Director of Construction Services .....$ 74.00

Andrew A. Forano, AIA
Senior Architect .....$ 67.50

Netta Architects employees do not receive additional premium pay above their base compensation packages. Overtime work is normally compensated with additional Flex-Time for use at the employees discretion.

Multiplier

Professional services as related to this Port Authority's Request for Professional Project Management Services on an "Call-In" Basis during the years of 2011 through 2014 will be billed by a "multiplier' in the amount equal to 2.0 times the actual salaries paid to our professionals.

BREAKDOWN

*Overhead	=	1.0
Profit (10%)	=	1.0
Multiplier	=	2.0

*OVERHEAD

Employee Benefits
Office Expenses
Advertising
Insurance
Taxes
Accounting
Legal Fees
Depreciation
Equipment Rental
Federal Unemployment

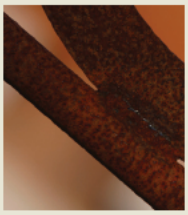
Professional Information

Netta Architects:
Different by Design

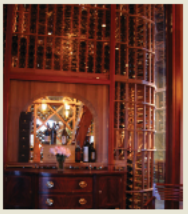
Netta Architects fully embraces the idea that collaboration and innovation are integral to creating built experiences for our clients. From architecture to construction management, we have consistently delivered effective solutions to the public and private sectors. What makes us different from other firms? Our people. We are a collection of passionate design professionals who are driven by excellence. Our clients have benefited from our unique perspectives and real-world experience—and that translates into everything we create.

Securing relationships through sustainable design. Netta Architects is committed to designing healthy and sustainable living, working and learning environments. We are proud of our standing as a LEED®certified design firm and our ability to minimize the environmental impact of our buildings. Our clients in the commercial, municipal and county government, hospitality, education and industrial market sectors demand nothing less than best design practices—and it shows in every project we undertake.

Civic pride. For over a decade, Netta Architects has been selected to design a multitude of high profile municipal projects. From civic centers and police stations to firehouses and libraries. We understand the complexities and nuances associated with publicly-financed projects and have the technical skill and knowledge to deliver projects which will maintain an enduring, functional, inspirational and innovative presence in their communities.



A rich history in historic renovations. Netta Architects specializes in the preservation of historic landmark buildings. We have acquired a broad range of experience in addressing issues related to adaptive and creative re-use, conservation of materials and preservation agency regulations. Netta Architects has successfully completed a large number of award winning historical preservation projects for private and public clients throughout New Jersey. We are certified by the states of New Jersey and New York Historic Preservation Offices.



Designing the best of all worlds. Collaborating with developers to deliver successful mixed-use projects is a Netta Architects specialty. As communities revitalize their downtown areas, mixed-use developments have once again become the best solution. Because we have an intricate understanding of urban planning and zoning laws, we are well positioned to design and develop vibrant and economically viable downtown communities.

Creating welcoming environments. Delivering world-class experiences to diners and travelers is a Netta specialty. The diversity of our creative team brings a unique perspective to each of our hospitality projects. We have designed restaurants and hotels in the United States, Caribbean and the South Pacific. Every detail and amenity is considered to ensure guests the very best accommodations.

NettaArchitects

Firm Background

The firm of **Netta Architects** was established in 1993 as a full service architectural design firm centrally located in Springfield, New Jersey. Since our inception, Netta Architects has positioned itself as one of the leading architectural firms in the Union, Essex, and Middlesex County areas performing over 100 million dollars in design work annually.

Netta Architects has won numerous design awards which include two for our most recent fire stations and has broadened the scope of its practice to an international level having recently completed projects in the Caribbean and New Zealand.

Currently, the firm employs a staff of about 25 people including architects, interior designers, and project managers all dedicated to one goal—client service along with innovative architectural design.

Our talented staff of professionals strives on assisting our valued clients with sensible design alternatives, cost control, and time management.

Personnel breakdown:

Total Staff:	25 employees
Registered Architects:	6
Licensed Interior Designers:	1
LEED Certified Designers:	3
Construction Managers:	1

Areas of Expertise

Netta Architects, as an Award-winning design firm possess extensive experience in the following areas:

NEW BUILDING DESIGN

- **Detention Facilities**
- **Transportation Facilities**
- **Public Safety Facilities**
- **Veterinary Facilities**
- **Commercial Facilities**
- **Recreational Facilities**
- **Multi-Family Housing**

HISTORIC RESTORATION

- **Exterior Restoration**
- **Interior Restoration**
- **Assessment of Need Studies**

Netta Architects is certified by the State of New Jersey's Historic Preservation office as an expert in the field of preservation.

INTERIOR DESIGN

- **Space Planning**
- **Interior Design**
- **Programming & Space Planning**
- **Interior Architecture**
- **Furnishings & Fixtures Selection**
- **Way Finding**
- **Sustainable Interior Design**

Professional References

Mr. George Devanney
County Manager
Union County
Union County Administration Building
Elizabethtown Plaza
Elizabeth, New Jersey 07207
[redacted]

Honorable Brian Wahler
Mayor
Township of Piscataway
455 Hoes Lanes
Piscataway, New Jersey 08854
[redacted]

Honorable Richard J. Gerbounka
Mayor
City of Linden
Municipal Building
301 N. Wood Avenue
Linden, New Jersey 07036
[redacted]

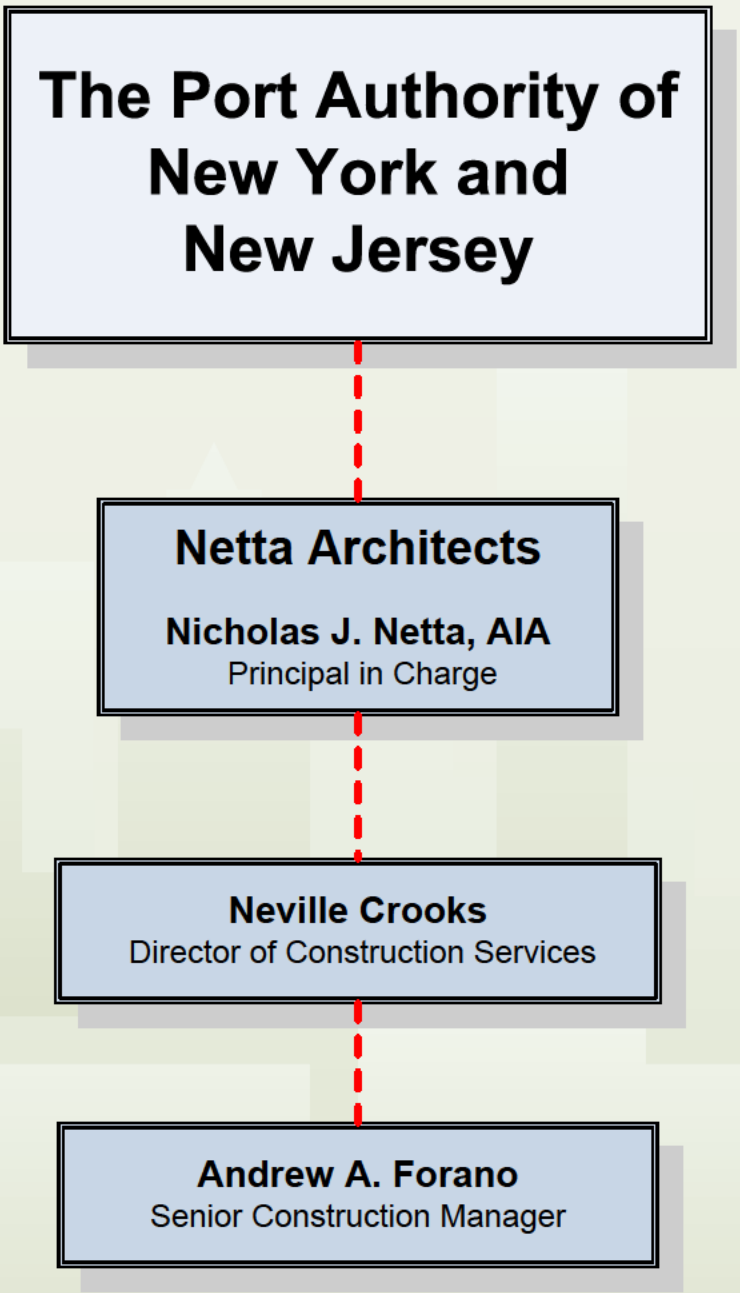
Honorable Cory Booker
Mayor
City of Newark
920 Broad Street
Newark, New Jersey 07102
[redacted]

Mr. Jorge Valencia
Director of Redevelopment
The Housing Authority of the City of Elizabeth
688 Maple Avenue
Elizabeth, New Jersey 07202-2690
[redacted]

Mr. Nicholas Salerno
Director of Architecture
New Jersey Transit
One Penn Plaza East
Newark, New Jersey 07102
[redacted]

Mr. John Papetti
Director of Public Works
City of Elizabeth
50 Winfield Scott Plaza
Elizabeth, New Jersey 07201
[redacted]

Honorable J. Christian Bollwage
Mayor
City of Elizabeth
50 Winfield Scott Plaza
Elizabeth, NJ 07201
[redacted]


The Port Authority of New York and New Jersey
Netta Architects
Nicholas J. Netta, AIA
Principal in Charge
Neville Crooks
Director of Construction Services
Andrew A. Forano
Senior Construction Manager

STATEMENT OF COMPLIANCE

Netta Architects has carefully reviewed the Port Authority of New York and New Jersey Request for Proposal for The Performance of Expert Professional Project Management Services as requested on a “Call-In” basis during 2011, 2012, 2013 and 2014 (RFP Number 22388). and if selected for a project, do hereby fully understand and will comply with the Authority’s Standard Performance of Professional Services.

NETTA ARCHITECTS

_____

NICHOLAS J. NETTA, AIA, NCARB DATE

Affirmative Action Statement and Certificate

I, NICHOLAS J. NETTA, AIA, NCARB, being the owner and principal architect of the architectural firm of NETTA ARCHITECTS located at 25 Route 22 East, in the Township of Springfield, State of New Jersey, County of Union do hereby certify the following statements;

Should the firm of Netta Architects be awarded any contracts for Expert Professional Project Management Services as Requested on a "Call-In" Basis during 2011, 2012, 2013 and 2014:

The firm of Netta Architects is registered and in compliance with the State of New Jersey. We firmly support the equal opportunity employment standards, ethics and procedures as stated in N.J.S.A. 10.:5-31 et seq. and N.J.A.C. 17-27. A copy of our (affirmative action certification) is attached hereto and made in part hereof.

NETTA ARCHITECTS

Nicholas J. Netta, AIA, NCARB
Principal

Certification 38245

CERTIFICATE OF EMPLOYEE INFORMATION REPORT

INITIAL

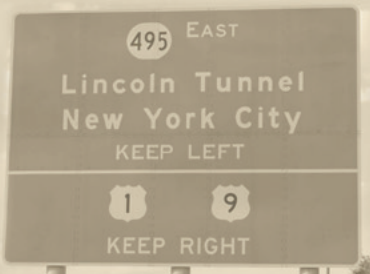
This is to certify that the contractor listed below has submitted an Employee Information Report pursuant to N.J.A.C. 17:27-1.1 et. seq. and the State Treasurer has approved said report. This approval will remain in effect for the period of 15-MAY-2010 to 15-MAY-2013

NETTA ARCHITECTS, LLC
25 RT. 22 EAST, SUITE 290
SPRINGFIELD NJ 07081

State Treasurer

Request for Proposals
RFP Number 22388

THE PORT AUTHORITY
OF NEW YORK & NEW JERSEY



Performance of Expert Professional Project Management Services Requested on a "Call-In" Basis During 2011, 2012, 2013, and 2014

Submitted to:

The Port Authority of New York and New Jersey
One Madison Avenue, 7th Floor
New York, NY 10010
Attention: RFP Custodian

Submitted by:

Urban Engineers of New York, P.C.
Two Penn Plaza
Suite 1103
New York, NY 10121

October 2010

URBAN
ENGINEERS OF NEW YORK, P.C.
Formulating Excellence®

URBAN ENGINEERS OF NEW YORK, P.C.
Formulating Excellence®
ISO 9001:2008 Certified | Founded 1960
Two Penn Plaza
Suite 1103
New York, New York 10121
(212) 736-9100 Fax (212) 736-9101
www.urbanengineers.com

October 21, 2010

The Port Authority of New York and New Jersey
One Madison Avenue, Seventh Floor
New York, New York 10010
Attn: RFP Custodian

Re: RFP #22388: Performance of Expert Professional Project Management Services on a "Call-In" Basis During 2011, 2012, 2013, and 2014

Dear Sir or Madam:

Urban Engineers of New York, P.C. (Urban) is pleased to submit the enclosed proposal to The Port Authority of New York and New Jersey (the "Authority") to provide Professional Project Management Services on an as-needed basis for various projects and programs at the Authority's facilities.

To meet your requirements, we have assembled a strong multidisciplinary Team, including highly experienced staff from ***Urban, KS Engineers, PC (MBE), Talson Solutions, LLC (WBE), and Armand Corporation (WBE.*** We bring a combined staff of more than 500 professionals qualified in the requisite areas for this on-call services contract. The Urban Team brings extensive experience in planning, engineering, program/project management, cost monitoring/control, biddability/ constructability reviews, scheduling, and construction management for port facilities, airports, transit systems, and bridges. In addition, Urban is **ISO 9001:2008-certified** and has an exceptionally strong commitment to quality control. We have demonstrated experience as the prime consultant on the following major infrastructure construction programs:

- ***Frankford Transportation Center (FTC):*** Urban provided program and construction management services to the Southeastern Pennsylvania Transportation Authority (SEPTA) for the construction of a major intermodal transit terminal facility for the Market/Frankford elevated train line in Philadelphia. The FTC is the largest single-site construction project ever undertaken by SEPTA, completed on time, within budget, and was valued at **$180 million.**

- ***Meadowlands Railroad and Roadway Improvement Project:*** The New Jersey Sports and Exposition Authority engaged Urban to provide construction management and construction inspection services for this project, which includes constructing two new tracks to serve a proposed new rail station to be built at the Meadowlands Sports Complex, as well as major improvements to existing roads and a new rail bridge. The program's cost is in excess of **$200 million.**

- ***Keystone Corridor Improvement Project:*** Urban provided program management services to the Pennsylvania Department of Transportation (PennDOT) for a **$145 million** upgrade program on Amtrak's Keystone Corridor between the Harrisburg Transportation Center and Amtrak's 30th Street Station in Philadelphia. Urban initially participated in an assessment study to determine the condition of the infrastructure and identify requirements to bring the line to a state of good repair. Urban then monitored the capital project construction progress to promote compliance with schedule and budget; conformance with design criteria; and construction to approved plans and specifications.

In addition to the above projects, Urban has participated in and led numerous Program Management Oversight (PMO) assignments for the Federal Transit Administration (FTA) since 1988. At present, Urban is the Project Management Oversight Consultant (PMOC) for the FTA in the New York City region, with responsibility for PMO of the MTA Capital Program. In this capacity we are responsible for the federally-funded projects in the New York City Transit Capital Program; the Long Island Rail Road Capital Program; and the East Side Access and 2nd Avenue Subway mega projects. In addition, we recently completed PMO responsibility for federally-funded New York City Department of Transportation marine projects (ferry terminals and purchase of new ferries). Furthermore, we have been selected as part of a JV to provide on-call program management services in support of PATH capital improvement program. In addition, we have begun providing program management services to NJ Transit for for the Portal Bridge Project on the Northeast Corridor.

Urban has also provided aviation design services to Authority facilities at Teterboro Airport. In addition, Urban currently holds on-call services contracts at Philadelphia International, Atlantic City International, and a number of other major airports, as well as serving as the civil engineer for the Dulles Tier 2, 48-gate terminal expansion valued at more than $1 billion.

Currently, more than 40% of Urban's work is comprised of as-needed design and construction management agreements with major transportation authorities, such as NYSDOT, NY State Thruway Authority, NJ Transit, South Jersey Transportation Authority, Philadelphia Regional Port Authority, Southeastern Pennsylvania Transportation Authority, Philadelphia International Airport, Metropolitan Washington Airports Authority, and PennDOT. As can be demonstrated from the continuation of repeat business in this type of engineering services contract, Urban brings a proven management approach to responding to our clients' needs through on-call service agreements.

Our proposed Program Manager, **Victor Simuoli, PE**, is a Professional Engineer registered in New York. Prior to joining Urban, Mr. Simuoli served for seven years as a consultant Project Manager for the Authority's Priority Capital Program Department on the JFK AirTrain project. He brings a wealth of experience and knowledge of the Authority's project management policies and procedures, as well as a demonstrated ability to effectively manage a large program in a complex environment. In addition, **William T. Thomsen, PE**, will serve as the Program Director and is licensed as a Professional Engineer in both New York and New Jersey to satisfy your requirements. Our personnel resources, diverse technical expertise, and proven management approach allows us to respond to requests quickly, and perform project management tasks in an efficient and cost-effective manner.

In closing, the Urban Team brings a wealth of experience and demonstrated success in project management for the design and construction of rail/transit systems and facilities, as well as aviation facilities, marine terminals, and bridges and tunnels. Please contact **William T. Thomsen, PE,** at **212-736-9100** if you have any questions or require additional information. Thank you for your consideration.

Very truly yours,

URBAN ENGINEERS OF NEW YORK, P.C.

Joseph P. McAtee, PE
Executive Vice President

Urban is an Outstanding Choice for this Assignment

In an effort to prepare an outstanding proposal, careful consideration was give to the proposer requirements defined in the Authority's RFP. The chart below demonstrates that Urban's proposal successfully addresses each requirement. Urban is excited to implement our proven approach to project management and demonstrate to the Authority why Urban continues to be the first choice of agencies throughout the region.

Proposer Requirements	The Urban Team
Experienced project/program management firm	✓ Urban has performed project management services on major capital projects for more than 35 years.
Five years of experience in the performance of Project/Program Management Services on major infrastructure construction programs (>$100 million in construction value)	✓ ▪ Meadowlands Railroad & Roadway Improvement Project, NJSEA, $200 million ▪ Keystone Corridor Improvement Project, Amtrak/PennDOT, $145 million ▪ Frankford Transportation Center, SEPTA, $180 million
Extensive experience providing "call-in" management services	✓ On-call assignments account for more than 25% of Urban's gross revenues, including more than 50 active on-call agreements with various agencies throughout the region.
Highly-qualified leadership	✓ Our proposed Project Manager, Victor Simuoli, PE, brings a wealth of experience and knowledge of the Authority's project management policies and procedures.
Qualified, local and available personnel	✓ Our firm's resources, including more than 400 project managers, planners, design engineers, construction managers, project control specialists and 100 New York and/or New Jersey Professional Engineers are located in the region, and available to support the Authority.
Comprehensive technical resources that address the needs of the Authority's diverse facilities	✓ Urban's Project/Program Management Services are strengthened by our experience providing planning, design, and construction management services for projects involving transit facilities, airports, marine/port facilities, bridges/ highways, and buildings.
Office in the New York/New Jersey Metropolitan Area	✓ Urban's New York City office is located at Two Penn Plaza, Suite 1103, New York, NY 10121.
Certificate of Authorization to practice Professional Engineering in the states of New York and/or New Jersey	✓ Urban possesses Certificates of Authorization to practice Professional Engineering in the states of New York and New Jersey.

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Project Management Services as Requested on a "Call-in" Basis
during 2011, 2012, 2013 and 2014

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D. **Firm Experience**
E. **Management Approach**
F. **Hourly Rate Information**
G. **M/WBE Participation**
H. **Firm Affiliates**
I. **Conflict of Interest**
J. **Exceptions to the Standard Agreement**

A. Attachment B – Agreement on Terms of Discussion

ATTACHMENT B

PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014

AGREEMENT ON TERMS OF DISCUSSION

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority's Freedom of Information Policy and Procedure adopted by the Port Authority's Board of Commissioners on November 20, 2008, which may be found on the Port Authority website at: *http://www.panynj.gov/corporate-information/pdf/Freedom-of-Information-Policy-and-Procedure.pdf*, not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

Urban Engineers, Inc.
(Company)

(Signature)

Joseph P. McAtee, PE
Executive Vice President
(Title)

October 21, 2010
(Date)

ORIGINAL AND PHOTOCOPIES OF THIS PAGE ONLY.
DO NOT RETYPE.

B. ATTACHMENT C – COMPANY PROFILE

ATTACHMENT C

COMPANY PROFILE

REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

1. Company Name (print or type):

   _____

2. Business Address (to receive mail for this RFP):

   _____

   _____

3. Business Telephone Number: _____
4. Business Fax Number: _____
5. Firm website: _____
6. Federal Employer Identification Number (EIN): [redacted] _____
7. Date (MM/DD/YYYY) Firm was Established: _____/_____/_____
8. Name, Address and EIN of Affiliates or Subsidiaries (use a separate sheet if necessary):

   _____

   _____

9. Officer or Principal of Firm and Title:

   _____

10. Name, telephone number, and email address of contact for questions: [redacted] _____

    _____

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? ☐ Yes ☐ No

    If yes, please attach **Port Authority** certification as a part of this profile.

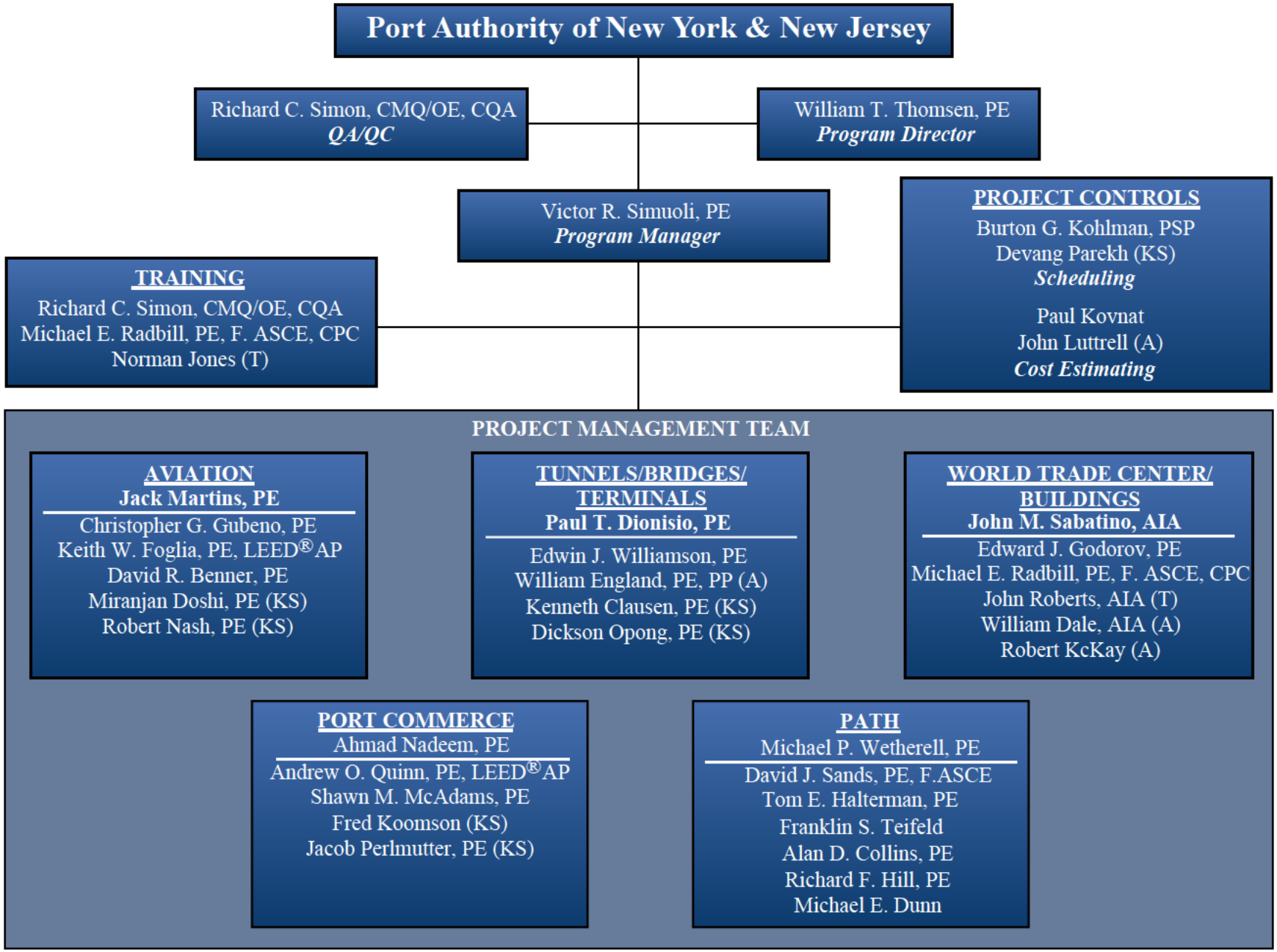
    If your firm is an M/WBE not currently certified by the Authority, see the Authority's web site – http://www.panynj.gov/business-opportunities/supplier-diversity.html, to receive information and apply for certification.

Name	Address	City	State	Zip	EIN
Urban Engineers, Inc.	530 Walnut Street 14th Floor	Philadelphia	PA	19106	[redacted]
Urban Engineers of Erie, Inc.	1319 Sassafras Street	Erie	PA	16501	[redacted]
Urban Construction Systems, Inc.	530 Walnut Street 14th Floor	Philadelphia	PA	19106	[redacted]
Urban International, Inc.	530 Walnut Street 14th Floor	Philadelphia	PA	19106	[redacted]

C. QUALIFICATIONS AND EXPERIENCE OF STAFF

Performance of Expert Professional Project Management Services
Requested on a "Call-In" Basis During 2011, 2012, 2013, and 2014
RFP Number 22388

THE PORT AUTHORITY
OF NEW YORK & NEW JERSEY



Legend

KS Engineers, P.C. (MBE) (KS)
Talson Solutions, LLC (WBE) (T)
Armand Coporation (WBE) (A)

URBAN ENGINEERS OF NEW YORK, P.C.
Formulating Excellence®

Expert Professional Project Management Services
As Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014

Port Authority of New York and New Jersey
Key Personnel Experience Summary

Name/Title	Years of Experience	Number of Projects	Key Project Experience, Last 5 Years	
			Project Name	**Cost**
William Thomsen, PE *Project Director*	34	50+	Integrity Monitoring Consultant, Freedom Tower, PANYNJ	$3B
			PM Oversight, MTA Second Ave. Subway and East Side Access, FTA	$12B
			Risk Assessment, LAC MTA Redline West Side Extension, FTA	$5B
Victor Simuoli, PE *Program Manager*	28	40+	PM Oversight, MTA NYCT Signals/Systems, FTA	$1.1B
			PM Oversight, MTA LIRR Capital Program, FTA	$250M
			Integrity Monitoring Consultant, Freedom Tower, PANYNJ	$3B
Jack Martins, PE *Task Leader - Aviation*	41	50+	Design, Runway 17-35, Philadelphia International Airport	$65M
			Design, International Arrivals Building Expansion, Wash. Dulles Int. Airport	$120M
			Design/CM, Critical Taxiways Rehabilitation, Phila. International Airport	$10M
Paul Dionisio, PE *Task Leader - Bridges/Tunnels*	34	30+	Rehabilitation of the West End Line, Brooklyn, NY, MTA NYC Transit	$160M
			Rehab. of Atlantic Ave. Viaduct, Brooklyn, NY, MTA LIRR	$150M
			Trenton Station Renovation, Trenton, NJ, NJ Transit	$79M
John Sabatino, AIA *Task Leader - WTC/Buildings*	42	20+	Integrity Monitoring Consultant, Freedom Tower, PANYNJ	$3B
			PM Oversight, MTA NYCT Second Ave. Subway, FTA	$5B
			Pennsylvania Convention Center Expansion, Phila, PA	$700M
Ahmad Nadeem, PE *Task Leader - Port Commerce*	22	70+	Design/CM, Eagle Point Dock Rehab., Westville, NJ, Sunoco Logistics	$22M
			Design/CM, Duraport Marine Terminal, Bayonne, NJ	$12M
			Preliminary Design, Bush Terminal Pier 6 Rehabilitation, Brooklyn, NY	$40M
Michael Wetherell, PE *Task Leader - PATH*	23	20+	PM Oversight, NYC Transit Rail Vehicle Procurement, FTA	$5B
			PM Oversight, MTA Second Ave. Subway and East Side Access, FTA	$12B
			Risk Assessment, LAC MTA Redline West Side Extension, FTA	$5B

Note: The Key Personnel Experience Summary was prepared in response to the submission requirements, Sections III.C.1 and III.C.3.

NAME **WILLIAM T. THOMSEN, PE**
TITLE **SENIOR VICE PRESIDENT, PROGRAM MANAGEMENT**
PROJECT ASSIGNMENT **PROGRAM DIRECTOR**

Years of Experience: 34

Registrations/Memberships

- Professional Engineer – NY, PA, NJ, MD
- NJDOT ETRP Compliance NJ
- American Society of Civil Engineers
  - Past President - Philadelphia Section
  - Past Chairman of Transportation and Urban Development
  - Secretary - District IV Legislative Affairs Committee
  - Member - National Committee, High Speed Ground Transportation
- American Public Transit Association
  - Light Rail Transit Committee
  - High Speed Inter City Ground Transportation Subcommittee
  - Capital Projects Subcommittee
  - Intercity Corridor Development Committee

Education

- MS, 1985, Drexel University, Engineering Management
- BS, 1978, Clarkson College of Technology, Civil/Environmental Engineering

Mr. Thomsen's experience with Urban Engineers, Inc. encompasses the management/engineering of major projects in the field of railway, electric traction power, and transportation systems. He presently serves as Senior Vice President and has performed project management, design, construction, value engineering, construction claims support, and expert witness services. Mr. Thomsen served as the Quality Assurance officer and chaired the Executive Advisory Committee for the Schuylkill Valley Metro Feasibility Study, providing support through team leadership. He has significant national experience with major capital improvement projects from planning through construction for SEPTA, MARTA, Tri-Rail, MDTA, Lynx, and MTA. He has served as an associate professor (part-time) at Temple University, lecturing on transportation engineering, and has taught a professional engineering registration review seminar.

Mr. Thomsen has special expertise concerning track, catenary, signal, and communications for transit systems. He has participated as a member of Urban's in-house constructability review committee, which examines contract documents for their constructability in order to mitigate construction claims. He is familiar with all aspects of civil engineering as they relate to transportation, and is well-qualified in the special requirements for coordination of engineering projects with active railroads and systems of public transportation. He has represented ASCE on the planning committee for the Area Coalition for Transportation in support of funding for SEPTA and is active in legislative affairs. Mr. Thomsen's recent relevant experience includes the following:

Schuylkill Valley Metro Feasibility Study, Southeastern Pennsylvania Transportation Authority, Philadelphia to Reading, PA - Quality Assurance/Executive Advisor for the feasibility study of introduction of rail service in a 60-mile corridor, including branches to major suburban locations. Project includes right-of-way assessments, route selection and operations planning, ridership forecasting, station location and evaluation, operating and capital costs, and performance evaluation. Both commuter rail and light rail modes were evaluated.

Newark Waterfront Connection, New Jersey Transit Authority, Newark, NJ - Performed value engineering services on the Newark Waterfront Connection, which provides a new direct connection from Newark Penn Station to the Hoboken Waterfront. The eastbound connection will provide direct electrified rail connection between the Northeast Corridor and New Jersey Transit's Morris and Essex line. He was responsible for reviewing track systems and rail operation elements of the program during this assignment.

Project Management Oversight, Baltimore Central Light Rail Line, Federal Transit Administration, Baltimore, MD - Project Manager for provision of PMO services for the Phase II extension to the Central Light Rail Line project. The Mass Transit Administration completed the Phase I core system. When the Phase II extensions were complete, the total project was be approximately 28 miles in length with a total project cost of $465 million. This project is the first design/build rail facility in the United States. He was appointed to a national design/build committee for transit projects by the Federal Transit Administration.

Mainline 9th Street Branch Bridges and Systems Rehabilitation, Southeastern Pennsylvania Transportation Authority, Philadelphia, PA - Project Manager for Urban's efforts on the Mainline 9th Street Branch Rehabilitation Program, now referred to as "Railworks." This included value engineering and cost confidence studies during the planning and engineering phase of the project. It also included participating in the rescheduling planning effort to reduce the program from a three-shutdown scenario to two shutdowns. Urban also provided catenary engineering for the electrical construction in a design/build effort with the electrical contractor.

Project Management Oversight, Los Angeles County Metropolitan Transportation Authority Metro Red Line Tunnels, Federal Transit Administration, Los Angeles, CA - Project Manager for an in-depth evaluation of the Metro Red Line subway tunnels (MOS1). The study reviewed and evaluated the structural integrity and safety of a 3.5-mile segment of twin bored transit tunnels. The study was commissioned in response to questions of potential construction deficiencies. A series of testing programs, both destructive and nondestructive, were performed. A final report was delivered to the LACMTA and presented publicly, which proved the tunnel's capacity under extreme static and seismic loading. This evaluation has been said to be the most comprehensive review ever performed on a subway construction project.

Project Management Oversight, Project Management Oversight, Bus Maintenance Facilities, Federal Transit Administration, Various Locations- Completed PMO for the construction of bus maintenance facility rehabilitation projects at several midwestern transit properties, including the KCATA in Kansas City, the VIA in San Antonio, Texas, and the CATA in Little Rock, Arkansas. Under this assignment, he served as the FTA's representative for the construction programs that were occurring to assure the FTA that project management objectives were being achieved. This assignment included assessment related to budget, schedule, and the quality of the constructed product. The total value of projects he oversaw was more than $50 million.

Philadelphia International Airport High Speed Rail Line, City of Philadelphia, Philadelphia, PA - Managed the construction phase activities for the systems contracts on the Philadelphia Airport High Speed Line for the City of Philadelphia. Included in this assignment was the coordination of construction of a new reverse running color lit cab signal system for the line, and the construction of a new constant tension catenary system along the entire route. All of this work was coordinated with the construction of approximately 12 miles of new track and overhead bridge construction while freight operations remained in service. He also assisted the City of Philadelphia in construction phase negotiation of claims associated with the project. The total project cost was $105 million and it received the Engineering Excellence award from the Consulting Engineers Council of Pennsylvania in 1986.

General Engineering Consultant, Light and Heavy Rail and Related Projects, Southeastern Pennsylvania Transportation Authority, Philadelphia, PA - Program Manager for all tasks undertaken on this on-call contract. Services provided include rail planning and design, yard modifications, electrification upgrades, signals, communications, station improvements, and corrosion control studies.

NAME **VICTOR R. SIMUOLI, PE**
TITLE **VICE PRESIDENT**
PROJECT ASSIGNMENT **PROGRAM MANAGER**

Years of Experience: 28

Registrations/Memberships

- Professional Engineer – NY
- Institute of Electrical and Electronic Engineers (IEEE)
- Construction Management Association of America (CMAA)
- Transportation Research Board (TRB)

Education

- MS, 1984, Polytechnic University, Electrical Engineering
- BS, 1982, Polytechnic University, Electrical Engineering

Mr. Simuoli has extensive experience in project management and systems engineering with qualifications in transit systems engineering, management, and implementation, and demonstrated experience in successfully managing large-scale, diverse projects from inception through conclusion. Prior to joining Urban Engineers, Mr. Simuoli was a senior associate at an international consulting firm that provided technical and project management support to the Port Authority of New York & New Jersey for the design and development of the JFK AirTrain ($1.9 billion project) and to New Jersey Transit for the Southern New Jersey Light Rail System ($500 million project). In addition, Mr. Simuoli previously served as Director of Engineering at MTA New York City Transit and as a Senior Capital Program Manager at MTA Long Island Bus.

His experience includes project management, construction management, design engineering, and testing and commissioning. His technical expertise encompasses systems integration, automatic train control, signaling, communications, system safety and security, and operations and maintenance. Mr. Simuoli's experience includes:

URBAN ENGINEERS of New York, PC, 2004 - PRESENT

Project Management Oversight Consultant, Federal Transit Administration - Currently providing project management oversight for the New York MTA Capital Program. Responsible for oversight of New York City Transit Signals and Systems capital projects valued at over $1.1 billion. Projects include the Automatic Train Supervision (ATS); Communications Based Train Control (CBTC) Canarsie Pilot; Public Address/Customer Information System (PA/CIS); Flushing Interlocking Phase II; and the Concourse Line Signal Modernization projects. Also responsible for oversight of the Long Island Rail Road Capital Program valued at approximately $250 million.

Performed risk assessments for the systems portion of two major New Start projects: the Second Avenue Subway, Phase 1, valued at $3.8 billion; and the East Side Access project, valued at $6.3 billion.

Integrity Monitoring Consultant, Port Authority of NY & NJ - Currently providing integrity monitoring services for construction of the Freedom Tower. Served as the Deputy Director of Engineering for the first six months of the contract and currently serves as the Senior Systems Engineer. Provides engineering support and expertise in the areas of construction management, project management and control processes, as well as providing support to other integrity monitoring functions, including investigation, forensic accounting, and executive management.

BOOZ ALLEN HAMILTON

JFK AirTrain, Port Authority of New York & New Jersey - Systems Project Manager providing project management and systems engineering expertise for the JFK AirTrain, a $1.9 billion fully automated light rail system built at JFK International Airport that opened successfully in December 2003. Managed a

consultant budget of over $2.5 million a year and led a team of twelve technical and rail operations professionals during the design, procurement, fabrication, and testing and commissioning of the system. Responsibilities and accomplishments in this position included:

Participated in the proposal evaluation process and counseled the Port Authority during contract negotiations and the development of a conformed Design Build Operate and Maintain (DBOM) contract. Analyzed cost proposals and developed a milestone payment scheme for the systems portion of the contract. Developed the design review process for the systems portion of the contract and led the preliminary and final engineering design reviews for the system.

Directed and guided systems integration and engineering activities (Automatic Train Control, Communications and SCADA, Vehicles, Operations and Maintenance, Reliability, Availability, Maintainability and Safety, Security, and Fare Collection). Successfully managed and led the system testing and commissioning activities through demonstrated system operation and system opening.

Southern New Jersey Light Rail System (River Line), New Jersey Transit - Lead Systems Engineer for the Southern New Jersey Light Rail Transit System. Led the preliminary and final bid evaluation effort for the systems portion of the project. Developed specifications for the rail signaling and traffic control interfaces at grade crossings and control center interfaces with communications and signaling systems, and prepared and delivered industry review presentations in these areas.

MTA NEW YORK CITY TRANSIT

MTA, New York City Transit, Engineering Director - Led the technical and administrative project management of a multi-million dollar, interdepartmental Automatic Vehicle Location and Control (AVLC) pilot project utilizing Global Positioning Satellite (GPS) technology to locate and track buses in real-time and provide real-time customer information at bus stops and kiosks. Participated in the development of technical specifications, contract negotiations, and proposal evaluations; developed the project management plan, and an operational test and evaluation plan which was to be used to determine the feasibility of implementing the AVLC system throughout New York City.

Instrumental in initiating New York City Transit's participation in Intelligent Transportation Systems (ITS) projects: prepared a proposal for a traffic signal prioritization pilot project for the Department of Buses; and developed criteria for obtaining real-time video data of traffic conditions in the Bus Command Center as part of a regional Interagency Remote Video Network (IRVN) project.

MTA LONG ISLAND BUS

MTA Long Island Bus, Senior Manager, Capital Programs - Led the planning, development and oversight of various large-scale transit projects in a multi-million dollar, five-year Capital Program. Provided technical and program management for these projects. Performed cost/benefit analyses, project alternative analyses, and determined operating budget impacts of capital projects. Specific projects included: Conversion of the main bus depot to accommodate compressed natural gas (CNG) buses. Conversion included design and implementation of a methane detection system and redesign of smoke purge, ventilation and building electrical systems; Design-build for a fast fill CNG fueling station; Procurement of 180 CNG buses; Automatic Vehicle Location (AVL) system based on GPS technology for entire bus fleet; computer-assisted scheduling and information system for a paratransit bus service.

NAME **RICHARD C. SIMON, CMQ/OE, CQA**

TITLE **VICE PRESIDENT, QUALITY SERVICES**

PROJECT ASSIGNMENT **QA/QC / TRAINING**

Years of Experience: 47

Registrations/Memberships

- American Society for Quality (ASQ) - Senior Member
- ASQ Certified Manager of Quality/Organizational Excellence
- ASQ Certified Six Sigma Green Belt
- ASQ Certified Quality Auditor
- Design and Construction Quality Institute (DCQI) - Past Vice Chairman, Board of Directors

Education

- BS, 1963, Cooper Union, Mechanical Engineering
- 1966, General Electric, Three-Year Manufacturing Management Program

Mr. Simon has extensive experience in all areas of Quality Assurance/Quality Control. He presently serves as a Senior Project Quality Manager and is the Lead Quality Manager for all of Urban Engineers' Federal Transit Administration Program Management Oversight Consultant (PMOC) assignments. He has extensive experience in developing and implementing quality programs and has had widespread practice helping contractors and their subcontractors resolve problems. Mr. Simon has dealt with many different customers throughout his career. Mr. Simon's experience includes:

Federal Transit Administration Project Management Oversight Consultant, National Assignments - Lead Quality PMOC for FTA Projects for Region 2 in New York City. He is overseeing more than $15 billion in projects including the Second Avenue Subway (SAS), East Side Access (ESA), and New York City Transit (NYCT). Previous assignments included Long Island Rail Road (LIRR) and New York City Department of Transportation (NYCDOT) in NYC; MARTA in Atlanta, GA; Tri-Rail in Pompano Beach, FL; DART in Dallas, TX; RAILTRAN in Fort Worth, TX; West Corridor LRT in Denver, CO; and the Las Vegas Monorail in Las Vegas, NV. He has worked with Quality Managers at these transit agencies to develop cost-effective quality systems that meet the intent of the FTA QA/QC Guidelines. During one of his quality assurance audits, he identified an opportunity for an agency to develop a two-way traceability system. This suggestion was implemented and that agency now has better control of its products. He also served as the Project Manager for all NYCDOT projects.

National Transit Institute, Rutgers University, New Brunswick, NJ - Project Director and Lead Instructor on a contract to develop and present a training course throughout the United States on the revised 2002 FTA Quality Assurance and Quality Control Guidelines. Under his leadership, Urban was selected to deliver this course for another five years through March 31, 2013. Through May 2010, he presented this course 27 times throughout the United States and Puerto Rico.

Frankford Transportation Center, Southeastern Pennsylvania Transportation Authority, Philadelphia, PA - Quality Assurance Manager for an Urban Engineers Joint Venture that provided Program Management Services for the rehabilitation of SEPTA's Frankford Transportation Center. Program tasks included erection of a new elevated guideway, construction of a new Main Terminal Building, and replacement of turnouts in a rail yard. Personal activities included managing the efforts of Contract Quality Control representatives from each of the eight prime contractors, extensive interface with several subcontractors, and resolving on-site construction problems.

Kvaerner Shipyard, Philadelphia, PA - Quality Assurance Lead for the Pennsylvania Shipyard Engineering and Architecture (PSE), LLP project; a fast track contract with Kvaerner,

a Norwegian Company that is building ships at the former Philadelphia Naval Shipyard. PSE was a joint venture of three companies plus a DBE firm that provided manpower from multiple sources. Mr. Simon was responsible for developing consistent systems that all PSE employees could follow. He created a unified document control system that listed the status and revision of all drawings on the project.

Other Urban Assignments - Quality Manager on the following projects: a Joint Venture that is providing integrity monitoring on the WTC Freedom Tower for the NYNJ Port Authority's Inspector General; a subcontractor to LAN who are providing: (1) design services on the SE Corridor for METRO in Houston, TX; (2) General Engineering Consulting Services for VIA in San Antonio, TX; and (3) design services for SRT in Sacramento, CA. He was also the lead person on a Joint Venture that prepared a Quality Assurance Manual for MTA in Baltimore, MD and provided quality training to MTA's engineering staff. He helped prepare a Quality Plan for METRA in Memphis, TN.

TAMS Consultants, Vice President and Director of Corporate Quality - Mr. Simon was directly responsible for TAMS entire Quality Assurance Program. He designed and implemented one of the first Total Quality Management (TQM) programs in the architectural/engineering industry, training nearly 400 employees. As a result of his efforts, TAMS earned a national reputation for TQM among competitors and clients. He played a key personal role in the successful promotion and sale of projects worth $6 million in design fees. While at TAMS, Mr. Simon was a charter member of the Design and Construction Quality Institute (DCQI) and Vice Chairman of its Board of Directors.

Space Systems Division of General Electric, King of Prussia, PA, Increasingly Responsible Quality Assurance Management Positions - Mr. Simon is a graduate of the prestigious three-year General Electric Manufacturing Management Program. This Program consisted of diverse assignments in manufacturing at different GE plants throughout the United States. Mr. Simon then held a series of increasingly responsible Quality Assurance positions as Manager of: Process Control; Supplier Quality; Quality Systems; Failure Analysis; and Quality Assurance at the Space Systems Division in Valley Forge, PA. Among his most significant accomplishments was leading a failure analysis team that conducted a comprehensive investigation of the Solar Maximum Mission satellite that had failed in orbit. The team identified the failure cause as an undersized fuse design in an attitude control module. A Shuttle Challenger crew restored the $50 million satellite to full operational status by installing a re-designed module. He also established and implemented a Quality Cost System; categorized prevention, appraisal, and failure costs; and trained 250 employees. Failure costs as a percent of applied direct labor were reduced by 40% over the following three years.

Mr. Simon's additional experience includes facilitating a partnering session between executives of the American Consulting Engineers Council and the US Army Corps of Engineers. This resulted in the first partnering agreement between a professional society and a US government agency. He has completed an ISO 9000:1994 Lead Assessor Training Course and an Internal Auditor Course for ISO 9001:2000 and is an internal ISO auditor for Urban Engineers. Mr. Simon is a Team Leader for the Keystone Alliance for Performance Excellence (KAPE) and was a Lead Senior Examiner and Examiner Training Facilitator for the Pennsylvania Quality Award and a National Examiner for the Workforce Excellence Network (WEN). WEN is a public/private partnership of Federal, State, Local and Private Organizations/Agencies. Mr. Simon has written several articles on TQM and has been a featured speaker for many organizations including clients, professional societies, and other consulting firms.

During his career, Mr. Simon has had extensive interaction and negotiation with many customers including: Federal Transit Administration, Federal Aviation Administration, NASA, Air Force, Army, Navy, National Security Agency, US Postal Service, SEPTA, Long Island Rail Road, and DCMC Quality on-site Department of Defense representatives.

NAME **MICHAEL E. RADBILL, PE, F.ASCE, CPC**

TITLE **VICE PRESIDENT**

PROJECT ASSIGNMENT ***TRAINING*** **/ WORLD TRADE CENTER/ BUILDINGS**

Years of Experience: 34

Registrations/Memberships

- Professional Engineer – NY, NJ, AZ, CO, CT, DE, FL, MD, NC, UT, OH, TX, PA
- Certified Advanced Metric Specialist
- Certified Professional Constructor
- Certified Documents Technologist
- Fellow - American Society of Civil Engineers
- American Institute of Constructors
- Society of American Military Engineers
- US Metric Association
- Construction Management Association of America
- Elected to Who's Who of International Professionals
- Fellow - National Transit Institute
- Elected to Panel of Neutrals, American Arbitration Association

Education

- MRP, 1976, Pennsylvania State University, Regional Planning
- BSCE, 1968, Clarkson University, Civil Engineering
- Diploma, 1995, US Air Force War College
- Diploma, 1986, US Army Command & General Staff College
- Certificate, 2007, Harvard Law School, Program of Instruction for Lawyers at PON - Mediation

Mr. Radbill has extensive technical and management experience in the construction of federal, state, local, and private projects. These projects include transportation, power generation, petrochemical, correctional, military, aviation, commercial, hotel, and others. His skills and management accomplishments include drafting and editing design and construction contracts and specifications; writing and updating corporate level construction procedures manuals; developing, updating, and analyzing critical path method (CPM) schedules; facilitating partnering for construction projects; preparing and analyzing construction claims for owners and contractors; participating in resolving of construction disputes during negotiation, mediation, mini-trial, and trial; testifying as an expert at trial; arbitrating construction disputes as an American Arbitration Association Arbitrator; and presenting training courses to owners and contractors on writing specifications, CPM scheduling, claims avoidance, and project and construction management. Mr. Radbill's experience includes:

URBAN ENGINEERS, INC. (February 2005 to Present)

Meadowlands Sports Complex, New Jersey Sports and Exposition Authority, New Jersey - Reviewed and edited construction contract general and special conditions, instructions to bidders, and special provisions. Merged the "boiler plates" from the Authority and New Jersey Transit into one contract document for a project that brings mass transit into the Meadowlands Sports Complex.

FasTracks, Regional Transportation District (RTD), Denver, CO - Facilitated a "mock" risk assessment workshop for the West Corridor Project. This 1½-day workshop reviewed the scope and schedule of the project, identified cost areas at risk for cost and schedule growth and with opportunities for cost and schedule savings. Explained the use of Monte Carlo statistical method for determining a confidence level that the project would be completed at the projected cost and schedule.

East Side Access Project, Metropolitan Transit Authority Const. Corp. (MTACC) New York City - Assessed risks of schedule and cost growth related to third party contracts with local railroads. Presented findings and

facilitated two-day risk-assessment workshop for the $6.3 billion project to bring the Long Island Railroad from Queens, under the East River, and into Grand Central Station in New York thru new tunnels and underground concourses.

Maryland State Highway Administration (MSHA) Baltimore, MD - Analyzed eight construction claims valued at over $1.2 million related to the reconstruction of the Interchange US 50 and Maryland Route 2 in Annapolis. In addition, Mr. Radbill led settlement negotiations with the MSHA and contractor.

Second Avenue Subway Risk Assessment, Federal transit Administration, New York City - Analyzed general conditions and general requirements of the construction contract for the Second Avenue Subway Project, Phase I in New York City. Using Federal transit Administration Program Guidance, prepared a report of potential risks to the project cost estimate resulting from language in the construction contract. Presented and discussed findings in a workshop with the New York MTA and project team.

Claims Analysis for the Connecticut Department of Transportation - One was a $2 million claim for extra work associated with the construction of a maintenance facility for one of the Department's District offices. The other was a $509,000 claim for delay and extra work related to the lengthening of the safety areas on each end of an airport runway near Waterbury, CT.

Quality Management & Audit Activities for Metro Solutions Phase II, Houston TX - Provided quality management services to include audit of preliminary engineering for the 7-mile Southeast Corridor Bus Rapid Transit (future light rail) Project. This is one of five corridors to be designed and constructed by 2012 at a cost of approximately $1.23 billion.

TRAUNER CONSULTING SERVICES, INC. (November 1990 to February 2005)

Senior Consultant - Mr. Radbill has provided construction claims analysis, dispute resolution, and litigation support for numerous projects to include: $2.4 billion Urban Train Project in San Juan, Puerto Rico; $147 million Polypropylene Plant, Linden, New Jersey; $100 million superfund cleanup site in southern New Jersey; $7 million Bachelor Enlisted Quarters, Naval Amphibious Base, Virginia Beach, Virginia; $50 million County Jail, Jacksonville, Florida; and a $15 million Highway and Bridge Project, Kentucky. He has provided analysis of termination cause and costs for a prime contractor on multiple school renovation projects for the surety. He assisted the Omaha District Corps of Engineers in the analysis of delays involving $27 million in construction of support facilities at the Strategic Air Command Air Force Base in Grand Forks, North Dakota. Services included preparation of an as-built schedule, analysis of the as-planned and as-built schedules, and preparation of a claim report, negotiation support, and testimony at a mini trial. He served as the American Arbitration Association appointed arbitrator on a panel of three arbitrators for a $1.6 million commercial construction dispute in New Jersey and as the sole arbitrator for a dispute between a subcontractor and the prime for a Delaware DOT highway construction project. He wrote and presented the training course entitled "Management of Transit Construction Projects" for the National Transit Institute for over ten years. He has been selected as a Fellow of the National Transit Institute at Rutgers University. He has facilitated partnering workshops for the construction of highway bridges and for service contracts for the U.S. Army. He has managed the metrication of and edited Construction Manuals for the states of Delaware and New Hampshire. He was the Project Director for the development and construction of a $50 million Intermodal Transportation Center for the Tri-State Transit Authority in Huntington, WV. He was also the project director for the updating and rewriting of three contracts; construction, professional services, and materials & supplies; for the Chicago Transit Authority. He was the project director for the creation of three project management plans for Federal Transit Administration funded projects: Washington Metropolitan Area Transit Authority; Tri-State Transit Authority, and the Ulster County, NY Area Transportation Authority. He assisted in the mediated settlement of a $6 million claim on the construction of a concrete pile highway bridge in Puerto Rico.

Norman Jones

Talson Solutions, LLC

306 Market Street, 4th Floor
Philadelphia, PA 19106

Norman Jones

EXPERIENCE

- 36 Years

EDUCATION

BA, Virginia State University
Science in Electronics

RECORD OF PROFESSIONAL EXPERIENCE

Mr. Jones has 36 years of experience in progressively responsible positions in the areas of Program / Project Management, Quality Assurance and Manufacturing. Service and product experience includes business startups, construction management, project coordination between government agencies and private industry, process development, system engineering, computer systems and high reliable satellite systems with associated test equipment. Highlights of Mr. Jones' relevant experience include the following:

Project Management / Quality Assurance, Project Management Oversight, Lead Quality Manager on Urban Engineers' Federal Transit Administration Program Management Oversight Contractor (PMOC) assignments. He has assisted in Program Management at various transit agencies to develop, implement, and maintain a cost-effective quality management system at MTA in New York, NY; MARTA in Atlanta, GA; SFRTA in Pompano Beach, FL; DART in Dallas, TX; TRE in Forth Worth, TX; RTD in Denver, CO; RTC in Las Vegas, NV; and MTA in New York, NY. In addition to his contributions to the PMO Team, Mr. Jones is a Course Developer and Instructor for the National Transit Institute (NTI). He assisted in the development of a training course and the on-going teaching of the course to familiarize transit agencies with the Revised 2002 FTA Quality Assurance and Quality Control Guidelines.

Project Manager, Communications and Power Center, -Key member of an implementation team charged with the responsibility to design and fast track construct a 350,000 square foot state-of-the-art satellite facility and the subsequent consolidation of capital equipment into the facility from two discontinued operations. Responsibilities included the optimization of the facility by product flow and space allocation, resolution of design issues, equipment relocation with special utility requirements, subcontract management and quality, cost and schedule control associated with each task.

Program Manager, NASA Ground Station, -Directly responsible for the manufacturing of 3 complex satellite communication systems. The system provides up-link and down-link communications among various satellites, the shuttle and ground control. Responsibilities included quality/cost/schedule control, interfacing with internal functional units, senior management, NASA and various subcontractors. An aggressive outsourcing plan identified over $613,000 in savings and the program was cited for positive and best practices during NASA audits.

Operations Manager, Electrical Aerospace Ground Support Equipment, -Directed a multifunctional team of 70 employees in fabrication, integration and test of complex electronic equipment and systems utilized in testing of communication satellites. Functional area exceeded all quality, cost and schedule goals.

Supervising Engineer, Failure Analysis and Non-destructive Testing, -Performed detailed failure investigations and managed the activity of 8

engineers in the timely investigation of failed spacecraft hardware and 3 technicians in non-destructive testing of incoming material and fabricated components. Selected to chair Failure Analysis Review Board. In this capacity reviewed and approved over 250 failure analysis investigations for technical content and corrective action implementation resulting in concurrence from many diverse customers.

Program Manager, Air Traffic Management Line of Business, -Responsible for hardware and software quality assurance activity on all FAA programs and coordinating the activity of Quality Program Managers assigned to various programs. Extensive interaction and negotiation with three resident FAA Quality Representatives and Contracting Officer, customers, major subcontractors and internal functional organizations.

Mr. Jones is a graduate of the General Electric Manufacturing Management Program. This Program consisted of four different assignments in manufacturing and quality at different GE facilities throughout the United States. Mr. Jones assignments included Advance Quality Assurance Engineering, Manufacturing Engineering, Production Supervision, and Work Simplification.

NAME BURTON G. KOHLMAN, PSP
TITLE SENIOR SCHEDULING ENGINEER
PROJECT ASSIGNMENT SCHEDULING

Years of Experience: 40

Registrations/Memberships

- OSHA 40 Hour Hazardous Waste Operations
- Emergency Response Training
- OSHA 8 Hour Refresher Course
- AACE Planning & Scheduling Professional
- American Society of Highway Engineers
- American Society of Civil Engineers
- Articles Published - Scheduling, Delay Claims, & Litigation for Pennsylvania Bar Association, Construction Litigation Committee, 1990

Education

- BS, 1979, Drexel University, Civil Engineering
- Certificate, 1997, Dale Carnegie Course

Mr. Kohlman has extensive experience, including two decades working with Urban Engineers (Urban) in critical path method (CPM) scheduling, design, construction management, claims analysis and mitigation, and computer applications. This experience comes from working on major airport, highway, marine, bridge, railroad structure, transit, and building projects, in addition to working on site layouts for heavy construction, project coordination between government agencies and private industry and multi-phase projects.

Integrity Monitor, Freedom Tower (1WTC) NYC, NY - Project Schedule Engineer on an integrity monitoring assignment responsible for the evaluation of the project controls methodology. Services include in-depth analysis and schedule characterization for integrated contracts leading to a new 1,776-foot high-rise tower at the World Trade center site. Conducts monthly reviews of schedule updates and meetings with the contractor to discuss status, trends and alternate approaches to the work. Participate in claim evaluations and negotiation sessions. Conducts a schedule risk assessment evaluation documenting potential risks and their time and cost implications for reporting to the Inspector General. This is done utilizing state of the art software and statistical methods and probabilities. The results are used to analyze progress and develop contingency or alternate plans. The effort supplements the search for waste, fraud and abuse that may be systemic to the construction industry and the evaluations, reports and analyses are forwarded to the NYNJPA Inspector General.

Meadowlands Rail Project, NJSEA (New Jersey Sports and Exposition Authority), East Rutherford, NJ - Served as a schedule engineer for a new $150 million commuter rail access and station for a professional sports complex. Responsibilities included conceptual construction packaging, master plan development, constructability review, and design monitoring. The Meadowlands Railroad and Roadway Improvement Project (MRRIP) is a multi-agency cooperative effort to provide a rail mass transportation access to the New Jersey Meadowlands Complex in East Rutherford, NJ. The overall construction program encompasses railroad and highway projects. The initial phase of the project included the construction of two new tracks, each approximately 12,300 feet in length and connected to the Pascack Valley Line. The rail station involved the construction of one island platform, approximately 950 feet in length. The platform included a waiting area for passengers including overpasses, stairs and elevators. In order to accommodate the new rail station, a highway interchange with Route 120 needed to be reconstructed. Special attention was necessary to allow both highway and rail construction while minimizing disruption to the existing Meadowlands operation. The two-track link allows customers throughout the state to travel to Meadowlands events by rail. Nine of New Jersey Transit's 11 rail lines indirectly connect with the Pascack Valley Line via Secaucus Junction. Mr. Kohlman is providing special services to NJSEA for their

consideration of a new NFL football stadium and the construction of the Xanadu retail complex.

Kvaerner Philadelphia Shipyard, Kvaerner Shipbuilding, Inc., Philadelphia, PA - The Philadelphia Naval Shipyard was closed through the Base Relocation and Closure Act (BRAC) and converted to a private state-of-the-art shipbuilding facility. The project required environmental cleanup; demolition of several structures; construction of new fabrication shops, paint shop, Goliath crane and administration facilities; drydock modifications; as well as site improvements. Construction of the 700,000-square-foot industrial floor space was a just-in-time construction project. Mr. Kohlman provided project control and administration for the design phase of the project. He developed a work breakdown structure, master schedule, phasing and bid packages for a compressed time fast track design and construction project; monitored drawing lists and owner supplied equipment purchases to meet the owner's needs to begin the ship building as soon as possible; monitored and tracked the preparation and application of over 20 federal, state, and local permits; and monitored and reported on the project status as design and construction continued at the same time. An approximate $251 million project.

New Terminal, Airfield, and Roadways, Washington National Airport, Metropolitan Washington Airports Authority, Washington, DC - Performed detailed design-phase scheduling; and developed, implemented, and updated CPM network schedules to coordinate with construction phasing schemes for this major airport expansion program.

Center City Commuter Rail Connection, City of Philadelphia, Philadelphia, PA - Schedule Engineer on construction of a four-track cut-and-cover commuter railroad tunnel through center city Philadelphia. This $350 million project integrated two independent railroads into a regional commuter facility. Responsibilities included schedule and cost control on system-wide contracts including track, traction power, signals, and communications, as well as some physical tunnel contracts. The project control team interfaced with city and federal agencies on a regular basis to monitor and report on status.

Project Management Oversight Experience - Schedule Engineer for the FTA's PMOC Program in Region 4. Projects included MARTA's (Atlanta, GA) North Line Extension; and MDTA's (Miami, FL) Palmetto Extension, East-West Corridor, and North Line Extension Projects. MARTA's North Line Extension was a $463.2 million heavy rail project that included a 2.3 mile double track extension, underground station with parking garage, elevated station with parking garage, and the acquisition of 56 railcars. The assignments involved conducting site visits and producing spot reports detailing an evaluation of the grantee's compliance with its management plan and the effectiveness of that plan. It also included interviewing management personnel to investigate and monitor the effectiveness of project controls. Other projects include:

Metropolitan Transit Authority (MTA), Federal Transit Administration, New York, New York - Project Schedule Engineer responsible for the evaluation of the grantee's project controls methodology. Services include in-depth analysis and schedule characterization for integrated contracts leading to new transit services. Conducted monthly reviews of schedule updates and meetings with the MTA to discuss status, trends and alternate approaches to the program. Lead a schedule risk assessment evaluation documenting potential risks and their time and cost implications. This was done utilizing statistical methods and probabilities. The results are used to develop a management plan with contingency reserves. These services are used on two MTA projects. **East Side Access (ESA**) is a $6.3 billion new alignment for Long Island Railroad that begins at the Harold Interlocking in Queens and runs under the East River to a new terminal station situated under Grand Central Station with eight tracks. **Second Avenue Subway (SAS)** is a $2.3 billion new subway line under Second Avenue. This work is the first of a four phase program that provides service from 96th street to 63rd Street.

Devang J. Parekh ***KS Engineers, P.C.***
Project Scheduler

EDUCATION
B.S.M.E. – New Jersey Institute of Technology, 1993
M.S.M.E. – New Jersey Institute of Technology, 1996

CERTIFICATIONS/TRAINING
Primavera P3 - Planning and Scheduling with Primavera P3
Primavera P6 – Introduction to Primavera P6

EXPERIENCE SUMMARY
Mr. Parekh has more than 9 years of experience in application, design, project and sales engineering. Some of the major industry experiences include, sheet piling, glass wall system for low and high-rise buildings, HVAC, nitrogen generator and co-generation plants and medical devices, FDA validation. His experience includes project analysis, document research, mechanical design and review of technical related issues. Other responsibilities included preparing technical proposals, equipment selection, presentations and design analysis of project updates and company products and summary of new design concept in a clear and concise manner. In addition, he is proficient in Primavera P3 & P6, Claim Digger, MS Project, MS Office, ACAD, CANVAS, ADOBE, Visio, Corel Draw, Concordance, Lexis-Nexis.

PANYNJ, NY – *Construction Claims Analyzer/Scheduler*
- Currently working on $204M reconstruction of the existing runway at John F. Kennedy Airport (JFKIA).
- Responsibility includes reviewing contractor's schedules and assist engineers in claims and estimation.
- Perform schedule analysis using Primavera P3, P6 and Claim Digger on weekly and monthly schedules.
- Created spreadsheets to track major project items for payment and schedule verifying.
- Advice Resident Engineer of any future claims and present the findings as required.
- Visit project job site and attend project and progress schedule review meetings.
- Create timelines for various contractors' claims as required.

Construction Claims Group, Cedar Knolls, NJ - *Senior Claims Consultant* responsible for the following:
- Worked on construction claims providing detailed analysis of entitlement, causation and schedule analysis.
- Met with State, City and County professionals for various negotiations on bridge, road and school projects.
- Building projects included the following:
    - Midwood High School (NY)
    - The Baruch College (NY)
    - East Orange PS #2 & #5 (NJ)
- Assisted in preparing Expert Report for Mediation, Arbitration and Litigation as required.
- Performed schedule claim analysis using Primavera P3 and Claim Digger and MS Project.
- Analyzed delays related to schedule delay claims, productivity claims and defective design claims.
- Created detailed As-built graphics to show job progress and any delays.

Capital Project Management, Inc., Fairfield NJ - *Claims Analyst / Consultant* responsible for the following:
- Provided construction services including claims consulting to various government and corporate clients.
- Used Primavera (P3), Claim Digger and MS Project to perform schedule review and analysis.
- Performed TIA (Time Impact Analysis) based on As-planned and As-built schedules.
- Projects included the following:
    - Miami Int'l Airport Expansion ($100M)

  - Morris County Bridge ($12M)
  - NJDOT Rt. 35 Shark River Bridge ($48M)
  - Watchung High School ($14 M)
  - New Brunswick School Renovation($5M)
- Interviewed key personnel, reviewed documents, schedules, payroll, contracts, etc.
- Assisted in preparation of Expert Report for clients based on our findings.
- Prepared as-built graphics using daily reports, equipment records, diaries, etc.
- Prepared presentations in PowerPoint for clients.

Bendheim Wall Systems, Passaic NJ - *Project and Sales Engineer* responsible for the following:
- Prepared quotations and proposals based on contractor's take-offs.
- As a Sales Engineer worked with architects, representatives and contractor's to fulfill their requirements.
- Worked with W&W Glass, Enclos Corp., Trainor Glass, Harmon, Karas & Karas.
- Developed price-sheet in Excel for estimating and officially used by the company for all estimating.
- Created and automated design calculation spreadsheet for glass wall design. These included deflection, stress/strain calculations, maximum glass height, moment of inertia, etc.

EKATO Corporation, Ramsey NJ - *Project Engineer/Sales Engineer* responsible for the following:
- Performed complete project review, design and estimation of industrial agitators/mixers.
- As a sales engineer visited many client locations for product presentations and review of design proposals.
- Designed agitators, which consisted of 5HP to 1500HP for various industries. Major industries include pharmaceutical, paint and adhesives, municipal wastewater treatment, flue gas desulphurization (FGD), mineral extraction, pulp and paper, chemical and other processes.
- Designed agitators to meet and or exceed stringent and complex mixing requirements.
- Performed Computational Fluid Dynamics (CFD) to visualize the agitator performance.
- Assisted in design and selection of multi-million dollar project for FGD applications. Major task of the plant was to convert the Sulfur Dioxide (SO_2) into Calcium Sulfate ($CaSO_3$) and by product is Gypsum.
- Assisted local municipalities in selection and design of wastewater agitators.

BOC Process Plants, Berkeley Heights NJ - *Project Engineer* responsible for the following:
- Performed detailed design and equipment selection for nitrogen generators. Assisted senior engineers in writing technical proposals for various projects.
- Performed process equipment sizing, selection and estimation for the project. The equipment included heat exchangers, pumps, compressors, filters, piping, etc.
- Spearheaded and created proposal tracking database in MS Access.
- Assisted the engineers in updating, tracking and modifying proposals to meet deadlines and perform reports.
- Prepared technical proposals for the client, based on final design and estimate.
- Assisted the Department in achieving a successful ISO 9001 audit.

National Medical Care, Rockleigh, NJ - *Validation Engineer* responsible for the following:
- Prepared technical proposal on test methods for FDA on medical devices, mainly kidney dialysis machines.
- Validated the devices to meet and/or exceed the stringent FDA, GMP and GLP rules and regulations.
- Designed performance and integrity testing of clinical and experimental dialysis devices.
- Enhanced existing test methods to attain the most saving and cost effective results.
- Responsible for keeping company's safety meetings and records updated in compliance with GMP and GLP.

NAME **PAUL KOVNAT, EIT, CEP**
TITLE **SENIOR ESTIMATOR**
PROJECT ASSIGNMENT **COST ESTIMATING**

Years of Experience: 27

Registrations/Memberships

- Certified Estimating Professional
- MCACES, 2nd Generation (MII) Basic Training
- National Civil Engineering Honor Society

Education

- BS, 1984, Drexel University, Civil Engineering

Mr. Kovnat is an Estimator with extensive, progressively responsible experience in heavy/civil construction. He has experience in estimating projects up to $180 million, including major bridges, highway interchanges, water/wastewater treatment plants, transit, rail, airport, tunnel, and underground utility projects. He is also familiar with joint venture bidding and design/build arrangements.

Mr. Kovnat has an understanding of union and open-shop environments, gained through exposure to multiple markets in the Mid-Atlantic region. He is also proficient with a number of construction industry software applications, including HCSS, P3, and Expedition. Mr. Kovnat's experience includes:

South Sacramento Light Rail, Sacramento, CA Performed capital construction cost estimates for three light rail stations on the South Sacramento Corridor Phase 2 (SSCP2) Project.

Southeastern Pennsylvania Transportation Authority (SEPTA) General Engineering Consultant, Philadelphia, PA Performed capital construction cost estimates for four SEPTA projects funded through ARRA. These projects all located on SEPTA's Regional Rail Division, included three Station Improvement Projects (Ryers, Chestnut Hill West, Tulplhocken) and a Line Section Improvement Project (Mainline Schuykill).

City of Baltimore Municipal Dock Cost Estimates Performed a detailed cost estimate for the repair of a damaged floating dock structure. The damage was sustained during a severe winter storm, which affected the floating structure in addition to the water and electric utilities. An additional estimate for the complete in-kind dock renewal construction cost was used for comparison purposes. The estimates were submitted to the client for insurance claim resolution.

Olin Dock Damage Investigation Repair Cost Estimate Generated a detailed cost estimate following an alleged barge allusion at the Olin Dock, a T-head structure located on the Mississippi River in Louisiana. After contractor bids were submitted, the repair cost estimate was compared with the bid figures. Advised the client on the scope of work and bid values.

Conoco Philips Containment Bulkhead Construction Cost Estimates Estimated construction costs for a one-of-a-kind containment bulkhead that was designed to be fabricated in place. Site requirements dictated difficult construction staging to make the project possible.

Blanket Purchase Agreement for Cost Estimating Services, General Services Administration, Region 3 - Senior Estimator for over 50 cost estimates for this continuing open-ended assignment, which includes plan development from conceptual through final design and construction costs ranging from $300,000 to $4 million. These have included renovations and security enhancements throughout the full range of CSI divisions. Facilities users have included the US Marshals, EPA, SSA, FBI, Post Office, Federal Courts, and Immigration.

Third Party Technical Review, Aberdeen Proving Grounds, Aberdeen, MD - Senior Estimator for the following Aberdeen Proving Grounds projects: Edgewood Area Options A &

B - Site Work and Utilities for Maryland Fire & Rescue Institute (MFRI) Facility, Dahlgren Fire Station, Renovations to Building 316, Renovations to Accommodate Multiple Block Locations, and Downer Hall Electrical and Mechanical Upgrades.

East Side Access, Metropolitan Transportation Authority, Federal Transit Administration, New York, NY - Senior Estimator for project management oversight for the Metropolitan Transportation Authority's entry into a $2.6 billion Full Funding Grant Agreement with the FTA for the East Side Access Project. Included a detailed independent estimate performed in order to validate the project contractors' indirect costs. Also, the project soft costs, such as engineering fees, construction administration/management fees, agency support costs, and insurance costs were validated.

Second Avenue Subway Project, Metropolitan Transportation Authority, Federal Transit Administration, New York, NY - Senior Estimator for PMO Consultant services on federally-funded transit projects in the New York metropolitan area. Among the projects overseen is the design and development of the new Second Avenue Subway from 125th Street to the Financial District. Total costs for the line are estimated at $16.8 billion. The project scope includes: tunneling; station/ancillary facilities; track, signal, and electrical work; maintenance and equipment storage yards; vehicle procurement; and other subway systems necessary for operation.

Trenton-Morrisville Toll Bridge Project, Delaware River Joint Toll Bridge Commission, Trenton, NJ - Lead Estimator for this $87 million project for the Delaware River Joint Toll Bridge Commission.

Senior Estimator, Philadelphia Regional Division, The Conti Group, Langhorne, PA. Direct estimating efforts for rail, airport, and bridge/highway projects up to $100 million in the Philadelphia area. Managed a team of estimators, which varied in accordance with the demands of each project. Staff estimator role on projects pursued by other divisions; including bids to NYCDOT, NYCTA, NJ Turnpike Authority, PANYNJ, US Army, US Navy, and various corporate project owners.

Assisted Project Managers in buy-out and start-up processes for awarded projects. Assisted Marketing Department with technical writing required for design/build proposals.

Senior Estimator, American Infrastructure, Worcester, PA. Lead Estimator of structural work for the Allan A. Myers Public Division. Bid highway and bridge projects to PennDOT, Pennsylvania Turnpike Commission, MDSHA, Maryland Transportation Authority, and other entities. Bid water resource projects to county and municipal authorities in PA, DE, MD and VA.

Primarily responsible for estimating demolition, foundation excavation, temporary excavation support, piling, caisson, structural concrete, and structural steel activities. Also performed estimates for earthwork, underground utility, mechanical piping, and asphalt paving activities in response to department workload. Performed quantity take-off, solicited material pricing, assigned appropriate crew resources, and determined production rates to calculate costs for self-performed work.

Interfaced with senior management on issues of risk identification, equipment utilization, craft labor requirements, and assessment of competitive market conditions.

Estimator - Conti Enterprises, Inc. (a division of The Conti Group) - South Plainfield, NJ. Estimated direct costs on projects for NJDOT highways, the Boston Central Artery / Tunnel, a runway extension, fiber optic backbone systems, a toll plaza reconstruction, and "Intelligent Transportation Systems". Also responsible for the preparation of pre-bid schedules.

John Luttrell – Estimator

YEARS OF EXPERIENCE: 20+

EDUCATION:
Mechanical Engineering, New York Institute of Technology

TECHNICAL CAPABILITIES:
Timberline Project Management, Microsoft Project and Microsoft Office

PROFESSIONAL EXPERIENCE:

DACK Consulting Solutions, Inc., White Plains, NY 2009 - 2010
Senior Mechanical Cost Estimator
Responsibilities included performing plan & spec estimates based on engineered drawings, and conceptual estimates based on limited information; soliciting bids from vendors and subcontractors; maintaining historical estimate database. Also required providing estimating input on projects at varying stages of design, and completing accurate quantity takeoff and apply standard unit pricing techniques for Plumbing, Fire Protection and HVAC. Projects included:

- MEP Hegeman Estimate – consisted of sanitary piping, gas piping, storm piping, sprinkler mains and piping, duct work, packaged A/C Units, air handling condensing units, cabinet unit heaters, Pumps, and fans.
- Putman Water Filter Plant Mechanical Piping – consisted of Carrier/Protected Water Piping, Process Piping, and Centrifugal Pumping Equipment.

LiRo Engineers, Syosset, NY **2009 - 2010**
Senior Mechanical Estimator, Consultant to LIRR
Duties included performing plan & specification estimates based on engineered drawings, and conceptual estimates based on limited information; verifying accuracy of out-source estimating services; and maintaining historical estimate database. Also required providing estimating input on projects at varying stages of design, and completing accurate quantity takeoff and apply standard unit pricing techniques for Plumbing, Fire Protection and HVAC. Projects included:

- Amtrak Standpipe – consisted of 8" Buried Fire Service and compressors & piping.
- Penn Station Rest Room Rehabilitation – consisted of HW & CW Piping, waste piping, vent piping, and HVAC.

Sairam Consultants, Inc., West Orange, NJ **2007 - 2008**
Mechanical Estimator, Consultant to Con Edison
Duties included performing plan & specification estimates based on 100% engineered drawings, and conceptual estimates based on limited information; soliciting bids from vendors & subcontractors; and following national labor and material cost trends. Also required providing estimating input on projects at varying stages of design, and completing accurate quantity takeoff and apply standard unit pricing techniques for Plumbing, Fire Protection and HVAC. Projects included:

- Various Power Generating Stations (5 Boroughs) – consisted of gas piping, vent piping, boiler breeching, chemical piping, and process instrumentation

Concost Associates, Inc., Newark, NJ **2006 - 2007**
Mechanical Estimator, Consultant to Gilbane/TDX
Duties included performing plan & specification estimates based on 100% engineered drawings, and conceptual estimates based on limited information; soliciting bids from vendors & subcontractors; and following national labor and material cost trends. Also required providing estimating input on projects at varying stages of design, and completing accurate quantity takeoff and apply standard unit pricing techniques for Plumbing, Fire Protection and HVAC. Project included:

- **Kings County Hospital – consisted of** close out of all mechanical change orders; compare contract work to change order directives**;** and negotiate final costs with all subcontractors.

Hanscomb Faithful & Gould **2004 - 2005**
Mechanical Cost Estimator, Consultant to American Airlines
Duties included performing plan & specification estimates based on 100% engineered drawings, and conceptual estimates based on limited information; soliciting bids from vendors & subcontractors; and following national labor and material cost trends. Also required providing estimating input on projects at varying stages of design, and completing accurate quantity takeoff and apply standard unit pricing techniques for Plumbing, Fire Protection and HVAC. Project included:

- American Airlines, JFK Airport – consisted of close out all mechanical change orders; compare contract work to change order directives; and negotiate final costs with all subcontractors.

Durr Mechanical Construction, Inc., New York, NY **2001 - 2004**
Mechanical Estimator
Duties included performing plan & specification estimates based on 100% engineered drawings, and conceptual estimates based on limited information; soliciting bids from vendors & subcontractors; and following national labor and material cost trends. Also required providing estimating input on projects at varying stages of design, and completing accurate quantity takeoff and apply standard unit pricing techniques for Process Piping & Equipment, and Hard Bidding. Projects included: Hunts Point WPCP, Newtown Creek WPCP, North River WPCP, Owls Head WPCP, Tallman Island WPCP, and Red Hook WPCP.

Chesterfield Associates, Inc. , Westhampton Beach, NY **1992 - 2001**
Mechanical Estimator
Duties included performing plan & specification estimates based on 100% engineered drawings, and conceptual estimates based on limited information; soliciting bids from vendors & subcontractors; and following national labor and material cost trends. Also required providing estimating input on projects at varying stages of design, and completing accurate quantity takeoff and apply standard unit pricing techniques for Plumbing, Fire Protection, HVAC, Process Piping and Hard Bidding.

Overall Estimates Projects Completed:

AVIATION

NAME **JACK M. MARTINS, PE**
TITLE **VICE PRESIDENT, AIRPORTS PRACTICE**
SERVICE AREA **AVIATION**

Years of Experience: 41

Registrations/Memberships

- Professional Engineer – PA, VA, MD
- American Society of Civil Engineers
- American Association of Airport Executives
- Airport Consultants Council
- Aviation Council of Pennsylvania

Education

- BS, 1969, Newark College of Engineering, Civil Engineering

Mr. Martins offers extensive airport design, construction, and project management experience, including significant time spent with the Philadelphia International Airport Division of Aviation. His experience extends to all aspects of airport planning, design, and construction, including airside, landside, and terminal development. Mr. Martins is completely familiar with airport operations, airfield requirements, airline coordination, and the FAA and state grant process. He has direct responsibility for the technical design and construction documentation of all airport projects undertaken by Urban. Mr. Martins' experience includes:

Mr. Martins has broad ranging experience with airport design, site development, and civil design through his many airport-related projects. He offers extensive experience with airport design, construction, and supervisory experience, including significant time spent with the Philadelphia International Airport Division of Aviation. Mr. Martins' experience extends to all aspects of airport planning, design, and construction, including airside, landside, and terminal development. He is completely familiar with airport operations, airfield requirements, airline coordination, and the FAA and state grant process. He has direct responsibility for the technical design and construction documentation of all airport projects undertaken by Urban. Mr. Martins' relevant experience includes:

Runway 9R-27L, Philadelphia International Airport, City of Philadelphia, Division of Aviation, Philadelphia, PA - Resident Engineer for the construction of this 10,500 foot instrument runway. The runway was constructed of full depth bituminous pavement and included in-pavement centerline lighting.

City of Philadelphia, Division of Aviation, Philadelphia, PA - Resident Engineer for several major airfield projects including the construction of Runway 9R-27L, Philadelphia's 10,500 foot main instrument runway. Responsibilities included supervision of all contractor activities, quality assurance, contractor payments, coordination with airport operations, and supervision of the inspection team.

City of Philadelphia, Division of Aviation, Philadelphia, PA - Design Engineer Supervisor responsible for management of in-house airport design department and all consultants providing design services for both Philadelphia International and Philadelphia Northeast Airports. This included preparation of capital and operating budgets, FAA and State Grant applications, coordination with FAA, Airport Operations, City Departments, and Airlines.

New Tier 2 Terminal, Washington Dulles International Airport- Project Director for the civil design for the 48-gate terminal. Responsible for assigning staff, monitoring budgets, quality assurance, and maintaining schedule.

New Terminal A West Philadelphia International Airport, City of Philadelphia, Division of Aviation, Philadelphia, PA - Project Director the design of all civil/site work for this $600 million facility. This included landside roadways and parking facilities, utility relocations, aircraft parking aprons, taxiways, hydrant fueling, geotechnical and construction phasing. Responsible for meeting milestones,

quality assurance, and budget.

New Terminal F, Philadelphia International Airport, City of Philadelphia, Division of Aviation, Philadelphia, PA - Project Director for the civil/site work for a 38-gate, $150 million, commuter aircraft terminal. Responsibilities included supervision of design for the access roads, utilities, geotechnical, aircraft parking apron, hydrant fueling, and construction phasing.

New Terminal, Ronald Reagan Washington National Airport, Metropolitan Washington Airport Authority, Washington, DC - Project Director for the civil/site engineering of this major terminal expansion, estimated at $500 million in total construction cost. Managed such elements as planning and final design for a new bi-level roadway, new aprons, and all associated utilities.

Terminal A Expansion, Philadelphia International Airport, City of Philadelphia, Division of Aviation, Philadelphia, PA - Managed the design of apron, roadways, and utilities associated with this $105 million terminal expansion, an 11-gate addition to the existing terminal facility. The project was designed for phased construction and included three separate engineering design contracts (apron, land side roadways, and utilities) totaling $22 million in construction cost.

Various Projects, Teterboro Airport, Teterboro, NJ - Directed design and construction inspection for the rehabilitation of Taxiways G and A, new IFR holding apron, and airport-wide taxiway guidance sign replacement.

Dulles International Airport, Metropolitan Washington Airport Authority, Washington, DC - Directed the design of a 2,600-foot-long concrete taxiway with all associated utilities and lighting.

South Jersey Regional Airport, Lumberton, NJ - Project Director for replacement of the existing antiquated runway lighting system. The new system includes a pilot actuated medium intensity lighting system with REILs, VASI, additional taxiway lighting, and new constant current regulator.

Albany International Airport, Albany, NY - Directed the design of several projects both landside and airside, including rehabilitation of apron, taxiways, and service roads.

Naval Air Engineering Center, Lakehurst, NJ - Managed a condition survey and study for repair of Westfield Runways 6-24 and 15-33. Also managed final design of test department runway and diversion taxiway.

New Jersey Air National Guard Fuel Apron, McGuire Air Force Base, NJ - Directed the design of a six-position, 80,000 square yard parking apron with hydrant fueling for KC-135 aircraft.

Route 17 Park and Ride Facility, New Jersey Transit Corporation, Ramsey Borough, Bergen County, NJ - Project Director for this civil portion of this design/build project for a new commuter rail station on New Jersey Transit's Port Jervis Line. Civil responsibilities include soil erosion control design and permit application / approval, site drainage including the detention basin, "kiss-n-ride" area and sidewalk ramps to the platforms that conform to ADA requirements. Intersection improvements include signalization, lane islands, stripping, sidewalks and curbs and the extension of sidewalks into the surrounding residential area.

Atlantic County Park at River Bend, Mays Landing, NJ - Project Director for this assignment which involved the preparation of contract documents, plans, and specifications for a recreation center and various other sports facilities. Included incidental improvements to roadways, parking areas, walkways, and other amenities at the 250-acre park, required a high degree of environmental coordination for wetlands impact within the sensitive New Jersey Pinelands preservation area.

NAME CHRISTOPHER G. GUBENO, PE

TITLE DEPUTY DIVISION MANAGER, AIRPORTS/CIVIL/SITE

SERVICE AREA AVIATION

Years of Experience: 19

Registrations/Memberships

- Professional Engineer – PA, VA, MD
- Airport Consultants Council
- American Association of Airport Executives
- American Society of Civil Engineers
- Whitemarsh Township (PA) Planning Commission, (2003-Present)
- Whitemarsh Township (PA) Open Space Committee (2007-Present)

Education

- BS, 1990, University of Pennsylvania, Systems Science and Engineering
- Certificate, 1998, Dale Carnegie Course
- Certificate, 2006, Urban Engineers, Inc., Project Management Training

Mr. Gubeno has extensive airport planning, airport design, and civil engineering experience on various sized projects. Mr. Gubeno's civil engineering design and construction background includes the design of runways, taxiways, and aprons, utilities, roadways, terminal buildings and facilities, hangars, parking lots, land development for commercial properties, implementation of environmental controls and coordination for environmental permitting, and navigational aid design. Mr. Gubeno's planning background includes forecasting and alternatives analysis for master plans, master plan updates, and airport layout plans using FAA planning standards, and planning integration for environmental impact statements and environmental assessments. Mr. Gubeno's experience includes:

International Arrivals Building Expansion, Metropolitan Washington Airports Authority, Washington Dulles International Airport, Dulles, VA - Project Manager of the site/civil and construction phasing design for the expansion of the existing IAB west of the Main Terminal Building. The project included the design of an addition to the west of the existing IAB, expansion of the IAB facilities and operations, relocation of the mobile lounge dock and redesign of the airfield and landside pavements and utilities. The civil site portion of the work included the design of construction phasing to maintain the existing IAB and the existing or new mobile lounge dock open for operation during construction in addition to the redesign of the airside pavements and utilities south and east of the building addition, coordination of the design of baggage cart ramps into baggage basements, reconfiguration of surface parking lots for dignitary and VIP pickup and employee parking to the west of the addition and a design of a new employee parking lot to the west of the project site. The construction phasing of the project was integral to the overall completion of the construction to maintain a secure AOA, operations of ground service vehicles and mobile lounges, access to the existing IAB mobile lounge dock and construction of the phases of the building. Mr. Gubeno also managed the construction phase services for the project including requests for information (RFIs), submittal reviews, attending site meeting and directing civil/site changes to the contract documents during construction. Urban is a subconsultant to PGAL. The construction estimate for the overall project, including the civil work, is approximately $125 million.

Parking Garages A and B/C Expansion, Metropolitan Washington Airports Authority, Ronald Reagan Washington National Airport, Washington, DC - Project Manager of the site/civil and construction phasing design for the addition of an additional level onto the top of Garage A and Garage B/C. The project included the design of an additional deck onto each of the existing parking garages, including extension of stair towers and elevators, and relocation of rental car facilities within one of the garages. The civil site portion of the project included the widening of existing traffic lanes around the garages, the design of a temporary vehicle ramp to permit contractor use of an existing ramp during construction for

lay-down and staging space, temporary and permanent signage changes around the garages, and restoration of the site to the pre-construction conditions. The project required significant analysis of traffic and construction phasing to maintain access around the garages and recirculation roads. Additionally, the design included analysis of staging and scheduling of the work to maximize contractor use and production. Mr. Gubeno also managed the construction phase services for the project including requests for information (RFIs), submittal reviews, attending site meeting and directing civil/site changes to the contract documents during construction. Urban is a subconsultant to Ammann & Whitney. The construction estimate for the overall project, including the civil work, is approximately $35 million. (2005-2008)

Runway 17-35 Extension Project, Philadelphia International Airport, City of Philadelphia, Division of Aviation, Philadelphia, PA - Project Manager for the airfield design that included a 400-foot extension to Runway 35 (south) and a 640-foot extension to Runway 17 (north). The airfield design included the design of both runway ends and parallel taxiways D and E east and west of RW 17-35. The project required significant planning and phasing of the projects in advance of the final airfield construction that included significant stormwater management; design of the enclosure of the main drainage ditches north of RW 17; surcharging of the RW 35 end of the site due to subsurface soils; coordination of design with the FAA for new localizers, glide slopes, and MALSR systems; threatened and endangered species mitigation in the form of turtle ramps and nesting sites; erosion and sediment pollution prevention planning and phasing; utility relocations and installations; and paving of the runway and associated taxiways. The most important parts of the project were the incorporation of the phasing, scheduling, and packaging into the design and the coordination with the FAA Eastern Region regarding the design of the NAVAIDs and maintenance of the airfield to meet Part 139 Certifications. The project was broken into smaller packages for bidding and scheduling purposes to meet a fast-track opening date set for the project as part of the FAA RTAP and fast-track program - OEP. Mr. Gubeno managed the construction phase services for the airfield portions of the project including requests for information (RFIs), submittal reviews, and directing civil/site changes to the contract documents during construction. Urban was the prime consultant with six subconsultants. The overall cost of the project is estimated at $55 million.

Tier 2 South Apron Phase 1, Metropolitan Washington Airports Authority, Washington Dulles International Airport, Dulles, VA - Project Manager for a four position hardstand parking apron for wide body aircraft. The project entailed the design of a 35,000 square yard hardstand parking apron that included stormwater, hydrant fuel, dedicated fire service water mains and apron lighting. Managed the project and integrated the hardstand apron design issues into the future utilities and expansion for the full Tier 2 South Apron. Managed and led the coordination with the airlines and operations on construction phasing in order to maintain the current airline use of the adjacent Concourse G and Apron G operations as well as the adjacent baggage transfer building operations. Mr. Gubeno also managed the construction phase services for the project including requests for information (RFIs), submittal reviews, attending site meeting and directing civil/site changes to the contract documents during construction. Urban is a subconsultant to Kohn Pedersen Fox Associates. The construction cost for the project is approximately $11 million.

Terminal A West, Philadelphia International Airport, City of Philadelphia, Division of Aviation, Philadelphia, PA - Project Manager for the apron design of a $350 million facility. This included demolition of four existing buildings, coordination of environmental mitigation packages for asbestos and lead paint removal from the existing buildings, over 2 acres of wetlands mitigation, surcharging and phasing of the site, utility relocations and design including stormwater, sanitary and water mains, design of a 1,800,000 square foot aircraft parking apron, and overlay and construction of new and existing taxiways. Urban was subconsultant to Kohn Pedersen Fox Associates. The construction cost for the overall project was approximately $22 million.

NAME KEITH W. FOGLIA, PE, LEED® AP
TITLE PROJECT MANAGER
SERVICE AREA AVIATION

Years of Experience: 23

Registrations/Memberships

- Professional Engineer – PA, MD
- NICET Level III
- LEED® AP

Education

- BS, 1986, Rutgers University, Civil Engineering
- Certificate, 2004, Dale Carnegie Course
- Certificate, 2008, Urban Engineers, Inc., Project Management Training

During Mr. Foglia's service with Urban Engineers, he has had the unique opportunity to gain both design and field experience. As a Site Design Engineer, Mr. Foglia has experience in developing site construction plans and specifications for airports, airfields, parks, sporting arenas, and transportation facilities. His experience includes design for runways, taxiways, and aircraft parking aprons, roadways, parking lots, stormwater management, utilities, on-site sewage disposal, water supply systems, and site grading. Mr. Foglia's experience includes:

Terminal F Expansion, Philadelphia International Airport - Senior Project Engineer for stormwater management design for terminal expansion. The project included a baggage claim building, access roadways, a building for baggage make-up and the associated airfield utility relocation and apron reconstruction to accommodate expanded airfield terminal facilities.

New Jersey Air National Guard Arm / Disarm Apron, Atlantic City Airport - Senior Project Engineer for airfield design for this holding apron adjacent to Runway 31 where F-16 & F-15 fighter jets hold prior to takeoff so that their weapons can be armed. The project included an earthen revetment impact berm designed to prevent a misfire from endangering inhabited areas. A mix of FAA and Military design criteria were used to satisfy the needs of the Air National Guard operating at this civilian airport.

Terminal E Expansion, Philadelphia International Airport - Senior Project Engineer and Associate Project Manager for site civil and airfield design for terminal expansion. The project included a baggage claim building on the arrivals road, a building for baggage make-up, security screening, restaurants, concessions and VIP lounge on the departures road and an airfield concourse hammer head expansion that provided hold room and jetway access to seven new aircraft positions at the end of concourse E.

United Airlines Express ACA Aprons, Taxiway and Holdrooms, Dulles International Airport- Senior Project Engineer and Associate Project Manager for the airfield design, civil site work and taxiway design for 19 position and 24 position commuter aircraft aprons. Each apron had hold room buildings. They were connected by new bus parking areas, service roadways and a new taxiway.

Tier 2 / Concourse C APM Sitework and Excavation, Dulles International Airport- Senior Project Engineer and Associate Project Manager for the site civil design of underground station excavation, site utilities and service roads around a new underground station for the Automated People Mover system at Dulles.

Concourse C Connector Tunnel Bypass Taxiways, Dulles International Airport- Senior Project Engineer, Associate Project Manager for a temporary taxiway design to facilitate continuous aircraft traffic during the construction of a pedestrian connector tunnel under existing taxiway E.

Aircraft Parking Layout for Jet Blue at Terminal 6, JFK International Airport, NY - Prepared planning schematics and detailed striping layout plans for the layout of aircraft

parking around Terminal 6. Planning alternatives were developed to accommodate revised aircraft parking that allowed aircraft to make use of existing hydrant fuel pits. Several alternatives were developed that made use of existing and proposed jetways.)

Tier 2 North and South Aircraft Parking Apron, Washington Dulles International Airport - Project Engineer for the design of aircraft parking aprons around the proposed Tier 2 International Terminal. Pavement, grading, drainage and utilities layouts were developed for aircraft parking between existing Taxiway C and Taxiway F. Various grading alternatives were developed and estimated for earthwork quantities in an effort to determine the most practical and economical grading alternatives.

Tier 3 Northwest Aircraft Parking Apron, Washington Dulles International Airport - Project Engineer for the detailed design of a remote aircraft parking apron. This apron had to be designed for construction in advance of the future Tier 3 Terminal project. Detailed grading was developed for the entire apron area from south of Taxiway F to the north side of the Tier 4 Terminal. The Tier 3 Northwest Apron concrete pavement grades were designed to match the future apron grades. This project included stormwater management, oil/water separators, dedicated fire fighting water pipes, electrical utilities and a hydrant fuel system. The project also included relocated ground service vehicle and snow removal equipment parking areas and the design of additional parking apron in the area of Tier 2 Southeast Apron.

Hammerhead D Aircraft Parking Apron, Philadelphia International Airport, Philadelphia, PA - Project Manager for the design of aircraft parking apron around a new extension to Terminal D at Philadelphia International Airport. The apron had to be re-graded so that storm water would drain away from the proposed building. New inlets were provided to allow storm water run-off to collect between aircraft. A water main was run around the building to supply water for fire hydrants and sprinklers. Existing and proposed pavement was evaluated for the new aircraft mix including a gate for the Boeing 777-200. An adjacent taxiway was relocated as part of this design.

International Terminal A West, Philadelphia International Airport, Philadelphia, PA - Project Engineer for the design of new aircraft parking apron around a new international terminal at Philadelphia. Elements of this design included airport geometry, construction phasing, building and utility demolition, utility relocation, surcharge grading, hydrant fueling, apron pavement, drainage, grading and erosion control.

Commuter Terminal F, Philadelphia International Airport, Philadelphia, PA - Project Engineer for the design of a new 38-gate aircraft parking apron surrounding the new terminal for regional aircraft. Design scope included utility relocations, hydrant fueling, building demolition, surcharge grading concrete and asphalt pavement design, drainage, grading and erosion control.

US Airways Remote De-Icing Apron, Philadelphia International Airport, Philadelphia, PA - Project Engineer for the design of new aprons and taxiways for de-icing aircraft near the runways. The design includes provisions for fixed pedestal de-icing equipment, underground glycol and water supply, concrete apron and asphalt taxiways.

Philadelphia International Airport Runway 8-26 Paving, Drainage and Lighting Package, Philadelphia, PA - Civil engineer for the design of a new 5,000-foot runway for commuter aircraft. This project includes a 500 foot tunnel under the east end of the runway for the relocated Hog Island Road and Conrail service track.

Midvale Bus Facility, Southeastern Pennsylvania Transportation Authority, Philadelphia, PA - Civil engineer for the design of a bus maintenance and enclosed storage/parking facility for 250 buses and a parking lot for the personal vehicles of the over 500 employees that will work out of this facility. This site design included on-site fuel stations and over 1.2 miles of new and re-designed access roadways.

NAME DAVID R. BENNER, PE
TITLE VICE PRESIDENT
SERVICE AREA AVIATION

Years of Experience: 38

Registrations/Memberships

- Professional Engineer – PA, NJ, MD, VA

Education

- MS, 1975, Drexel University, Civil Engineering
- BS, 1972, Drexel University, Civil Engineering
- Certificate, 1997, Dale Carnegie Course

Mr. Benner has extensive and diverse engineering experience emphasizing airport development. His knowledge of airport design and procedures has been nurtured through exposure to a variety of projects and people at airports throughout the northeast. Before working in the private sector, Mr. Benner worked for the Division of Aviation at Philadelphia International Airport where he began his distinguished career in aviation. Therefore, he is familiar with and sensitive to the needs of airport owners/managers as well as those of the designer. Throughout his career, Mr. Benner has worked with various state aeronautical agencies and FAA personnel through which he has developed an excellent host of contacts who can facilitate the progress of project development. He brings broad ranging skills to projects gained through a wide variety of exposure on numerous airport project designs. Mr. Benner's experience includes:

Phase II Fueling Apron, McGuire Air Force Base, New Jersey Air National Guard - Project Manager for design of the 75,000-square yard extension of the KC-135, concrete parking apron which included provisions for hydrant fueling. The project was coordinated with the simultaneous construction of the new fuel cell maintenance hangar. Combined with the Phase I apron, the new apron has the capacity for parking 18 KC-135 aircraft. The grading concept for the apron was established to accomplish two goals: one, aircraft should each park on a ridge in order to level the planes and facilitate fueling and two, ensure that all paved surfaces slope away from the plane and toward a catch basin in the event of a fuel spill. Any spilled fuel would be captured by the stormwater system and passed through a gravity type oil/water separator. The separator was sized to contain fuel volume equivalent to the largest fuel cell on the KC-135. In addition to deadman shutoff controls at each fuel pit, there are radio controlled panic shutoff stations strategically placed around the apron perimeter. The project was carefully scrutinized using established quality assurance procedures employed by Urban and now incorporated with its recent ISO 9001 certification. Mr. Benner was involved in regular coordination with Urban's resident engineer during the construction phase.

Deicing Apron, Philadelphia International Airport - Project Manager for the aircraft deicing apron for two Group V, two Group IV, and six Group III aircraft deicing stations. Studies preceded design to select the appropriate apron location considering taxiing patterns and predominant arrival and departure directions during inclement weather. Airline schedules were compared to runway departure rates to assess the number of deicing stations. A graphical taxiing simulation was reviewed with the client and later demonstrated for the FAA and airlines to illustrate how the project would fit the existing taxiway flow. The simulation pointed out the need for a second taxiway connector to the runway end. That taxiway was subsequently included with the project. The extra taxiway would reduce holdover time on the applied glycol as well as allow clockwise taxiing routes, hence, efficient aircraft circulation. The apron included underground glycol distribution piping and pedestal mounted application equipment. The use of underground delivery of pre-heated glycol Types 1 and 4 combined with fixed pedestal glycol spray units was expected to shorten typical deicing times by as much as 50 percent. An added benefit of the underground delivery was reduced vehicle traffic to and from the apron and circulating around the aircraft.

Reduced vehicle circulation increased operational safety.

Apron B-C-D, Philadelphia International Airport, City of Philadelphia, Division of Aviation - Project Design Manager for complete reconstruction of Apron B-C-D (130,000 square yards of concrete), including phasing, demolition, utilities, aircraft parking layouts, pavement design, contract documents, and office technical support during construction. There are 26 active gates in the B-C-D work area; the design was prepared to maintain operations with no more than two gate closures at any given time.

Baltimore/Washington International Airport, General Engineering Services - Project Manager for a two-year on-call services contract for varied task order services to the Maryland Aviation Administration (MAA). Urban prepared a composite set of drawings cataloguing leaseable space in the entire Terminal building including accurate measurement of all spaces. The package was developed in AutoCAD with open architecture that would allow conversion to a Geographic Information System. Mr. Benner developed a training syllabus and conducted hands-on training classes for MAA personnel who would be using and updating the delivered system.

General Engineering Services, Atlantic City International Airport, South Jersey Transportation Authority - Project Manager for this continuing on-call services contract to supplement the engineering staff on a variety of task order assignments. Under his direction, Urban has developed contract documents for airport construction, aided the Authority in developing their CIP, performed various studies and surveys, plus responded to any needs of the client in a timely manner. As the Authority has a small engineering staff, Urban provides full-service engineering and also acts in a program management capacity. Urban also frequently provides construction management coordinated by Mr. Benner as in the Runway 13-31 rehabilitation project and the current terminal security improvement project.

Runway 6-24 Rehabilitation, Northeast Philadelphia Airport - Project Supervisor responsible for guidance and reviews and using airport design knowledge to set design criteria. This 7,200-foot-long primary runway was completed within the construction schedule with minimal traffic interruption. The intersection of two runways was rehabilitated during a weekend closure of the airfield in order to minimize impacts to operations.

Runway 15-33 Rehabilitation, Northeast Philadelphia Airport - Project Supervisor for the rehabilitation of this bituminous "W" section runway. The runway is the secondary runway with lightweight users. The pavement was beginning to fail due age factors such as oxidation and shrinkage cracking rather than load induced failure. During pavement aging, many surface cracks had developed which were repaired prior to overlay. Cracks were identified for the contractor's benefit through aerial photography after a rainfall; those aerial photographs were incorporated with the contract plans.

General Engineering Services Contract Manager, Philadelphia International Airport, City of Philadelphia, Division of Aviation, Philadelphia, PA - Mr. Benner has continuously managed the three-year, on-call services contracts for the City of Philadelphia for over 10 years. These on-call contracts provide services at Philadelphia International and Northeast Philadelphia Airports. The most recent contract has had over 100 task order assignments with tasks ranging from as little as $200 up to as much as $160,000. Mr. Benner establishes and tracks budgets for all task orders as well as orchestrates and supervises the engineering work. Assignments included engineering design and/or construction management; review of tenant development drawings; and miscellaneous engineering support. With over 100 task orders, the type of work ranges from new to renovation to simple repairs. Landside, airside, and building work are samples of the typical tasks required.

NIRANJAN DOSHI, PE *KS Engineers, P. C.*
Project Engineer – Civil

EDUCATION
BS / Civil Engineering / Gujarat University, Gujarat, India / 1964
Masters in Materials in Data Processing and Computer Programming, Computer Educational Institute, Philadelphia, PA, 1969

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
Professional Engineer – NJ ([redacted])
Certificate of Public Works Manager, NJ.

EXPERIENCE SUMMARY
Mr. Doshi has 39 years of civil engineering experience in the design of underground piping systems and site design. His experience includes the following: hydraulics and hydrology studies; highway and street design; site development; traffic and parking facilities; railroad maintenance facilities; storm sanitary and industrial waste sewer systems design; design of fire, process and potable water systems; design of underground fuel tanks and associated piping; preparation of permit applications for DEP and township approvals for sewerage systems; storm water management; soil erosions & sediment control and Environmental engineering; preparation of engineering specifications, requisitions, design reports; and shop drawing reviews, construction coordination and supervision of various private and government projects:

PANYNJ, Professional Civil Engineering Services (MBE/WBE) as Requested on a "Call-In" Basis during 2008, 2009 and 2010, NY/NJ – Senior Project Engineer/Task leader for the civil engineering services on a "Call-In" basis. Services provided generally consist of preparing civil engineering designs, contract drawings, technical specifications, and construction cost estimates for a variety of new projects, also rehabilitation, restoration and resurfacing of existing and new parking lots and roadways. Worked on the following projects as a Task Leader:

- SWF – New Employee Parking Lot – Design of grading & drainage, pavement design, roadway lighting, signing and striping design, etc. Responsible for Stage III (Final Design) drawings, specifications and estimates.
- SWF – The Milling and Resurfacing of a Portion of Cargo Road in the vicinity of Reese Aviation FedEx Maintenance Hanger - Stage IV – Design of the reconstruction of a portion of an existing land side roadway and adjacent parking area including design of the grading & drainage, pavement design, signing and striping design, etc. Responsible for preparation of Stage III (Final Design) drawings, specifications and estimates.
- SWF – Expansion of Parking Lot "D" – Design of the expansion of an existing parking lot including design of the grading & drainage, pavement design, signing and striping design, etc. Responsible for preparation of Stage III (Final Design) drawings, specifications and estimates.
- SWF – Rehabilitation of R/W 9 Approach Lighting & Cables – Design services for the replacement of runway approach lighting and cables. Responsible for preparation of Stage III Civil (Final Design) drawings, specifications and estimates. Work included removal of airfield pavement markings, design of new temporary and permanent airfield pavement markings and pavement restoration around lighting cans.
- SWF – Rehabilitation of Taxiway Edge Lighting & Installation of Flashing Runway Guard Lights - Responsible for preparation of Stage III Civil (Final Design) drawings, specifications and estimates. Work included removal of airfield taxiway pavement markings, design of new permanent airfield taxiway pavement markings, enhanced holding position marking plans and pavement restoration around lighting cans at holding position.
- JFK – High Pressure Fire Protection System Critical Valve Replacement Phase III - Stage III and IV Services – Design services for the replacement of eight (8) High Pressure Fire Protection System Critical Valves. Responsible for Stage III (Final Design) drawings, specifications and estimates.

KSE

PANYNJ, Engineering Department, Staff Service Engineer, Two gateway Center, 16th Floor, Newark, NJ 07102 (January 2003 to 2006) Lead Civil Engineer on following major NY Airport projects:

- Expansion of Runways & Taxiways at Kennedy Airport to accommodate future Airbus A380. Worked on grading, paving, airfield pavement markings and drainage design
- Designed very complex underground piping systems of Parking Garage for American Airlines and 3000 feet long Sanitary Sewer Forced Main Project for JetBlue Terminal. Projects submitted before deadline and saved thousands of dollars in design for both projects and were bid on time.
- Participated in updating civil specifications and many standard civil details of Port Authority Engineering Department, E/A Design Division, Civil Discipline.
- Also worked on Stage I – Civil Estimate, Contract No. JFK-946 and later worked on Stage III design for the Project following selection of the design option
- Hangar 12, Parking Reconfiguration, W.O. # 911.933.080, Stage I Report
- Hangar 12, Parking Reconfiguration, JFK-967 Stage III & IV, worked as a Civil Task Leader. Design of pavement, parking layout and island for bus Stop
- Widening of R/W 13R-31L, JFK-946, Stage I Report
- Relocation of T/W A & Rehabilitation of T/W B, JFK-931, Stage I
- Relocation of T/W A & Rehabilitation of T/W B, JFK-134.105, Stage III, Completed Drainage Design, Worked as a Lead Drainage Design Engineer
- Pump House Modification/Renovation, Civil Work, JFK-916, Stage I Report
- Pump House Modification/Renovation, Stage III, and Completed Civil Design of Fire Protection System around pump House. Worked as a Civil Task Leader.
- Priority Site Construction of 7 Slabs, T/L SB, JFK-911.933, W.O. # 72
- Red Garage, Stage III Civil design, JFK-134.100A, 2004 & Stage IV, JFK-134.100B, 2005 and 2006, worked as a Civil Task Leader. Design included relocation of existing large storm sewer and water quality control structure design, Domestic & Fire Protection water systems. Also worked on Stage IV, PACC's and construction coordination for the site work.
- Contribution in preparing Presentation for NLA – Widening of R/W & Pavement design
- Study of Outfall # 3, JFK-945
- Modification of Fire Protection System around building 263/264, Stage I, III, and IV. W.O. # 960.002 & JFK-973, 2004 & 2005. Worked as a Civil Task Leader.
- Completed stage III 100% design submission on Sanitary Sewer Force Main Project for Jet Blue, Terminal 5, Contract No. JFK-424.000. Worked as a Civil Task Leader. Also worked on stage IV at JFK Airport, review of shop drawings and construction coordination.

ROBERT S. NASH, PE, PTOE, CME, LEED Green Associate ***KS Engineers, P.C.***
Task Leader – Civil & Traffic Engineering Design

EDUCATION
MS/Transportation Engineering, Brooklyn Polytechnic Institute, Brooklyn, NY, 1980
BS/Civil Engineering, Brooklyn Polytechnic Institute, Brooklyn, NY, 1978

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
Professional Engineer - NJ ([redacted] Expires: 4/30/12)
Professional Traffic Operations Engineer (Expires 11/17/2011)
Certified Municipal Engineer
PPS Context Sensitive Design
TCC (Traffic Control Coordinator), Rutgers (02/22/05-02/25/05)
Traffic Signal Design Approval Process (1.5 PDH), Rutgers (Issued: 2/15/06)
Road Safety Audit Train the Trainer (Issued: 3/26-27/2008)
Electrical Signal Design (7/31-8/1/2008)
Construction Management (22.5 PDH & 2.25 CEU), (NJIT, Issued: 9/26/08)
LEED Green Associate

EXPERIENCE SUMMARY
Mr. Nash has 32 years of experience in the geometric and civil design of various types of highways, roadways, bridges, and park and ride lots. He has also managed numerous transportation facilities reconstruction projects. He has held the positions of Senior Highway and Traffic Engineer and Director of Transportation for private consultants and was a public transportation engineer for municipalities in New York State. He also served as Traffic Engineer for the City of Yonkers. His representative project experience includes:

PANYNJ, Expert Professional Civil Engineering Services (MBE/WBE) as Requested on a "Call-In" Basis during 2008, 2009 & 2010, Various Locations, NY and NJ – Project manager as Prime Consultant responsible for providing civil engineering services on a "Call-In" basis during 2008 and 2009. Services provided generally consist of preparing civil engineering designs, contract drawings, technical specifications, and construction cost estimates for a variety of new projects, also rehabilitation, restoration and resurfacing. To date *KSE* has worked on the following:

- JFK – High Pressure Fire Protection System Critical Valve Replacement – Design services for the replacement of eight (8) High Pressure Fire Protection System Critical Valves. Responsible for Stage III (Final Design) drawings, specifications and estimates.
- Stewart International Airport (SWF) New Employee Parking Lot – Design of grading & drainage, pavement design, roadway lighting, signing and striping design, etc. Responsible for Stage III (Final Design) drawings, specifications and estimates.
- SWF - Rehabilitation of Cargo Road and Parking Area for Building 2290 – Design of the expansion of an existing parking lot including design of the grading & drainage, pavement design, signing and striping design, etc. Responsible for preparation of Stage III (Final Design) drawings, specifications and estimates.
- SWF - Expansion of Parking Lot "D" – Design of the rehabilitation of a section of land side airport. The project also entailed all aspects of roadway design, preparation of MPT Plans, and Pavement Marking Plans. Responsible for preparation of Stage III (Final Design) drawings, specifications and estimates.
- SWF – Rehabilitation of R/W 9 Approach Lighting & Cables – Design services for the replacement of runway approach lighting and cables.
- SWF – Rehabilitation of Taxiway Edge Lighting & Installation of Flashing Runway Guard Lights - Responsible for preparation of Stage III (Final Design) drawings, specifications and estimates.

PANYNJ, Expert Professional Civil Engineering Services as Requested on a "Call-In" Basis during 2008 for New Employee Parking Lot at Stewart International Airport, NY – Project Manager responsible for providing civil design services for project at Stewart International Airport. The project entailed the design of a new parking lot including design of the grading & drainage, pavement design, roadway lighting, signing and striping design, etc. *KSE* responsible for among other tasks the preparation of Stage III (Final Design) drawings, specifications and estimates. *KSE* is currently awaiting the commencement of Stage IV (Construction Phase) Services

PANYNJ, Expert Professional Civil Engineering Services as Requested on a "Call-In" Basis during 2008 for Rehabilitation of Cargo Road and Parking Area for Building 2290 at Stewart International Airport, NY – Project Manager responsible for providing civil design services for project at Stewart International Airport. The project entailed the design of the rehabilitation of a section of land side airport roadway utilized by Federal Express to access a hanger. The project also entailed all aspects of roadway design, preparation of Maintenance and Protection of Traffic Plans, and Pavement Marking Plans. *KSE* responsible for among other tasks the preparation of Stage III (Final Design) drawings, specifications and estimates.

PANYNJ, Expert Professional Civil Engineering Services as Requested on a "Call-In" Basis during 2008 for Expansion of Parking Lot "D" at Stewart International Airport, NY – Project Manager responsible for providing civil design services for project at Stewart International Airport. The project entailed the design of the expansion of an existing parking lot including design of the grading & drainage, pavement design, signing and striping design, etc. *KSE* responsible for among other tasks the preparation of Stage III (Final Design) drawings, specifications and estimates.

City of Bayonne, Design of the Replacement of One Existing Signalized Intersection and Design of a New Signalized Intersection, Bayonne NJ – Project Manager responsible for design of the replacement of the existing Broadway and 38th Street signalized intersection and the design of a new traffic signal installation for the intersection of Prospect Avenue and 32nd Street. The purpose and objective of this project is to replace an existing, outdated intersection with a current state-of-the-art traffic signal installation and to install a completely new signalized intersection.

Union County, Design of the Upgrade of Three Traffic Signal Installations, City of Elizabeth, Union County, NJ. – Project Manager responsible for this project which entails the upgrading of three existing traffic signal installations. Services provided included traffic volume data collection, preparation of collision diagrams from accident data, preparation of traffic signal warrant analysis, preparation of traffic signal plans, and preparation of electrical plans, specifications, and engineer's estimate for construction documents.

Hudson County, Design of 10 Traffic Signal Installations at Various Locations Within Hudson County NJ (Package "P") – Project Manager responsible for the preparation of detailed design plans and construction bid documents for the installation of new traffic signals and upgrading of existing installations at various locations throughout the County. Services provided included traffic volume data collection, preparation of collision diagrams from accident data, preparation of traffic signal warrant analysis, preparation of traffic signal plans, and preparation of electrical plans, specifications, and engineer's estimate for construction documents.

TUNNELS, BRIDGES AND TERMINALS

NAME PAUL T. DIONISIO, PE
TITLE SENIOR PROJECT MANAGER
SERVICE AREA TUNNELS, BRIDGES AND TERMINALS

Years of Experience: 34

Registrations/Memberships

- Professional Engineer – NY, NJ, CT, FL
- American Society of Civil Engineers
- AIA/American Consulting Engineers Council Committee
- American Consulting Engineers Council - Metro Region

Education

- MS, 1976, Cornell University, Civil Engineering
- BS, 1975, Cornell University, Civil Engineering

Technical Expertise: Railroad and highway bridge inspections and designs (over 5,000 bridges). Railroad station improvements (over 50 stations). Bus, rail, and highway maintenance facility studies, renovations, and new designs (over 35 shops). Various subway pump room and electrical room renovations. Various subway drainage system improvements. Extensive buildings and highway bridge designs.

Dewberry-Goodkind, Inc. - Senior Associate: Director Rail and Mass Transit. (May 1995-2010)

Stone & Webster Engineering Corporation - Assistant Structural Division Manager and Supervisor/Project Manager/Project Engineer. (1987-May 1995)

Iffland Kavanagh Waterbury, P.C. - Project Engineer/Resident Engineer/Team Leader/ Quality Control Engineer. (1979-1987)

Malcolm Pirnie, Inc. - Senior Structural Engineer/Assistant Resident Engineer. (1975-1979)

Rehabilitation of Four Stations and Elevated Structures on the West End Line, MTA New York City Transit, Brooklyn, NY - Project Manager for civil, traffic, structural, geotechnical engineering, and transit operations analysis for this $160 million project. Led the rehabilitation design of four elevated stations. Also led the rehabilitation design of six miles of elevated structure and component rehabilitation for eight stations. Served as key member of high profile, risk management study.

Rehabilitation of Atlantic Avenue Viaduct, MTA-Long Island Rail Road, Brooklyn, NY - Project Manager for preliminary design services to develop design-build bid documents for the $150 million rehabilitation of the 8,000-foot-long, 199-span Atlantic Avenue Viaduct.

Various MTA-NYC Transit Authority Indefinite Quantity Engineering Services Contracts - Various Counties, NY - Project Manager responsible for over 100 task orders. Major tasks included drainage improvements for 25 sites, painting of Astoria Line, and system-wide management study of elevator program.

Trenton Station Renovation, New Jersey Transit, Trenton, NJ - Project Manager for final design and construction support services for the $79 million program. Responsible for structural, geotechnical, civil, and traffic engineering.

Mount Vernon (East) Transportation Center, MTA Metro-North Railroad, Mount Vernon, NY - Project Manager responsible for extensive City interfaces; design services for the intermodal center, including a station building and platform; a new overpass; bus access; and a 350-parking space commuter parking facility.

Montclair Connection Value Engineering, New Jersey Transit, Bloomfield, NJ - Project Manager/Value Engineer responsible for civil, structural, and geotechnical value engineering services for this $50 million project. Provided key contributions to $7.3 million final accepted savings.

NAME **EDWIN J. WILLIAMSON, PE**
TITLE **SENIOR PROJECT MANAGER**
SERVICE AREA **TUNNELS, BRIDGES AND TERMINALS**

Years of Experience: 33

Registrations/Memberships

- Professional Engineer – NJ
- American Society of Civil Engineers
- National Society of Professional Engineers
- Construction Management Association of America

Education

- BSCE, 1980, New Jersey Institute of Technology , Civil/Structural Engineering
- Certificate, 2008, Urban Engineers, Inc., Project Management Training
- MSCM, 2009, Stevens Institute of Technology, Construction Management

Mr. Williamson has extensive diversified experience in the engineering, design and construction of transportation infrastructure facilities. Mr. Williamson served as Project Engineering Manager on a new light rail transit project in New Jersey. He was Project Manager and Field Project Engineer for resident engineering and construction inspections services agreements on three major highway/arterial projects having a total construction value exceeding $130 million. He is currently serving as Senior Project Manager providing project management oversight services on a federally funded multi-billion dollar rail transit project in New York City. Mr. Williamson's experience includes:

Project Management Oversight Consultant, Federal Transit Administration, Region II Major Capital Projects, NY.

Mr. Williamson is currently serving as Assistant Project Manager on the Project Management Oversight (PMOC) team responsible for monitoring the progress of Federal Transit Administration (FTA) funded projects for the New York Metropolitan Transportation Authority (MTA) and the New York City Department of Transportation.

MTA - East Side Access Project

Project Oversight and Monitoring

Since 2006, Mr. Williamson has served as Assistant Project Manager providing construction and railroad force account monitoring and schedule reviews, attending monthly and quarterly progress meetings and preparing PMOC observation reports.

Risk Analysis and Mitigation

During 2006, Mr. Williamson provided key support for preparation of the Risk Assessment and Risk Management Study for the $7.24 billion East Side Access Project (ESA) to provide Long Island Rail Road service directly into Grand Central Terminal located in midtown Manhattan, New York City. The Study was prepared for the FTA and involved an in-depth review and analysis of the project's scope, schedule and budget to identify and assess risks and to develop risk mitigation strategies for use throughout the duration of the project. Mr. Williamson developed and completed a final report to the FTA in 2007 that included the results and recommendations from the Risk Assessment and Risk Management Study. Starting in 2007 and continuing into 2008, he is leading the current effort to develop and complete two of the five major reports to the FTA that will provide updated status of the Project's risk profile and risk mitigation commitments.

Full Funding Grant Agreement

In 2006, Mr. Williamson completed a comprehensive report that confirmed the grantee's (MTA) readiness to enter into a Full Funding Grant Agreement (FFGA) with the FTA. This report was one of several key documents that provided the basis for the USDOT/FTA to enter into the FFGA with the MTA on December 18, 2006.

MTA - Long Island Rail Road

Mr. Williamson served as Project Manager providing oversight on two Long Island Rail Road projects: the $115 million Atlantic Terminal Improvement Project in Brooklyn, NYC; and the Annual Track Work Program typically valued at $50-60 million per year.

- Atlantic Terminal is the third busiest transportation terminal in New York City after Grand Central Terminal and Penn Station. The improvement project included the complete rehabilitation of an existing underground LIRR terminal station at Flatbush Avenue as well as the passenger connections from LIRR to 10 New York City Transit (NYCT) subway lines and 4 NYCT bus lines. A private developer constructed the 4-story, 450,000-sq.-ft. retail center and the 10-story, 364,000-sq.-ft. office tower above the LIRR terminal. NYCT rehabilitated and modernized the existing Atlantic Avenue subway station, which is part of the terminal, as a separate project.
- The Annual Track Work Program provides for the replacement and upgrade of deteriorated track components that have exceeded their life-cycle expectancy. The program includes the installation of both concrete and wood switches and ties, track surfacing, grade crossings rehabilitation, rail profiling, rail joint elimination and switch timber replacements. The associated Track Construction Equipment Program included the purchase of new construction equipment to replace existing equipment that has little or no useful remaining life and to add new equipment required for the safe and efficient maintenance, repair and upgrading of the LIRR track network.

Mr. Williamson's responsibilities on both projects included monitoring, analyzing and evaluating the cost, schedule and contractual performance of these projects. He reviewed Project Management Plans, attended progress meetings, provided evaluation of project management, schedules and budgets and prepared monthly reports to the FTA. Mr. Williamson also worked with the FTA Region II office in preparing for the Long Island Rail Road Quarterly Review meetings that presented progress on all FTA funded projects and programs including the Atlantic Terminal Improvement Project and the Annual Track Work Program.

Rehabilitation of Amtrak New York Rail Tunnels, Amtrak, Bergen Co., NJ and Boroughs of Manhattan and Queens, New York City, NY - Resident Engineer responsible for interface between Amtrak and the construction contractor, supervision of the inspection staff and coordination with other projects underway in the tunnels, ventilation shafts and evacuation shafts. Majority of the work was done during weekend track outages. Safety was a major aspect of the work involving continuous air monitoring in the tunnel, coordination of track outages, disconnection of power to both 13k V overhead catenary and 600 V third rail as well as other life safety issues. Scope of the $30 million project included installation of 72,000 linear feet of 6-inch diameter dry fire standpipe, associated valves and appurtenances, fire department connections and risers at portals and ventilation/evacuation shafts in the East River Tunnels [Lines 1, 2, 3 & 4] and the North (Hudson) River Tunnels [Tracks 2 & 3]. Responsibilities also included oversight and witnessing of hydrostatic pressure and flow tests per NFPA and development of the recommended inspection, testing and maintenance program for the completed system.

Newark Elizabeth Rail Link, Elizabeth Segment (MOS-3), Public Private Partnership: New Jersey Department of Transportation/New Jersey Transit; County of Union, New Jersey; Washington Group Int'l, City of Elizabeth, NJ - Project Engineering Manager, responsible for technical engineering support of project development efforts and environmental review and approval process (DEIS and FEIS). Managed multidiscipline team to complete the System Design & Performance Description, Design Criteria and Preliminary Engineering and Design (plans, specifications, schedule and construction cost estimate). Project is a 5.8 mile long electric light rail system connecting downtown Elizabeth with Newark International Airport and which will be implemented using the Design, Build, Operate and Maintain process with an estimated construction cost of $350 million. Major features include: dedicated two-track guideway with overhead contact system; nine passenger stations; four traction power substations; vehicle maintenance facility and yard; six new rail bridges; 900ft. long rail viaduct; rehabilitation of six existing rail bridges; seven new rail grade crossings and intermodal connections with NJ Transit Northeast Corridor service, Newark International Airport Airtrain and future water ferry service to New York City.

William England, PE, PP – Sr. Project Manager

YEARS OF EXPERIENCE: 30+

EDUCATION:
Masters of Science in Civil Engineering, New Jersey Institute of Technology, Newark, NJ.
Bachelor of Science in Civil Engineering, Newark College of Engineering, Newark, NJ.

CERTIFICATIONS/ REGISTRATIONS:
- Registered Professional Engineer (P.E.) – New Jersey, New York, Pennsylvania, Maryland, North Carolina, Ohio, Delaware, Florida
- Registered Planner (P.P) - New Jersey

AFFILIATIONS:
ASCE, NSPE, NJSPE, NJSME

SUMMARY:
Mr. England is an accomplished, detail oriented professional offering thirty years of engineering design, project management and municipal experience as a consultant and in house municipal engineer. He is a registered engineer in New Jersey, New York, Pennsylvania, Delaware, Maryland, North Carolina and Florida and also a Registered Planner in the State of New Jersey. He has served and Engineer of Record for more than twelve communities in New Jersey and developed complete plans and specifications for numerous schools in the region.

PROFESSIONAL EXPERIENCE:

PROFESSIONAL EXPERIENCE:
Armand Corporation, Cherry Hill, NJ **2009 - Present**
Principal Project Manager

Puerto Rican Unity for Progress (PRUP) New Administration Building. Principal Project Manager assigned to the construction of a new $3.1M administration building and after school center in Camden, NJ. Duties included preparing cost estimates, conducting inspections, reviewing change order and providing analyses; scheduling; punch list; conducting project meetings; and approval of contractor requests for payment.

Gloucester County Road Safety Improvements. Project manager assigned to the construction of road safety improvements in the Township of West Deptford. Work includes re-signalization of Kings Highway and Parkeville Station Road; new handicap ramps; repaving of Mantua Grove Road; and restriping, including the addition of designated left hand turn lanes. Particular attention is required due to the presence of a school and an emergency response headquarters.

Pennsylvania Emergency Management Agency. Project Manager assigned to a team of professionals working on behalf of the owner to develop a new facility for emergency management. Scope includes pre-construction review of construction documents through final construction documents, including cost estimate review. Make recommendations regarding construction estimates as it relates to the project budget, and analyze the site plan for conformance to sound engineering practices.

Fort Monmouth. Project Manager assigned to a team of professionals working with FMERA. Scope of work includes investigating the reuse of the base as part of the base closure by inspecting

the various facilities and completing a cost to upgrade/reuse the facility or demolish the structure(s). Items investigated will be overall condition of the building; code violations; maintenance issues; barrier free access; hazardous material (lead paint, asbestos, etc), and providing cost estimates for same.

CMX, Manalapan and Brick Offices, NJ **1999 – 2009**

Principal Project Manager

- Served as engineer of record for twelve communities in NJ. Responsibilities included roadway improvement, resolution of resident complaints, inspection of developer installed improvements and recommendations for bond releases.
- Provided engineering services for numerous planning and zoning boards.
- Developed complete plans and specifications for numerous schools in NJ, including concept planning, design of access roads, parking areas and bus drop off zones, utility design and stormwater management facilities.
- Construction management as part of a team of professionals for a major stream stabilization and water quality project, providing field and design support. Liaised with government officials in all aspects of the project.
- Design and construction manager for a new park in Hamilton Twp. Completed feasibility studies, hydraulic studies for converting a piped drainage system into a meandering stream, complete with waterfalls, pedestrian paths, ponds and lighting.
- Supported go-lives to accomplish all on time and on budget implementations.
- Design, plans and specification for numerous parks in NJ.
- Managed a department of landscape architects, planners, and GIS staff.
- Participated in management training and leadership workshops.
- Engineer of record for parking authorities.

Bergman Engineering, West Windsor, NJ **1991-1999**

Chief Engineer

- Review of Planning and Zoning Board applications for resolution compliance and final resolution conformance prior to bond release.
- Designed capital improvements for various municipalities including roads, stormwater management facilities, sanitary sewerage facilities, pump station improvements.
- Construction management for various public projects including shop drawing review, processing payment requests, inspection, and project closeout.
- Prepared complete site plans and specifications for numerous schools. Designed sewer, water, fire service, detention systems, etc., and submitted and secured SCS, stream encroachment and other state and local permits.
- Designed and inspected numerous park expansions and rehabilitations.
- Coordinated with government officials and public works directors on special projects.

Schoor and Canger Group, Manalapan, NJ **1989-1991**

Department Manager

- Supervised and managed the work product of a 40 person design department.

EDUCATION
MS/Civil Engineering, University of Illinois, 1967
BS/Civil Engineering, University of Illinois, 1966

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
Professional Engineer – NJ ([redacted], Received: 1985, Expires: 4/30/12), NY [redacted] Received: 1983; Expires: 9/30/11)

TRAINING
The Mini Bridge – Culvert Planning and Design, Rutgers University, Spring 2009
LRFD Steel Bridge Design course, presented by Highway Bridge Services, Boston MA, May 2010
Accelerated Construction Using the Northeast Extreme Tee (Next) Beam, presented by PCI, April 2009
Applications of Fiber Reinforced Polymer (FRP) Composites to Bridge Rehabilitation and Design, presented by ASCE at NJIT including a speaker from FHWA, April 2010.

PUBLICATIONS
Co-author and presenter of paper for 2003 NYC Bridge Conference
"Refined LRFD Analyses Used to Check Inverset Design."
Author and presenter of paper for 2004 national Concrete Bridge Conference
"Striving for 100-Year Bridge Decks –Overcoming Chlorides and Cracking"

EXPERIENCE SUMMARY
Mr. Clausen has 42 years of diverse structural/bridge engineering experience including corporate oversight, section and project management, and design for both highway and railroad bridges. He has designed steel girder and prestressed concrete girder railroad and highway bridges and miscellaneous structures for expressways, river crossings, and railroad relocation projects. He has also led numerous special structural investigations and repair/rehabilitation studies and plan preparation for a variety of clients including the Port Authority. He is the Director of Bridge Design at KS Engineers.

PANYNJ, Performance of Expert Professional Structural Engineering Services (MBE/WBE) On A "Call-In" Basis During 2008, 2009 and 2010 – PA Agreement #'s 415-08-058, 415-09-058 and 415-10-058 – Deputy Project Manager / Task leader for structural engineering services on a "Call-In" basis for the Port Authority of New York & New Jersey. Services provided under this contract generally consist of preparing structural engineering studies, condition surveys, designs, contract drawings, technical specifications and construction cost estimates for a wide variety of new facility structures and structural renovation and rehabilitation projects.

PANYNJ, Performance of Expert Professional Structural Engineering Services (MBE/WBE) On A "Call-In" Basis During 2008, 2009 and 2010 – JFK Airport – Aqueduct Bridge Crossing Stages 3 & 4, NY – Project Engineer for structural design services for contract repairs to the JFK Airport Aqueduct Bridge railings and expansion joints. He was Task Leader during Stage III for performing structural design and preparing the structural contract drawings for the necessary repairs. He investigated the use of Asphaltic Plug Joints, which were used and developed a simple method of ensuring field fit for the railing repairs. .The scope included preparation of General Drawings as well as the structural plans..

PANYNJ, Performance of Expert Professional Structural Engineering Services (MBE/WBE) On A "Call-In" Basis During 2008, 2009 and 2010 – Protective Structures at JFK Airport – Taxiways Q and A, NY - Project Engineer for providing design services for protective slabs at Taxiway A and Q at JFK Airport in Queens, NY. Led the structural design and preparation of structural contract drawings for protective structures over the Junction chamber and triple barreled culverts that run under Taxiway's Q and A. The protective structures are to carry the loads from various aircraft specified by the Authority with allowances for future increases in load and impact. Protective systems include precast slabs, cast-in-place slabs and a steel beam framing system with a steel plate

deck support system. The work also includes preparation of General Drawings and incorporating requirements and drawings from various non-structural disciplines. KSE prepared detailed cost estimates as well as an estimate of the construction duration. During stage IV, KSE attended a preconstruction meeting, reviewed shop drawings, and responded to requests for information.

PANYNJ, Performance of Expert Professional Structural Engineering Services (MBE/WBE) On A "Call-In" Basis During 2008, 2009 and 2010 – JFK Airport – Reconfiguration of Fuel Truck Loading Racks – Project Engineer for Stage I&II design of miscellaneous structural supports for the fuel truck loading racks.

PANYNJ, PATH Rail Structures East & West of Newark Penn Station, NJ - Structural lead for the inspection and rehabilitation of bridge superstructures, piers and abutments used by PATH, some of which were owned by AMTRAK. Project included the development of repair recommendations, contract plans, and services during construction. Bearings were monitored periodically over a 2-year period.

PANYNJ, Amsterdam Avenue Bridge over Trans-Manhattan Expressway, NY - Project Manager for the inspection, evaluation and plans for extensive deck and structural repairs to this structure to the west of George Washington Bridge. Staging of construction, utilities coordination, and M&PT were major considerations.

PANYNJ, Expressway over Amtrak and LIRR, NYC, NY - Project Manager for the inspection, evaluation and plans for extensive deck and structural repairs for this structure leading to the Lincoln Tunnel. Designed emergency repairs when it was discovered that the strands in a prestressed concrete deck panel were extensively corroded. M&PT and coordination with Amtrak, LIRR and NJ Transit were required.

NYSDOT, Richmond Road Bridge Design, Rehabilitation and TMS Measure as Part of 21 Bridge Contract on Staten Island Expressway, Richmond County, NY (Contract D010248) – Project Engineers for structural design of four bridges carrying Staten Island Expressway (S.I.E.) WB and EB over Richmond Road and Targee Street, replacing the steel beam bridges and widening the S.I.E. using prestressed concrete box beams. A similar project is underway for the steel beam superstructure and widening of the Renwick Street Bridge. Prestressed concrete NEXT beams and box beams were evaluated for the replacement. Abutments were also widened.

MTA LIRR, Contract No. 5973-1-5, Release A, POJ6243 – Design for Shinecock Canal, Montauk Highway and North Highway Bridge Rehabilitation Project – Project Manager for KSE's portion of the rehabilitation of three (3) Long Island Railroad bridges located in Hampton Bays, Suffolk County, NY. Responsible for computation of As-Built and As-Inspected Ratings for the North Highway Bridge and the Montauk Highway Bridge including estimates of remaining fatigue life. He performed the conceptual design study for the replacement of the North Highway Bridge abutments and superstructure according to two alternatives, attempting to accomplish the complete replacement in 48 hours. Construction schemes and conceptual cost estimates were prepared for the two schemes. Work also involves computing quantities and estimating costs at the various phases of the work as well as performing a general review of the rehabilitation plans by the prime consultant.

NYCDOT, 145th Street Bridge Reconstruction Support Services, New York, NY - Provided oversight for shop drawing review of bridge deck replacement using prefabricated Inverset and Effideck systems.

MTA Bridges & Tunnels, Brooklyn-Battery Tunnel Deck Slab Rehabilitation Study, NY - Project Engineer for study of methods for the long-term rehabilitation of the elevated deck slab in the Brooklyn Battery Tunnel. The deck slab was extensively deteriorated and lane closures were permitted only during night-time hours and on weekends. Various methods of demolition were investigated including hydro-demolition. Various repair and overlay materials were investigated including LMC, rapid-set concrete, and high performance concrete. SHRP Reports were studied and industry experts were contacted for state-of-the-art recommendations. An in-depth constructibility study was performed and cost estimates prepared.

DICKSON OPONG, PE *KS Engineers, P.C.*
Project Manager

EDUCATION
MSE, Civil Engineering, Princeton University/1983
BSE, Civil Engineering, Princeton University/1980

PROFESIONAL REGISTRATION/CERTIFICATIONS
Professional Engineer: New Jersey ([redacted] – received 03/1990) and New York ([redacted]
NHI Course 130053A, Bridge Inspection Refresher Course
NHI Course, Steam Stability and Scour at Highway Bridges
AASHTO LRFD Bridge Design Workshop, FHWA/NSBA

EXPERIENCE SUMMARY
Mr. Opong has nearly 30 years of experience in planning, preliminary and final design, development and implementation of bridge and highway projects for New Jersey Department of Transportation, Port Authority of New York and New Jersey, New Jersey Turnpike Authority and other public agencies in tri-state region. He has demonstrated excellent technical and managerial skills on several infra-structure improvement/rehabilitation projects for many pubic transportation agencies. He is a Vice-President and Head of the Structures Department of KS Engineers.

PANYNJ, Performance of Expert Professional Structural Engineering Services (MBE/WBE) On A "Call-In" Basis During 2008, 2009 and 2010 – PA Agreement #'s 415-08-058, 415-09-058 and 415-10-058 - Project Manager responsible for providing structural engineering services on a "Call-In" basis for the Port Authority of New York & New Jersey. Services provided under this contract generally consist of preparing structural engineering studies, condition surveys, designs, contract drawings, technical specifications and construction cost estimates for a wide variety of new facility structures and structural renovation and rehabilitation projects. Assignments to date have consisted of the following:

- Multi-Facility CAD Drafting Services
- JFK Airport –Protective Slabs on Taxiways, Q & A
- Structural Engineering Services / Staff Augmentation
- PATH - Installation of Backflow Prevention Devices
- LaGuardia Airport - Upgrade CTB East
- JFK Airport - Fire Alarm Connection for Gas Station - Bldg.#
- JFK Airport – Reconfiguration of Fuel Truck Loading Racks
- JFK Airport - Repairs to Aqueduct Bridge Railings/Expansion Joints
- Stewart Airport - Positive Air Pressure for Loading Bridges
- JFK Airport – Repair of Slab at Building
- CADD Design Services for Navigation Aids Improvements at JFK Airport
- CADD Design Services for Demolition- Hanger 12 &building #94 at JFK Airport
- SWF- Runway Incursion Mitigation Study
- PATH – Installation of Backflow Prevention Devices, Macmillan Bloedel Building
- EWR Airport – Structural Engineering Services –Shop Drawing Review – Stage 3
- EWR Airport – Structural Engineering Services –Shop Drawing Review – Stage 3

PANYNJ – Design Services for WTC PATH Terminal Transportation HUB Project – WP # 21 – Project Manager responsible for design services of various temporary structures for WTC PATH Terminal Transportation Hub Project, as design consultant to Phoenix Constructors, JV.. Design included, but not limited to, crane platform, structural bracings, roof structures and columns supports, support of excavation for footings and walls, supports under blast plates construction barricades, under-pinning columns and support beams. Services also included preparation of signed and sealed CADD drawings / calculations and review of shop drawings. Also responsible for additional design services on Task Order No. 26 (Design Engineering Services / MATOC) for cantilevered temporary work platform, and other miscellaneous structural design support for field modification during construction.

NYSDOT, Richmond Road Bridge Design, Rehabilitation and TMS Measure as Part of 21 Bridge Contract on Staten Island Expressway, Richmond County, NY (Contract D010248) – Project Manager for structural design of four bridges carrying Staten Island Expressway (S.I.E.) WB and EB over Richmond Road and Targee Street, replacing the steel beam bridges and widening the S.I.E. using prestressed concrete box beams. Abutments are also being widened.

NJTA, Bass River Bridge Widening and Rehabilitation, Garden State Parkway, Bass River Township, New Jersey—Project Manger for the in-depth structural inspection/evaluation, design of new MSE Retaining walls at approaches of new bridge including utility relocations, survey/mapping and right-of-way plans.

NJTA, Cedar Creek Bridge Replacement, Garden State Parkway, Berkeley Township, NJ. QA/QC Engineer for the replacement of a northbound and south bound 3-span deck slab bridges with wider single-span prestressed girder bridges, according to LRFD. Semi-integral abutments on steel pipe piles are being used. Construction staging to maintain traffic on the Parkway is required.

PANYNJ, 1998 Biennial Inspection of Outerbridge Crossing New Jersey Approach Bridges – Project Manager responsible for supervision and coordination of the project work. Project work involved inspection of fracture critical members, miscellaneous structures, bridge mounted sign structures and preparation of report.

PANYNJ, 1997 Biennial Inspection of the Lincoln Tunnel New Jersey Approach Bridges – Senior Project Engineer responsible for technical review and quality assurance of the project work. Project work involved routine NBIS inspection of approach structures, sign structures, structural rating analysis and preparation of reports. Major parts of the inspections were conducted at night to allow for minimal traffic interruptions.

PANYNJ, George Washington Bridge NBIS Inspection of the New Jersey Approach Bridges, NJ – Senior Project Engineer – Project work involved the NBIS inspection of approach structures, sign structures and light towers. Responsible for technical review of project work which included inspection, load ratings and report preparation.

PANYNJ, Biennial Inspection of 15 Bridges at LaGuardia Airport in Queens, New York – Senior Structural Engineer – Project work included inspection involving bridges with fracture critical members and reviewing inspection reports.

PANYNJ, Rehabilitation Design Study Report of the 102nd Street Bridge Over Grand Central Parkway In Queens, New York – Project Manager – Project work included the inspection and structural evaluation of the bridge for rehabilitation to meet current AASHTO and New York State Department of Transportation design standards and preparation of report.

PANYNJ, Structural Evaluation, Analysis and Load Rating of Floorbeams and Brackets of the Outerbridge Crossing between Perth Amboy, New Jersey and Staten Island, New York – Project Engineer – Project work included structural evaluation, load rating and fatigue strength analyses.

PANYNJ, Inspection and Rehabilitation of the PATH Vertical Lift Bridge over Hackensack River in Jersey City, NJ – Structural Engineer – Project work included the inspection of the lift span truss members, counterweights, sheaves and trunnions, fender system and development of repair details and shop drawings.

NJDOT, Design of Bridge Replacement Project on Libertyville-Plumbsock Road over Clove Brook in Sussex County, New Jersey – Project Manager – Project work included preparation of the final (Phase III and IV) design contract documents for the new replacement bridge and post-award construction engineering services. Designed the reinforced concrete abutments and prestressed box beams as per AASHTO Standard Specification and the New Jersey Department of Transportation Bridge Design Manual and reviewed shop

PATH

NAME MICHAEL P. WETHERELL, PE
TITLE VICE PRESIDENT
SERVICE AREA PATH

Years of Experience: 23

Registrations/Memberships

- Professional Engineer – NY
- American Society of Heating, Refrigerating and Air-Conditioning Engineers
- American Society of Civil Engineers

Education

- BS, 1982, US Naval Academy, Engineering
- Certificate, 2008, Urban Engineers, Inc., Project Management Training

Mr. Wetherell is an executive with diverse experience in Engineering, Project Management, Business Development, and Customer Service. He has contributed to the development of engineering designs and standards that have had an important impact on rail transit. Mr. Wetherell's experience includes extensive rail car project management and design analysis, maintenance procedure specification, operating rule development, component failure mode and safety analysis, component inspection, quality assurance and equipment specification development. He has a thorough understanding of the design development, production and acceptance and operation of rail vehicles from the Railcar Builder, Component Supplier, System Operator and Federal Rulemaking and Oversight perspectives. Highlights of Mr. Wetherell's experience include the following:

Risk Assessment Project Manager for Federal Transit Administration Programs - As FTA "Black Belt" in performing Risk Assessments, Mr. Wetherell has led the Risk Assessment team for Urban Engineers in the evaluation of Federal investment in a $7 Billion project to expand Long Island Rail Road service to Grand Central Station and a $5 billion project to construct a Second Avenue Subway line in Manhattan. The effort for these two projects has led the pioneered many facets of the new FTA Risk Assessment system and has introduced models for concepts such as Cost and Schedule Contingency Plans and the Project Scoping Document and Project Execution Plan. He has led a similar preliminary risk assessment effort for the Sound Transit U-Link Project, a $1.5 billion, 3.5-mile extension of light rail service in Seattle. Mr. Wetherell is presently leading an effort to perform the first risk assessment "re-look" of Federal investment in the New York MTA East Side Access Project.

Project Management Oversight, Metropolitan Transportation Authority (MTA), Federal Transit Administration, New York City, NY - Project Manager, part of a Project Management Oversight team responsible for monitoring construction of Federal Transit Administration funded R-142, R-142A and R-160 new rail cars and the New Corona Maintenance Facility and Car Washer in New York City. Responsibilities include monitoring and evaluating these major projects with regard to schedule, budget, and contractual performance. Provides in-depth evaluations of project management, construction progress and issues, budget and schedules, prepares monthly reports, reviews Project Management Plans, Management Manuals, and procedures. Provides contract administration support for Urban Engineers' contract with the FTA. Mr. Wetherell has been instrumental in the technical support of the FTA development of the revised method of assessing and mitigating potential risk on federally funded projects.

New Anthem Holdings, Corp., Uniondale, NY - Vice President, reported directly to Company Principals regarding engineering product development and applications. Developed and implemented market based applications for a new technology refrigeration compressor. Led the design of new applications for a new technology compressor for the Rail and Bus transit, supermarket refrigeration, and container ship refrigeration markets. Developed and successfully carried out a Strategic Plan to have this compressor installed in a major private sector project.

The Long Island Rail Road, Jamaica, NY - General Manager, Fleet Engineering responsible for Rail Vehicle Engineering, Testing, and Quality Assurance. Approved all modification designs to new and existing vehicles, directed new rail equipment specification writing, rail equipment testing and acceptance, configuration control, failure tracking and maintenance quality control for the largest commuter railroad vehicle fleet in the US. Achievements included the following:

1) New Dual Mode and Diesel Electric Locomotive Acceptance: Led the technical team in the resolution of locomotive engine skid and equipment rack metal fatigue cracking, participated in instrumented fatigue analysis, performed final LIRR review and approval of design modifications and repair methods. Participated in the analysis of brake system safety, including the redesign and testing of brake system pneumatic back-up for electronic brake systems as a modification to the original design. Worked closely with the manufacturer and LIRR maintenance personnel to resolve C-3 coach HVAC system design issues including balanced heat and reheat, temperature sensing and air flow design modifications. This effort brought the system into compliance with the specification. Participated as the lead mechanical department engineer in the calculation and verification of equipment braking charts for new train operations. As the lead engineer for LIRR, resolved several system reliability issues, resulting in a 300% increase in fleet reliability in three years.

2) Quality Control and Fleet Testing: Integrated the Quality Control function into the Fleet Engineering Group, overseeing and spot checking the inspection of fleet modifications to new and existing rail vehicles. Reported to the Chief Mechanical Officer on Quality Control issues. Brought the Fleet Testing function into the Fleet Engineering Group, overseeing the investigation of equipment problems and approving engineering modifications to resolve design issues.

The Long Island Rail Road - Assistant Chief Mechanical Officer - New Fleet/ Equipment Engineering; Implemented a series of technical advancements resulting in an additional passenger rail car life expectancy of 20 years for cars internally overhauled. Led the LIRR design effort for a combined procurement between LIRR and Merto-North Railroad of new M-7 Electric rail cars.

Chairman American Public Transit Association Passenger Rail Equipment Safety Standards Task Force (PRESS T.F.) - Charter Member; represented LIRR in the revision of Federal passenger rail car regulations and developed construction and operating safety standards for rail car construction in cooperation with the US Federal Railroad Administration. Elected Chairman of the PRESS T.F. in 1998.

Director of Production/Materials Planning and Project Support for the LIRR; Developed and implemented a Department Production Plan to manage the work flow and materials for the maintenance and inspection of an 1100 rail car fleet. Designed and developed a program for the internal overhaul of 30-year old rail vehicles, and performed an analysis of reliability of improvements to individual systems and their impact on fleet performance.

Director of Fleet Strategy at LIRR; Developed a 25-year program for rolling stock replacement and overhaul. Performed needs analysis and provided a preliminary design concept for a new locomotive maintenance facility built at the Sheridan Yard. Developed technical analysis of equipment performance specifications for new locomotives - presented to senior staff and Board Members.

Bombardier Corporation - Director, Marketing and Sales; Account Responsibility for 70% of the US Rail Transit Market. Led the development of technical and commercial proposals for, and negotiated major new rail vehicle contracts with, major railroad authorities. Developed, with the support of engineering staff, innovative new designs such as the New Jersey Transit Comet III high-low end door, and the Head end power arrangement for the Connecticut DOT Shoreliner Trains.

NAME DAVID J. SANDS, PE, F.ASCE

TITLE DEPUTY PRACTICE LEADER, TRANSIT

SERVICE AREA PATH

Years of Experience: 37

Registrations/Memberships

- Professional Engineer – PA, NJ, MD, OH, IN
- Fellow - American Society of Civil Engineers
- American Society of Highway Engineers
- American Railway Engineering & Maintenance of Way Association-Committee 6
- Metropolitan Railway Club of NY

Education

- MCE, 1980, Villanova University, Civil Engineering
- BCE, 1973, Villanova University, Civil Engineering
- 2002, OSHA 10 Hour Construction Safety & Health Training
- Certificate, 2006, Urban Engineers, Inc., Project Management Training
- Certificate, 2004, Dale Carnegie Leadership Development Course
- Certificate, 1989, Penn State Executive Program

Mr. Sands is responsible for managing the technical services associated with design of transit facilities. He supervises Urban Engineers' (Urban) Transit Practice Mr. Sands' extensive experience includes project management of large capital improvement projects for transit and railroad infrastructure modernization, upgrade, and improvement. During his time at Urban, he has participated in improvement programs, such as facilities expansion and rail yard rehabilitation. Mr. Sands' experience includes:

Southeastern Pennsylvania Transportation Authority, General Engineering Service Contracts 2007, Philadelphia, PA - Program Manager for a task order contract for design services. Projects to date include a route signage improvement project for regional rail stations, a signal power study for transient over-voltage, load rating of structural beams carrying SEPTA cranes, Girard Avenue trolley turn-back track, Bell's Corner bus loop survey, cost confidence and constructability review of a pedestrian tunnel for Malvern & Levittown Stations, Villanova Station improvements conceptual engineering, protective relay operation investigation & coordination study, Ryers Station improvement - structural engineering, North Philadelphia transportation center-elevator/escalator compliance, Woodland Shop roof replacement project, substation overhaul program, 20th St. through 30th St. wall rehabilitation, 69th St. Terminal restrooms renovation, Suburban Station locker room expansion, R8 Station amenity improvements including Station roof replacement and rehabilitation of retaining walls, Elmwood Shop fire suppression improvements, Frankford Bus Garage fire suppression improvements, Station agent kiosks and fareline modifications.

Frankford Transportation Center Rehabilitation Program, SEPTA, Philadelphia, PA - Resident Engineer for a $39 million dollar contract to relocate the guideway structure of the Market-Frankford Subway/Elevated Line and a $4 million dollar rail yard rehabilitation contract at SEPTA's Frankford Transportation Center in northeast Philadelphia, PA. Responsible for construction management of the projects to assure that the contractors construct the proposed facilities in compliance with the plans and specifications on schedule and within budget. The guideway relocation project involves installation of all systems associated with the proposed guideway including the section through the proposed Terminal Building including track, traction power, and signal and communications systems. Relocate Bridge Street between Bustleton Avenue and Penn Street, construct bus islands and canopies, a temporary run-around track for the existing guideway east of the Terminal, and a bus lane from Griscom Street to Frankford Avenue, south of Pratt

Street. Also, perform temporary work to allow continued bus, trackless trolley, and rail operations. Demolish part of the existing guideway and Terminal structures and demolish the Pratt Street Station entrance on the South side of Frankford Avenue. Modify the tank farm, the bus depot apron, the trackless trolley wirework, and maintain and protect traffic during construction. The scope of work for the modifications of Bridge Street Yard includes procurement and installation of track and special track work to relocate one existing turnout, replace 19 existing turnouts including nine single turnouts, two lap turnouts and two triplex turnouts, contact rail and rail bonding for signals and traction power. The work also includes the installation of traction power and a negative return system, duct banks, switches, breakers, data transfer devices to permit remote monitoring facilities, ducts for the proposed signal system, insulated joints and switch heaters. The project won the Project Management Institute-Delaware Valley Section 2003 Project of the Year Award.

Rail Connection to the NYS&W, Norfolk Southern Corporation, Jersey City, NJ - Project Manager for design coordination and obtaining environmental permits for construction of a rail connection to the NYS&W for the Norfolk Southern Corporation near Croxton Yard in Jersey City, NJ.

Intermodal Facility Expansion Project, CSX Intermodal, Kearny, NJ - Project Manager for obtaining environmental permits for expansion of the intermodal facility for CSX Intermodal in Kearny, NJ. Obtained NJDEP, US Army Corps and local permits for the project.

Intermodal Facility Expansion Project, CSX Intermodal, Philadelphia, PA - Project Manager for preparation of contract documents and obtaining proposals for wetland plantings in conjunction with mitigation of wetlands for expansion of the intermodal facility for CSX Intermodal in Philadelphia, PA.

Southeastern Pennsylvania Transportation Authority, Wayne Junction Station Improvement Project, Philadelphia, PA - Project Manager for the design and construction phase services for the rehabilitation of a major regional rail station. The project includes constructability and construction phasing, ADA compliance, historical preservation issues.

Southeastern Pennsylvania Transportation Authority, Design for the Replacement of Bridge 10.12, Jenkintown, PA - Project Manager for the design and construction phase services to replace Undergrade Bridge 10.12 carry SEPTA Main Line over the Tacony Creek. The project includes constructability, construction phasing, environmental permits and utility protection.

Locomotive Maintenance Building, Norfolk Southern Corporation, Conway, PA - Project Manager for a $15 million locomotive maintenance building for locomotive servicing and repair. The project involves design and construction management of a locomotive servicing and repair facility with pumps, piping, oil/water separators, tracks, overhead cranes, repair pits and platforms, offices and welfare facilities.

Morrisville Train Storage Yard Phase II for New Jersey Transit, Morrisville, PA - Project supervisor for construction phase services for the construction and electrification of a 12 track storage yard, yard sectionalization, feeder routing, new catenary structures, modification of existing catenary structures and grounding and bonding.

Southeastern Pennsylvania Transportation Authority, General Engineering Service Contracts, Philadelphia, PA - Project supervisor for development of comprehensive ADA checklists tailored to the needs of SEPTA to be used in the design of transit facilities. Also, design of engineering projects involving catenary systems, emergency power, station parking, environmental monitoring, hydrology studies, rail car procurement, surveying and station improvements.

Southeastern Pennsylvania Transportation Authority, Schuylkill Valley Metro - Project supervisor to study design alternatives for a 63-mile commuter rail corridor between Philadelphia and Reading, PA.

NAME TOM E. HALTERMAN, PE
TITLE SENIOR PROJECT ENGINEER
SERVICE AREA PATH

Years of Experience: 46

Registrations/Memberships

- Professional Engineer – PA, NJ, MD
- American Railway Engineering and Maintenance-of-Way Association
- PenTrans - Board Member

Education

- MS, 1978, University of Pennsylvania, Civil/Urban Engineering-Transportation
- BS, 1969, Drexel University, Civil Engineering

Mr. Halterman has extensive experience in the planning, analysis, and design of railway and mass transit facilities. This experience ranges from planning level studies to detailed final design, including preparing specifications and cost estimates. His experience includes intercity freight and passenger rail, commuter rail, heavy rail, light rail, electric bus, and diesel bus modes. He has served as Design Engineer, Project Engineer, and Project Manager on a variety of projects. Mr. Halterman's experience includes:

Risk Assessment for LA Metro Westside Extension, Los Angeles, CA -Participated in FTA Risk assessment process for a proposed 8.6 mile extension of the Los Angeles Purple Line subway. Evaluated the trackwork component of the project including main line track, crossovers, pocket tracks and connections to maintenance facilities, a proposed turnback facility, and additional storage yard.

Second Avenue Subway, New York, NY: Participated in characterization and risk assessment, focusing on track and stations, for Phase 1 of a heavy rail subway extension in New York City. Also reviewed concept of operations as basis for project design, and participated in FTA contract package review process for civil and utilities.

Eastside Access, New York, NY: Participated in characterization and risk assessment for project to extend Long Island Railroad service into a new terminal beneath Grand Central Terminal in New York City. Evaluated track, third rail, and catenary designs with special focus on the complex staging of construction to connect the project to existing Long Island Railroad and Amtrak line. Also participated in FTA contract package review process for civil and utilities.

Assessment of FastTracks Financial Plan, Denver, Co. - Reviewed and evaluated the operating costs component of the financial plan for a 10 year, $6.7 billion capital program to implement new and expanded light rail and commuter rail services in the Denver metropolitan region. Work included identifying risks in the plan's projected operating costs which included both direct operations by the regional transit agency as well as public/private partnership operations. Updated plan reviews were completed in 2009 and 2010.

Wayne Junction Station Project, Philadelphia, PA: Conducted operational study and prepared detailed report related to construction staging and intermodal improvements associated with rehabilitation of key commuter rail stations serving six rail routes and 3 bus routes. Also managing preparation of construction specifications.

Alexander Road Bridge over Amtrak, Princeton Junction, NJ: Provided design oversight and QA/QC for development of plans to modify the catenary system, structure bonding and grounding, and related facilities to accommodate replacement of a highway bridge crossing over Amtrak's 4-track Northeast Corridor main line.

Center City Master Plan, Philadelphia, PA: Sr. Engineer providing consulting services to the Center City District in developing the Public Transit Component of a Master Plan for Center City Philadelphia. Tasks included examination of capital requirements and operating costs for

upgrading the frequency and hours of operation of a commuter rail line, consideration of transfer improvements at existing transit hubs, and review of plans and updating of cost estimates for a proposed new subway station.

Center City District Light Rail Study, Philadelphia, PA: Project Manager for conceptual study of proposed light rail line serving Market Street and the north and south Delaware River waterfront. The study considered various options for placement of tracks, configuration of transit lanes and stops, and accommodation of existing bus routes. Order of magnitude capital and operating costs were estimated.

Center City Commuter Rail Connection, Philadelphia, PA - Design Engineer for track alignment and, ballasted, ballastless, and direct fixation track structures including interlockings for this four-track electrified commuter rail project. The project involved tunnel, open cut, and embankment right-of-way through dense (CBD). Was Project Engineer for coordination of signal and electrification design with civil design. Was Project planner and Project Manager for the location and design of a new supporting storage yard for 130 cars and modifications to an existing storage yard.

Philadelphia International Airport High Speed Line, City of Philadelphia, Philadelphia, PA - Design Engineer for track alignment and interlockings, and Engineer for coordination of signal and electrification designs.

Morrisville Train Storage Yard, Phase II, New Jersey Transit, Morrisville, PA - Senior Engineer providing design reviews for electrification of 12 storage tracks, yard sectionalization, feeder routing, new catenary structures, modification of existing catenary structures, grounding, and bonding.

Schuylkill Valley Metro MIS/DEIS, Southeastern Pennsylvania Transportation Authority, Philadelphia to Reading, PA - Project Manager for a Major Investment Study/Draft Environmental Impact Statement for this 62-mile corridor. Project included assessment of purpose and needs, development and evaluation of alternatives, environmental assessments, engineering and operating analysis, development of conceptual engineering plans, ridership forecasting, development of cost estimates, and financial analysis. The project also included extensive public outreach, coordination with planning and governmental jurisdictions, and production of documentation meeting federal requirements. The selected alternative consisted of a modern rail service with a projected project cost of $1.4 billion.

Review of Catenary Facilities - Airport Line Project, Southeastern Pennsylvania Transportation Authority, Philadelphia, PA - Project Manager for evaluation and preparation of designs for modifications to catenary system to enhance its performance and reliability. The work included structural modifications, wire replacement, and tension and hardware changes to a variable tension system; and development of a work program for repairs and adjustments to a constant tension system.

Falls Township Passenger Train Station, Redevelopment Authority of the County of Bucks, Morrisville, PA - Project Manager for evaluation of proposed addition of passenger station to commuter rail yard being constructed by New Jersey Transit. Evaluated alternative platform locations and related pedestrian and vehicular access issues; evaluated impacts to track, signals, and electrification facilities; and prepared conceptual cost estimates.

Mainline Schuylkill Phase II, Southeastern Pennsylvania Transportation Authority, Philadelphia, PA - Project Manager for the design of a $44 million project to rehabilitate seven bridges and replace the entire overhead catenary system for a major segment of SEPTA's four-track, electrified regional rail trunk line in Center City Philadelphia. Project also included security fencing, lighting, grounding and bonding, sectionizing switches, trackwork, and temporary signal system modifications. Maintenance of rail traffic required extensive multi-year phased construction sequence.

NAME **FRANKLIN S. TEIFELD**
TITLE **SENIOR RAILROAD DESIGNER**
SERVICE AREA **PATH**

Years of Experience: 32

Registrations/Memberships

- American Railway Engineering and Maintenance Association (AREMA) Committee #14 - Yards and Terminals

Education

- BS, 1977, New Jersey Institute of Technology, Civil Engineering

Mr. Teifeld has extensive railroad engineering, planning, and project management experience. During his distinguished career with Consolidated Rail Corporation (Conrail), he served in many positions, including Planning Engineer, Senior Transportation Analyst, and Office Engineer. Mr. Teifeld's duties involved developing proposal requests, plans, estimates, and specifications for rail freight and intermodal facilities, including major Conrail intermodal yards in the New York/New Jersey metropolitan area. He consulted with railroad customers, port authorities, and state transportation agencies regarding rail facility design and operation. He prepared reports to senior management; designed rail freight classification and intermodal facilities; estimated construction costs; and modeled rail freight yard operations and track-train dynamics using mainframe computer programs. Mr. Teifeld also performed studies of rail traffic flows and effects on terminal facilities, managed civil engineering personnel, and supervised and planned physical plant maintenance for various rail facilities. In addition, he is experienced in the use of IBM mainframes, personal computers, and Intergraph UNIX CADD.

At Urban Engineers, Mr. Teifeld served as Project Manager for design of Norfolk Southern Railway Corporation's Croxton Intermodal Rail Support Yard, Intermodal Premium Gate Facility, and container loading pad and track located in Secaucus, NJ. In addition, he served as Project Manager for design of Norfolk Southern Railway Corporation's E-Rail Intermodal Rail Support Yard and satellite parking facility in Elizabeth, NJ. For CSX, Mr. Teifeld provided design and project management services for both the Greenwich Intermodal Facility in Philadelphia, PA and the Kearny Intermodal Facility in Kearny, NJ. Mr. Teifeld's experience includes:

Work Experience:

Southeastern Pennsylvania Transportation Authority - Extension of Rt. 15 Light Rail Line - Responsible for track and civil design of extension of the existing Rt. 15 light rail streetcar line from a new junction at Girard and Frankford Avenues to a terminus loop at Delaware and Frankford Avenues. The project is being undertaken in connection with the temporary termination of rail service northward to Port Richmond as a result of a multiyear PennDOT reconstruction project of I-95. Additionally, the line will serve patrons and employees of the currently under construction SugarHouse Casino at Delaware and Frankford Avenues.

Jersey City and Secaucus, NJ - Norfolk Southern Croxton Yard Intermodal Terminal - Remote parking facilities feasibility study. Project entailed design and evaluation of remote and site adjacent trailer parking facilities to support increase volume of intermodal movements through existing transfer facility.

Inspection and Evaluation of the Salem Branch, Gloucester and Salem Counties, New Jersey - Project Manager responsible for track and undergrade structure inspection of approximately 18 miles of a former Conrail branch line purchased by the County of Salem, New Jersey in 1995. The purpose of the inspection of the line, operated at 5 MPH as "Excepted Track" under 49CFR213, was to develop a scope of work and rehabilitation cost estimate to bring the line into compliance with the requirements of Class II track to permit operation at 25 MPH.

Relocation of Conrail Perth Amboy Industrial Track, Perth Amboy, NJ - Project Manager responsible for design of relocated alignment of approximately a three quarter mile segment of Conrail branch line necessary to accommodate construction of City of Perth Amboy New Jersey Public Safety, Court and Recreation Complex. Work included design of earthwork, utility relocation, track construction and a new grade separation structure over a county highway.

Norfolk Southern Railway Croxton Intermodal Terminal, Jersey City, NJ- Project Manager responsible for all aspects of design and construction management, client interface, project budget and regulatory agency interface. The project consists of improvements and expansion of the existing intermodal transfer facility formerly operated by Conrail. The design entails a new 2500' long container/trailer loading area, a relocated seven track local freight yard, a new four track intermodal flat car storage yard, a new truck entrance gate facility, stormwater management facilities, all environmental permitting, wetlands remediation, public at grade crossing reconstruction, utility relocation or protection design and area lighting.

Norfolk Southern Railway E-Rail Intermodal Terminal, Elizabethport NJ - Project Manager responsible for all aspects of design and construction management, client interface, project budget and regulatory agency interface. The project consists of improvements and expansion of the existing intermodal transfer facility formerly operated by Conrail located adjacent to the Port Newark/Elizabeth Marine Terminal. The project consists of the design of a new 10-track intermodal flat car storage yard, a remote secure trailer storage area, paving repairs, storm water management facilities.

CSX South Kearny Intermodal Terminal, South Kearny, NJ - This existing former Conrail Intermodal terminal is one of two CSXI facilities serving the busy New York City metropolitan area. Improvements to the facility included new loading tracks and container handling areas, a new equipment maintenance facility and substantial improvements to the storm water management facilities. As Project Engineer design responsibilities included track and roadway geometry, earthwork and grading design and storm water management facilities. The necessity of maintaining current levels of operations of the terminal during construction required careful planning and staging of the improvements as well as detailed evaluation of the constructability of each planned improvement.

Oak Island Departure Yard West End Ladder Reconstruction, Newark, NJ - This project involved survey, design and construction layout of the complete replacement of the switching ladder track at the west end of the departure yard of Conrail's Oak Island Classification Yard. Oak Island is the major carload freight classification yard in the New York metropolitan area and as such, design and construction efforts required careful consideration of constructability issues as well the need to maintain operations throughout the duration of the project. Responsibilities included management and performance of all survey and design efforts.

Jersey City, NJ - Gateway Rail Transport LLC. Project Manager responsible for all aspects of design for a new Intermodal Transfer Facility located at Norfolk Southern's Croxton Intermodal Terminal. The facility is planned to receive Construction and demolition debris from the greater New York metropolitan area for transloading into rail cars prior to shipment to landfills in Ohio.

CONSOLIDATED RAIL CORPORATION, NEW JERSEY DIVISION, ELIZABETHPORT, NJ (1979 - 1984)

Office Engineer, New Jersey Division- Managed New Jersey Division civil engineering staff performing a variety of services to the Maintenance of Way and Operating departments including field surveys, construction layout, customer and local governmental liaison, facility design and engineering, cartography, construction management and office administration.

NAME ALAN D. COLLINS, PE
TITLE SENIOR PROJECT MANAGER
SERVICE AREA PATH

Years of Experience: 31

Registrations/Memberships

- Professional Engineer – NJ, PA, GA
- American Railway Engineering and Maintenance of Way Association (AREMA)

Education

- MSCE, 1997, Drexel University, Civil Engineering
- BSCE, 1979, Cornell University, Civil Engineering
- Certificate, 2006, Urban Engineers, Inc., Project Management Training

Mr. Collins has extensive experience in railroad design, construction, project management, and operations analysis. During his many years at Conrail, he worked as a Project Engineer in the field, in project control, in civil design, as a liaison to public agencies, and in transportation analysis. Since the split-up of Conrail, Mr. Collins has applied his experience at Urban Engineers, Inc., overseeing the design and regulatory submissions for projects at various locations, including intermodal sites for Norfolk Southern's Croxton Intermodal Terminal in Jersey City and CSXI's Kearny terminal and Livernois Terminal for both NS & CSXI in Detroit. He is design Project Manager for the expansion of New Jersey Transit's facility in Morrisville, PA. He managed bidding and budget control for CSX's $30 million Greenwich Yard expansion in Philadelphia, PA. His computer capabilities include MicroStation and Inroads, Primavera project management and scheduling software, and Excel. Mr. Collins' experience includes:

Inman Diesel Facilities, Norfolk Southern, Atlanta, GA - Project Manager for design of diesel facilities including a six locomotive fuel shelter, a locomotive rapid repair service building, and a turntable. This includes the process piping as well as the building MEP. Site work includes utility relocation, storm water management, erosion and sedimentation control, building demolition, upgrade to electrical power distribution, 18,000 feet of new track alignment and regulatory approvals.

Locomotive Inspection Pits, Norfolk Southern, Cleveland, Baltimore & Toledo - Project Manager for design of mini inspection pits and mechanical facilities to pump fresh oil into locomotive and to dispose of waste oil.

Croxton Car Shop, Norfolk Southern, Jersey City, NJ - Project Manager for design and regulatory approval of a shelter for rail car repair activity. New Jersey Meadowland Commission approval was secured in four months, soil district approval in seven weeks.

Storage Yard, New Jersey Transit, Morrisville, PA - Project Manager for design of track geometry and catenary work for a 9 track storage yard and intricate ladder and lead tracks. New Jersey Transit will take over "Clocker" service from Amtrak in 2006, and this yard expansion will support that service. Assisted in detailed schemes for staged reconstruction of three track bridges over the Northeast Corridor while maintaining rail traffic both above and below.

Chambersburg Intermodal Terminal, CSX, Guilford Township, PA - Project Manager for design of an intermodal terminal in a 'greenfield' site. Because the site was previously undeveloped, the stormwater management and erosion and sedimentation control permitting requirements were substantially more stringent than for a typical project in an existing rail yard.

Enola Fuel Shelter, Norfolk Southern, East Pennsboro Township, PA - Project Manager for the design of a shelter to accommodate the fueling of six locomotives at a time. A change in NS' operational requirements mandated a 3000 foot shelter location change, which in turn caused wholesale changes to track and sitework. NPDES approval was secured in seven weeks.

Livernois Intermodal Terminal, CSX and Norfolk Southern, Detroit, MI - Project Manager for design and permitting to reconfigure Livernois Yard. Norfolk Southern and CSX Intermodal upgraded the existing shared Conrail terminal into two separate facilities. Specific tasks include track layout, gate configuration, relocation of a 100 year old, 6 foot City sewer, staging of a temporary truck entrance, sitework, traffic analysis, lighting and regulatory issues.

Croxton Intermodal Terminal, Norfolk Southern, Secaucus, NJ - Project Manager for design of reconfiguration and improved lighting for the terminal. Managed the submissions process for the regulatory agencies, including the New Jersey Meadowlands Commission and the State Soil Conservation District. The regulatory approvals were obtained in a timely fashion.

Greenwich Intermodal Terminal and Yard Reconfiguration, CSX Intermodal & CSX Transportation, Philadelphia, PA - Managed bidding of trackwork, mechanical, electrical and demolition work at Greenwich Yard. Managed bidding and installation of remote controlled security treadles. Maintained comprehensive budget and contract quantity data for entire $30 million project, which involved several contractors, three separate funding sources, and an often-changing scope.

Intermodal Terminal, CSX Intermodal, Kearny, NJ - Project Manager for the $6 million expansion of the terminal acquired by CSXI, overseeing design and permitting for the entire project. Also served as CSXI's liaison with Conrail to expedite the project while the facility still belonged to Conrail.

Track Connection, Philadelphia, PA - Project Manager for design of a track connection from Norfolk Southern's Mustin Field Intermodal Facility to existing trackage. This project included a clearance restricting overhead bridge and pump system for the low point.

North American Terminal for FastShip, Philadelphia, PA - Project Manager for design and permitting work on $125M North American Terminal of FastShip adjacent to Packer Marine Terminal in Philadelphia. Developed various conceptual plans for ship berthing, track, truck circulation, security and gate layout. Evaluated trade-offs between terminal processes, equipment costs, and site improvement costs. Will manage the detailed design and formal regulatory submissions in the near future.

Prior to joining Urban Engineers, Mr. Collins spent 19 years at Conrail, where his experience included:

Project Control - Maintained scheduling and fiscal control of up to $20 million per year of capital expenditures on projects in the 1980s that helped bring Conrail into profitability. These projects consisted of track and signal rationalization and modernization, intermodal terminal site work, and interior renovations for modern train dispatching facilities.

Transportation Support - Performed line capacity studies, capital program coordination, and customer service functions for Conrail's Premium and LTL Intermodal Service.

Civil Design, Elimination of Antis Tunnel, Altoona, PA - Designed the track alignment for the reconfiguration of the former Antis yard to permit the elimination of the clearance restricting Antis Tunnel. Manipulated a complicated vertical profile and horizontal alignment to minimize the combined cost of the new bridge and the earthwork.

Value Engineering, North Bergen, NJ - Simplified New Jersey Transit's construction staging plan for replacement of the 69th Street crossing with a bridge. This will save NJT approximately $100,000, accelerate the completion of the bridge, while protecting the function of the adjacent gate to Conrail's North Bergen Intermodal Terminal.

NAME MICHAEL E. DUNN
TITLE SENIOR PROJECT MANAGER
SERVICE AREA PATH

Years of Experience: 40

Education

- BS, University of Michigan, Civil Engineering
- Penn State University , Amtrak Project Management Program
- University of Virginia, Amtrak Executive Training Program
- Wharton School of Business, Fundamentals of Finance and Accounting
- Harvard University, Project Management Training

Mr. Dunn has extensive experience in planning, directing, and managing railroad right of way maintenance, production, and capital construction, and station hardening security that includes project planning, design, project controls, and administration. Managed and directed both large and small staffs in traditional, matrix, and project-oriented management structures.

Urban - Senior Project Manager - New York, NY

As Senior Project Manager, Mr. Dunn is responsible for all program management oversight of the Eastside Access Program's railroad force account activities, which include Long Island Railroad, Metro North Railroad, and Amtrak. To do so, he maintains regular interface with Engineering Department managers of all three railroads as well as the Metropolitan Transit Authority's Capital Construction managers.

Amtrak - Director Design Support - Responsible to coordinate and review new capital construction project designs and act as Amtrak's engineering design representative for all large-scale projects in the NYPS area, including Moynihan Station and the Brookfield overbuild project. As a member of Amtrak's Fire and Life Safety staff, was also Project Manager for security-related projects such as Station Hardening and Movable Bridge Security, which were done on behalf of and in cooperation with Amtrak's Security Department.

Project Manager First Avenue Vent - New York, NY -Plan, direct, and manage the construction of the First Avenue Ventilation Project, a $172 million project to reconstruct the ventilation structures at First Avenue in Manhattan. The responsibilities of this Fire and Life Safety project included design direction and review, project control management, and construction management, and overall project direction.

Director NEC Business Operations - Philadelphia, PA, Director Budgets and Performance Measures, Technical Director Track Production - Manage and direct staff responsible for planning annual capital program for system production units, as well as preparation and daily oversight of capital and core budget performance for construction valued at $60-$80 million per year. Developed all annual and multi-year program schedules, estimates, and other financial and planning functions necessary to totally integrate a wide range of MW programs.

Program Director - High Speed Rail Planning and Program Integration -Directed activities of 14 professionals responsible for all design engineering, financial controls, scheduling, and interagency agreements required to complete the $1.5 billion Northeast Corridor High Speed Rail Program. Responsible for coordination with senior officials of Amtrak's many diverse departments to achieve goals of the program.

Special Assistant to the Vice President Engineering -Personal representative of the Vice President Engineering for state departments of transportation including California and New York, as well as prospective commuter clients Metrolink, Peninsula Commute, and North San Diego County. Responsible for coordinating all

engineering disciplines, including design, construction, mechanical, and maintenance of way to ensure that critical multi-million dollar projects were successfully completed in a political atmosphere.

Director Engineering Special Projects - Responsible for providing engineering support services to our Northeast Corridor commuter clients, particularly New Jersey Transit and Septa. Coordinated all early planning and design efforts for these agencies' capital programs, including NJT's Secaucus Transfer and Eastbound Waterfront Connection projects and Septa's Overbrook and Frazer Maintenance Facility projects, as they related to Amtrak.

Project Manager Atlantic City and Westside Connection Projects - Planned, directed, and managed all operational and administrative aspects for over 200 force account employees from 3 disciplines involved in the construction of the Atlantic City Line Project - a four-year, $70 million project to completely reconstruct the 57-mile main line between Frankford Junction, PA, and Atlantic City, NJ, done in partnership with New Jersey Transit. Technical representative between Amtrak and third party contractors involved in the construction of the Westside Connection Project in Manhattan, a three-year, $100 million project to convert an abandoned 10 mile long freight line into a 60 mph passenger line connecting upstate New York with Penn Station.

Division Engineer - Managed and directed a large management staff responsible for right-of-way maintenance, production, and capital construction for train operations at normal speeds up to 110 mph. This staff was responsible to manage up to 1300 employees. Responsible for coordination and teamwork of several diverse engineering disciplines with a total budget of $30 million per year.

Engineer Track Laying System (TLS) Planning - Directed and managed a staff of degreed engineers responsible for all planning and design aspects for Amtrak's Track Laying System. Developed all engineering, design, and survey work required ahead of all TLS construction, including publishing a Site Specific Work Plan (SSWP) for each railroad block in which the system worked.

Penn Central

Assistant Division Engineer - Harrisburg, PA

Supervisor Track - Philadelphia, PA

Supervisor Track - Camden, NJ

Assistant Supervisor Track - Wilmington, DE

NAME **RICHARD F. HILL, PE**
TITLE **PROJECT MANAGER**
SERVICE AREA **PATH**

Years of Experience: 47

Registrations/Memberships

- Professional Engineer – NJ, PA
- American Railway Engineering and Maintenance Association (AREMA)- Member of Committee 11 (Commuter Rail) and Committee 17 (High Speed Rail)
- Chairman of the Committee 11 & 17 subcommittee for developing seminars on Passenger Railroading
- American Public Transit Association (APTA)
- American Society of Civil Engineers

Education

- MCE, 1971, Villanova University, Civil Engineering
- BCE, 1963, Villanova University, Civil Engineering

Mr. Hill has extensive Mega Project experience as a Civil Engineer in both Design and Construction. At the Pennsylvania Department of Transportation (PennDOT), he was the project manager for 10 miles of the Interstate 95 Highway Project through Center City Philadelphia from south of the Girard Point Bridge to Girard Avenue. Work included the Girard Point Bridge, a major 8 lane bridge over the Schuylkill River, Interchanges with both the Walt Whitman and Benjamin Franklin Bridges over the Delaware River, a 10 lane cut and cover tunnel 1800 feet long, two transit stations on Southeastern Pennsylvania Transit Authority's (SEPTA) Market Frankford Subway/Elevated line and relocation of the Market Frankford line into the median.

At Amtrak, he was the Director-Contract Construction for the NECIP Project and other work between Boston, MA and Washington, DC. He directed all contracted construction on the Northeast Corridor for 17 years including 10 movable bridges, 10 stations, 4 maintenance of way bases, 3 Maintenance of Equipment facilities, multiple wheel truing facilities, substations, etc. He also directed the initial work on the Electrification Project between New Haven, CT and Boston, MA, which included the completion of the EIS statement, locating 10 substations, determining areas needing additional Right of Way to locate the Catenary poles, etc. For 6 months he was assigned the remaining Amtrak Contracted Construction, until Amtrak hired a person for non Northeast Corridor construction.

At Urban Engineers, Mr. Hill was the Senior Project Manager for the FTA, overseeing the MTA's management of the Second Avenue Subway Project in New York City. This project has an estimate in excess of $4.4 Billion. Prior to this assignment, Mr. Hill was the Program Manager for SEPTA's Frankford Transportation Center, which was the Terminal facility for the Market/Frankford line and SEPTA's largest single site project to that time.

Mr. Hill has extensive experience in program management and construction management of major highway, rail and rail transit facilities, planning, scheduling, budgeting and cost estimating, quality control/quality assurance, safety, agency/contractor coordination, documentation, inspection and community relations. Mr. Hill's experience includes:

Senior Project Manager - Responsible for providing Project Management Oversight (PMO) services to the Federal Transit Administration (FTA) as part of the Urban Engineers PMO team. Mr. Hill performs project oversight of Transit Agencies that receive funding from the FTA to assure the most efficient use of the Public Funding. Current duties include acting as Project Manager (PMOC) on New York City MTA's Second Avenue Subway Project Phase 1, which is estimated $4.866 Billion. Construction of Phase 1 began in the spring of 2007.

Mr. Hill has provided support to the FTA and the Grantee in reviewing the various required plans needed to get a Full Funding Grant Agreement. He has been involved in the

review and approval recommendation of the Second Avenue Subway's New Starts approval, Approval to Enter Final Design, Early Systems Work Agreements, Project Management Plan, Safety and Security Management Plan, Risk Characteristics, Risk Mitigation Planning Workshops, Before and After Plan, Real Estate Acquisition and Management Plan, etc.

Mr. Hill previously performed this function for MARTA in Atlanta, GA and Lynx in Orlando, FL.

Program Manager - Responsible for SEPTA's Frankford Transportation Center Project, FTC. This was the final part of SEPTA's $650 million Frankford Elevated Reconstruction Project and the largest site specific project in SEPTA's history. The $180 million center, constructed at the northern terminus of the Frankford-Market Elevated/Subway Line, serves as an intermodal transfer point for bus and rail passengers and is expected to promote the economic revitalization of the Frankford neighborhood. The Frankford Transportation Center Bridge-Pratt transit station serves about 50,000 commuters a day.

The project included improving high-speed rail, bus, and trackless trolley operations; providing improved and sheltered transfer capabilities; providing enclosed parking with access to transit; and creating a community focal point and catalyst for area revitalization. The new facility includes a four-level terminal building with a 450-foot-long platform, support facilities and terminal operations, retail space, a 36-berth local bus station, a 1,000-car parking structure, major modifications to an existing bus depot, and relocation and reconstruction of 1,500 feet of the elevated rail structure. The design included restoration of the original Bridge Street Terminal and its adaptive reuse as a major entry hall for the new terminal.

Responsibility included the documentation, inspection, quality assurance, schedule, contract administration, budget, contractor coordination, safety, cost estimating, etc. for the construction of the Facility. Other duties included interfacing with the client and other agencies, supporting SEPTA's community relations interface between the contractors and the local community, coordinating information between the FTC project and SEPTA Operations and the other programs on SEPTA's Market-Frankford Subway Elevated line.

Senior Project Manager - Responsibilities included providing Project Management Oversight (PMO) services to the Federal Transit Administration (FTA) as part of the Urban Engineers PMO team. Acting as Assistant Project Manager to MARTA in Atlanta and to LYNX in Orlando. Other duties included acting as an assistant to the Senior Vice President for Construction Management in administering the CM group.

DeLeuw, Cather and Company - August 19, 1996 to April 4, 1998

Senior Construction Manager - Responsible for managing the planning, scheduling, budgeting and cost estimating, agency/contractor coordination, inspection, quality control/quality assurance, documentation, etc. for the construction, procurement and railroad force account contracts for the Newark Airport Monorail Connection to Amtrak's Northeast Corridor. The project consists of multiple contracts (Site Development and Foundations, a Major Transfer Station for the Railroad and Monorail, foundations for the Monorail, reconstruction of Conrail's two running tracks from Island Yard to Amtrak's Northeast Corridor, Conrail signal work for the new Bud siding, Amtrak Signal work, Amtrak Track work, Amtrak ET work, Amtrak Switch exchange work for 7 turnouts, two turnout purchase contracts, signal bridge purchase contract, catenary pole purchase contract, construction of 2 new running tracks for the Northeast Corridor, administration of scheduling for New Jersey Department of Transportation's Foundations for Route 21 and Construction of route 21)and will run for three to four years, with a total budget of $120 million.

PORT COMMERCE

NAME AHMAD NADEEM, PE
TITLE PROFESSIONAL ENGINEER
SERVICE AREA PORT COMMERCE

Years of Experience: 21

Registrations/Memberships

- Professional Engineer – PA, LA
- American Institute of Steel Construction (AISC)
- American Concrete Institute (ACI)
- Delaware Valley Association of Structural Engineers
- Deep Foundation Institute (DFI)

Education

- MS, 2001, Louisiana State University, Engineering Science
- MS, 1995, Louisiana State University, Civil Engineering
- BS, 1987, M. R. Engineering College, India, Civil Engineering
- 2002, Drexel University, Project Management Course
- 2002, PSMJ, Marketing Boot Camp
- Certificate, 2006, Urban Engineers, Inc., Project Management Training

Mr. Nadeem is a marine and general structural engineer with extensive experience with various consulting engineering firms. He has extensive experience in managing, designing and engineering of marine, bulk material handling, heavy industrial, and building projects. He has designed and supervised the design, detailing, fabrication, erection, and other field operations of several steel and concrete projects. He also has several publications in the field of wind engineering. On the marine side, he has planned, designed, and managed the construction of several dry bulk, break bulk, liquid, and container handling terminals. His marine design and engineering experience also includes barge handling facilities, military ports, cruise terminals, ferry terminals, and marinas. Designed marine structures include bulkheads, soldier piles, retaining walls, low and high deck structures, dolphins, monopiles, cells, fender systems, crane and container crane rail foundations, tank foundations, minipiles, spud piles, mooring chains, anchors, barge hauling systems, buoys, sinkers, winches, wire ropes, and pad eyes.

PROJECT EXPERIENCE:

Project Management Oversight, U.S. Federal Transit Administration, Midtown Ferry Terminal, NY - Monitored the construction management of this $58 million Ferry Terminal on the Hudson River. Responsibilities included reviewing the progress of the construction and budget of the project. The progress was reported to the FTA.

CP Cement Terminal, Brooklyn, NY - Project Manager and Structural Engineer for the planning and design of a 40 million dollar cement import terminal in Brooklyn, NY. The scope of work included pier inspection, hydrographic survey, boundary survey, sedimentation analysis, dredge volume calculation, fish study, waterfront development permits, geotechnical investigation, layout of the proposed terminal, preliminary design of the terminal including a new dock to handle 50,000 DWT vessel, pneumatic pipes, stabilizing the existing finger pier, flat storage structure (warehouses), bin, equipment, and truck loadout support structure and foundations.

Lehigh Cement Terminal, Brooklyn Navy Yard, NY - Project Manager for the inspection of Pier K at Brooklyn Navy Yard, leased by Lehigh Cement. The inspection was conducted to evaluate the reasons for the observed depressions on the pier surface. It was determined that the reason for depressions may be the leakage through drain holes in the pier or the consolidation of fill. Remedies were suggested to alleviate this problem.

Plains All American, LP, Liquid Terminal, Paulsboro, NJ - Project Manager and Marine Structural Engineer for the design of rehabilitation to the existing T-Head dock. The scope involved the design of a new loading platform, 100 ft of new walkway, strengthening a breasting dolphin, two new breasting dolphins

and repairs to fender system of other existing breasting structures.

National Gypsum Company Terminal, Burlington, NJ - Project Manager and Structural Engineer for the design of pier rehabilitation to handle 65,000 DWT vessels. The existing timber piles supporting the dock with an elevated conveyor gallery were deteriorated to a critical condition. The design required a complete renewal of piles and the beams supporting this high deck concrete platform. The existing concrete deck was retained in place. The design accommodated for the construction work to be conducted in a way to not interfere with the daily pier operations. Mr. Nadeem has also managed several hydrographic surveys (soundings), dredging operations, waterfront development and dredging permits for this terminal.

Philadelphia Cruise Terminal Rehabilitation, Philadelphia Naval Shipyard - Project Manager and Structural Engineer for the rehabilitation of Pier 2, Cruise Terminal at Philadelphia Navy Yard. When it was determined that the existing timber piles of the existing pier were slender due to scouring of the mudline, Urban designed the rehabilitation effort that minimized the impact on the daily operations of the cruise terminal and allowed safe access to the cruise ships for normal services. Twenty five front row piles and 315 braces were installed. Urban also provided technical assistance during the construction work.

Sunoco Liquid Terminal Upgrades, Westville, NJ - Project Manager and Marine Structural Engineer for the waterfront development permit acquisition and design of Sunoco liquid terminal. Dock No. 3 is being upgraded to receive up to 160,000 DWT vessels involving mooring analysis using OPTIMOOR software and OCIMF guidelines. Design of several mooring and breasting structures, including fender system, walkways, capstans, and mooring hooks is required. Dock No. 1A and 2 are also being reviewed for rehabilitation requiring new mooring and breasting structures, encasement of cells, strengthening and jacketing of piles, and walkways. The project is currently being designed.

Pacific Atlantic Terminals, Liquid Terminal, Philadelphia, PA - Project Manager and Marine Structural Engineer for the waterfront development and dredging permit acquisition, dredging operation, and design of rehabilitation to the two Philadelphia terminals of PAT. The scope of dredging work includes performing hydrographic survey, calculating dredge material quantities, sampling and testing of dredge material, obtaining NJDEP, PADEP, and ACOE permits, bidding and managing the dredge activity at the North and South Terminals. The scope of other permit work includes securing a grandfather permit for the South terminal to perform future construction work activities without the need of going through the lengthy permit process and obtaining a waterfront development permit for the proposed rehabilitation of the existing liquid handling dock at the South Terminal. The South terminal has not been in use for quite some time and is abandoned. The scope of design work includes inspecting the pier underwater, coordinating geotechnical investigation, and providing various design options for the rehabilitation of the pier, including cost estimates, to handle liquid barges up to 640 feet. Two marine loading arms and two hoses will be installed to transfer the products. The option selected by PAT will be designed in details. The project is currently in the design phase.

Pier One Hays Bulk Terminal, Girard Point, Philadelphia, PA - Project Manager and Marine Structural Engineer for the planning, design, permit acquisition, litigation support, and construction inspection of this $5 million project. The pier was first inspected above and under water to assess the structural condition of the existing low deck structural elements after a partial collapse. A 400-foot long section of the pier was renewed as a mid-deck structure, isolated from the neighboring weaker section of the pier. The new pier deck was designed for 1000 psf live load and Caterpillar 950G front end loader. The project had several technical challenges during the design and construction due to the need of sustaining heavy loads at a site underlain by weak cohesive soils to a depth of 70 feet and the presence of unknown obstructions. PDA analysis and dynamic testing of piles was conducted to confirm pile capacities.

NAME ANDREW O. QUINN, PE, LEED® AP

TITLE STRUCTURAL ENGINEER

SERVICE AREA PORT COMMERCE

Years of Experience: 9

Registrations/Memberships

- Professional Engineer – NY, NJ, PA, MD, DE
- Association of Diving Contractors International (ADCI)
- Bridge Inspection Refresher
- Safety Inspection of In-Service Bridges
- Open Water Scuba Diver (PADI)
- LEED® AP

Education

- BSCE, 2001, Rutgers University
- Certificate, 2008, Urban Engineers, Inc., Project Management Training

Mr. Quinn is a Marine Structural Engineer with extensive experience relating to bridges and waterfront structures. As an Engineer Diver, he has personally performed more than 350 hands-on underwater inspections. His experience also includes the design of new steel marine structures, and the rehabilitation of existing steel, concrete, and timber marine structures. He has supervised field operations of several pier waterfront projects. Mr. Quinn's experience includes:

Urban Engineers, of New York P.C., New York, NY 2007 to present - Performed several in-depth above and underwater inspections of waterfront structures including piers, wharfs, and mooring platforms. Inspections were conducted for public and private sector clients, including the Philadelphia Regional Port Authority, Waste Management, Inc., Stonehenge Advisors, Inc., and Sonoco, Inc. Inspection work includes various types of timber, steel, and concrete structures. Responsibilities include oversight of diving operations, and report preparation. Generated detailed reports for all inspection work. Developed repair designs, specifications, and contract drawings to prolong the service life of multiple waterfront structures. Acted as a project manager and site engineer providing construction management of three large scale pier rehabilitation projects. Responsibilities include acting as the client's technical representative throughout the duration of rehabilitation contracts, and oversight of field operations.

Generated detailed reports for all inspection work. Developed repair designs, specifications, and contract drawings to prolong the service life of multiple waterfront structures. Acted as a project manager and site engineer providing construction management of three large scale pier rehabilitation projects. Responsibilities include acting as the client's technical representative throughout the duration of rehabilitation contracts, and oversight of field operations.

National Gypsum Services Company, Inc., *Engineering Analysis of Existing Unloading Structure Capacity for Installation of New Larger Capacity Receiving Hopper - Burlington, NJ,* Project Manager

Calculated required capacity of existing structure to handle the installation of a new, larger receiving hopper. Reviewed existing plans and previous rehabilitation efforts.

National Gypsum Services Company, Inc., *Inspection of Piers - Various Locations*, Project Manager

Underwater and topside structural inspection of port facilities throughout the United States. Personally performed hands-on inspection at each site as well as directly supervising local diving services companies:

- Rensselaer, NY - Steel H-pile dolphins connected with reinforced concrete caps, steel tube truss walkways.
- Baltimore, MD - Concrete encased fluted steel pile bents with reinforced concrete caps and main pier deck. One severely deteriorated steel H-pile supported reinforced concrete cap dolphin. Dolphin condition warranted rehabilitation design which includes auxiliary steel piles.

- Portsmouth, NH - Steel sheet pile bulkhead and steel sheet pile breasting / mooring cells. Severe corrosion in tidal zone required encasing existing structures with new steel sheet pile.
- Wilmington, NC - Reinforced concrete pile supported R/C dolphin caps and accessway bents with pre-stressed concrete double-T beam spans. The inspection recorded ongoing cracks and deterioration of the R/C piles as well as identified vessel impact damage which required repair of one dolphin.
- Tawas City, MI - Square steel sheet pile cells with a reinforced concrete pier deck and timber fendering. Wrote detailed inspection reports which include ratings of each structure, photographs and video recordings as well as tables of measurements establishing the extent of deterioration and remaining capacity. Repair options with cost estimates were prepared for each site to help the client forecast future maintenance and capitol improvement requirements.

Sunoco Logistics, Inc., *Eagle Point Pier Rehabilitation - Emergency Underwater Inspection, West Deptford, NJ*, Field Engineer

Performed underwater inspection of Fender Cluster 11, a steel pile supported structure following vessel impact. Fieldwork resulted in restriction of breasting and mooring access to maintain safety. Determined the extent of damage for insurance claim resolution between the client and the responsible party.

Previous Project Experience:

Churchill Consulting Engineers, P.C., Berlin, NJ

Served as a team leader for above and underwater routine bridge inspections, culvert inspections, and overhead sign structure inspections. Produced reports including CAD drawings and repair recommendations for the New Jersey Department of Transportation, New Jersey Transit, and the New Jersey Turnpike Authority. Performed underwater construction inspections for bridge rehabilitation work.

Collins Engineers, Inc., Albany, NY

Worked as an assistant team leader for routine underwater bridge inspections throughout New York, New Jersey, Connecticut, Wisconsin, Illinois, and South Carolina. Performed pier inspections for various state and federal agencies including the United States Coast Guard and U.S. Navy. Performed in-depth inspections on over 100 structures in the New York State Barge Canal system. Was a member of an emergency inspection team which responded to needs caused by Hurricane Katrina.

W.J. Castle P.E. & Associates, Inc., Lumberton, NJ

Served an assistant team leader for underwater and topside bridge inspections for the New Jersey Department of Transportation, New York Bridge Authority, Burlington County Bridge Commission, Delaware Joint Toll Bridge Commission, and the Delaware River Port Authority. Once took emergency action to close down a privately owned toll bridge due to structural problems. Performed video inspections of confined spaces with Remote Operated Vehicles. Design experience includes temporary works for bridge reconstruction projects and several bridge load rating analysis. Worked as a field engineer for the reconstruction of the Bay Head Yacht Club (historic structure built on timber piles above water).

New York State Thruway Authority, *Underwater Inspection - Barge Canal Structures, Engineer*-Diver Performed underwater inspections of 104 structures including locks, approach walls, mooring cells, and dams along the eastern portion of the Erie Canal system. Developed maintenance and repair recommendations, wrote inspection reports.

NAME SHAWN M. MCADAMS, PE
TITLE STRUCTURAL ENGINEER
SERVICE AREA PORT COMMERCE

Years of Experience: 13

Registrations/Memberships

- Professional Engineer – NY, NJ, DE, MD, VA, NC, PA, DC, NH, TX
- AISC

Education

- BS, 1999, Swarthmore College, Engineering
- Certificate, 2006, Urban Engineers, Inc., Project Management Training

Mr. McAdams is a Structural Engineer with extensive experience, including marine engineering and design of waterfront facilities, bridges, and foundations. The bulk of his experience covers design, analysis, and evaluation of both steel and concrete structures. Mr. McAdams' experience includes:

Marine Projects

Sunoco Eagle Point Dock Repairs, Westville, NJ - Responsible for multi-phase design of ship breasting facilities and pile-supported mooring dolphins, as well as analysis of existing structural elements in order to rehabilitate the dock to a safe and operational condition. Design included alternate construction methods to reduce the construction schedule and maintain dock operations during construction. Duties also included design and analysis of ship mooring line patterns and hose tower rehabilitation.

Plains All American Pipeline Dock Rehabilitation, Paulsboro, NJ - Responsible for the design of new and strengthening of existing pile-supported breasting structures, as well as a new steel loading platform and catwalks.

Monorail Hoist Beam Design, Delair NJ - Responsible for design of a monorail beam system and supports for hoisting heavy equipment. Challenges included retrofitting supports to existing site conditions.

Sunoco Hose Tower Repairs, Westville, NJ - Responsible for design of access catwalk and new pad-eyes and supports for existing hose tower structure.

Flemington Circle, NJ Route 31, New Jersey Department of Transportation - Completed allowable stress design for pier and abutments, as well as seismic design. Additional tasks included designing field splices for the steel girders and design of pot bearings.

Route 33 Bypass, New Jersey Department of Transportation (NJDOT) - Responsible for review and correction of shop drawings. Responsibilities also included redesign of four structures, ten retaining walls, and twelve sign structures based on comments received from NJDOT.

Commodore Barry Bridge Vessel Collision Protection, DRPA, PA/NJ - Responsibilities included quality analysis and design of two artificial stone islands around the base of the piers to arrest the movement of vessels and protect the structure and the vessel, as well as performing an analysis of the bridge response due to an impact scenario. Work also covered the assessment of other types of protection structures, such as cells, pile structures, and floating fenders.

Bridge Projects

Pennsylvania Turnpike Commission, Full Depth Reconstruction between Valley Forge and Norristown, PA - Responsible for design work, including steel and pre-stressed concrete bridges, noise and earth-retaining walls, and sign structures for the PA Turnpike full-depth reconstruction between Valley Forge & Norristown. Responsibilities also included cost estimates, preparation of T,S&L reports, final structure design, preparation and evaluation of PS&E plans, as well as construction staging management.

Pennsylvania Turnpike Commission, NorthEast Extension Full Depth Reconstruction, M.P. A20 - A30 - Responsible for analysis of structural alternates, preliminary design, and preparation of cost estimates and TS&L reports. Design included earth-retention systems, noise walls, and several bridges.

Pennsylvania Turnpike Commission Reconstruction Project, M.P. 85.0 to 94.0 - Responsible for TS&L and PS&E submissions, and review of comments. Designed structures included two single-span, steel girder bridges and nine retaining walls, including mechanically stabilized earth, modular Geogrid, post and plank, and steel sheet pile walls.

Merion Avenue Project, Pennsylvania Department of Transportation (PennDOT), District 6-0 - Designed single span steel bridge and two retaining walls. Responsible for converting and updating existing plans and design from LFD to LRFD design methodology.

SR 6220, PennDOT, District 6-0 - Preformed preliminary design and cost estimate for three bridge structures and prepared the TS&L submissions.

SR 6202, Section 711, PennDOT - Responsible for performing final design and preparing the PS&E plans for a two continuous span, prestressed concrete bridges.

SR 0030, Section S26, PennDOT - Responsible for T,S&L submission for four proprietary retaining walls. Performed cost analysis for several types of retaining wall systems; including cast-in-place concrete, soldier pile and plank, T-wall, Geogrid and M.S.E. walls.

Astra Zeneca, Delaware Department of Transportation - Performed the final design and plans for cantilever abutments, as well as four proprietary retaining walls.

SR 0222, PennDOT - Responsible for evaluation and approval of submitted shop drawings for prestressed concrete beams, drainage systems, bearings, and sign structures.

Ship Loader Rehab, Ashtabula, OH - Performed design and completed 3-D model and analysis of repairs to existing ship loader crane boom and supporting structure.

Breasting Dolphin Rehab, Anacostia, MD - Completed design for replacement of breasting dolphin structure.

Sugarhouse Casino, Philadelphia, PA - Responsible for design of earth-retaining sheet pile bulkhead, high deck structure supported on piles, rip-rap, and a pile supported C.S.O. sewer and foundation.

Pacific Atlantic Terminals Dock Rehabilitation, Philadelphia, PA - Responsible for design of ship breasting facilities and fenders and mooring dolphins, as well as strengthening and repair of the existing concrete and steel sheet pile seawall to prevent further movement.

Broad Street Bulkhead, Philadelphia, PA - Responsible for design of a sheet pile bulkhead structure to replace the existing deteriorated quay wall.

Rehabilitation of Pier 1 at Girard Point, Philadelphia PA - Responsible for design and evaluation of structural elements of a high deck pier structure and steel sheet pile bulkhead due to in-field and as-built conditions. Elements included were sheet pile wall, concrete pile cap and deck, and fender chain system for low pile capacities at site.

Kinder Morgan Bulk Terminals, Philadelphia, PA - Responsible for design of a cellular sheet pile extension to the existing bulkhead. Duties also included layout and design of a new liquid handling dock at the site.

EDUCATION
AS/Civil Engineering, City and Guilds of London Institute

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
NICET II Equivalent

EXPERIENCE SUMMARY
Mr. Koomson has over 16 years of Construction Inspection working for agencies that include the PANY&NJ, NYC DDC, NYC DEP and others agencies providing construction oversight. A sampling of project's with relevant project experience follows:

PANYNJ, New Jersey Marine Terminal Construction – Civil Inspector monitoring activities at Marine Terminal construction sites. Work includes installation, testing and inspecting Civil works. Provides oversight to ensure construction progresses as scheduled and contract specifications are adhered to. Prioritizes multiple assignments, maintain deadlines, and works in a team environment. Inspects construction site daily and works with contractors to schedule deliveries, follow safety requirements, adhere to quality and code compliance; files daily narratives and progress reports detailing personnel, equipment, materials and work summary.

Over the last twenty-six months, Mr. Koomson has performed construction inspection on the following projects:

- Port Elizabeth Expressrail, Elizabeth Lead Tracks & South Bay Avenue - work consisted of construction of second lead track into Expressrail, reconstruction of existing lead track, construction of rail bridge over McLester St., reconstruction of Bay Ave., construction of new South Bay Ave. roadway, utility and other related work.
- Port Newark – Berth 8 & Berth 10 Wharf Reconstruction - work consisted of demolition of existing wharf, dredging and berth deepening, steel pile & steel sheet piling installation, installation of gabion walls, concrete deck reconstruction, paving & utilities.
- Port Elizabeth – North Ave/McLester St. Curve Realignment – work consisted of roadway realignment, including paving, utilities, traffic controls, overhead signage, storm water treatment units and related work.
- Port Newark – Port Street Interim Traffic Improvements - work consisted of removal of concrete islands and traffic controls; installation of guiderails, traffic barriers, signage, pavement markings and electrified traffic control devices at Port Street and vicinity.
- Port Newark – Berths 36 & 63 Wharf Reconstruction - work consisted of removal and disposal of existing wharf, dredging, upland disposal of dredged materials, steel pipe piles, sheet piles and other marine construction, paving, utilities and related work.
- Immediate Repairs, Berths 10–12 - repair of concrete encased piles.
- Immediate Marine Rehabilitation, repair of concrete encased piles.
- Concrete Roadway Rehabilitation – Repairs to North Avenue Bridge & Corbin Street Ramp; work included removal of deteriorated concrete and placement of new concrete and Latex Modified Concrete.
- Immediate Repairs - Corbin Street – excavated deteriorated concrete and replaced with Latex Modified Concrete (LMC).

NYCDDC, Reconstruction of Frederick Douglas Circle Project, Borough of Manhattan – Senior Construction Inspector The project involves reconstruction of this circle to include the erection of Figure monument in tribute to Frederick Douglas, fountain and constellation wall and quilt pattern design. The project also includes installation of 48", 20" and 12" sewers, heritage and standard traffic signal and street lighting, along with complete granite curb,

sidewalk and roadway construction, and tree planting. He also attended all critical phase meetings.

NYCDDC, HWK614B1, Reconstruction of Bergen Avenue Area in Brooklyn – Senior Construction Inspector responsible for construction oversight on a $27.7 million project. The work includes the installation of sidewalks, roadway, center mall, storm and sanitary sewers and the complete street and sidewalk reconstruction within approximately 16 residential blocks just west of Paerdegat Basin. The storm sewers were built on piles while most of the sanitary sewers were placed on the same lane as the existing sewers that were removed.

NYCDDC, Contract MED-579/Abandonment of Existing High Pressure Fire System in Lower Manhattan – Senior Construction Inspector responsible for the inspection of the removal of hydrants, hydrant valve boxes and main line valve boxes. Inspection of concrete and asphalt restoration surveys and does the preparation of Punch list for the final inspection. Also, he does testing and inspection of the concrete (Slump test, Air test, Temperature), plus the inspection of MPT.

NYCDEP, Installation of Sewers in Linwood Avenue, Staten Island, NY, Project No. SE-247A/SER002155. This project involved installation of 12" ESVP gravity sewers and 5'6" x4" concrete box culvert sewers. His duties include record keeping, project status/completion reports, documentation supporting contract payments, balance of materials, fixed assets reports, field cards, in-service notification and change orders.

New Jersey Turnpike between Interchange 8 and 13 Linden City, Union County. Senior Construction Inspector for the widening project.

NYCDEP, Victory Boulevard Sewer Project in Staten Island (SE208A/362A). Construction Inspector responsible for construction oversight on project. This project included installation of gravity sewers, utility crossing and pavements and sidewalk restoration.

EDUCATION

BS/Civil Engineering, Rutgers University, New Brunswick, NJ, 1981

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

Professional Engineer - NJ ([redacted] Expires: 4/30/08); NY (#070751, Expires: 10/31/08)
NHI Course 130053A, Bridge Inspection Refresher Course (issued: 01/2008)
NHI Course, Inspection & Maintenance of Ancillary Highway Structures, (06/2005)
NHI Course [redacted] Fracture Critical Inspection Techniques for Steel Bridges, September 2002
NHI Course [redacted] Bridge Management Training - Inspection Session, June 1998
NHI Course # [redacted] Safety Inspection of In-Service Bridges, November 1994
ESRI Introduction to ArcGIS I, 3/4/05
NYSDOT - Bridge Inspectors NDE Showcase, March 13, 2008

EXPERIENCE SUMMARY

Mr. Perlmutter has 27 years of experience in project management; project engineering; bridge replacement and rehabilitation design; light rail structural design; construction supervision; inspection of bridges, buildings, airports, and marine facilities; and resident engineering for bridge and highway construction projects. His relevant project experience includes:

PANYNJ, Facility Condition Survey Services As Requested on a "Call-In" Basis During 2006, 2007 and 2008 – Assignment # 4 Biennial Inspection for LaGuardia Airport Bridges – Project Manager responsible for the condition inspection and report preparation of 16 bridges at LaGuardia Airport in Queens, NY. The bridges include 2 airport entrance roadways over the Grand Central Parkway, departure ramps adjacent to and partially within terminal buildings, 2 enclosed pedestrian walkway bridges connecting the parking garage buildings (Lot 2) to Central Terminal building, and several connector ramp bridges over airport access roads within airport limits. Inspection also includes inspection of overhead sign structures mounted to the bridge structure as well as bridge fascia mounted sign structures.

PANYNJ, Facility Condition Survey Services As Requested on a "Call-In" Basis (MBE/WBE) During 2006, 2007 and 2008 – Assignment # 3 – Condition Survey for 16 Buildings at Elizabeth Port Marine Terminal – Project Manager responsible for condition surveying services on a "Call-In" basis was responsible for the condition survey and report preparation of Buildings 1130, 4030, 4060, 4070, 5000, 5020, 5030, 5060, 5070, 5080, 5090, 5110, 5120, 5130, 5140, and 5160 at Elizabeth Port Marine Terminal. Purpose of the inspection was to determine the condition of the buildings' structure and to identify any structural or non-structural deficiencies that might present potential safety hazards and to develop recommendations for correcting any deficiencies found to prevent further deterioration requiring major repair work. All building structural elements received a 100% visual inspection with 10% hands-on, up-close inspection including connections.

PANYNJ, Facility Condition Survey Services As Requested on a "Call-In" Basis During 2006, 2007 and 2008 – Assignment # 1 – Condition Survey of High Mast Light Towers at Harrison and Substation 50 at Journal Square – Project Manager responsible for the condition survey of 11 high-mast light towers located at the PATH Car Shop facility in Harrison and the Substation 50 and Compressor Room buildings located at the PATH Journal Square Transportation Center in Jersey City.

PANYNJ, Facility Condition Survey Services As Requested on a "Call-In" Basis During 2006, 2007 and 2008 – Assignment # 2 – Condition Survey of High Mast Light Towers at Port Newark and Port Elizabeth Marine Terminal – Project Manager responsible for the condition survey of 275 High Mast Light Towers at Port Elizabeth and Port Newark facilities. All light towers received a 100% hands-on inspection of the exposed foundations and bases, including anchor bolts and base plate welds. All towers that were inspected previously received a complete hands-on inspection. Newly installed towers were mostly visually inspected above the base of the towers.

PANYNJ, Facility Condition Survey Services As Requested on a "Call-In" Basis During 2006, 2007 and 2008 – Assignment # 3 – Condition Survey of High Mast Light Towers at Howland Hook Marine Terminal – Project Manager responsible for the condition survey of 43 high mast light towers at the Howland Hook Marine Terminal in New York. All high mast light towers received a 100% hands-on inspection including all structural framing and connections, luminaire assembles and connections, structural support systems, visible portions of the foundations, and other appurtenances attached to the light towers including floodlights and signs.

PANYNJ, Facility Condition Survey Services As Requested on a "Call-In" Basis (MBE/WBE) During 2006, 2007 and 2008 – Assignment # 1 Condition Survey for LaGuardia Airport Sign and Lighting Structures – Project Manager for the inspections and report writing for approximately two hundred twenty four (224) sign structures; one hundred seventy one (171) high mast light towers; two hundred forty four (244) light poles; and ninety four (94) traffic light structures. Structural and non-structural related deficiencies that could present a potential safety hazard were identified as well as verifying the status of repairs identified in the previous inspection report.

PANYNJ, Facility Condition Survey Services As Requested on a "Call-In" Basis (MBE/WBE) During 2006, 2007 and 2008 – Assignment # 2 2007 Condition Survey of the Facades of Lincoln Tunnel Ventilation Buildings – Project Manager responsible for the inspection and report writing for facade inspections of the Lincoln Tunnel Ventilation Buildings (2 buildings in New Jersey and 3 buildings in (New York) to assure the structural integrity of the exterior walls in regards to safety of the general public. *KSE* was also responsible for verifying the status of repairs identified in the previous inspection report.

PANYNJ, Condition Survey for Tunnel and Bridge Facilities on "Call-In" Basis During 2006 – Project Manager responsible for inspection services for condition survey of tunnels and structures and other associated services as requested on the following task orders under this "Call-In" contract: P.O. 4900002420 – Condition Survey of PATH Tunnels G, H, J, K, Y and Waldo Repair Shop and P.O. 4900002421 – Condition Survey of PATH Tunnels A, B, E, F (Caisson 2 to Exchange Place) and Miscellaneous Structure.

NJTA, Garden State Parkway Miscellaneous Structural Repairs, MP28.0 to MP163.2, OPS 3084 – Project Manager for the contract documents for the rehabilitation of superstructure and substructure units for various bridges on the GSP. This project involved the field survey of deficiencies found in the inspection reports for the prioritization of repairs and the preparation of contract documents (construction plans, MPT plans, specifications, estimates, and schedules).

WORLD TRADE CENTER/BUILDINGS

William Dale, AIA – Project Manager

YEARS OF EXPERIENCE: 13

EDUCATION:
Executive Masters of Business Administration, Temple University, Philadelphia, PA – 2007
B.A., Architecture, Temple University, Philadelphia, PA - 1992

CERTIFICATIONS/ REGISTRATIONS:
Registered Architect - AZ

SUMMARY:
Mr. Dale has over 10 years of experience as a registered architect in the construction industry. His professional experience includes the design of educational, commercial, and institutional/industrial facilities for public and private owners in New Jersey and New York. He has managed both architects and engineers in several organizations. In addition, he has broad experience with codes and standards including the International Building Code, BOCA, and the Uniform Building Code.

PROFESSIONAL EXPERIENCE:

Armand Corporation **2007 - Present**
School District of Philadelphia - Capital Improvement Program. Assistant Project Manager - Providing project management services for various renovations in the School District of Philadelphia. Specific duties include reviewing designs for constructability; management of multiple and various types of construction projects; tracking and management of project costs, scheduled activities, communications and other relevant data utilizing Prolog; and coordination of construction site work through meetings with school administration, school district's program managers and other concerned parties.

Robert E. Lamb, Inc., Valley Forge, PA **2006 - 2007**
Project Manager - Responsible for coordination for multidiscipline projects in the energy section, i.e. data centers and control rooms. Duties included conducting building condition survey, disseminating information, researching and proposing alternative material selections, as well as developing and managing project time-lines and delivery schedules.

Hill International, Inc. **2003 - 2006**
Construction Manager/Project Engineer - Project Manager for multiple school construction and renovation projects in New Jersey, Pennsylvania, and New York. Duties included conducting weekly meetings, site inspection, change order review, estimating, constructability reports and document review. Other responsibilities included: analytical review of proposals for work in the technology sector; value engineering of projects from programming through construction document; and reports for dispute resolution centered on clarity of construction document scope and detail.

Beatty Harvey & Associates, New York, NY **2002 -2003**
Served as Project Manager for ongoing projects for USEPA in Edison, New Jersey. These projects included new building construction, building renovation, building condition surveys for new emergency response center, facility planning, feasibility studies and cost estimating. The tasks included RFI response, submittal review, site visits and coordination with contractors and engineers.

Industrial Design & Construction, Phoenix, AZ **2000 - 2002**

Served as Architectural Lead for on-site services during construction of a 148,000 s.f. sub-micron Class I clean room microelectronics manufacturing facility and central utilities building (Intel Corporation). Tasks included day-to-day interaction with the construction management team, resolving coordination issues between contractors and engineers, responding to RFI's, reviewing submittals and managing team during the "As-Built" document phase. Designed and prepared presentation documents for a microelectronic facility.

ARCADIS Giffels, Phoenix, AZ **1999 - 2000**
Served as Project Manager/Senior Designer for a waterproofing project of an existing underground garage for C.B. Richard Ellis. Also, performed adaptive reuse and asset surveys of existing properties for the Salt River Project. Coordinated Architectural, Mechanical, Electrical, Structural and Civil departments.

Sheller Architecture **1998 - 1999**
Manager for the design development and engineering process of a Southwest Access, Corporate Headquarters and an office addition. Reviewed UBC and city ordinances and participated in jurisdictional plan review and permitting process. Coordinated Mechanical, Electrical, Structural, Civil, Landscape and Interior consultants.

Day & Zimmermann International, Inc., Phoenix, AZ **1997 - 1998**
As Senior Designer, verified existing conditions for code compliance studies. Prepared drawing, specification and as-built drawings and equipment layouts for laboratory relocation for Intel Corporation and Motorola.

Day & Zimmer International, Inc. **1993 - 1997**
Provided construction administration and drawing lead for 33,000 s.f. bulk pharmaceutical processing pilot plant, pharmaceutical fill/finish manufacturing plant, warehouse and offices. Also, prepared construction documents for an 80,000 s.f. pharmaceutical plant, offices and R&D laboratories**.**

Urban, Philadelphia, PA **1992 - 1993**
As Contract Designer, responsibilities included conducting building condition survey, designing security gates and preparing construction documents for the SEPTA Suburban Station.

NAME JOHN M. SABATINO, AIA, LEED® AP

TITLE SENIOR PROJECT MANAGER

SERVICE AREA WORLD TRADE CENTER/ BUILDINGS

Years of Experience: 42

Registrations/Memberships

- Licensed Architect – NY, NJ
- LEED® AP
- American Institute of Architects
- National Council of Architectural Registrations Boards (NCARB)

Education

- BA, City College of New York, Architecture
- BS, New York Institute of Technology, Architectural Technology

Mr. Sabatino has extensive experience in all areas of building design and construction. He presently serves as a Senior Project Manager and is the Deputy Managing Director for our Integrity Monitoring of a major office building in New York City. He is licensed to practice Architecture and is a LEED® Accredited Professional. His experience has been centered around Capital Program and Project Management within the metropolitan area as well as around the country. Additionally, he has extensive experience in Real Estate and Safety management.

Second Avenue Subway

Performed the architectural portion of the technical capacity and capability review of the Second Avenue Subway project, which included reviewing the project management plan, design quality manual, and station design, and interviewing the architects on the project and preparing a report on findings.

Major High Rise Office Building

Deputy Managing Director for the Integrity Monitoring of the construction of a 3.6 million gross sf/2.6 million useable sf multi-billion dollar office building in downtown New York City. This responsibility reports directly to the Owner and is centered on eliminating fraud, waste, and abuse. It requires monitoring the activities of the design professionals and the construction manager. Additionally, it includes monitoring the construction for safety, compliance with drawings and specifications, schedule, and cost avoidance.

Expansion to and Renovation of a Convention Center

Owner's Representative - Project Executive for development of the design, construction documentation, and cost control of the $700 million state-funded project. This Expansion to and Renovation of the Pennsylvania Convention Center consisted of adding one million square feet to the existing center, consisting of new mechanical and electrical plant, new 35,000-square-foot Kitchen, 60,000-square-foot ballroom, new exhibit halls, and meeting rooms. Also included as part of this effort was a 70,000-square-foot renovation to the center's support space and renovation of the existing center to comply with the ADA and fire and life safety codes. The project was designed to qualify for a LEED Certification.

Feasibility Study for a Major Art Foundation

Project Executive for the Feasibility Study to move the Barnes Galleries and Art Institute to a new 150,000-square-foot facility in Center City Philadelphia. The study was used to successfully petition the Orphan's Court to break the will of Albert C. Barnes, which prohibited the Barnes from moving from its original location. Directed the preparation of the study that included land acquisition strategy, site/code analysis, building design tests of the site, and project budgeting, and developed the logistics to secure and move the art. The study became the program for the project design to house the largest collection of French and Post Impressionist art in the country valued at $9 billion.

Heating and Cooling Plant Replacement & Upgrade

Project Executive for the Design - Build Replacement & Upgrading of the Pennsylvania Convention Center's Central Heating and Cooling Plant. This $25 million project included

design and construction of a new heating and cooling plant that included reinforcement of the floor, removal of four gas absorption chillers and replacing them with two gas centrifugal chillers and two gas absorption chillers, two boilers, associated electrical equipment, air handlers, pumps, ductwork and piping, while keeping the facility up and running continuously.

Satellite Headquarters, Conference Training Center and Hotel

Project Executive for the Site Selection, Land Purchase, Design and Construction of a 1.6 million-square-foot suburban corporate complex. This $575 million project provided office space for 3,000 employees in one million square feet of office space, a 300,000-square-foot conference/training center and a 420-room, 300,000-square-foot hotel.

Major Office Park

Project Executive for a major corporate initiative that was achieved in several phases:

Phase 1 – Directed the land acquisition and site due diligence of a 900-acre farm site in a rural location.

Phase 2 – Managed the design development and governmental approval of a general development plan consisting of 7.5 million square feet of office, hotel, conference center, retail buildings and amenities

Phase 3 – Directed design and construction of a major infrastructure project that included constructing and dedicating to the County a new road that bi-furcated the 900 acres. This included design and installation of all new electric, telephone, and storm/sanitary sewers and distribution of same to the building pads.

Phase 4 – Directed design and construction of an $800 million, 14-building, multi-use corporate campus that houses 7,200 employees in 2.3 million square feet that included parking garages, three cafeterias, full service gym, medical/dental offices, retail spaces, and outdoor fields.

Phase 5 – Developed and implemented the real strategies for properties being vacated, including negotiating lease surrender, sub-leases, and liquidation of equipment and furnishings.

OSHA Compliance

Project Director for remediation of OSHA violations, fines, and subsequent lawsuits resulting from a death in a facility owned by a Fortune 100 corporation. This included negotiating the settlement of all lawsuits and implementing OSHA-approved environmental and building operations procedures for all facilities owned by the corporation. Additionally, developed the group that managed the implementation of all the safety and environmental programs.

Mr. Sabatino's additional experience includes developing a national strategic real estate plan and the tactical implementation of all lease negotiations and design/construction projects in the plan. This included: managing site location searches, structuring and analyzing real estate transactions, lease administration, audits of operating expenses, landlord interface through regional project teams, and strategic service partners.

During his career, Mr. Sabatino has also provided hands-on project troubleshooting services for a major London project that was behind schedule, over budget, and faced lease problems. This meant devising strategies for getting back on schedule, lowering the over-budget status of the project, while resolving lease signing and lease surrender issues. The results: the facility was opened as originally scheduled, all lease issues were resolved and the over-budget status was reduced by 60%.

NAME EDWARD J. GODOROV, PE
TITLE MECHANICAL ENGINEER
SERVICE AREA WORLD TRADE CENTER/ BUILDINGS

Years of Experience: 43

Registrations/Memberships

- Professional Engineer – NJ, PA, MD, IL
- American Society Heating, Refrigeration & Air Conditioning Engineers
- American Society of Plumbing Engineers
- American Society of Sanitary Engineers - Past Chapter President 1984 (Past Member)
- National Society of Professional Engineers - Past Chapter President 1988

Education

- BAE, 1967, Pennsylvania State University, Architectural Engineering
- BS, 1963, Pennsylvania State University, Mechanical Engineering
- Certificate, 2005, Dale Carnegie Course

Mr. Godorov is responsible for the design and construction management of the heating, ventilation, air conditioning, plumbing, and fire protection for shopping malls, food markets, hotels and motels, financial centers, corporate centers, industrial complexes, medical and pharmaceutical facilities, public and private educational institutions. Mr. Godorov's experience includes:

Philadelphia Navy Yard, Building 669, Philadelphia, PA - Chief Mechanical Engineer for the Renovation of an existing 2-story building for office and warehouse space.

The Franklin Institute Museum Addition and Building Project, Saylor Gregg Architects, Philadelphia, PA - MEP Principal for the 43,000-SF expansion will include new museum exhibit space, staff offices, and supporting mechanical space. The addition will feature two floors of permanent multi-story exhibit space, one floor of traveling exhibits, offices, and basement for mechanical space. This building is designed to obtain LEED Silver certification.

177th Fighter Wing Fire Station, New Jersey Air National Guard, Atlantic City International Airport, Philadelphia, PA - Chief Mechanical Engineer for the renovation and addition to the 177th New Jersey Air National Guard Fire House. The 14,775-SF space includes offices, locker rooms, apparatus bays, and training facilities.

US Airways Ground Service Equipment Facility, Philadelphia International Airport, Philadelphia, PA - Chief Mechanical Engineer for the design and construction of a new 56,000-SF ground service equipment facility, including a training room, break room, lavatories, paint booths, loading docks, parts storage area, and fluid and waste transfer systems. Responsible for the commissioning of the mechanical systems within the building and the opening of the building.

Atlantic Aviation's Terminal & Hangars, Philadelphia International Airport: DPK&A, Architects, Philadelphia, PA - Chief Mechanical Engineer for the project design and layout of a new terminal building, two new airplane hangars, and a new general maintenance building.

The University of Pennsylvania, Museum of Archaeology and Anthropology, MEP Infrastructure Upgrade, Project F.A.R.E., Philadelphia, PA - Chief Mechanical Engineer for the Mechanical & Electrical upgrades in the century-old building. The main complex, which was completed between 1899 and 1929, could no longer protect the artifacts against damage from changes in temperature and humidity, air pollution, and mold. The original mechanical and electrical systems did not meet current standards for environmental control or modern occupants. Upgrades and replacement of building systems were designed without compromising the architectural beauty and

historic character of the museum complex.

US Airways Ground Service Equipment Facility, Philadelphia International Airport
Mechanical Engineer for the design and construction of a new 56,000 SF ground service equipment facility for US Airways, Mr. Godorov provided plumbing, HVAC and other mechanical systems design for the project. Mr. Godorov designed mechanical and plumbing systems for the facility that included a training room, break room, lavatories, paint booths, loading docks, parts storage area, and fluid and waste transfer systems. Mr. Godorov provided design coordination for the mechanical and plumbing systems within the building and coordinated the design with the structural design and architecture. Mr. Godorov will be part of the team responsible for commissioning of the mechanical systems within the building and the opening of the building.

177th New Jersey Air National Guard Fire House Mr. Godorov served as the Mechanical Engineer team leader for the Renovation and Addition to the 177th New Jersey Air National Guard Fire House. The 14,775 SF space includes offices, locker rooms, apparatus bays and training facilities.

Rutgers University's Science Building Renovation, SaylorGregg Architects, Camden, NJ - Project Engineer for mechanical design and coordination including all phases of project design and layout from schematic through construction documentation including but not limited to feasibility studies, site surveys, load calculations, equipment selections, code and standards review, coordination with all related disciplines.

Atlantic Aviation's Terminals & Hangars, Philadelphia International Airport; DPK&A, Architects, Philadelphia, PA - Project Engineer for mechanical design and coordination for all phases of project design and layout from schematic through construction documentation including but not limited to feasibility studies, site surveys, load calculations, equipment selections, code and standards review, coordination with all related disciplines i.e. plumbing, electrical, structural, and architectural.

Elizabethtown Train Station Renovation, Borough of Elizabethtown, Elizabethtown, PA - Project Engineer for mechanical design and coordination for all phases of project design and layout from schematic through construction documentation including, but not limited to, feasibility studies, site surveys, load calculations, equipment selections, code and standards review, coordination with all related disciplines. The project consisted of split-type air-conditioning systems with indoor air-handling units and outdoor air-cooled condensing units, hot water cast iron boiler, hot water pumps, hot water radiation, hot water unit heaters, hot water duct heating coils, toilet exhaust system, domestic water piping and gas fired hot water storage tank.

Trenton Central Fire Headquarters and Museum, Venturi, Scott Brown Associates, Trenton, NJ - Chief Mechanical Engineer for all mechanical engineering design services from the project design phase through construction administration. This project focused on the restoration and renovation of an historical fire house to accommodate a museum, administration offices and the addition of dorms and a state-of-the-art fire truck repair facility. This modified fire house will serve as the Central Fire Headquarters for the City of Trenton. Led the development of the necessary specialty: above and below ground vehicle fume exhaust systems; fuel storage, transfer and automatic distribution systems; lubrication/vehicle maintenance fluids and storage automatic distribution systems; filtration exhaust/ventilation for fire extinguisher refill station; medium and low pressure screw type compressed air distribution system; self contained breathing apparatus refill station system; wood dust collection system; metal dust collection system; welding fume collection systems; and a petroleum fluid waste recycling system.

John B. Roberts, AIA

Talson Solutions, LLC

306 Market Street, 4th Floor
Philadelphia, PA 19106

JOHN B. ROBERTS, AIA

EXPERIENCE

- 37 Years

EDUCATION

BA, Howard University School of Architecture & Planning, 1972

NCARB Intern Development Program; certified January 1979

REGISTRATIONS/ MEMBERSHIPS

- Licensed Architect; New York [redacted]; Michigan [redacted] Illinois # [redacted]; Ohio [redacted] Indiana #[redacted] Texas [redacted]
- National Council of Architectural Registration Boards (NCARB), Certification [redacted]
- American Institute of Architects
- American Arbitration Association

RECORD OF PROFESSIONAL EXPERIENCE

John Roberts is currently a Senior Project Manager representing Talson Solutions on the Project Management Oversight (PMO) team of Urban Engineers of New York, PC. Mr. Roberts is experienced in project management oversight, program management, construction management and architectural design. He has worked on a wide range of facility types, including , new and existing subway systems, regional rapid transit stations, transit centers, major medical facilities, university health systems, airport expansion, schools, full service senior care facilities, office buildings, correctional facilities, sports complexes, parking garages, and community development housing. His diverse roles, for both public and private owners, have included Project Oversight Manager, Design Manager, Project Architect, Project Manager, Construction Manager, Owner Representative, Project Engineer, Resident Engineer and Construction Superintendent. Highlights of Mr. Roberts' experience include the following:

Project Management Oversight; Federal Transit Administration (FTA), Region II, Major Capital Projects. Grantee: Metropolitan Transportation Authority, New York, NY

Project Manager, New York City Transit Stations Rehabilitation Program, as a part of the Project Management Oversight team responsible for monitoring design and construction of Federal Transit Administration (FTA) funded stations projects. Responsibilities include monitoring the projects to determine if they are on schedule and within budget; are proceeding in conformance with the drawings & specifications; are being implemented efficiently and effectively. As Oversight Manager, Mr. Roberts provides FTA with evaluations of management procedures, construction progress and project issues; prepares monthly reports, reviews the grantee Master Project Management Plan, Supplemental Project Management Plans, Management Manuals and procedures, and provides reports to the FTA as to whether these documents are acceptable and makes recommendations for acceptance.

Risk Assessment; Mr. Roberts participates as a part of the multidisciplinary team analyzing the design, estimate, scheduling, procurement and construction aspects of the multi-Billion dollar Second Avenue Subway and East Side Access projects.

Second Avenue Subway Project; provides support to the lead oversight managers with regards to monitoring architectural design elements in the new subway stations.

East Side Access Project; provides support to the lead oversight managers with regards to monitoring architectural design elements for the new station at Grand Central Terminal.

Project Manager for the Program Management Team; Greater Cleveland Regional Transit Authority (GCRTA) – Reconstruction of Light Rail Stations, Cleveland, OH: Responsible for design and construction phase management for removal and replacement of 26 light rail, Green and Blue Line stations and construction of two (2) new power substations. Responsibilities included liaison with transit Board of Trustees

and City jurisdictional departments; coordination of A/E team and the A/E contract; coordination of estimates, bidding, bid analysis, client presentations; and construction contract administration.

Project Manager, GCRTA - New East 34th St. Station, Cleveland, OH: Responsible for the design of this light rail station, proposed to service the metro campus of Cuyahoga Community College.

Cost Consultant, GCRTA – New West 25th St. Station, Cleveland, OH: Responsible for preparing design phase estimates for the architect of record on this new heavy rail station on the "red' line.

Construction Manager, GCRTA – New Waterfront Line, Cleveland, OH: Responsible for managing the construction of four (4) new light rail stations, including Settler's Landing, East Bank and East 9th St. Stations; two (2) new power substations, all site work, streetscape, coordination of signage and the integrated public arts program. The new 2.2-mile line was the first extension of the system in the previous 25 years. Designed by Parsons Brinckerhoff, the new Waterfront Line features the first segmental bridge construction in a rail transit system in the United States.

Construction Manager, GCRTA – New Windermere Station, Cleveland, OH: Renamed the Louis Stokes Transportation Center, this Intermodal station is the largest in the RTA system and services both bus and heavy rail transit on the "red" line. This station will also serve as a transfer point from the new BRT line along Euclid Ave. Responsibilities included construction supervision and coordination of the integrated public art program.

Sound Transit – New Light Rail System, Seattle, WA: Participated as a member of the value engineering team during the pre-design study that was prepared by the independent design team Parsons Brinckerhoff, Inc. The value engineering study covered traffic analysis, parallel platform vs staggered platform analysis, utilities & drainage, aerial guideway analysis, and station design. The resultant team recommendations were accepted by Sound Transit and included as a part of the final design scope of work.

Project Architect/ Architect of Record, Detroit Department of Transportation (DDOT)
New Downtown Transit Center: The FTA funded Rosa Parks Transit Center is designed as a multi-modal public transit facility in the heart of downtown Detroit, Michigan. The facility occupies a 2.4 acre site and includes an enclosed 27,700 square foot (including three-levels) building with a central island passenger concourse serving fifteen bus bays. The passenger concourse and busway features a tensioned fabric roof structure for protection from inclement weather as well as to provide an environment with natural lighting. The enclosed transit building houses passenger waiting areas with fixed seating, staffed transit information and ticketing areas, commercial retail venues including a coffee shop, a convenience store, a newspaper and magazine shop, and a small food service venue. The facility also houses transit operations facilities and a transit police substation. The completed fabric canopy will be the largest tensioned fabric system in the United States.

Responsible for organizing and managing the design team; managing the design and construction document phases of the project; specification writing; coordination with the owner and all city agencies; and construction contract administration.

Project Manager, Detroit Department of Transportation (DDOT)
8 Mile Boulevard Corridor Improvements

- 8 Mile Bus Stop Improvements: Construction of 200 new bus stops along 8 Mile Boulevard including signage, trash receptacles and some new bus shelters.
- Eastland Transit Center, Harper Woods, MI: Design and construction of new transit center, including new pavilion, shelters, new sitework and landscaping.
- Northland Transit Center, Southfield MI: Rehabilitation of existing transit center, including new pavilion, breezeway shelters, new sitework and landscaping.
- State Fair Transit Center, Detroit, MI: Addition to existing transit center, including expanding existing pavilion, new sitework, landscaping, passenger waiting islands and shelters.

William Dale, AIA – Project Manager

YEARS OF EXPERIENCE: 13

EDUCATION:
Executive Masters of Business Administration, Temple University, Philadelphia, PA – 2007
B.A., Architecture, Temple University, Philadelphia, PA - 1992

CERTIFICATIONS/ REGISTRATIONS:
Registered Architect - AZ

SUMMARY:
Mr. Dale has over 10 years of experience as a registered architect in the construction industry. His professional experience includes the design of educational, commercial, and institutional/industrial facilities for public and private owners in New Jersey and New York. He has managed both architects and engineers in several organizations. In addition, he has broad experience with codes and standards including the International Building Code, BOCA, and the Uniform Building Code.

PROFESSIONAL EXPERIENCE:

Armand Corporation **2007 - Present**
School District of Philadelphia - Capital Improvement Program. Assistant Project Manager - Providing project management services for various renovations in the School District of Philadelphia. Specific duties include reviewing designs for constructability; management of multiple and various types of construction projects; tracking and management of project costs, scheduled activities, communications and other relevant data utilizing Prolog; and coordination of construction site work through meetings with school administration, school district's program managers and other concerned parties.

Robert E. Lamb, Inc., Valley Forge, PA **2006 - 2007**
Project Manager - Responsible for coordination for multidiscipline projects in the energy section, i.e. data centers and control rooms. Duties included conducting building condition survey, disseminating information, researching and proposing alternative material selections, as well as developing and managing project time-lines and delivery schedules.

Hill International, Inc. **2003 - 2006**
Construction Manager/Project Engineer - Project Manager for multiple school construction and renovation projects in New Jersey, Pennsylvania, and New York. Duties included conducting weekly meetings, site inspection, change order review, estimating, constructability reports and document review. Other responsibilities included: analytical review of proposals for work in the technology sector; value engineering of projects from programming through construction document; and reports for dispute resolution centered on clarity of construction document scope and detail.

Beatty Harvey & Associates, New York, NY **2002 -2003**
Served as Project Manager for ongoing projects for USEPA in Edison, New Jersey. These projects included new building construction, building renovation, building condition surveys for new emergency response center, facility planning, feasibility studies and cost estimating. The tasks included RFI response, submittal review, site visits and coordination with contractors and engineers.

Industrial Design & Construction, Phoenix, AZ **2000 - 2002**

Served as Architectural Lead for on-site services during construction of a 148,000 s.f. sub-micron Class I clean room microelectronics manufacturing facility and central utilities building (Intel Corporation). Tasks included day-to-day interaction with the construction management team, resolving coordination issues between contractors and engineers, responding to RFI's, reviewing submittals and managing team during the "As-Built" document phase. Designed and prepared presentation documents for a microelectronic facility.

ARCADIS Giffels, Phoenix, AZ **1999 - 2000**
Served as Project Manager/Senior Designer for a waterproofing project of an existing underground garage for C.B. Richard Ellis. Also, performed adaptive reuse and asset surveys of existing properties for the Salt River Project. Coordinated Architectural, Mechanical, Electrical, Structural and Civil departments.

Sheller Architecture **1998 - 1999**
Manager for the design development and engineering process of a Southwest Access, Corporate Headquarters and an office addition. Reviewed UBC and city ordinances and participated in jurisdictional plan review and permitting process. Coordinated Mechanical, Electrical, Structural, Civil, Landscape and Interior consultants.

Day & Zimmermann International, Inc., Phoenix, AZ **1997 - 1998**
As Senior Designer, verified existing conditions for code compliance studies. Prepared drawing, specification and as-built drawings and equipment layouts for laboratory relocation for Intel Corporation and Motorola.

Day & Zimmer International, Inc. **1993 - 1997**
Provided construction administration and drawing lead for 33,000 s.f. bulk pharmaceutical processing pilot plant, pharmaceutical fill/finish manufacturing plant, warehouse and offices. Also, prepared construction documents for an 80,000 s.f. pharmaceutical plant, offices and R&D laboratories**.**

Urban, Philadelphia, PA **1992 - 1993**
As Contract Designer, responsibilities included conducting building condition survey, designing security gates and preparing construction documents for the SEPTA Suburban Station.

Robert McKay, Sr. Project Manager

YEARS OF EXPERIENCE: 29

EDUCATION:
MBA, Management, Phila. College of Textiles and Science – 2000
B.S., Mechanical Engineering Tech., Temple University – 1983

CERTIFICATIONS/ REGISTRATIONS:

- Certification in Project Management, American Management Association – 1989
- Plumbing Insp. License (ICS) for Residential, Industrial and Commercial Structures, Dept. of Community Affairs Uniform Construction Code, NJ - 2004

SUMMARY:
Mr. McKay has over twenty years experience with emphasis in the area of project management including cost estimating and QA/QC. His experience has included design and commissioning of HVAC, fire suppression, electrical, and plumbing; remediation of office buildings, substations and other commercial structures; and renovation of bus garages, residential buildings, educational facilities, and food courts. Mr. McKay has hands-on knowledge of materials and equipment, as well as experience with vendor supplier negotiations, and staff direction.

PROFESSIONAL EXPERIENCE:

Armand Corporation **2005 - Present**

School District of Philadelphia Construction Management Services for the Capital Improvement Program. Project Manager - Providing construction management services for various renovations in the School District of Philadelphia. Specific duties include preparing cost estimates and reviewing designs for constructability; development of project master schedules utilizing Primavera P3; management of multiple and various types of construction projects simultaneously; tracking and management of project costs, scheduled activities, communications and other relevant data utilizing Prolog; commissioning of HVAC, mechanical, electrical and plumbing systems, and coordination of construction site work through meetings with community organizations, school administration, political representatives, school district's program managers and other concerned parties.

School District of Philadelphia, Jules Mastbaum Area Vocational Technical School (A.V.T.S.), Project Manager – Provided construction management services for the total renovation of all mechanical, electrical and plumbing systems at the high school. The project also included general construction encompassing major and minor renovation of classrooms, shops, computer laboratories, auditorium and offices. Duties included tracking and management of project costs, scheduled activities, communications and other relevant data utilizing Prolog; commissioning of HVAC, mechanical, electrical and plumbing systems; and coordination of construction site work through meetings with community organizations, school administration, political representatives, school district's program managers and other concerned parties.

School District of Philadelphia CM Services for the Ben Rush High School. Asst. Project Manager - Provided construction management services for various renovations of the $30M Benjamin Rush High School. Specific duties included reviewing designs for constructability; oversight of remediation of underground storage tanks, soil contamination and asbestos abatement; tracking and management of Contract changes, project costs, and scheduled activities; and

coordination of construction site work through meeting with Architects, Engineers, School Principals, and other concerned parties.

FTHA Physical Needs Assessment for NJ42-2. Project Manager - Provided inspections services for a physical needs assessment at a HUD funded development. Inspected 10% of the units for mechanical, electrical, structural, roof, and exterior deficiencies. A cost estimate was performed along with a complete narrative of each of the units inspected. The narrative, detailed inspection reports, and cost estimates will provide FTHA with the tools needed to make a determination as to whether to demolish/rebuild or renovate.

GOVCOM Enterprises, Inc., Willingboro, NJ **2000 – 2005**
Project Manager - Managed, developed budgets and coordinated the efforts of the subcontractors, project engineers, consultants, superintendents, and construction tradesmen in the execution of residential, industrial and commercial projects. Conducted progress, preconstruction, and pre-bid meetings. Maintained project schedule (CPM), negotiated project change order requests, and obtained the necessary permits and licenses for construction. Communicated with all levels of governmental, municipal, state, and regulatory agencies necessary to obtain permits, inspections, and approvals for construction and design work.

SEPTA, Philadelphia, PA **1991 – 1998**
Project Engineer, Engineering and Construction Department Managed and coordinated multiple 3rd party design and construction projects/contracts, and provided commissioning services for HVAC, mechanical, electrical and plumbing. Dealt with consultants, in-house engineers, community groups, government agencies (EPA, OSHA, U.S. Army Corps of Engineers, etc.), and all levels of management necessary to complete projects. These projects included construction or renovation of office buildings, railroad stations and railroad facilities, substations, parking garages, bus garages and shops, bridges, heavy highways, civil, architectural, and electrical services.

SEPTA, Philadelphia, PA **1989 – 1991**
Supervisor Facilities Construction Projects/Project Manager, Operations Support Managed multiple 3rd party contracts and in-house construction work force for the construction and renovation of various SEPTA facilities. Coordinated construction work with Facilities Engineering, related department management, and outside organizations. Ensured the contractors' work was done in strict adherence with construction and contract documents. Generated construction drawings and specifications, and coordinated work of other engineering disciplines necessary to complete the various design projects. Reviewed construction and contract documents submitted from outside consultants for compliance with design criteria, and performed commissioning services.

SEPTA, Philadelphia, PA **1984 – 1989**
Mechanical Engineer II/Facilities Engineering - Performed design for HVAC, fire suppression, plumbing services, and other mechanical facilities needed for a large mass transit system. Generated construction drawings and specifications, and coordinated work of other engineering disciplines necessary to complete the various design projects. Reviewed construction and contract documents submitted from outside consultants and contractors for compliance with design criteria.

D. FIRM EXPERIENCE

Integrity Monitoring
World Trade Center - Freedom Tower
New York, NY

"Rising to 1776 feet, the Freedom Tower will be the cornerstone of the World Trade Center site."

Client: The Port Authority of New York and New Jersey

Urban Engineers is a joint venture partner of the Fortress Monitoring Group (FMG), which brings together professional personnel recognized for their engineering, forensic auditing, investigative, legal abilities and experience. Urban's personnel constitute FMG's engineering division.

FMG was selected by the Port Authority of New York and New Jersey to serve as the Integrity Monitor for the construction of the Freedom Tower on the World Trade Center site in Lower Manhattan. In this role, FMG reports exclusively to and works closely with the Port Authority's Inspector General to design an appropriate integrity monitorship program. FMG's purpose is to prevent fraud, waste and abuse and/or corruption; to detect it; and, if detected, to coordinate with the Inspector General on definitive and effective actions to be taken.

HIGHLIGHTS:

- Integrity Monitoring
- Risk Assessment
- Constructability Reviews
- Construction Monitoring

Second Avenue Subway
Project Management Oversight
New York, NY

"The Second Avenue Subway will be the first major new subway development in New York City in over 50 years."

Client: Federal Transit Administration (FTA)

HIGHLIGHTS:

- Project Management Oversight
- Tunneling
- Tracks and Signals
- Vehicle Procurement
- Performance Monitoring

The Federal Transit Administration appointed Urban Engineers (Urban) to perform Project Management Oversight (PMO) services on federally-funded transit projects in the New York metropolitan area. Among the projects Urban is overseeing is the design and development of Phase I of the new Second Avenue Subway (SAS) from 106th Street to 63rd Street. Total cost for Phase I is $4.87 billion.

SAS will reduce overcrowding and delays on the Lexington Avenue Line, improve travel for both city and suburban commuters, and improve access to mass transit for residents of the East Side of Manhattan. In total, Phase I will include three new underground stations and an expansion of the existing station at 63rd Street. SAS will be the first major new subway development in New York City in over 50 years.

The current project scope includes: tunneling; station/ancillary facilities; track, signal, and electrical work; vehicle procurement; and all other subway systems necessary for operation. Phase I provides an Initial Operating Segment from 96th Street to 63rd Street that will connect with the existing Broadway Line that extends to Lower Manhattan and Brooklyn. Subsequent Phases will extend the line northward to 125th Street and to the southern terminus at Hanover Square in Lower Manhattan.

As PMO Contractor, Urban monitors the performance of the Metropolitan Transportation Authority (MTA) and its consultants to confirm that the federal government's funds are being appropriately spent and provides special consultations on a broad range of issues that may emerge throughout the project. A key portion of this work was the Risk Assessment effort, which included the first schedule contingency plan and the first project execution strategy for a multi-billion-dollar FTA program. Urban's continuing effort includes in-depth analysis of risk factors, development and tracking of cost and schedule contingency plans, and identification of issues that may require mitigation strategies. The assignment includes a detailed and on-going review of the MTA's cost estimate and schedule for Phase 1.

Whitehall Ferry Terminal
Project Management Oversight
New York, NY

"A new terminal for the venerable Staten Island Ferry will benefit the 1.7 million people who use the ferry each month."

Client: Federal Transit Administration (FTA)

HIGHLIGHTS:

- Intermodal Terminal
- Rehabilitated Ferry Slips
- Improved Structural Integrity
- Improved Public Access
- Public Open Space

Urban Engineers (Urban), under its New York area project management oversight contract, is responsible for oversight for the design of the Whitehall Ferry Terminal (WFT), a 180,000-square-foot ferry terminal located on the southern tip of Manhattan. The intermodal terminal incorporates three rehabilitated slips for the Staten Island Ferry and the marine craft facilities servicing the ferry. Reconstruction of the WFT improves the structural integrity of the ferry terminal, the three ferry slips, and the timber piles that support the building; enhances the appearance of the terminal and overall site; and creates a major new open public space.

The project includes connections to two subway stations, a terminal for three bus lines, a taxi drop-off space, and space for 96 bicycles. On the north side of the new terminal building, a two-acre public open space, the Peter Minuet Plaza, will improve access to the terminal.

The monthly Staten Island Ferry ridership is approximately 1.7 million people. The annual ridership is approximately 20 million people.

Meadowlands Railroad & Roadway Improvements
East Rutherford, NJ

> **"This new rail service helps cement the Meadowlands' status as a world-class destination for spectator sports and other major events."**
>
> Dennis Robinson
> President and CEO of NJSEA

Client: New Jersey Sports and Exposition Authority

HIGHLIGHTS:

- Program Management
- Construction Management
- Construction Inspection
- Scheduling
- Cost Estimating
- New Rail Spur with Station
- Extensive Interagency Coordination

The New Jersey Sports and Exposition Authority hired Urban Engineers, Inc. (Urban) to provide program management, construction management, and construction inspection services for the Meadowlands Railroad and Roadway Improvement Project. The assignment also included development, tracking, and updating a master schedule, and preparation of an independent cost estimate.

Multiple clients created the need for extensive interagency coordination to keep players on the same page through the process. Urban successfully worked within this multi-agency environment in a cooperative effort to provide rail access to the Meadowlands Sports Stadiums and the future Xanadu entertainment and retail complex.

The project included construction of a 2.1-mile dual track rail spur off New Jersey Transit's (NJT) Pascack Valley Rail Line, which serves NJT's new Meadowlands Rail Station. The station, located within the Meadowlands Complex, is directly adjacent to the new Giants/Jets Stadium. The line included three interlockings, bi-directional signaling, hazardous material remediation, and approximately 3,500 feet of viaduct over wetlands. The rail station features an island platform approximately 950 feet in length, and a waiting area for passenger queuing and shelter. All aspects of code required egress and passenger flow, including pedestrian overpasses, escalators, stairs, and elevators.

The project was completed on time and within budget through two superfund sites, with constraints due to unreliable utility information, a moratorium due to anadromous fish, construction impacts due to race track operations, and numerous major concurrent construction projects on the site, including the Giants/Jets Stadium, Xanadu Entertainment Complex, and New Jersey Turnpike Authority's Interchange 16W.

Keystone Corridor Improvement Project (KCIP)
Harrisburg, PA

Client: Pennsylvania Department of Transportation

"The KCIP is an example of the Commonwealth's and PennDOT's commitment and vision in establishing the state as a leading advocate for major transportation improvements."

HIGHLIGHTS:

- Project Management Oversight
- Monitor the following:
  - Construction Progress
  - Schedule
  - Budget
  - Design Conformance
- Five Year Capital Program

Urban Engineers (Urban) was the Project Management Oversight (PMO) Consultant for the $140 million PennDOT/Amtrak KCIP. The Commonwealth of Pennsylvania defines the Keystone Corridor as Amtrak's 104-mile Harrisburg Line from the Harrisburg Transportation Center to Amtrak's 30th Street Station in Philadelphia. Urban performed PMO services during the three-year annual capital program starting in the fall 2000. The ultimate goal of Corridor improvements is to support high-speed travel at up to 120 miles per hour, thus affording 90-minute travel times between Harrisburg and Philadelphia.

Urban's association with this significant transportation project is a continuation of its previous involvement as team member responsible for performing the Keystone Corridor Assessment and Business Plan. This prior study was completed to determine the current condition of the infrastructure and to identify requirements to bring the line into a state of good repair. Assessing the importance of the line to the Commonwealth, determining an appropriate role for the Commonwealth's ownership, management, and operation, as well as developing a business plan to support the proposed service and institutional issues related to the lines purchase or lease option were major issues investigated.

Under this contract, Urban monitored the capital project's construction progress to determine whether the KCIP was meeting objectives such as schedule, budget, conformance with design criteria, construction to approved plans and specifications, and efficiency and effectiveness of implementation.

Frankford Transportation Center
Philadelphia, PA

"FTC was the largest single-site construction project ever undertaken by SEPTA. The work had to be performed with minimal disruption to the 50,000 riders that pass through the terminal each day."

Client: Southeastern Pennsylvania Transportation Authority

Urban Engineers' (Urban's) Program Manager, in conjunction with our Joint Venture Partner, maintained close coordination with SEPTA's Capital and Operations Departments, the designer, contractors, community, and SEPTA riders. Construction for this terminal was performed while maintaining accessibility and service for the more than 50,000 commuters who pass through the facility daily. The Frankford Transportation Center (FTC) Program consisted of five overlapping projects.

HIGHLIGHTS:

- Program Management
- Construction Management
- Safety
- Quality Assurance
- Master Schedule Management
- Operations Coordination
- Community Relations
- Contract Administration

Quality assurance, safety, and community relations were essential elements of the program management services, in addition to the usual tasks that are included in construction management. Urban substantiated the inspection and certification of material before it was shipped to the terminal, as well as the quality of the installation processes. The program required constructing a major terminal facility for the Market/Frankford Elevated line in a confined space with little room for storage of material and equipment. At the same time, service was maintained for 16 separate bus and trackless trolley routes that interchange with the elevated line at the terminal, requiring close coordination with SEPTA's bus operations.

Except for a scheduled nine-day system outage, rail service was not interrupted. During these nine days, the existing guideway was demolished and a new pre-built guideway was constructed to the west. During Project 3, the Guideway and Systems Contract, a temporary trestle was constructed to support the elevated rail line while a new portion of Bridge Street was constructed below. To complete all tasks within the outage time, construction was performed around-the-clock. When complete, Frankford Avenue was opened to natural lighting for the first time in 75 years.

The new transportation center features enclosed, climate-controlled waiting areas; a four-level, 1,000-vehicle parking garage adjacent to Bustleton Avenue; a renovated historic Bridge Street Station building; a two-story main hall; 7,000 SF of retail space; and escalators and elevators to comply with the federal Americans with Disabilities Act.

The FTC was named Project of the Year by the Project Management Institute - Delaware Valley Section.

On-Call Engineering Services
Philadelphia International/Northeast Philadelphia Airports
Philadelphia, PA

"Urban has held a three-year contract to provide on-call engineering design and construction administration services at the Philadelphia International and Northeast Philadelphia Airports for more than 25 years."

Client: City of Philadelphia
Division of Aviation

HIGHLIGHTS:

- On-Call Services include:
  - Design
  - Construction Inspection
  - Environmental Investigations
  - Structural Analyses

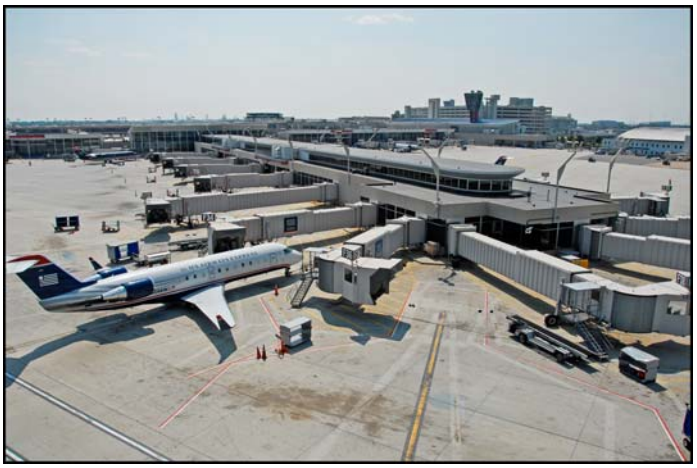
Recent projects include the following:

Philadelphia International Airport

Taxiways M, N & K3 Study
Obstruction Surveys
Additional Parking at Security Gate One
Airport Master Plan Project Management Oversight
Resident Engineer Emergency Pavement Repairs
Overheight Vehicle Detection System & Sign Structure Lighting
9R Safety Area Contract Documents
Terminal F Taxilanes Modification to Standards
Master Utility Plan Update
Terminal C Beam Replacement
De-Icing Management Support
Terminal F Pedestrian Crossing Study 2
Garage Entrance Road Rehabilitation
Runway 17-35 Extension Pre-Design Services
EIS Report Review
Communications Demarc No. 2, Study
Airfield Construction Impact Analysis
Cargo City Apron Reconstruction
Tenant Permit Reviews
Deicing Boom Replacement Estimate
Overheight Vehicle Escape Road Two-way Traffic Study
Taxiways K, K3, M, N, S, S1, W & H Rehab
Cell Phone Lot Signing Study
PCI for Runways & Taxiways
Convenience Store/Gas Station Traffic Study
Roadway Configuration Study
Sidewalk Feasibility Study
AHSL Platform Repair Study
Rent-A-Car Expansion Metes & Bounds Survey
Resident Engineer Employee Parking Expansion
Roadway Safety Improvements
Perimeter Service Road - Phase 1
Taxiway C Resident Engineer/Inspection Services
Taxiway J Resident Engineer/Inspection Services
Security Fence Replacement Inspection Services
Structural Inspections
Approach Light Pier Condition Survey
SR 291 Re-route Traffic Mitigation
Sign Information Study
Roadway Facility Condition Report
Resident Engineering Services
Bond Report

Northeast Philadelphia Airport

Perimeter Path - Phases 2-4
Taxiway C Extension
Pavement Management System Update Taxiway D - Environmental Permitting
Taxiways A & L Rehabilitation
Taxiway C Resident Engineer/Inspection Services
Compass Calibration Study



KS Engineers, P.C.
Engineers . Surveyors
Construction Managers

New Jersey
New York
Pennsylvania

info@kseng.com
www.kseng.com

Civil Engineering Services "Call-In" Basis during 2008, 2009 & 2010

New York and New Jersey

PROJECT NAME

Expert Professional Civil Engineering Services (MBE/WBE) as Requested on a "Call-In" Basis during 2008, 2009 and 2010

PROJECT OWNER/CLIENT

Port Authority of NY&NJ
2 Gateway Center
Newark, NJ 07102
Joseph A. Calautti, PE
973.792.4337

START/END DATES

2008 – 2010

CONTRACT AMOUNT

$454,909 (Amount to Date)

KEY PERSONNEL

Kamal Shahid, PE, Principal-in-Charge
Robert Nash, PE, Project Manager
Niranjan Doshi, PE, Task Leader
Dewan Rahman, EIT, CADD Manager

PROJECT DESCRIPTION

KS Engineers, P.C. (KSE) was retained by the Authority as a Prime Consultant to provide civil engineering services on a "Call-In" basis during 2008, 2009 and 2010. Services generally consist of preparing civil engineering designs, contract drawings, technical specifications, and construction cost estimates for a variety of new projects, rehabilitation, restoration and resurfacing projects. Assignments were completed on schedule and within budget. ***KSE*** has worked on the following individual assignments:

- SWF – Design of a New Employee Parking Lot – Civil Stage III Services –
- SWF – The Milling and Resurfacing of a Portion of Cargo Road in the vicinity of Reese Aviation FedEx Maintenance Hanger – Stage IV
- SWF – Design of the Expansion of Parking Lot
- SWF – Design of Rehabilitation of R/W 9 Approach Lighting and Cables
- SWF – Design of Rehabilitation of Taxiway Edge Lighting and Installation of Flashing Runway Guard Lights
- JFK – High Pressure Fire Protection System Critical Valve Replacement Phase III - Stage III and IV Services
- GWB – Sanitary Sewer Study at Administration Bldg Parking Lot

KS Engineers, P.C.
Engineers . Surveyors
Construction Managers

New Jersey
New York
Pennsylvania

info@kseng.com
www.kseng.com

PANYNJ 2008 - 2010 MBE/WBE "Call-In" for Structural Engineering Services

New York and New Jersey

PROJECT NAME
Performance of Expert Professional Structural Engineering Services (MBE/WBE) on a "Call-In" Basis during 2008, 2009 and 2010

PROJECT OWNER/CLIENT
Port Authority of NY & NJ
Gateway Center, 14th Fl., Newark, NJ 07102
Amit Chatterjee, Principal Structural Engineer/EAD, 973.792.4497
Robert Kumapley Project Manager, 212-792-4486

START/END DATES
2008 - 2010

CONTRACT AMOUNT
$500,000 (Approximate amount to Date for Combined Assignments)

KEY PERSONNEL
Kamal Shahid, P.E., Principal-in-Charge
Dickson Opong, P.E., Project Manager
Kenneth Clausen, P.E., Task Leader

PROJECT DESCRIPTION
Services provided under this contract generally consist of preparing structural engineering studies, condition surveys, designs, contract drawings, technical specifications and construction cost estimates for a wide variety of new facility structures and structural renovation and rehabilitation projects. To date ***KSE*** has been given the following assignments under this "Call-In" agreement:

- **Multi-Facility CAD Drafting Services**
- **JFK Airport –Protective Slabs on Taxiways, Q & A**
- **Structural Engineering Services / Staff Augmentation**
- **PATH - Installation of Backflow Prevention Devices**
- **LaGuardia Airport - Upgrade CTB East**
- **JFK Airport - Fire Alarm Connection for Gas Station - Bldg.#**
- **JFK Airport – Reconfiguration of Fuel Truck Loading Racks**
- **JFK Airport - Repairs to Aqueduct Bridge Railings/Expansion Joints**
- **Stewart Airport - Positive Air Pressure for Loading Bridges**
- **JFK Airport – Repair of Slab at Building**
- **CADD Design Services for Navigation Aids Improvements at JFK Airport**
- **CADD Design Services for Demolition- Hanger 12 &building #94 at JFK Airport**
- **SWF- Runway Incursion Mitigation Study**
- **PATH – Installation of Backflow Prevention Devices, Macmillan Bloedel Building**
- **EWR Airport – Structural Engineering Services –Shop Drawing Review – Stage 3**
- **EWR Airport – Structural Engineering Services –Shop Drawing Review – Stage 3**

ARMAND CORPORATION

Project Title:	American Airlines JFK Terminal Redevelopment
Client Contact:	Jerry Gold, Project Manager Jacobs Carter Burgess 260 Madison Avenue New York, NY 10016 [redacted]
Contract Duration:	October 1998 - January 2003
Project Cost:	$1.2B

Armand Corporation provided communications and special systems program management services for the American Airlines JFK Airport Terminal Redevelopment Project. The $1.2 billion construction project provided for the demolition of the American Airlines terminal building and the construction of a new terminal complex. The Armand Corporation provided the program management for systems integration and related construction requirements. The company was responsible for the electronic distribution, archiving, and management of AE drawings and specifications for the project.

Our systems integration responsibilities included; Cable Plant – Fiber/Copper Cabling Distribution Systems; Public Address Systems; LAN/WAN/Internet Systems; Commercial Antenna Television (CCTV); SCADA; Building Management Systems; Fire Systems; Network and Cable Plant Management Systems; and Security Access Control/Closed Circuit Television

Project Title:	Port Imperial Ferry Terminal
Client Contact:	Jack Kelly, Regional Vice President URS Corporation 1628 John F. Kennedy Boulevard Philadelphia, PA 19103 [redacted]
Contract Duration:	June 2001 - August 2002
Project Cost:	$25M

Armand Corporation provided on-call services for design review and recommendations. The facility was constructed over water off the bulkhead in Weehawken, NJ. The work included ramps and docks associated with the ferry operation, dredging and a waterfront pedestrian walkway running along the bulkhead. The project also required the construction of a 3-story, 30,000 square foot building with two passenger levels and a third floor penthouse for mechanical equipment.

Project Title:	River Line Transit (formerly Southern New Jersey Light Rail System	
Client Contact:	Ty Dickerson, Project NJ Transit One Penn Plaza Newark, NJ 07102 [redacted]	Barbara Leavitt, Contracts Administration AECOM (DMJM+HARRIS) 520 8th Avenue, 10th Floor New York, NY 10018 [redacted]
Contract Duration:	April 1996 – March 2004	Project Cost: $620M

In April 1996, NJ Transit procured a General Design Assistance Consultant, (GDAC), to perform preliminary engineering and design services for a $620,000,000 transit system connecting Camden, Burlington, and Mercer Counties. The GDAC team produced solicitation documents and assisted in the selection of a design, build, operate, and maintain (DBOM) contractor. The GDAC team verified compliance of the DBOM contractor with technical and contractual requirements during the design and construction of the transit system. As part of the GDAC team, Armand Corporation responsibilities included quality assurance program implementation; on-call services for utility protection and relocation design, land surveying and mapping, geotechnical investigation, bridge inspection, capital cost estimate and corrosion control program. We inspected milling and resurfacing of roadways, construction and bridges, maintenance facility, park & ride facilities, shop yard center, and stations stops.

Project Title:	Newark Elizabeth Rail Link	
Client Contact:	Rich Amodei, Vice President 1818 Market Street, Suite 1410 Philadelphia, PA 19103 [redacted]	Peter Gentle, (former Resident Engineer) [redacted]
Contract Duration:	February 2003 - June 2006	Project Cost: $120M

The purpose of this project was to extend the existing Newark City Subway at Newark Penn Station for a distance of approximately one mile to Newark's Broad Street Train Station. Armand Corporation was part of the construction management team in which the objectives included:

- A Constructibility review of plans and specifications.
- Reviewing change orders and providing analyses.
- Monitoring CPM schedule.
- Inspecting milling and resurfacing of roadway, station, track, catenary, electrical, mechanical, and environmental work as specified.
- Monitoring and inspecting all construction activity, systems implementation and overall contract administration.
- Providing assistance to the Design Consultant in preparation of the project's final as-built drawings, and project close-out.

MAJOR PROJECT EXPERIENCE
(Listed by Project Value)

Client: **Federal Transit Administration (FTA)**
Projects: **New York City Metropolitan Transit Authority 2nd Avenue Subway and East Side Access**
Value: **$10.4 billion**

Since 2005, Talson has served as a member of the program management oversight team for the New York City Metropolitan Transit Authority's new 2nd Avenue Subway ($6.4 billion) and East Side Access ($4.0 billion) projects. Talson participates in contractor and agency meetings in order to provide independent assessments of funding submittals and project status including budget, design, and schedule performance to the FTA. Talson participated in readiness reviews of the project's cost control, schedule, documentation and quality management systems.

Client: **Office of Inspector General**, **Autoridad del Canal de Panama**
Project: **Canal Expansion Program - Third Set of Locks**
Value: **$5.2 billion**

Since 2008, Talson has assisted the Autoridad del Canal de Panama with the $5.2 billion Canal Expansion Program / Third Set of Locks project. Talson provided construction audit planning and consulting services for various scope of works including; (1) Business Process and Controls Review for the Third Set of Lock contract, (2) Project Team Readiness, (3) Multi-Year Audit Planning, (4) Construction Audit Training, (5) Project Reporting and Management Information System Review, (6) Staff Assessments and Organization Analysis.

Client: **Internal Audit Department, Marathon Oil Company**
Projects: **Equatorial Guinea Train 2, Alvheim FPSO and Training**
Value: **$3+ billion**

Talson reviewed Marathon's Project Management System and assisted in the development of audit plans for the Equatorial Guinea Train 2 project. Talson conducted a detailed review of the cost management plans, change management procedures and project controls for the Alvheim Floating Production Storage Offloading (FPSO) project ($2+ B) located in the Norwegian Sector of the Northern North Sea. Talson developed and conducted tailored capital project audit training classes for Marathon's worldwide internal audit staff supporting refinery and production type of projects.

E. MANAGEMENT APPROACH

MANAGEMENT APPROACH

GENERAL APPROACH

The Urban Team will build on successes realized on past and present program management and design and construction project management assignments. Effective performance will be achieved with the Team of project management professionals assembled for this assignment. The success of the Port Authority's "as-needed" contract for project management services requires both technical and administrative resources and effective communication between the consultant and client representatives. Urban has developed its approach to managing call-in contracts based on numerous similar assignments. Nearly 40% of Urban's total revenue is derived from task order-based contracts. The firm has developed internal task order procedures that address the technical and administrative aspects of project assignments. These procedures will enable the Urban Team to provide timely, efficient, and effective consultant services.

The contract is expected to include a wide variety of projects. The Urban Team has the necessary technical experience in the types of design and construction projects that the Port Authority may desire to undertake under this contract. We will approach each task by looking at who will be the "owner" of the project, and will work with that client group and the Port Authority's Project Manager in order to address the specific issues and project challenges.

Urban believes that single-point responsibility and management is necessary to successfully administer an "as-needed" services contract. Urban's Program Manager will be responsible for on-going coordination of task orders with the Port Authority's Contract Administrator. The Program Manager will have the authority to make overall program decisions and influence individual project decisions. The authority to negotiate with the Port Authority on individual assignments will also reside with the Program Manager.

The Program Manager will assign an appropriate Task Project Manager depending on the nature of the assignment. Each designated Task Project Manager has primary responsibility for execution of a given task order assignment after receipt of NTP from the client project manager. The Task Project Manager directs the team for that task on a day-to-day basis and maintains communication with the client's Project Manager.

The Program Manager and Task Project Manager roles are defined in more detail below.

Program Manager – The Program Manager has two major responsibilities: to administer the contract and to coordinate the management of the various task work orders that may arise. The Program Manager is the primary person responsible to the Port Authority's Contract Administrator for delivery of project management services. For each work order, the Program Manager and key staff will directly participate in the establishing the project work plan. The Program Manager assigns tasks to appropriate members of the Team, directs and reviews the prompt preparation of proposals, enforces Urban's corporate commitment to ISO 9001 standards of quality for Team members, and monitors that Team performance is timely and meets the requirements of the Port Authority's Contract Administrator and Project Managers/Engineers.

The Program Manager is responsible for directing and executing the technical work required by the Port Authority, including periodic "on-board" monitoring of assignments for responsiveness

to the task requirements and for budget and schedule performance. Specific responsibilities include:

- Coordinate contract execution
- Assign Task Project Mangers
- Determine project Team for each task
- Attend scope review meeting
- Approve cost proposal
- Monitor work order budget and schedule status
- Monitor M/WBE goal attainment
- Prepare monthly program status reports
- Meet with Port Authority Project Manager on a regular basis
- Maintain integrated deliverable schedule
- Establish quality review team for each assignment
- Monitor adherence to **ISO 9001:2008** Quality Program

Task Project Manager – The Program Manager will select an appropriate Task Project Manager. This individual will be responsible for the daily execution of tasks and subtasks associated with each project, and the preparation of project technical, budget, and schedule information for periodic reports to the Program Manager. In most cases, the Task Project Manager will be the lead technical member of the Team for each task. Specific responsibilities include the following:

- Establishing project objectives
- Monitoring program activities to achieve the objectives
- Scheduling project activities
- Budgeting the cost of each activity
- Directing Urban staff and subconsultants
- Monitoring performance to meet project objectives
- Preparing monthly task status report
- Reviewing and approving subconsultant and overall task order invoices.

In accordance with Urban's **ISO 9001:2008** Quality Policy, the Program Manager will perform contract and quality reviews at regular intervals to determine that the work meets the client's requirements and Urban's standards. These reviews are performed to check that the following project management activities are occurring on a timely basis:

- A kick-off meeting that describes the project and shares information, including the expectation of communication and project deliverable responsibility
- Work directions from the Task Project Manager are being followed
- Design calculations are being checked
- Action items from meetings are identified and responsibility for closing issues is assigned

- Project configuration is being reviewed with the Port Authority and the technical disciplines
- Agency coordination is being continuously conducted
- Periodic quality reviews are scheduled
- Responses to quality reviews are made
- Design Team is focused on production schedule
- Requests for Information (RFIs) are being promptly answered
- Contractor submissions are being reviewed on a timely basis
- Constructability reviews are performed and responses prepared
- Project Notebook is maintained

Our Team will prepare a Project Notebook at NTP for each task assigned to us. The Project Notebook is a management tool that has been utilized by Urban for many years, and was adopted as a formal **ISO 9001:2008** quality procedure. Use of the Project Notebook has standardized the technical execution of Urban's assignments. The Project Notebook format emphasizes the orderly summary of project scope and status, while providing documentation for the execution of the assignment and production of client deliverables

TASK MANAGEMENT APPROACH

Task A. Project Initiation Services

1. Develop Program/Project Management Plans

The Urban Team has extensive experience under its Program Management Oversight assignments with the FTA in reviewing and assisting transit agencies throughout the United States in preparing Project Management Plans (PMP) that meet strict federal guidelines. Our Team will assist the Port Authority in establishing PMPs that accurately define the following functions within a project:

- *Project Management*: including management control systems, cost management, schedule management, and project reporting requirements;
- *Quality Assurance/Quality Control*: including quality assurance and quality control objectives, the quality management system elements, quality assurance responsibilities, quality in design, and quality in construction;
- *Document Control*: including document control procedures, document control during design, and document control during construction and closeout;
- *Change Orders*: including change order processing, change order approval levels/signatures, and change order control;
- *Safety*: including safety in the design phase, safety in construction, site safety;
- *Security*: risks are to be identified and mitigated by appropriate security elements incorporated into the project;

- *Environmental*: including environmental compliance with federal, state, and local requirements; and
- *Project Closeout Procedures*: including substantial completion and final completion and acceptance.

We will assist in developing project scope, schedule, and budget for various stages of project delivery. Our experience in performing constructability reviews on large projects will be utilized in assisting the Port Authority in developing RFPs for design services that will help produce designs that can be implemented at reasonable costs.

Project budgets will be prepared by an experienced estimator(s) so that budget line items accurately reflect the project scope. Realistic and reliable initial project cost estimates are necessary to maintain project budgets and to mitigate potential cost-overrun risks. Often, overruns result from estimates that do not include the cost for work, materials, or equipment that is required to fulfill the intent of the design, but is not specifically identified in the contract documents. The need for specialized equipment or for an item that demands distinctive formwork, are two examples of this type of cost. Such items typically fall into the category of contractor 'means and methods' and are usually not considered in the Engineer's Estimate. Not recognizing site specific circumstances that can impact the cost of the work, such as access to the work site, or the cost of interfacing with other third parties, are also often overlooked. Our experience in construction management and in performing constructability reviews will help in developing realistic project budgets.

An experienced scheduler(s) will establish realistic project schedules that take into account resource requirements and accurately relate the major direct and indirect project elements to each other. Adequate detail and understanding of the processes to be undertaken is critical to developing a sound project schedule. A comprehensive schedule will enable the Team to continually monitor a project and quickly react to delays before they impact the critical path. The Urban Team has a wealth of experience in developing schedules using CPM programs such as Primavera Project Planner (P6). Urban has been utilizing P3 for construction management, oversight, and design schedules since 1984 and is currently working with P6. Urban has performed as a Construction Manager on many large projects, and has coordinated schedules of multiple contractors on large infrastructure and transportation programs.

2. Provide Business Analysis Services

The Urban Team will provide business analysis services, as required, to identify the owner's project requirements and to define/document project scope. Under our PMO assignments for the FTA, Urban reviews programs of projects and proposed scopes, and makes recommendations as to the adequacy of project scopes, budgets, and proposed schedules.

3. Coordinate Project Team Alignment and Team-Building

Urban recognizes that the successful implementation and execution of a project is dependent upon assembling a project team having the right skill sets and whose members can work effectively as a team. The proposed Urban project managers bring a wealth of experience in successfully implementing large scale, complex projects, and know what it takes to assemble, align, and manage project teams.

4. **Assist in the Preparation of Requests for Proposals (RFPs)**
   We will assist in developing RFPs for the performance of expert professional architectural and engineering services. As discussed above, our experience in performing constructability reviews on large projects will be utilized in assisting the Port Authority in developing RFPs for design services that will help produce designs that can be implemented at reasonable costs.

5. **Coordinate Risk Analysis**
   In addition to our traditional Program Management Oversight services, we have developed and provided a special area of assistance as one of FTA's prime Risk Assessment contractors. In this capacity, Urban has provided requisite schedule, cost estimating, QA/QC, and scope review for the readiness requirements by FTA for the approval of large projects as they have proceeded to obtain Full Funding Grant Agreements. Successes in the performance of these significant risk assessments have led to the development and implementation of monitoring tools that have benefited NYC programs and others throughout the country. The FTA continues to utilize Urban's skill to assist others involved in risk assessment programs.

6. **Prepare and Conduct Presentations**
   Urban understands that public relations is a critical and necessary component of major infrastructure projects and a successful means of providing information and receiving feedback to/from various project stakeholders.. Urban will support the Port Authority with project status reports, graphic support material, attendance and presentations at public meetings, or additional requested efforts. We are prepared to undertake any supplemental public relations activities the Port Authority may consider necessary.

Task B. Project Implementation Services

1. **Manage PMP Implementation**
   As discussed above, Urban has extensive experience under its Program Management Oversight assignments in working with agencies to help them develop and implement PMPs that meet federal guidelines.

2. **Conduct Meetings**
   Urban is prepared to conduct meetings with the Project Team. The meetings will provide a forum to: review the project schedule and budget; resolve coordination issues between stakeholders and internal Port Authority Departments; and identify critical issues that may need to be elevated to senior management.

3. **Manage Preparation of Contract Documents**
   Our Team will provide the technical support necessary to perform independent reviews of design documents, as well as supplemental constructability and cost estimating reviews. Urban will actively coordinate review with external stakeholders and internal Authority departments. The result will be a single review document for each project, which includes comments with references to the originating individual or organization. After a detailed evaluation of review comments by the design consultant, Urban and the design consultant will meet to discuss the ultimate disposition of review comments. The results of this meeting will be documented in a report to the Port Authority.

4. Identify Operational and Maintenance Constraints

Coordination among various Port Authority departments is critical to success. We will engage the appropriate Port Authority stakeholders during design to identify potential operational and maintenance constraints.

5. Review Contract Documents for Conformance to Approved Scope and Budget

Our Team will review studies, preliminary designs, and contract documents for conformance to approved scope and budget as called for in the RFP. We will prepare design status reports that will summarize outstanding design issues.

Urban will review the final design cost estimate prepared by the design consultant for projects and contracts for which construction bids have yet to be received. This review will check conformance to established Port Authority estimating guidelines, comprehensiveness, utilization of labor rates, equipment rates, and material prices, and application of appropriate factors for shift work. The results of Urban's review will be summarized and transmitted to the Authority in report format, including any calculated revisions to the estimated project contract cost. This effort will serve as a critical check of the construction budget and minimize potential budget overrun during construction bidding.

6. Prepare Project Documentation

Urban will prepare project documentation and maintain a project file, in accordance with Authority procedures.

7. Coordinate Bidding and Award

Our Team is ready and able to provide the Port Authority with any assistance required to advertise and issue the bidding documents to the prospective bidders. As Project/Program Manager, we will check the documents to see that agreed upon clarifications, changes, and alternate construction methods that were accepted on similar contracts have been incorporated into the contract documents by the design consultant. The following summarizes our approach to key tasks performed during the Procurement/Bidding Phase:

- *Innovative Contracting* – Innovative contracting practices encourage contractors to expedite projects, thereby reducing the economic burden to the public. Typically, innovative contracting practices are ideal for projects that could potentially create high user costs, impair emergency services, severely impact the flow of traffic on a major arterial, produce detours on inadequate roads, or impact adjacent commercial enterprises.

  The Urban Team, coordinating with our constructability and value engineering staff, is prepared to investigate and recommend innovative contracting methods to facilitate accelerated construction. We will assist the Port Authority and its design teams to perform the appropriate analysis to determine if an individual construction contract merits innovative contracting and, if so, which method is most appropriate. Innovative contracting methods that will be investigated include: Incentive/Disincentive (I/D); Cost-Plus-Time Bidding (A+B or A-B Methods); and Lane Rentals.

- *Pre-Bid Conferences* – Urban will assist the Port Authority in preparing the agendas and making the presentations for pre-bid meetings. We will emphasize interaction among contractors and their interdependencies, along with the need for cooperation. In

conjunction with the services provided at the pre-bid conference, our Team, together with and as requested by the Authority, will visit the project site with prospective bidders and discuss proposed locations' storage space, staging areas, access to the work, and disposal of material.

We will assist the Port Authority's Project Manager in answering questions on construction aspects, such as project scheduling, work prosecution, environmental concerns, organizational matters, project scheduling, and other pertinent items. Typically, items that require clarification or modification are identified at the pre-bid conference. Our Team will direct questions from the bidders to the appropriate design/engineering consultant or project participant. Minutes of these meetings will be prepared and issued. Answers to questions requiring a written response to bidders will be compiled and incorporated into the minutes for Port Authority review and issuance. We recognize the need for prompt response to pre-bid questions and for the preparation of any addenda to provide the bidders ample time to prepare their bids.

- *Evaluation of Construction Bids* – Urban has an excellent understanding and depth of knowledge and information on construction bids throughout the region. This information has been compiled from hundreds of projects for agencies and municipalities in the region. We will review construction bids and investigate any major variations between estimated costs and actual bids. Also, we will check to see if any bids are unbalanced and review the plans and specifications to determine the cause of the unbalance. By this action, we may uncover potential changes/claims that the contractor may have discovered and review its effect on the project. We will then recommend a meeting with the contractor to discuss these items and determine if a responsive bid has been submitted.

8. Coordinate and Monitor Shop Drawings and RFIs

Urban will establish procedures to track and monitor submittals and shop drawings. The contractor will provide submittals with a transmittal form that must include relevant information. The contractor will be required to describe any variations from the contract requirements or substitutions in each letter of transmittal. The design consultant will be required to identify any changes made to the submittal that add or delete from the original contract requirements, and to initiate a change order through Urban. Urban will establish and maintain a control and logging system for tracking individual submittals. Urban will continually review the tracking system and remind the contractor and/or design consultant of delinquent submittals or re-submittals

Requests for Information (RFIs) from the contractor will be tracked by Urban for each project. RFIs will typically be handled by the Project Resident Engineer, who should act immediately upon receipt of an RFI from the contractor so that an expedient response is provided. If a response cannot be rendered quickly by the Resident Engineer, the field inspection staff, or the Urban staff, then the designer of record will be contacted for clarification. An RFI log will be maintained to track the date of request and date of response for each RFI. Urban will advise the Port Authority of resolutions of issues stemming from contractors' Requests for Information and any other clarifications of the design documents that are necessary.

9. Coordinate Post Award Contract Changes (PACCs)

We bring extensive experience in evaluating change order control processes on a large number of major projects, and will leverage this experience and expertise in coordinating the preparation of post award contract changes (PACC) for the Authority.

10. Attend Construction Progress Meetings

Urban's extensive construction management experience will enable our Team to effectively participate in construction progress meetings and coordinate facility force account work as called for in the RFP.

Task C. Project Monitoring and Reporting Services

1. Monitor and Report on Consultant/Contractor/Staff Performance

Urban will monitor and report on the actual consultant/contractor/staff performance versus what is presented in an approved management plan. Urban brings a wealth of experience through its Program Management Oversight assignments with the FTA in monitoring adherence to accepted project management plans.

2. Update and Review Actual and Forecasted Costs and Schedules

The Urban Team will integrate cost and progress reporting with the schedule planning and reporting system. The integrated cost/schedule/progress reporting system will provide management with promptly issued, accurate data on costs, budgets and progress. We will recommend a frequency at which the Port Authority should require reports of the principal project tasks and the format necessary to properly monitor the project and then coordinate and produce these reports to the Port Authority's specification.

3. Monitor Progress of Construction

Urban will assist the Authority's construction managers in reviewing the contractor submitted CPM schedules to check that contract activities are logical, durations are realistic, specifications are met, and the critical path is not crowded with an unreasonable number of critical or near-critical activities. Urban will continue to measure as-planned performance vs. actual performance throughout the project. We will focus on the contractor's critical activities, track weekly progress and identify potential problem areas for early resolution, identify any areas where the contractor is not achieving the planned rate of progress, and review and make recommendations of possible alternative courses of action to recover lost schedule time. In addition, we will check that any time extensions for excusable delays that may have been approved since the last update are incorporated into the schedule.

4. Prepare Monthly Status Reports

Detail and summary level reports will provide periodic and cumulative costs, comparison of actual costs to planned costs of each element of work, analysis of any variances from the planned costs that may occur, cost relationships with schedule and progress and variations in the defined scope of project work. We will report engineering and administrative costs, as well as construction and procurement costs. The methodology of reporting will provide forecasts of the costs of work packages at conclusion and of the total project. Budget trends will be monitored early on to detect potential cost overruns before they become a significant issue.

In addition to routine cost forecasting, we will follow a process for conducting periodic reviews and updates from an overall management perspective as a design develops and contracts for materials, equipment, and services are awarded. Elements of the project cost estimate may be subject to varying degrees of re-estimating depending on the status of project development, changes in previously predicted economic conditions, unfavorable experience in contract awards, or refinement of quantities. Schedule impacts will be considered in conjunction with these periodic cost estimate reviews.

5. **Evaluate Design Consultant Invoices**
   Urban will evaluate design consultant invoices for earned value and recommend payment.

6. **Evaluate Impact of Changes**
   The system Urban will implement for governing cost control will also provide guidance for preparing and processing change orders. It will include a written order of authorization to the contractor to perform additional or extra work, adjustments, or the deletion of work. Change orders can encompass construction field changes, design changes, specification changes, changes in scope of work, emergency repairs and damage claims, as-built quantities, contract time adjustments, and assessment of liquidated damages. Urban will develop a change order spreadsheet that includes the item number and description of work, unit pricing, and quantity additions/deductions. The spreadsheet will be accompanied by a letter explaining each item number's adjustments – i.e. change in design or specification, reflection of actual work performed, and adjustments required to meet actual field conditions. Finally, the change order package submitted to the Authority will include justification with receipts, authorization, contractors' material, equipment and labor breakdowns, and any other supporting documents.

7. **Schedule and Organize Briefings**
   As required, Urban will schedule and organize briefings with Port Authority executives to: review and discuss the status of projects; present critical issues requiring Authority approval; and provide recommendations regarding policies and procedures. In addition, Urban will proactively seek feedback from the Port Authority regarding the quality and content of our monthly status reports. It is our goal to minimize the amount of time needed for executive staff to obtain a thorough and sound understanding of critical issues.

Task D. Program Level Management Services

1. **Assist Project Managers with Scheduling and Implementation**
   Urban brings vast experience in monitoring and assessing large capital projects throughout the United States for the FTA. This experience includes evaluating programs and projects for adequate project planning and staffing and assessing whether or not the agencies undertaking the projects have an adequate technical capacity to successfully implement their programs. Our experience in providing project management oversight for multiple, concurrent projects will prove invaluable in assisting the Authority's Project Managers in scheduling and implementing selected programs and/or groups of projects.

2. **Establish Annual and/or Program Level Resource Requirements**
   Aware of the diversity of assignments in a program such as this and the need for reliable and timely forecasts, Urban has a long history of assisting many public and private entities in

developing, validating, and providing financial analysis and alternatives to capital and operating budgets. Our staff includes experts in estimating, scheduling, finance, and grants management who have worked for public agencies, contractors, and professional service consultants, allowing Urban to provide the Port Authority with an element of reasonableness and practicality that many other firms cannot match. Urban realizes the importance of providing an owner financial forecasts that can be confidently depended upon in advancing complex, as well as relatively simple projects. We have witnessed many projects that needed to be suspended or cancelled due to poor planning and improper forecasting. Having this awareness and having successfully been engaged to remediate many program "budget busts" makes Urban one of the few firms that can offer full-service capabilities in the various areas, including budgeting and forecasting.

3. **Ensure that Projects/Programs are Staffed and Started, As Planned**
   In coordination with our efforts related to developing and updating the program level schedules (Item #4), Urban will check that the appropriate level of staffing, both Port Authority and consultant, is identified and coordinated with the project milestone dates. As projects/programs progress, Urban will monitor the staffing and provide recommendations to the Authority regarding staffing levels and qualifications.

4. **Update Program Level Schedules**
   Our approach to developing and/or monitoring program level schedules of this magnitude is based on our experience successfully performing similar schedules for program management assignments and numerous multi-contract infrastructure projects. The program level schedules will incorporate the design schedules for each project, administrative review cycles associated with processing contracts, development of utility agreements, right-of-way acquisition needs, environmental commitments and permit requirements, and detailed preliminary construction schedules. The key to a useful schedule is its accuracy in reflecting the interrelationships and dependencies of the numerous contracts. The restraints, constraints, and milestones linking the various sections must be identified and the activities labeled and coded accordingly. For an assignment of this magnitude, the program level schedule will be a crucial tool for program-wide monitoring, contract coordination, and funding projections.

5. **Evaluate and Recommend M/WBE Subcontractor Goals**
   During the planning phase of each project/program, Urban will review the project scope, including the level of required technical resources, and make recommendations regarding the M/WBE subcontractor goals. In performing this task, Urban will make sure that applicable Authority, federal, and/or state guidelines are followed.

Task E. Program Management Services

1. **Provide Ancillary Program Management Support Services**
   Part of the program management support called for in the RFP is to conduct biddability and constructability reviews. Urban, through past corporate initiatives and the firm's **ISO 9001:2008** Quality Certification, undertakes constructability reviews of design projects. Constructability review and analysis of the firm's design product is a staple of the organization's services, routinely conducted for every client. Urban has a five-year open-end contract with Pennsylvania DOT to provide constructability review services on an as-needed

basis and has provided constructability reviews on projects totaling over $2 billion over the last eight years.

2. **Coordinate Biddability and/or Constructability Reviews**
   Urban's Integrated Constructability Evaluations Program enables designers to produce high-quality, cost-effective design documents that can be reasonably constructed in the field without unnecessary cost or project delays and without sacrificing quality. Reviews are performed by a Team of individuals with extensive field experience and a clear understanding of the project's design, the constraints of the project site, and the concerns of the various regulatory agencies involved. In working with owners, designers, and contractors, the Urban Team has identified the following critical components that form a useful framework for the Integrated Constructability Evaluations Program: early issue resolution, document reviews, site investigations, utility coordination, schedule analysis, biddability reviews, and estimate reviews.

   Urban is prepared to perform and/or coordinate biddability and constructability reviews. We understand it is vital to expedite this task to allow review and evaluation of findings by the Authority and its design consultants to facilitate incorporation of agreed-upon revisions into the contract documents in time to support the construction advertisement schedule.

3. **Maintain Records for the Preparation of Record Drawings**
   Our experience on past design and construction management assignments will enable us to maintain records for the preparation of record drawings that satisfy your requirements.

4. **Provide Support Services**
   Urban is prepared to provide support services in the areas of: updating and developing new modules and procedures as requested for the Agency's project management manual document; support document control activities including tracking the shop drawing submittal process; coordinating project control functions; and preparing technical presentations and assisting in responding to public inquiries.

5. **Provide Project Management Training/Workshops**
   Urban has a contract with the National Transit Institute (NTI) to provide a transit project management training course throughout the United States and has experienced personnel who can provide project management training/workshop sessions as requested. Urban's staff presents seminars nationally and develops training programs for agencies similar to the Port Authority.

F. HOURLY RATE INFORMATION

Port Authority of New York and New Jersey

Expert Professional Project Management Services

As Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014

Rate Schedule

Name	Firm	Rate
William Thomsen, PE	U	$96.50
Victor Simuoli, PE	U	$96.11
Richard Simon, CMQ/OE, CQA	U	$87.50
Kamal Shahid, PE*	KS	$120.00
Aviation		
Jack Martins, PE	U	$89.60
Christopher Gubeno, PE	U	$65.00
Keith Foglia, PE, LEED AP	U	$45.00
David Benner, PE	U	$56.14
Niranjan Doshi, PE	KS	$55.12
Robert Nash, PE	KS	$72.00
Tunnels, Bridges & Terminals		
Paul Dionisio, PE	U	$76.00
Edwin Williamson, PE	U	$81.45
William England	A	$46.90
Kenneth Clausen, PE	KS	$57.60
Dickson Opong, PE	KS	$64.60
PATH		
Michael Wetherell, PE	U	$96.30
David Sands, PE	U	$63.60
Tom Halterman, PE	U	$56.70
Franklin Teifeld	U	$54.25
Alan Collins, PE	U	$53.10
Richard Hill, PE	U	$80.26
Michael Dunn	U	$72.80

Name	Firm	Rate
World Trade Center/Buildings		
John Sabatino, AIA	U	$81.22
Edward Godorov, PE	U	$62.51
Michael Radbill, PE	U	$77.62
John Roberts	TS	$92.57
William Dale, AIA	A	$44.15
Robert McKay	A	$45.05
Port Commerce		
Ahmad Nadeem, PE	U	$70.00
Andrew Quinn, PE, LEED AP	U	$40.00
Shawn McAdams, PE	U	$42.41
Fred Koomson	KS	$42.85
Jacob Perlmutter, PE	KS	$74.50
Training		
Richard Simon, CMQ/OE, CQA	U	$87.50
Michael Radbill, PE	U	$77.62
Norman Jones	TS	$82.84
Project Controls		
Burton Kohlman, PSP	U	$63.00
Devang Parekh	KS	$47.00
Paul Kovnat	U	$63.63
John Luttrell	A	$52.90
Field Office Mutiplier:		2.10
Home Office Multiplier:		2.40

Legend

Urban Engineers of NY, PC	U
KS Engineers, PC (MBE)	KS
Talson Solutions, LLC (WBE)	TS
Armand Corporation (WBE)	A

* Principal billing rate, no multiplier applied

Notes

- 2010 hourly rates shown
- Anticipated annual escalation of 3%
- Premium pay policies attached
- Multipliers listed above will be used by all team members. Team members' supporting documentation attached.

URBAN ENGINEERS OF NEW YORK, PC

SCHEDULE OF FIELD AND OFFICE OVERHEAD RATES

YEAR ENDED DECEMBER 31, 2008

URBAN ENGINEERS OF NEW YORK, PC
FOR THE YEAR ENDED DECEMBER 31, 2008

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Citrin Cooperman & Company, LLP

CERTIFIED PUBLIC ACCOUNTANTS

INDEPENDENT AUDITORS' REPORT

To the Officers and Directors
Urban Engineers of New York, PC

We have audited the accompanying schedule of field and office overhead rates (the "schedule") of Urban Engineers of New York, PC (the "Company") for the year ended December 31, 2008. This schedule is the responsibility of the Company's management. Our responsibility is to express an opinion on this schedule based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the financial audit standards contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the schedule is free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the schedule. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall schedule presentation. We believe that our audit provides a reasonable basis for our opinion.

The accompanying schedule was prepared on the basis of accounting prescribed by Part 31 of the Federal Acquisition Regulations and certain other Federal and state regulations as described in Note 2. Accordingly, the accompanying schedule is not intended to present the results of operations of the Company in conformity with accounting principles generally accepted in the United States of America.

In our opinion, the accompanying schedule referred to above presents fairly, in all material respects, the overhead rates of the Company for the year ended December 31, 2008, in conformity with the basis of accounting described in Note 2.

In accordance with *Government Auditing Standards,* we have also issued our report dated July 29, 2009, on our consideration of the Company's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and is important for assessing the results of our audit.

This report is intended solely for the use and information of the management of the Company and government agencies or other customers related to contracts employing the cost principles of the Federal Acquisition Regulations and is not intended to be and should not be used by anyone other than these specified parties.

Citrin Cooperman & Company, LLP
CERTIFIED PUBLIC ACCOUNTANTS

July 29, 2009

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URBAN ENGINEERS OF NEW YORK, PC
SCHEDULE OF FIELD AND OFFICE OVERHEAD RATES
DIRECT AND ALLOWABLE INDIRECT COSTS
FOR THE YEAR ENDED DECEMBER 31, 2008

	Total Costs	Exclusions	Exclusion Note	Direct Costs	Allowable Indirect Costs
Direct expenses (excluding payroll)	$ 1,259,893	$ -		$ 1,259,893	$ -
Indirect expenses:					
Administrative fees	246,084	-		-	246,084
Advertising	13,100	13,100	(a)	-	-
Bad debts	19,600	19,600	(k)	-	-
Computer expense	16,183	-		-	16,183
Conference and seminars	14,741	-		-	14,741
Contributions	1,836	1,836	(b)	-	-
Depreciation	26,422	-		-	26,422
Dues and subscriptions	15,077	884	(b)(j)	-	14,193
Employee relations	13,706	4,199	(b)(c)(f)	-	9,507
Equipment maintenance	4,158	-		-	4,158
Equipment rental	5,137	-		-	5,137
Insurance, employee benefits	162,968	-		-	162,968
Insurance, other	34,305	-		-	34,305
Insurance, professional liability	44,124	-		-	44,124
Interest	55,586	55,586	(d)	-	-
Legal and accounting	39,642	13,038	(i)(l)	-	26,604
License and inspections	442	-		-	442
Meals and entertainment	42,876	30,268	(c)(f)(g)	-	12,608
Office expense	11,148	467	(b)(f)	-	10,681
Postage and freight	5,980	-		-	5,980
Profit-sharing expense	54,202	-		-	54,202
Recruiting	106	-		-	106
Rent, New York City	24,728	-		-	24,728
Rent, Buffalo	69,276	-		-	69,276
Supplies, reproduction	8,714	-		-	8,714
Telephone	26,225	-		-	26,225
Travel and lodging	144,887	25,587	(c)(f)(h)	-	119,300
Tuition	15,026	-		-	15,026
Taxes, miscellaneous	54	-		-	54
Taxes, New York City	3,112	-		-	3,112
Taxes, payroll	343,982	-		-	343,982
Payroll, production	2,665,747	-		2,665,747	-
Payroll, production, OT premium	45,692	-		45,692	-
Payroll, production, vacation	141,881	-		-	141,881
Payroll, production, holiday	81,260	-		-	81,260
Payroll, production, personal time	65,277	-		-	65,277
Payroll, production, paid absence	1,293	-		-	1,293
Payroll, production, general time	731,417	-		-	731,417
Subtotal, to page 3	$ 6,455,887	$ 164,565		$ 3,971,332	$ 2,319,990

See accompanying notes to schedule of field and office overhead rates.

URBAN ENGINEERS OF NEW YORK, PC
SCHEDULE OF FIELD AND OFFICE OVERHEAD RATES
DIRECT AND ALLOWABLE INDIRECT COSTS (CONTINUED)
FOR THE YEAR ENDED DECEMBER 31, 2008

	Total Costs	Exclusions	Exclusion Note	Direct Costs	Allowable Indirect Costs
Subtotal, from page 2	$ 6,455,887	$ 164,565		$ 3,971,332	$ 2,319,990
Payroll, administrative	694,673	-		-	694,673
Payroll, vacation	48,697	-		-	48,697
Payroll, holiday	6,953	-		-	6,953
Payroll, personal time	5,295	-		-	5,295
Payroll, paid absence	406	-		-	406
Provision for taxes, Federal	(32,724)	(32,724)	(e)	-	-
Provision for taxes, state	(2,658)	-		-	(2,658)
Deferred tax benefit, Federal	12,038	12,038	(e)	-	-
Deferred tax benefit, state	(12,488)	-		-	(12,488)
	$ 7,176,079	$ 143,879		$ 3,971,332	$ 3,060,868

Legend:

(a) To exclude advertising costs per FAR 31.205-1.
(b) To exclude gifts and contributions per FAR 31.205-8.
(c) To exclude entertainment costs per FAR 31.205-14.
(d) To exclude interest and other financing costs per FAR 31.205-20.
(e) To exclude Federal income taxes per FAR 31.205-41.
(f) To exclude unsupported costs per FAR 31.201-2.
(g) To exclude costs of alcoholic beverages per FAR 31.205-51.
(h) To exclude travel and meal costs in excess of maximum per diem rates per FAR 31.205-46.
(i) To exclude selling costs per FAR 31.205-38.
(j) To exclude legislative lobbying costs per FAR 31.205-22.
(k) To exclude bad debt per FAR 31.205-3.
(l) To exclude direct costs per FAR 31.202.

See accompanying notes to schedule of field and office overhead rates.

URBAN ENGINEERS OF NEW YORK, PC
SCHEDULE OF FIELD AND OFFICE OVERHEAD RATES
ALLOCATED FIELD AND OFFICE INDIRECT COSTS
FOR THE YEAR ENDED DECEMBER 31, 2008

	Allowable Indirect Costs	Allocation Method	Allocated Amounts	
			Field	Office
Administrative fees	$ 246,084	Gross PR %	$ 84,259	$ 161,825
Advertising	-	N/A	-	-
Bad debt	-	N/A	-	-
Computer expense	16,183	Build %	2,790	13,393
Conference and seminars	14,741	Direct PR %	5,525	9,216
Contributions	-	N/A	-	-
Depreciation	26,422	Build %	4,555	21,867
Dues and subscriptions	14,193	Direct PR %	5,320	8,873
Employee relations	9,507	Direct PR %	3,563	5,944
Equipment maintenance	4,158	Build %	717	3,441
Equipment rental	5,137	Build %	886	4,251
Insurance, employee benefits	162,968	Gross PR %	55,800	107,168
Insurance, other	34,305	Gross PR %	11,746	22,559
Insurance, professional liability	44,124	Sales %	16,026	28,098
Interest	-	N/A	-	-
Legal and accounting	26,604	Direct PR %	9,971	16,633
License and inspections	442	Build %	76	366
Meals and entertainment	12,608	Direct PR %	4,725	7,883
Office expense	10,681	Build %	1,841	8,840
Postage and freight	5,980	Build %	1,031	4,949
Profit sharing expense	54,202	Gross PR %	18,559	35,643
Recruiting	106	Direct PR %	40	66
Rent, New York City	24,728	100% Design	-	24,728
Rent, Buffalo	69,276	Build %	11,943	57,333
Supplies, reproduction	8,714	100% Design	-	8,714
Telephone	26,225	Build %	4,521	21,704
Travel and lodging	119,300	Build %	20,567	98,733
Tuition	15,026	Direct PR %	5,632	9,394
Taxes, miscellaneous	54	Build %	9	45
Taxes, New York City	3,112	Sales %	1,130	1,982
Taxes, payroll	343,982	Gross PR %	117,779	226,203
Payroll, production	-	N/A	-	-
Payroll, production, OT premium	-	N/A	-	-
Payroll, production, vacation	141,881	Actual	44,235	97,646
Payroll, production, holiday	81,260	Actual	28,134	53,126
Payroll, production, personal time	65,277	Actual	24,762	40,515
Payroll, production, paid absence	1,293	Actual	1,293	-
Payroll, production, general time	731,417	Actual	163,276	568,141
Subtotal, to page 5	$ 2,319,990		$ 650,711	$ 1,669,279

See accompanying notes to schedule of field and office overhead rates.

URBAN ENGINEERS OF NEW YORK, PC
SCHEDULE OF FIELD AND OFFICE OVERHEAD RATES
ALLOCATED FIELD AND OFFICE INDIRECT COSTS (CONTINUED)
FOR THE YEAR ENDED DECEMBER 31, 2008

	Allowable Indirect Costs	Allocation Method	Allocated Amounts Field	Allocated Amounts Office
Subtotal, from page 4	$ 2,319,990		$ 650,711	$ 1,669,279
Payroll, administrative	694,673	Direct PR %	260,363	434,310
Payroll, vacation	48,697	Direct PR %	18,252	30,445
Payroll, holiday	6,953	Direct PR %	2,606	4,347
Payroll, personal time	5,295	Direct PR %	1,985	3,310
Payroll, paid absence	406	Direct PR %	152	254
Provision for taxes, Federal	-	N/A	-	-
Provision for taxes, state	(2,658)	Sales %	(965)	(1,693)
Deferred tax benefit, Federal	-	N/A	-	-
Deferred tax benefit, state	(12,488)	Sales %	(4,536)	(7,952)
	$ 3,060,868		$ 928,568	$ 2,132,300
Direct Labor	$ 2,711,439		$ 1,016,309	$ 1,695,130
Overhead Rate =	Allowable Indirect Costs / Direct Labor	=	91.37%	125.79%
Facilities Capital Cost of Money (FCCM)	$ 2,204		N/A	$ 2,204
Percent of Direct Labor	0.081%		0.00%	0.13%

Allocation Methods	Field	Office
Direct PR %	37.48%	62.52%
Gross PR %	34.24%	65.76%
Sales %	36.32%	63.68%
Build %	17.24%	82.76%

See accompanying notes to schedule of field and office overhead rates.

URBAN ENGINEERS OF NEW YORK, PC
NOTES TO SCHEDULE OF FIELD AND OFFICE OVERHEAD RATES
FOR THE YEAR ENDED DECEMBER 31, 2008

NOTE 1. NATURE OF BUSINESS

Urban Engineers of New York, PC (the "Company") is a multi-disciplinary engineering firm specializing in the design and construction management of transportation projects from the feasibility and planning stages through design, construction, and post-construction services. The majority of the services the Company provides are undertaken as cost-plus-fixed-fee, specific-rate and fixed-fee contracts.

NOTE 2. BASIS OF PRESENTATION

The accompanying schedule of field and office overhead rates (the "schedule") was prepared on the basis of accounting prescribed in Part 31 of the Federal Acquisition Regulations (the "FAR"). Accordingly, this schedule is not intended to present the results of operations of the Company in conformity with accounting principles generally accepted in the United States of America. In addition, the schedule reflects the rates of the Company only and does not include the rates of any of the Company's affiliates.

NOTE 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Accounting system

The Company's method of estimating costs for pricing purposes during the proposal process is consistent with the accumulation and reporting of costs under its job-order cost accounting system. This system is maintained for the recording and accumulating of costs incurred under the Company's contracts. Each project is assigned a job number so that costs may be segregated and accumulated in the job-order cost accounting system.

Contract costs

Contract costs include direct labor costs, subcontractor costs, and those indirect costs related to contract performance such as indirect labor, payroll taxes, employee benefits, supplies, and other contract costs.

The Company utilizes the accrual basis of accounting for financial reporting purposes and recognizes contract costs as incurred.

Labor-related costs

The Company charges project labor for all jobs based on actual labor costs. Overtime premium costs are included in the direct labor base.

Use of estimates

The preparation of the schedule in conformity with the basis of accounting prescribed in Part 31 of the FAR requires management to make estimates and assumptions that affect the reported amounts of expenses during the reporting period. Actual results could differ from those estimates.

NOTE 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Depreciation/leasing

Certain assets are purchased and depreciated, while others are leased and considered operating leases, and the annual lease costs are included in the overhead pool. Depreciation is provided on a straight-line and accelerated basis over the estimated useful lives of the various assets, which are as follows:

Equipment	3-5 years
Furniture and fixtures	7 years
Leasehold improvements	Shorter of useful life (4-5 years) or lease term

The Company leases certain assets under various operating leases. The annual lease costs are included in the overhead pool.

Income taxes

Deferred income taxes are determined using the liability method in accordance with Statement of Financial Accounting Standards ("SFAS") No. 109, "Accounting for Income Taxes." Under this method, deferred tax assets and liabilities are determined based on differences between financial reporting and tax bases of assets and liabilities (i.e., temporary differences) and are measured using enacted tax rates and laws that are expected to be in effect when the differences are expected to be recovered or settled. Deferred tax assets are reduced by a valuation allowance when it is more likely than not that some portion or all of the deferred tax assets will not be realized.

Uncertain tax positions

In June 2006, the Financial Accounting Standards Board ("FASB") released FASB Interpretation ("FIN") No. 48, "Accounting for Uncertainty in Income Taxes." FIN 48 interprets the guidance in SFAS No. 109, "Accounting for Income Taxes." When FIN 48 is implemented, reporting entities utilize different recognition thresholds and measurement requirements when compared to prior technical literature. On December 30, 2008, the FASB Staff issued FASB Staff Position ("FSP") FIN 48-3, "Effective Date of FASB Interpretation No. 48 for Certain Nonpublic Enterprises." As deferred by the guidance in FSP FIN 48-3, the Company is not required to implement the provisions of FIN 48 until fiscal years beginning after December 15, 2008. As such, the Company has not implemented those provisions in the accompanying schedule.

Since the provisions of FIN 48 have not been implemented in accounting for uncertain tax positions, the Company continues to utilize its prior policy of accounting for these positions, following the guidance in SFAS No. 5, "Accounting for Contingencies." Disclosure is not required of a loss contingency involving an unasserted claim or assessment when there has been no manifestation by a potential claimant of an awareness of a possible claim or assessment unless it is considered probable that a claim will be asserted and there is a reasonable possibility that the outcome will be unfavorable. Using that guidance, as of December 31, 2008, the Company has no uncertain tax positions that qualify for either recognition or disclosure in the accompanying schedule.

URBAN ENGINEERS OF NEW YORK, PC
NOTES TO SCHEDULE OF FIELD AND OFFICE OVERHEAD RATES
FOR THE YEAR ENDED DECEMBER 31, 2008

NOTE 4. PROFIT SHARING PLAN

The Company participates in a savings plan sponsored by Urban Engineering, Inc. ("Urban Inc."), which qualifies under Section 401(k) of the Internal Revenue Code. Urban Inc. is related to the Company through common ownership. The plan was amended, effective January 1, 2007, to allow participating employees to defer up to 100% of pre-tax salary, but not more than statutory limits. The plan provides for matching employer contributions of 50% of a participant's contributions, with a maximum employer contribution of 1.5% of a participant's earnings. The Company's matching contributions for the year ended December 31, 2008, included in profit sharing expense in the accompanying schedule, amounted to $54,202.

NOTE 5. RELATED PARTY TRANSACTIONS

The Company was charged administrative fees by Urban Inc. for management, accounting and administrative services. Fees for these services, included in administrative expenses in the accompanying schedule, totaled $246,084 for the year ended December 31, 2008.

Additionally, the Company is engaged by or engages Urban Inc., Urban Engineers of Erie, Inc. ("Erie"), an affiliate related to the Company through common ownership, and Marvin Waxman Consulting Engineers, Inc. ("Waxman"), an affiliate related to the Company through common ownership, on a sub-contract basis. For the year ended December 31, 2008, revenues for services provided to Urban Inc. and Erie totaled $2,961,817, and costs for services, included in direct expenses in the accompanying schedule, received from all three affiliates amounted to $248,060.

The Company also received advances from Urban Inc. during 2008. Interest on these advances accrues monthly at a rate of prime plus 1/2% per annum. Interest expense accrued and unpaid for the year ended December 31, 2008, amounted to $55,586.

NOTE 6. FACILITIES CAPITAL COST OF MONEY

The Facilities Capital Cost of Money (the "FCCM") Rate has been calculated in accordance with FAR Section 31.205-10, using the Company's average net book values of equipment and facilities multiplied by the average Treasury rates for the applicable period, as shown below:

Net capital assets - January 1, 2008	$ 37,616
Net capital assets - December 31, 2008	51,661
	$ 89,277
Average net capital assets	$ 44,639
Average treasury rate	4.9375%
Facilities capital cost of money	$ 2,204
Direct labor base	$ 2,711,439
FCCM Rate	0.081%

INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

To the Officers and Directors
Urban Engineers of New York, PC

We have audited the schedule of field and office overhead rates (the "schedule") of Urban Engineers of New York, PC (the "Company") for the year ended December 31, 2008, and have issued our report thereon dated July 29, 2009. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States.

Internal Control over Financial Reporting

In planning and performing our audit, we considered the Company's internal control over financial reporting as a basis for designing our auditing procedures for the purpose of expressing our opinion on the schedule, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of the Company's internal control over financial reporting.

A *control deficiency* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent or detect misstatements on a timely basis. A *significant deficiency* is a control deficiency, or combination of control deficiencies, that adversely affects the Company's ability to initiate, authorize, record, process, or report financial data reliably in accordance with Part 31 of the Federal Acquisition Regulations, such that there is more than a remote likelihood that a misstatement of the Company's schedule that is more than inconsequential will not be prevented or detected by the Company's internal control.

A *material weakness* is a significant deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that a material misstatement of the schedule will not be prevented or detected by the Company's internal control.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and would not necessarily identify all deficiencies in internal control that might be significant deficiencies or material weaknesses. We did not identify any deficiencies in internal control over financial reporting that we consider to be material weaknesses, as defined above.

1800 JFK BOULEVARD, PHILADELPHIA, PA 19103 • (215) 545-4800 • FAX (215) 545-4810

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Company's schedule is free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, and contracts, including the provisions of the applicable sections of Part 31 of the Federal Acquisition Regulations, noncompliance with which could have a direct and material effect on the determination of schedule amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards.*

This report is intended solely for the information and use of management and government agencies or other customers related to contracts employing cost principles of the Federal Acquisition Regulations, and is not intended for and should not be used by anyone other than these specified parties.

Cotrin Cooperman & Company, LLP
CERTIFIED PUBLIC ACCOUNTANTS

July 29, 2009

URBAN PREMIUM/OVERTIME PAY POLICY

- Overtime is paid in accordance with the FLSA laws.
- Overtime is paid for hours worked in excess of 40 hours.
- Overtime can be paid at straight time or time and a half and shift differentials will only be paid should the client contract state it.

KS Engineers, P.C.

Multiplier: Overhead and Fee Summary - (October 2010)

Location	Direct Labor	Fringe	Subtotal	G&A	Subtotal	Profit	Total Multiplier
Home Office	1.0	46.0%	1.46	82.0%	2.28	10%	2.50

EXHIBIT A

KS ENGINEERS, P.C.
STATEMENT OF DIRECT LABOR, FRINGE BENEFITS AND GENERAL OVERHEAD
FOR THE YEAR ENDED DECEMBER 31, 2009

BASE/ELEMENT OF EXPENSE	PER GENERAL LEDGER	FAR DISALLOWANCES	NOTES	FAR ALLOWABLE COSTS	ALLOCATION TO FIELD	FIELD ALLOCATION METHOD	ALLOCATION TO OFFICE
DIRECT LABOR	$ 8,059,035	$ 176,375	a	$ 7,882,660	$ 3,620,900		$ 4,261,760
				100%	46%		54%
BURDEN AND FRINGE COSTS							
COMPENSATED ABSENCES	1,221,859			1,221,859			
PAYROLL TAXES	1,084,264			1,084,264			
BONUS	281,750			281,750			
401K , DEF COMP PLAN & MISC BENEFITS	223,113			223,113			
GROUP INSURANCE	815,019			815,019			
TOTAL FRINGE COSTS	$ 3,626,804			$ 3,626,804	$ 1,665,972		$ 1,960,831
FRINGE RATE				46%	46%		46%
OVERHEAD							
OFFICER SALARY	530,080			530,080	243,492	A	286,588
INDIRECT SALARIES	2,515,003			2,515,003	1,155,267	A	1,359,736
INDIRECT SALARIES - FIELD DIVISION	519,858			519,858	207,943	C	311,915
INSURANCE	278,827	2,605	b	276,222	126,883	A	149,339
TRAVEL AND MEALS	65,006	16,001	c	49,005	22,511	A	26,495
RENT	696,985	52,172	d	646,813	161,703	B	485,110
OFFICE SUPPLIES	48,524	6,444	e	43,080	10,770	B	32,310
DEPRECIATION	98,026			98,026	24,507	B	73,520
TELEPHONE & UTILITIES	169,101			169,101	42,275	B	126,826
BANK CHARGES	2,877			2,877	1,230	A	1,447
DUES AND PUBLICATIONS	39,901	3,237	f	36,664	9,166	B	27,498
PAYROLL PROCESSING FEE	23,617			23,617	10,845	A	12,769
PROFESSIONAL FEES	507,393			507,393	233,071	A	274,322
AUTO EXPENSES	209,020	109,941	g	99,079	45,512	A	53,567
TAXES	13,065			13,065	6,001	A	7,064
EQUIPMENT LEASES	73,052			73,052	18,263	B	54,789
SECURITY	9,684			9,684	4,448	A	5,236
COMPUTER EXPENSE	96,509			96,509	24,127	B	72,382
SUPPLIES	65,319			65,319	30,004	A	35,315
RECRUITMENT	12,770			12,770	5,866	A	6,904
REPRODUCTION AND PHOTO	14,224			14,224	3,556	B	10,668
REPAIRS AND MAINTENANCE	36,759	1,675	h	35,084	8,771	B	26,313
SEMINARS AND EDUCATION	67,731	12,135	i	55,596	25,536	A	30,058
POSTAGE AND DELIVERY	19,547			19,547	4,887	B	14,660
ADVERTISING	4,964	4,964	j	-	0		-
INTEREST	73,982	73,982	k	-	0		-
CONTRIBUTIONS	11,003	11,003	l	-	0		-
ENTERTAINMENT	525	525	m	-	0		-
PENALTIES	66	66	n	-	0		-
TOTAL OVERHEAD COSTS	$ 5,209,219	$ 294,752		$ 5,911,467	$ 2,426,639		$ 3,484,828
OVERHEAD RATE				76%	67%		82%
TOTAL BURDEN, FRINGE AND OVERHEAD COSTS	$ 9,833,023	$ 294,752		$ 9,538,271	$ 4,092,611		$ 5,445,660
OVERHEAD RATE				121%	113%		126%

ALLOCATION METHOD CODES

A - 45.9%	$ 3,620,900 / $ 7,882,660	FIELD LABOR / TOTAL DIRECT LABOR
B - 25%		ESTIMATED ALLOCATION
C - 40%		ESTIMATED ALLOCATION

Note References

a - Represents premium time excluded from the base.
b - Costs of financing an installment payment plan for insurance unallowable per FAR 31.205-20.
c - Meal and lodging costs in excess of the Jt. Travel Regulation unallowable per FAR31.205-46;
Costs of alcohol unallowable per FAR 31.205-51; Costs of entertainment unallowable per FAR 31.205-14;
Direct costs unallowable per FAR 31.202; Costs deemed unreasonable per FAR 31.201-3.
d - Costs in excess of the normal costs of ownership under common control unallowable per FAR 31.205-36.
e - Entertainment costs unallowable per FAR 31.205-14.
f - Lobbying costs unallowable per FAR 31.205-22.
g - Personal use of auto unallowable per FAR 31.205-6(m)(2);
Costs of direct use of company vehicles are unallowable per FAR 31.202.
h - Prepaid maintenance costs unallocable per FAR 31.201-4.
i - Entertainment expense unallowable per FAR 31.205-14; Unallowable advertising and public relations costs per FAR 31.205-1;
Meal costs in excess of the Jt. Travel Regulation unallowable per FAR31.205-46; Lobbying costs unallowable per FAR 31.205-22.
j - Advertising is unallowable public relations per FAR 31.205-1.
k - Interest is unallowable per FAR 31.205-20.
l - Contributions are unallowable per FAR 31.205-8.
m - Entertainment costs are unallowable per FAR 31.205-14.
n - Penalties are unallowable per FAR 31.205-15.

Prepared in compliance with the Federal Acquisition Regulations (FAR), Subpart 31.2.

KSE Engineers . Surveyors . Construction Managers
KS Engineers, P.C. 494 Broad Street, 4th Floor, Newark, NJ 07102 . P: 973.623.2999 . F: 973.242.2955 . www.kseng.com

KSE Premium/Overtime Pay Policy

- Only non-exempt employees are eligible for overtime pay.
- Overtime premium is paid for work hours over 40 hours per week, and during Holidays, Saturdays and Sundays.
- A 10% night pay differential is paid for all night work.

W&S

Armand Corporation
Statement of Overhead Rates
For the year ended December 31, 2009

Cost Element	Submitted	Adjustment	As adjusted
Direct labor	$ 708,978		$ 708,978
Overhead Expenses:			
Indirect labor	312,901		312,901
Payroll taxes	100,477		100,477
Employee benefits	45,051		45,051
Insurance	59,486		59,486
Office & supplies	27,061	(3,338)a	23,723
Travel and auto	80,490		80,490
Depreciation	17,296		17,296
Telephone	26,123		26,123
Equipment lease	13,637		13,637
Repairs & maintenance	27,974		27,974
Professional fees	14,898		14,898
Utilities	14,925		14,925
Advertising	3,260	(3,260)b	0
Property taxes	33,888		33,888
Meals & entertainment	2,426	(2,426)c	0
Payroll Service	2,002		2,002
Amortization	4,589		4,589
Dues and subscriptions	2,164		2,164
Conference and seminars	6,707		6,707
Bank charges	1,395		1,395
Contributions	1,350	(1,350)d	0
Corporate taxes	3,949		3,949
Total	$ 802,049	(10,374)	$ 791,675
Overhead rate	113.13%		111.66%

Explanation of adjustments:

(a) Xmas costs unallowed per prior years audit change.
(b) Advertising unallowed cost under FAR 31.205-1.
(c) Meals and entertainment unallowed cost under FAR 31.205-14.
(d) Contributions unallowed cost under FAR 31.205-8.

See accompanying notes and accountants' report

ARMAND

ARMAND CORPORATION

OVERTIME POLICY

Employees paid on an hourly basis are entitled to overtime pay as follows:

- All hours worked in excess of forty (40) per week are paid at the rate of time and one-half (rate x 1.5)
- Employees do not receive overtime if they work more than eight (8) hours in a single day until they have worked in excess of the weekly forty (40) hour requirement

PAID HOLIDAYS

Recognized by Armand Corporation for the Year 2010

New Year's Day – Friday, 01/01/10
Martin Luther King, Jr. Day * - Monday, 01/18/10
Memorial Day – Monday, 05/31/10
Independence Day – Monday, 07/05/10
Labor Day – Monday, 09/06/10
Thanksgiving Day – Thursday, 11/25/10
Day After Thanksgiving – Friday, 11/26/10
Christmas Day – Friday, 12/24/10

**This is a floating holiday. If you work this day you may substitute President's Day, Good Friday, or any other day prior to April 30th with straight pay.*

TALSON SOLUTIONS, LLC
Calculation of Overhead Rate
Year Ended December 31, 2007

Total Operating Expense for 2007	$ 826,659
Less: Direct Costs	
Direct labor (Billable)	(355,666)
Payroll taxes (Billable)	(12,815)
Outside Consultants	(63,209)
	(431,689)
Less: Unallowable Costs	
Donations	(2,800)
Interest expense	(271)
Marketing	(11,907)
Entertainment	(914)
Meals	(3,949)
	(19,841)
	375,129
Add Back:	
RSB Non-Chargeable	206,761
Total Overhead Costs - 2007	$ 581,889
Billable Labor, Taxes and Consultants	$ 431,689
Overhead Rate	1.35

TALSON SOLUTIONS LLC

306 Market Street
Fourth Floor
Philadelphia, PA 19106

215-592-9634 (P)
215-592-9636 (F)
www.talsonsolutions.com

Premium Pay Policy

When office or project commitments cannot be met during regular working hours, employees may be requested to work in excess of forty (40) hours per week. If overtime hours are incurred, all overtime must be coded to the project worked on when overtime actually occurred. Requirements for overtime must be pre-approved by the engagement manager. For all employees, all authorized hours worked will be charged to the cost objective for which the effort was expended, both for direct and indirect work. The Authority rates do not account for any uncompensated overtime.

G. M/WBE PARTICIPATION

COMMITMENT TO MBE/WBE PARTICIPATION

Urban is committed to meeting the Authority's goals for MBE/WBE participation on this assignment. If selected, Urban will provide details of our MBE/WBE participation plan at that time. The plan will identify our MBE/WBE partners, establish participation values in accordance with the Authority's goals, and define processes used to coordinate participation with the Authority.

Our Team includes long-standing partners of our firm and combines some of the most well-known firms in project management, design, and construction management in the region, including:

KS Engineers, P.C. (MBE)

KS Engineers, P.C. (KSE), a certified MBE with offices in Newark, NJ, New York City, and Philadelphia, PA, is a highly qualified professional engineering firm that provides civil engineering; structural engineering; geotechnical engineering; construction management and inspection; landscape architecture; aerial mapping ground control; and boundary survey, topographic survey, right-of-way and GPS mapping services. Over the past decade, KSE has grown from a small firm to a highly reputable, mid-sized, full-service civil/structural engineering firm. KSE has a staff of approximately 200 full-time employees, including 35 design professionals, 80 construction inspectors of various levels, four licensed land surveyors, five survey crews, 30 licensed civil/structural engineers, eight LEED certified professionals, and more than 20 support engineers and surveyors.

KSE's experience with the Authority includes numerous assignments as a prime consultant under the various "call-in" contracts listed below with the Port Authority of New York and New Jersey:

- Construction Management Services (MBE/WBE) on a "Call-In" Basis during 2010
- Topographic & Boundary Surveying Services (MBE/WBE) on a "Call-In" Basis during 2010
- Civil Engineering Services (MBE/WBE) as requested on a "Call-In" Basis during 2008, 2009 and 2010
- Structural Engineering Services (MBE/WBE) on a "Call-In" Basis During 2008, 2009 and 2010
- Construction Management Services (MBE/WBE) on a "Call-In" Basis 2007, 2008 and 2009
- Facility Condition Survey (M/WBE) as requested on a "Call-In" Basis during 2009, 2010 and 2011
- Facility Condition Survey for Building Facilities as requested on a "Call-In" Basis during 2009, 2010 and 2011
- Topographic & Boundary Surveying Services (MBE/WBE) on a "Call-In" Basis during 2007, 2008 and 2009
- General Traffic Engineering Services (MBE/WBE) on a "Call-In" Basis During 2003 and 2004

Whether project needs call for a professional CM to augment the owner's staff with pre-planning, design, construction, engineering, and management expertise or on-site construction teams consisting of resident engineers and inspectors for reviewing work in-progress for contractor conformance to the specifications, design intent, and safety programs, KSE has the expertise in carrying out successful field programs.

- *Bridges* - From simple to complex bridge projects involving rehabilitation, replacement, painting, demolition, or new facilities, KSE is a leader in providing full-service construction inspection and management for vehicular, rail, pedestrian, movable, trestle, viaduct, and culvert structures.

- *Highways* - KSE routinely provides construction inspection, administration, and management services for controlled access highways, arterial highways, county and municipal roadways, park-and-ride facilities, interchanges, toll plazas, and other highway-related construction programs.

- *Rail/Transit* - KSE provides comprehensive construction inspection assistance and management for light and heavy rail, subways, commuter rail, freight rail, and high-speed rail, including yards, shops, terminals, stations, bridges, and tunnels. KSE consistently meets client expectations and project objectives in a professional and cost-effective manner.

- *Facilities/Buildings* - For commercial, residential, educational, and transportation facilities and buildings, KSE provides on-site resident engineering, site safety inspection, management and inspection services for contractor conformance to project requirements and compliance to design intent, safety, and quality control.

Armand Corporation (WBE)

Armand Corporation is a minority and woman-owned engineering, construction management, and technology business created in 1990 and incorporated in 1991. Since the company's inception, Armand has successfully conceived and implemented numerous and varied projects in engineering and construction management. The company's experience encompasses a variety of markets, including transportation, utilities, commercial building, housing, and institutional facilities. Armand has had substantial involvement in projects with construction values from $500,000 to $1.2 billion. Armand's staff of 23 employees includes engineers, construction managers, estimators, and inspectors.

Armand has a proven history of high-quality services to federal, state, and local agencies in this region. The firm has excelled in providing quality services from the pre-design through the construction phase for our clients, and has earned a reputation for delivering projects on-time and on-budget. Armand has been ranked among the Top 50 CM Firms for four consecutive years by NJ Biz (2003 – 2007). Throughout the company's history, Armand has provided project management oversight, on-site engineering support, environmental permitting, contract administration, inspections, cost controls, and estimating services for our clients. In the past nineteen years, Armand has participated on variety of transportation and facility projects including:

- Quality Assurance and Quality Control services for NJ Transit River Line Transit System.
- Constructability Review Services for the $25 million Port Imperial Ferry Terminal.

- Project Management Services for Base Realignment and Closure at the Naval Air Warfare Center.
- Project Management Services for five K-12 contracts throughout New Jersey.
- Construction Management Services for the School District of Philadelphia's Capital Improvement Program.

Talson Solutions, LLC (WBE)

Founded in 2001, Talson has assessed risk, performed construction audits, and worked towards controlling project costs and improving quality across all disciplines to ensure that each party involved in the project provides the services expected within the costs allowed. Talson brings together an interdisciplinary team of seasoned accountants, architects, engineers, finance specialists, and project managers and attribute their success to their ability to work cooperatively with the many parties involved in a project. Presently, Talson is working with Urban on the Port Authority's Tower One Project (The Freedom Tower), as part of the Fortress Monitoring Group (FMG). FMG is a joint venture that brings together professional personnel recognized for their engineering, forensic auditing, investigative, legal abilities, and experience. Urban's personnel constitute FMG's engineering division and provide support related to its purpose of preventing fraud, waste, abuse, and/or corruption; to detect it; and, if detected, to coordinate with the Port Authority's Inspector General the definitive and effective actions to be taken. Talson is also a part of Urban's federal contract to provide Program Management Oversight to the Federal Transportation Administration on the Second Avenue Subway project here in New York City.

Talson was formed for the purpose of providing a wide range of specialty construction consulting services, contract audit and compliance monitoring, and risk reduction on major capital programs and projects. Talson's mission is to provide project stakeholders, including audit committees, funding sources, trustees, and executive management, with verifications and assurances that their project team and contractors are executing a well-planned project, are performing efficiently and effectively, and are minimizing risk. Talson's diverse staff backgrounds provide insight into complex contracts, design and construction management, financial controls, and project events. Services include:

- Capital Program Risk Assessment
- Contract Audit & Compliance
- Cost Recovery Audits
- Project Monitoring and Oversight
- Retail Construction Support
- Quality Audits
- Training
- ARRA Stimulus Oversight Support

KS ENGINEERS, P.C.

THE PORT AUTHORITY OF NY & NJ

March 15, 2010

Mr. Kamal Shahid
President
KS Engieers, P.C.
494 Broad Street, 4th Floor
Newark, NJ 07102

RE: **MINORITY-OWNED BUSINESS ENTERPRISE CERTIFICATION**
TYPE: **ARCHITECTUAL & ENGINEERING**

Dear Mr. Shahid:

We have completed our review of your qualifications for certification as a **Minority-owned Business Enterprise (MBE)**, and we are pleased to inform you that your application has been approved. The references you submitted for **KS Engieers, P.C.** have been reviewed and are satisfactory. Your firm has been included on our roster of eligible **MBEs** for contracts with the Port Authority of New York and New Jersey.

Please be advised that the Port Authority's Office of Business & Job Opportunity periodically reviews all certifications and reserves the right to decertify any previously certified firm that no longer meets the Port Authority's guidelines for **MBE** designation.

Additionally, any **MBE** whose business incurs changes in any substantial manner must notify the Office of Business & Job Opportunity within thirty days of that change. These changes include, but are not limited to, a change of officers, directors, location, corporate name, or financial condition. Failure to advise of these changes may result in our removing the firm from our roster of eligible **MBEs**. If you have any questions regarding your certification, please feel free to call Weicong Mao at (212) 435-7816.

Sincerely,

Lash Green
Director
Office of Business & Job Opportunity

LG/LG

Enclosure: Certificate
Registration Notice

233 Park Avenue South
New York, NY 10003
T: 212 435 7000

THE PORT AUTHORITY OF NY & NJ

Anthony R. Coscia
Chairman

Christopher O. Ward
Executive Director

Certified

by

Office of Business & Job Opportunity

KS Engineers, P.C.

Certificate PA-20373

This certificate acknowledges that the above named firm is certified as a **Minority-owned Business Enterprise.** This company has met the criteria for ownership and control as established by the Port Authority Policy for Revised Minority, Woman and Small Business Enterprise (M/W/SBE) Programs, dated June 10,1993.

This certification will remain in effect for five years from the date of notice and may be extended only upon submission by you, and acceptance by the Port Authority of a recertification application attesting that the ownership and control of the business, on which this certificate is granted, has not changed. This office must be notified within 30 days of any material changes in the business which affect ownership and control. Failure to do so may result in the revocation of this certification and/or imposition of other sanctions.

Lash Green
Director
Certified: 3/15/2010

Rosemary Jenkins-Varela
Manager, Certification
Scheduled Re-evaluation: 3/14/2015

Form: 6/10/93

TALSON SOLUTIONS, LLC

THE PORT AUTHORITY OF NY & NJ

Anthony R. Coscia
Chairman

Kenneth J. Ringler, Jr.
Executive Director

Certified

by

Small Business Programs

Talson Solutions, LLC

Certificate PA-25643

This certificate acknowledges that the above named firm is certified as a **Minority Business Enterprise.** This company has met the criteria for ownership and control as established by the Port Authority Policy for Revised Minority, Woman and Small Business Enterprise (M/W/SBE) Programs, dated June 10, 1993.

This certification will remain in effect for five years from the date of notice and may be extended only upon submission by you, and acceptance by the Port Authority of a recertification application attesting that the ownership and control of the business, on which this certificate is granted, has not changed. This office must be notified within 30 days of any material changes in the business which affect ownership and control. Failure to do so may result in the revocation of this certification and/or imposition of other sanctions.

Lash Green
General Manager
Certified: July 28, 2006

Rosemary Jenkins Varela
Manager, Certification
Scheduled Re-evaluation: July 27, 2011

Form: 6/10/93

ARMAND CORPORATION

THE PORT AUTHORITY OF NY & NJ

September 22, 2006

Ms. Barbara Armand
President
Armand Corporation
1815 Garden Avenue
Cherry Hill, NJ 08003

RE: M/WBE RECERTIFICATION
TYPE: ARCHITECTURAL & ENGINEERING

Dear Ms. Armand:

This is to acknowledge receipt of the recertification Application which your firm submitted. **Armand Corporation** continues to be on our roster of eligible **Minority/Women-owned Business Enterprises (M/WBEs)** for contracts with The Port Authority of New York and New Jersey.

Please be advised that the Port Authority's Small Business Programs Unit periodically reviews all certifications and reserves the right to decertify any previously certified firm that no longer meets the Port Authority's guidelines for **M/WBE** designation.

Additionally, any **M/WBE** whose business incurs changes in any substantial manner must notify the Small Business Programs Unit within thirty days of that change. These changes include, but are not limited to, a change of officers, directors, location, corporate name, or financial condition. Failure to advise of these changes may result in our removing the firm from our roster of eligible **M/WBEs**. If you have any questions regarding your certification, please feel free to contact Cecelia Wallace at (212) 435-7808.

Sincerely,

Lash Green
General Manager
Small Business Programs

LG/CAW/ps

Enclosures: Certificate
Registration Notice

233 Park Avenue South
New York, NY 10003
T: 212 435 7000

THE PORT AUTHORITY OF NY & NJ

Anthony R. Coscia
Chairman

Kenneth J. Ringler, Jr.
Executive Director

Certified

by

Small Business Programs

Armand Corporation

Certificate PA-11030

This certificate acknowledges that the above named firm is certified as a **Minority/Woman-owned Business Enterprise**. This company has met the criteria for ownership and control as established by the Port Authority Policy for Revised Minority, Woman and Small Business Enterprise (M/W/SBE) Programs, dated June 10, 1993.

This certification will remain in effect for five years from the date of notice and may be extended only upon submission by you, and acceptance by the Port Authority of a recertification application attesting that the ownership and control of the business, on which this certificate is granted, has not changed. This office must be notified within 30 days of any material changes in the business which affect ownership and control. Failure to do so may result in the revocation of this certification and/or imposition of other sanctions.

Lash Green
General Manager
Certified: September 22, 2006

Rosemary Jenkins-Varela
Manager, Certification
Scheduled Re-evaluation: September 21, 2011

Form: 6/10/93

H. FIRM AFFILIATES

FIRM AFFILIATES

For any assignments in New York, work will be performed by Urban Engineers of New York, PC, and for any assignments in New Jersey, work will be performed by Urban Engineers, Inc., an affiliate of Urban Engineers of New York, PC.

The affiliates of Urban Engineers of New York, PC are:

Name	Address	City	State	Zip
Urban Engineers, Inc.	530 Walnut Street 14th Floor	Philadelphia	PA	19106
Urban Engineers of Erie, Inc.	1319 Sassafras Street	Erie	PA	16501
Urban Construction Systems, Inc.	530 Walnut Street 14th Floor	Philadelphia	PA	19106
Urban International, Inc.	530 Walnut Street 14th Floor	Philadelphia	PA	19106

I. CONFLICT OF INTEREST

URBAN ENGINEERS OF NEW YORK, P.C.

CONFLICT OF INTEREST

Urban Engineers of New York, P.C. has identified the following potential conflicts of interest which may give rise to conflicts with assignments issued under this Agreement:

1. Integrity Monitoring at the Tower One (Freedom Tower) at the World Trade Center site as a member of a joint venture with Fortress Monitoring Group;
2. On-Call Professional Planning, Project Management, and Related Services for PATH as a member of a joint venture with Louis Berger Associates;
3. PMO assignments for the Federal Transit Administration in New York City; and
4. Team member firms that may be asked to perform work at the World Trade Center site could create a conflict of interest with this assignment and the assignment identified in paragraph 1, above.

Urban is committed to working with the PANYNJ to avoid, neutralize, or mitigate any conflict that may arise in the performance of this Agreement.

KS ENGINEERS, P.C.

KSE Engineers . Surveyors . Construction Managers
KS Engineers, P.C. 494 Broad Street, 4th Floor, Newark, NJ 07102 . P: 973.623.2999 . F: 973.242.2955 . www.kseng.com

The Port Authority of New York and New Jersey
One Madison Avenue, 7th Floor
New York, NY 10010
Attention: RFP Custodian

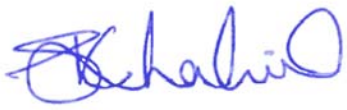
Re: RFP # 22388 – Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013 and 2014

Conflict of Interest Statement

To Whom it May Concern:

To the best of our knowledge, ***KS Engineers, P.C. (KSE),*** does not have any conflict of interest, nor give the appearance of a possible conflict of interest, in regards to the referenced project for Port Authority of New York and New Jersey.

Very truly yours,
KS Engineers, P.C.



Kamal Shahid, PE
President

TALSON SOLUTIONS, LLC

TALSON
SOLUTIONS LLC

306 Market Street
Fourth Floor
Philadelphia, PA 19106

215-592-9634 (P)
215-592-9636 (F)
www.talsonsolutions.com

October 19, 2010

Urban Engineers of New York, P.C.
2 Penn Plaza
Suite 1103
New York, NY 10121

Re: Conflicts of Interest – Port Authority of New York and New Jersey

To whom it may concern,

To the best of our knowledge, Talson Solutions, LLC does not have any actual conflicts of interest should it be awarded this Agreement. However, Talson Solutions, LLC is currently under contract for the following assignments which may give rise to conflicts with assignments issued under this Agreement: 1. Integrity Monitoring at the Tower One (Freedom Tower) at the World Trade Center site as a member of a joint venture with Fortress Monitoring Group; and 2. PMO assignments for the Federal Transit Administration in New York City.

Talson is committed to working with the PANYNJ to avoid, neutralize, or mitigate any conflict that may arise in the performance of this Agreement.

Sincerely,

Robert S. Bright
President
Talson Solutions, LLC

ARMAND CORPORATION

ARMAND

www.armandcorp.com

October 19, 2010

Urban Engineers of New York, P.C.
2 Penn Plaza
Suite 1103
New York, NY 10121

Re: Conflict of Interest – Port Authority of New York and New Jersey

To Whom It May Concern:

Armand Corporation is not aware of any conflicts of interest should Urban Engineers be awarded this Agreement. However, Armand Corporation is a joint venture partner in ARMAND/KSE JV that has just been awarded a contract to perform construction management services on a "call-in basis" for the Real Estate Division, of The Port Authority of New York and New Jersey.

Sincerely,

ARMAND CORPORATION

Barbara Armand
President

CORPORATE HEADQUARTERS 1815 Garden Avenue Cherry Hill, NJ 08003 [P] 856.489.8200 [F] 856.489.8212
NEW YORK OFFICE 45 W 36th St. 3rd FL., New York, NY 10018 [P] 646.895.0897 [F] 212.643.3456

J. EXCEPTIONS TO THE STANDARD AGREEMENT

EXCEPTIONS TO THE STANDARD AGREEMENT

Urban Engineers of New York, PC has included with this submission a letter contained in a separate envelope that requests specific exceptions to the standard agreement.

WorleyParsons
resources & energy

EcoNomics

Proposal for

Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013, and 2014

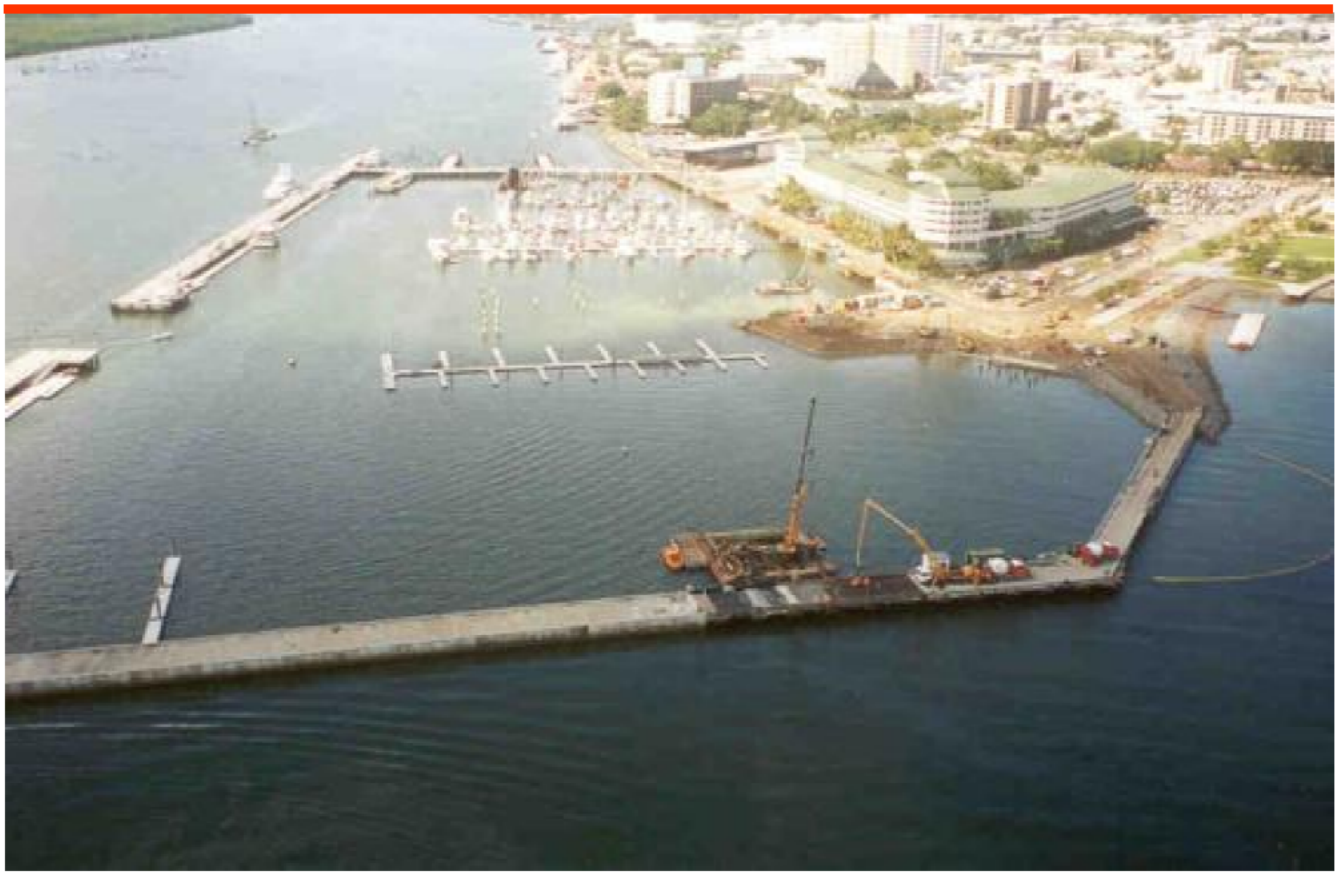
RFP Number 22388

Prepared for

THE PORT AUTHORITY OF NY & NJ

Additions and Edits to Standard Agreements

1010R2734
21 October 2010



WorleyParsons
resources & energy

33 Wood Avenue South
Iselin, New Jersey 08830
USA
Telephone: 732-603-4963
Facsimile: 732-321-6562
www.worleyparsons.com

October 21, 2010

The Port Authority of New York and New Jersey
One Madison Avenue
7th Floor
New York, New York 10010
Attn: RFP Custodian

RE: PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT ENGINEERING SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013, AND 2014
RFP NO. 22388
WORLEYPARSONS PROPOSAL NO. 1010R2734

Dear RFP Custodian:

WorleyParsons Group Inc., in accordance with the above subject RFP, respectfully submits the attached suggested additions and edits to The Port Authority of New York and New Jersey's "Standard Agreements" and its related terms and conditions.

Should you have any questions please do not hesitate to contact me at 610-834-6802 or Mr. John D. Pauling at 856-217-7238.

Sincerely,
WorleyParsons

Chris Ashton
Senior Vice President and General Manager – Eastern Operations

INDEMNIFICATION - add the following as 25.E.

"Any and all personal injury or property claims, damages, losses and expenses arising from or caused by the joint acts or omissions of the parties shall be apportioned between the parties in accordance with applicable law."

INSURANCE – see attached for requested changes to Article 26

Add the following four Articles:

WARRANTY/REMEDY

Consultant warrants that the services to be performed hereunder shall be performed in accordance with the standards customarily utilized by an experienced and competent professional engineering organization rendering the same or similar services under the same or similar circumstances. Consultant shall reperform any of said services which were not performed in accordance with this standard provided Consultant is notified in writing of the nonconformity within one year after the performance of the deficient services. Consultant will perform the remedial work at no cost to the Authority; provided, however, that Consultant shall have no liability or responsibility for repair, modification or replacement of materials, equipment or facilities or the costs associated with such repair or replacement.

With respect to any materials and equipment procured by Consultant on behalf of the Authority, Consultant shall use reasonable efforts to obtain from vendors or suppliers of such equipment or materials the best available warranties for the benefit of The Authority at a price acceptable to The Authority. CONSULTANT MAKES NO WARRANTIES WHATSOEVER WITH RESPECT TO EQUIPMENT AND MATERIALS PROCURED FROM THIRD PARTY VENDORS OR SUPPLIERS. Consultant shall, at The Authority's request, assist the Authority in the enforcement of such warranties as may be extended by third party vendors and suppliers.

THE WARRANTIES SET FORTH IN THIS ARTICLE ARE THE ONLY WARRANTIES MADE BY CONSULTANT IN CONNECTION WITH THE SERVICES. NO OTHER WARRANTIES OF ANY KIND, WHETHER STATUTORY, ORAL, WRITTEN, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL APPLY. THE REMEDIES SET FORTH IN THIS ARTICLE ARE IN LIEU OF AND EXCLUDE ALL OTHER REMEDIES AVAILABLE TO THE AUTHORITY AGAINST CONSULTANT EITHER AT LAW OR IN EQUITY, AND REGARDLESS OF WHETHER SUCH CLAIMS ARE ALLEGED TO HAVE RISEN FROM NEGLIGENCE; BREACH OF WARRANTY; BREACH OF CONTRACT; OR OTHER ACT, ERROR OR OMISSION; OR FROM STRICT OR ABSOLUTE LIABILITY IN TORT; OR FROM ANY OTHER CAUSE WHATSOEVER; OR ANY COMBINATION OF THE FOREGOING.

CONSEQUENTIAL DAMAGES

In no event shall either party be liable to the other for special, indirect, incidental, punitive or consequential damages of any nature (regardless of whether such damages are alleged to have risen from negligence; breach of warranty; breach of contract; or other act, error or omission; or from strict or absolute liability in tort; or from any other cause whatsoever; or any combination of the foregoing) including, but not limited to: damages arising from the use or loss of use of any facility; loss of anticipated profits or revenues; costs of replacement services, goods and utilities; damages arising from delay; or interest.

LIMITATION OF LIABILITY

Consultant's maximum cumulative liability shall be limited to the compensation received by Consultant for the services performed.

FORCE MAJEURE

Neither party shall be liable for any unforeseeable event beyond its reasonable control not caused by the fault or negligence of such party (or its agents, employees and subcontractors), which causes such party to be unable to perform its all or part of its obligations under this Agreement and which it has been unable to overcome by the exercise of reasonable due diligence including but not limited to strikes, disturbances, riots, fire, severe weather, governmental action or inaction, acts of war, acts of terrorism or sabotage, acts of God, or any other causes similar or dissimilar to the foregoing. In the event of the occurrence of such a force majeure event, the party unable to perform shall promptly notify the other party in a writing which describes the circumstances. It shall suspend performance only for such period of time as is necessary as a result of the force majeure event and shall use its best efforts to resume performance as quickly as possible thereafter. The obligation to make payments when due for completed services shall not be excused by a force majeure event. A force majeure event shall be considered a change to the work scope.

26. INSURANCE AND WORKERS' COMPENSATION INSURANCE

A. Commercial Liability Insurance:

1) The Consultant shall take out and maintain at his own expense Commercial General Liability Insurance including but not limited to Premises-Operations, Completed Operations and Independent Contractor coverages in limits of $5,000,000 combined single limit per occurrence and in the aggregate for Bodily Injury Liability and Property Damage Liability. And if vehicles are to be used to carry out the performance of this Agreement, then the Consultant shall also take out, maintain and pay the premiums on Automobile Liability Insurance covering all owned, non-owned and hired autos in $5,000,000 combined single limit per accident for bodily injury and property damage. Any/all activities performed airside must, at all times, be performed while under security escort as approved in advance, and in writing by the Project Manager. If at any time, the Consultant is unescorted in the performance of any field services airside, or if so directed by the Authority, the Commercial General Liability Insurance and Automobile Liability Insurance must contain limits of $10,000,000 combined single limit per occurrence and in the aggregate, as provided in item 2) (a) below. In addition, the liability policies (other than Professional Liability) shall include the Authority and its wholly owned entities as additional insureds and shall be specifically endorsed with a provision that the policy may not be canceled, terminated or modified without thirty (30) days written advance notice to the Project Manager. Moreover, the Commercial General Liability policy shall not contain any provisions (other than a Professional Liability exclusion, if any) for exclusions from liability other than provisions or exclusions from liability forming part of the most up to date ISO form or its equivalent unendorsed Commercial General Liability Policy. The liability policy(ies) and certificate of insurance shall contain separation of insured condition (cross-liability) and severability of interests provisions so that coverage will respond as if separate policies were in force for each insured.

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Further, the certificate of insurance and the liability policy(ies) shall be specifically endorsed that "*The insurance carrier(s) shall not, without obtaining the express advance permission from the General Counsel of the Port Authority, raise any defense involving in any way the jurisdiction of the tribunal over the person of the Port Authority, the immunity of the Port Authority, its*

Commissioners, officers, agents or employees, the governmental nature of the Port Authority, or the provisions of any statutes respecting suits against the Port Authority."

2) Additional Coverages: The Consultant shall have the policy endorsed when required by the Chief Engineer for specific services hereunder and include the additional premium cost thereof as an out-of-pocket expense:

a) If the services of the Consultant, as directed by the Authority, require the performance of services airside, the Commercial General Liability and Automobile Liability coverage limits stipulated in subparagraph 1, above, shall be increased to an amount of $15,000,000 per occurrence and in the aggregate as provided herein.

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Deleted: 2

b) Endorsement to eliminate any exclusions applying to explosion, collapse and underground property damage.

c) Endorsement to eliminate any exclusions on account of ownership, maintenance, operation, use, loading or unloading of watercraft.

d) Coverage for work within 50 feet of railroad.

B. Workers' Compensation Insurance:

1) The Consultant shall take out and maintain Workers' Compensation Insurance in accordance with the requirements of law and Employer's Liability Insurance with limits of $1,000,000 each accident

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2) Additional Coverages: The Consultant shall have the policy endorsed when required by the Engineer for specific services hereunder and include the additional premium cost thereof as an out-of-pocket expense:

a) United States Longshoremen's and Harbor Workers' Compensation Act Endorsement.

b) Coverage B Endorsement - Maritime (Masters or Members of the Crew of Vessels), in limits of not less than $1,000,000 per occurrence.

c) Amendments to Coverage B, Federal Employers' Liability Act in limits of not less than $1,000,000 per occurrence.

C. Professional Liability Insurance:

$2 million each occurrence and in the aggregate, covering negligent acts, errors, mistakes, and omissions arising out of the work or services performed by Consultant, or any person employed by Consultant. All endorsements and exclusions shall be evidenced on the certificate of insurance. The coverage shall be written on an occurrence form or may be written on a claims- made basis with a minimum of a three-year reporting/discovery period.

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D. Compliance:

Prior to commencement of work at the site, the Consultant shall deliver a certificate from its insurer evidencing policies of the above insurance stating the title of this Agreement, the P. A.

Agreement number, compliance with notice of cancellation provisions, and containing a separate express statement of compliance with each of the requirements above set forth to the Project Manager.

1) Upon request of the General Manager, Risk Management/Treasury, the Consultant shall furnish to the Authority a certified copy of each policy itself.

Deleted: , including the provisions establishing premiums

2) Renewal certificates of insurance or policies shall be delivered via e-mail to the Authority's Project Manager at least fifteen (15) days prior to the expiration date of each expiring policy. The General Manager, Risk Management must approve the renewal certificate(s) of insurance before work can resume. If at any time any of the certificates or policies shall become unsatisfactory to the Authority, the Consultant shall promptly obtain a new and satisfactory certificate and policy.

3) If at any time the above liability insurance should be canceled, terminated, or modified so that the insurance is not in effect as above required, then, if the General Manager shall so direct, the Consultant shall suspend performance of the Agreement at the premises. If the Agreement is so suspended, no extension of time shall be due on account thereof. If the Agreement is not suspended (whether or not because of omission of the General Manager to order suspension), then the Authority may, at its option, obtain insurance affording coverage equal to the above required, the cost of such insurance to be payable by the Consultant to the Authority.

4) The requirements for insurance procured by the Consultant shall not in any way be construed as a limitation on the nature or extent of the contractual obligations assumed by the Consultant under this Agreement. The insurance requirements are not a representation by the Authority as to the adequacy of the insurance to protect the Consultant against the obligations imposed on them by law or by this or any other Agreement.

Date Date:

WorleyParsons
resources & energy

EcoNomics

Proposal for

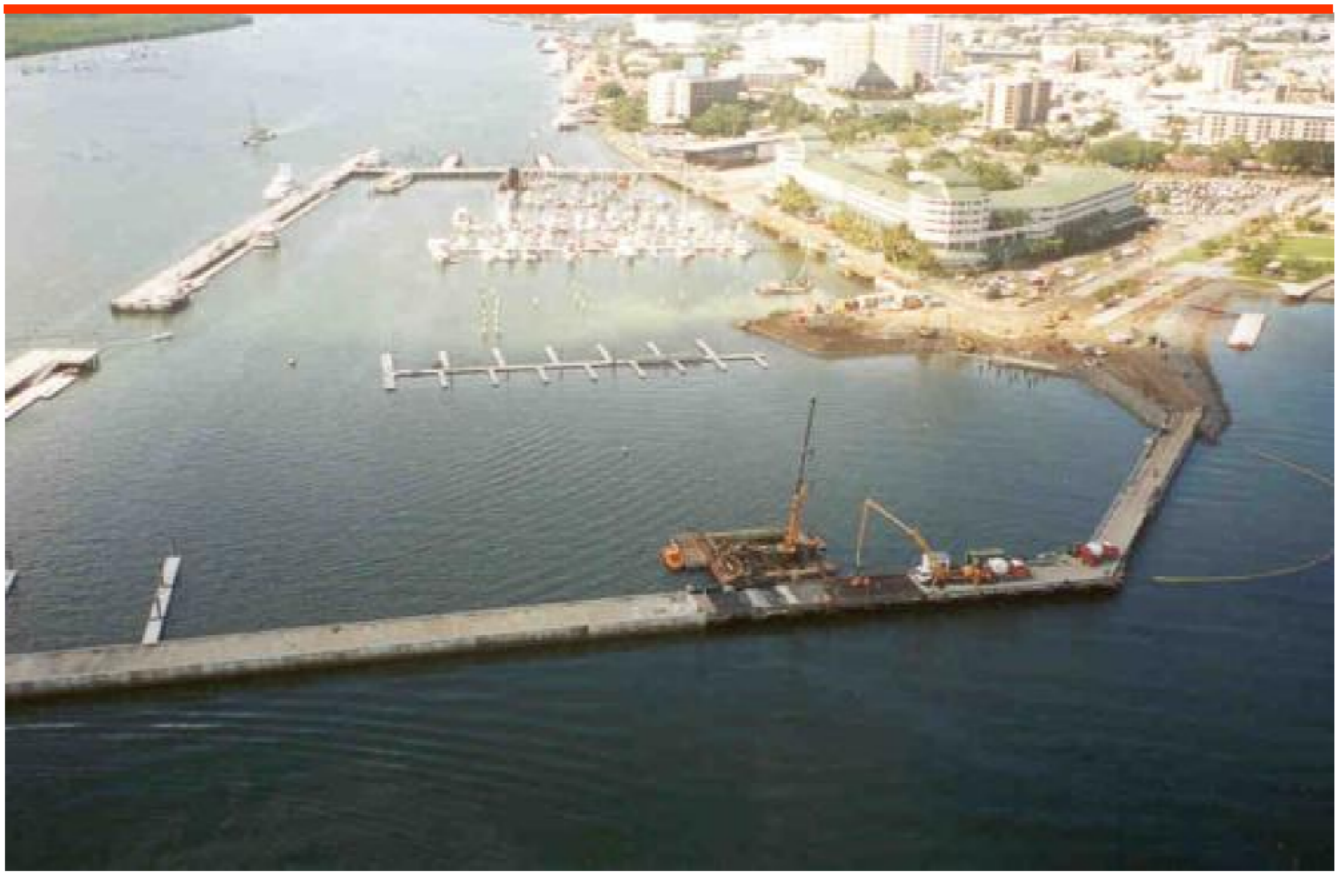
Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013, and 2014

RFP Number 22388

Prepared for

THE PORT AUTHORITY OF NY & NJ

1010R2734
21 October 2010



WorleyParsons

resources & energy

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October 21, 2010

The Port Authority of New York and New Jersey
One Madison Avenue
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New York, New York 10010
Attn: RFP Custodian

RE: PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT ENGINEERING SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013, AND 2014
RFP NO. 22388
WORLEYPARSONS PROPOSAL NO. 1010R2734

Dear RFP Custodian:

WorleyParsons Group Inc. is pleased to hereby submit to The Port Authority of New York & New Jersey our response to the above-referenced request for proposal, including Addendum 1 received on 13 October 2010.

The WorleyParsons team is committed to providing "Best in Class" resources for this project. WorleyParsons technical resources include on staff Project and Program Management Specialists and engineers with extensive hands-on expertise with the management of major infrastructure construction programs. This expertise includes architectural and engineering design – conceptual, preliminary, and final contract preparation and construction management services. We have a dedicated team of professional Project Management Specialists, in a wide variety of disciplines, which are prepared to support this contract.

We look forward to providing our project and program management services at the Authority's facilities; utilizing the high standards expected of industry leaders. Should you have any questions, or need additional clarification regarding our submittal, please contact me at 610-834-6802 or Mr. John D. Pauling at 856-217-7238.

Sincerely,
WorleyParsons

Chris Ashton
Senior Vice President and General Manager – Eastern Operations

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Section A
Attachment B – Agreement on Terms and Conditions

PERFORMANCE OF EXPERT PROFESSIONAL CORROSION CONTROL ENGINEERING DESIGN SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011

ATTACHMENT B

AGREEMENT ON TERMS OF DISCUSSION

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority's Freedom of Information Policy and Procedure adopted by the Port Authority's Board of Commissioners on November 20, 2008, which may be found on the Port Authority website at: *http://www.panynj.gov/corporate-information/pdf/Freedom-of-Information-Policy-and-Procedure.pdf*, not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

WorleyParsons Group Inc.
(Company)

(Signature)
Chris Ashton, Senior Vice President and General Manager – Eastern Operations
(Title)
October 20, 2010
(Date)

ORIGINAL AND PHOTOCOPIES OF THIS PAGE ONLY.
DO NOT RETYPE.

Section B
Attachment C – Company Profile

ATTACHMENT C

COMPANY PROFILE

REQUEST FOR PROPOSALS FOR THE PERFORMANCE OF EXPERT PROFESSIONAL CORROSION CONTROL ENGINEERING DESIGN SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011 (RFP #22013)

1. Company Name (print or type):

   WorleyParsons Group Inc.

2. Business Address (to receive mail for this RFP):

   33 Wood Avenue South
   Iselin, New Jersey 08830

3. Business Telephone Number: 732-603-4963

4. Business Fax Number: 732-321-6562

5. Firm website: www.worleyparsons.com

6. Federal Employer Identification Number (EIN): [redacted]

7. Date (MM/DD/YYYY) Firm was Established: 02 / 07 / 1980

8. Name, Address and EIN of Affiliates or Subsidiaries (use a separate sheet if necessary):

   WorleyParsons of New York, Inc. (EIN [redacted]
   2675 Morgantown Road
   Reading, Pennsylvania 19607

9. Officer or Principal of Firm and Title:

   Chris Ashton, Senior Vice President and General Manager – Eastern Operations

10. Name, telephone number, and email address of contact for questions:
    John Pauling Mobile Telephone: [redacted]
    john.pauling@worleyparsons.com

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? Yes (No)

    If yes, please attach **Port Authority** certification as a part of this profile.

    If your firm is an M/WBE not currently certified by the Authority, see the Authority's web site – http://www.panynj.gov/business-opportunities/supplier-diversity.html, to receive information and apply for certification.

Section C
Qualifications and Experience of Staff

Section C — Qualifications and Experience of Staff

This section provides a profile of the program managers proposed for this contract. Table 1 provides a representative project(s) for the three (3) proposed Program Managers, verses the overall scope elements stipulated in Attachment A. Also provided in this section is the proposed organizational structure, with resumes of the key staff and other key personnel.

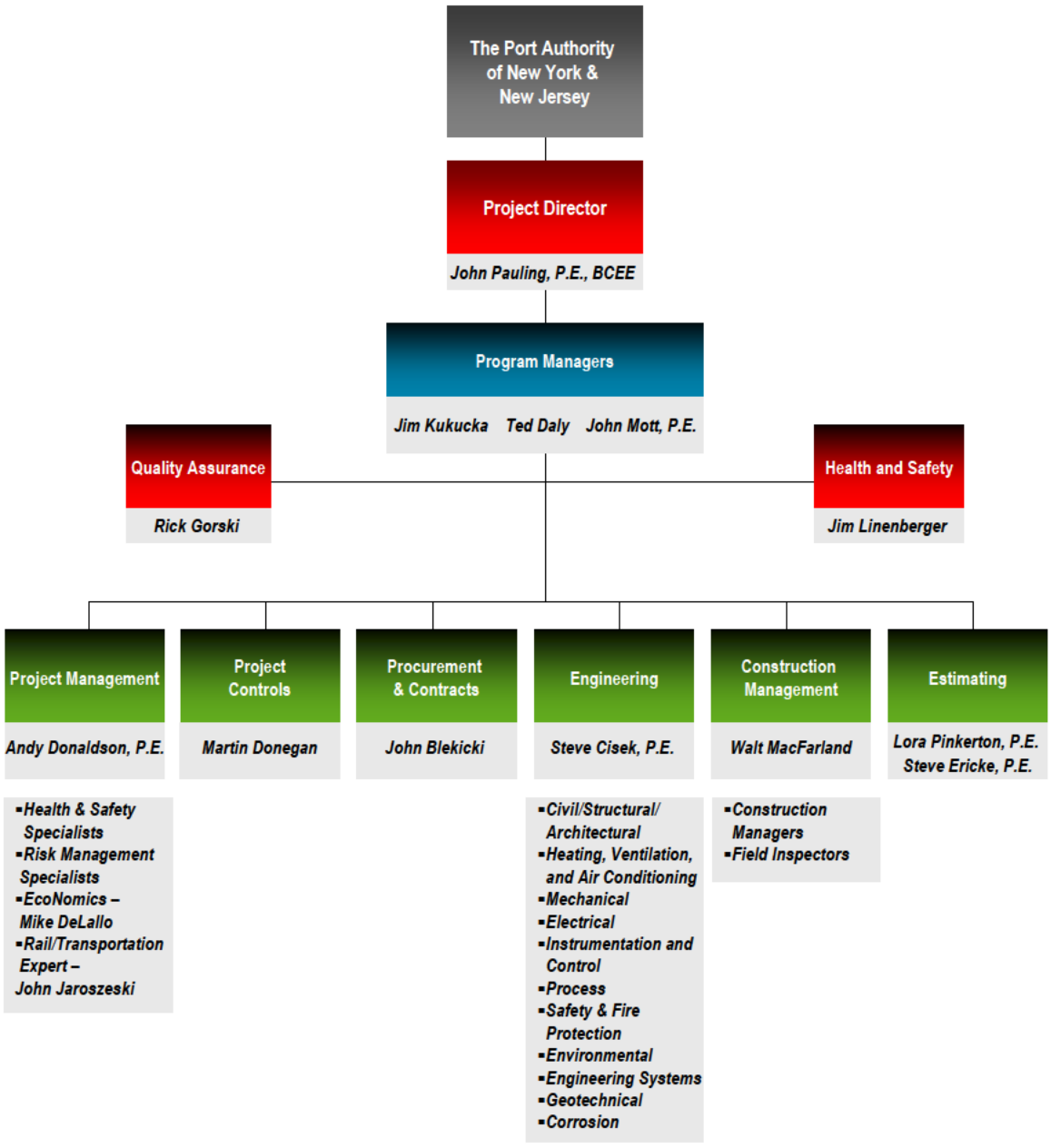


Table 1
Representative Projects of Proposed Program Managers

Name	Project	Cost	Project Initiation	Implementation	Monitoring/Reporting	Program Management	Marine	Aviation	Tunnels and Bridges	Terminals	Rail	Power Generation
Richard Gorski	Saudi International Petrochemical Company (Sipchem) Project Manager	$1.0 B	X	X	X	X	X			X		X
Richard Gorski	Ferrexpo - Iron Ore Expanssion, Ukraine	$500 M	X	X	X	X			X	X	X	X
Jim Kukucka	South Port Container Terminal Design and permitting development, PA	$500 M	X	X	X	X			X	X	X	X
Jim Kukucka	Battery Park City Authority, Project Manager for the design review and engineering of Pier A	$30 M	X	X	X	X	X			X		
Jim Kukucka	Global Terminal & Container Services, Inc, Program Manager / V.P. Asset Manager for the modernization and expansion of terminal	$189 M	X	X	X	X	X			X		
Ted Daly	Port Newark Container Terminal (PNCT) Rehabilitation Project. Owner's representative and project manager responsible for the completion of a 182 acre, $300 million terminal rehabilitation project.	$300 M	X	X	X	X	X			X		
Ted Daly	Pusan NewPort Corporation, Busan Container Terminal Equipment Procurement Program, Project Manager	$980 M	X	X	X	X	X			X		

Table 1
Representative Projects of Proposed Program Managers

Ted Daly	Caucedo Container Terminal Design. Lead project design engineer for the layout of the terminal and for the development of the equipment specifications.	$300 M	X	X	X	X	X			X	X	X
John Mott	PSEG Hudson Generating Station Front End Upgrades	$100 M+ (current) $100 M+ (planned)	X	X	X	X						X

WorleyParsons
resources & energy

John D. Pauling, P.E.
Project Director

Resume

SUMMARY

Twenty-eight years of diversified experience in business/engineering management and engineering, including twenty-three years in the environmental field. Developed market entry and diversification strategies and business plans for seaports' and airports' programs. Experience includes design engineering, project management, sales/marketing, and business management. Mr. Pauling has experience with the design of cathodic protection systems for above ground and underground tanks and piping systems. Specific experience includes concept design, regulatory evaluation, permitting, detailed design, construction management, operations/maintenance, and privatization. Planned/developed engineering design and turnkey proposals up to $90 million in value.

EXPERIENCE

2010 - Present **Business Manager, Infrastructure and Environment – WorleyParsons, Reading, Pennsylvania**

Responsible for Eastern Operations Infrastructure and Environment business and Ports and Marine business strategic growth planning for United States and Latin America. Participate in Eastern Operations strategic planning and proposal preparation for Port of Long Beach and Public Service & Gas proposals.

2008 - 2010 **Vice President – Halcrow, Inc., New York City, New York**

- Market Sector Manager Coastal Programs for North American Region; Sustainability Director for North American Region; Maritime Lead for Mid- Atlantic Region.

2003 - 2008 **Vice President Seaports and Airports Programs – Weston Solutions, Inc., West Chester, Pennsylvania**

Responsible for business planning and strategic implementation on national/international basis; developed key personnel hiring and strategic partner teaming strategies; led development of key/significant proposals.

1998 - 2003 **Deputy Director/Program Manager Ports and Waterways – Weston Solutions, Inc., West Chester, Pennsylvania**

- Developed market entry strategies on national basis; responsible for ports and waterways business sales and profitability; established client/innovative sediment remediation technology partnerships. Achieved $4.3 MM for Ports and Waterways sales in 1999.

1996 - 1997 **Project Director – Weston Solutions, Inc., West Chester, Pennsylvania**

Developed client sales/marketing plans/strategies; responsible for individual utilization, sales and cost of sales goals; responsible for overall client coordination and development.

Resume

1994 - 1995 **Project Manager – Weston Solutions, Inc., West Chester, Pennsylvania**

Responsible for developing and obtaining concurrence for proposal/project scope of work, personnel assignments, quality assurance plan, budget, and schedule.

- Philadelphia Corps of Engineers - Upgrading hydrant refueling system ($20 million) at Dover Air Force Base, Delaware.
- FDA Consolidation Project in Association with the Kling-Lindquist Partnership, Maryland – Waste Management/Hazardous Material Abatement.

1993 - 1994 **Deputy Engineering Design Department Manager – Weston Solutions, Inc., West Chester, Pennsylvania**

Directed operations of Engineering Design Department of sixty personnel; responsible for staff utilization/staff development; assisted department manager in profit planning. Developed weekly/monthly engineering utilization/staffing report and coordinated weekly staff meetings.

1992 - 1993 **Section Manager – Weston Solutions, Inc., West Chester, Pennsylvania**

Provided management and technical leadership for Project Engineering Section of six professionals; responsible for Project Engineering Section profitability; responsible for assignment of project engineers on proposals/projects.

Rocky Mountain Arsenal, Colorado, Turkey Project Submerged Quench Incineration (SQI) – Developed project engineering and engineering staffing for $40 million award winning project completed on-time and under budget.

1989 - 1992 **Technical Manager – Weston Solutions, Inc., West Chester, Pennsylvania**

Responsible for preparation of engineering/turnkey proposals; developed standardized engineering approach/details for wastewater treatment/storage tank facilities; provided technical leadership, nationally, on engineering design proposals/projects.

1988 - 1989 **Project Engineer – Weston Solutions, Inc., West Chester, Pennsylvania**

Coordinated scientific and engineering disciplines; planned proposal and project technical approach; prepared/negotiated engineering budget and schedule for proposals and projects.

WorleyParsons
resources & energy

Richard V. (Rick) Gorski
Quality Assurance

Resume

SUMMARY

Over 30 years in leadership and management positions in engineering and construction, public works, and government organizations, both U.S. and international. Experience includes upstream onshore and offshore and downstream hydrocarbons projects, minerals and metals extraction and processing projects, and execution of projects for Russia, Ukraine, and Australia. Over 10 years with WorleyParsons as a Program Director, Project Director, and Vice President. Skilled in all aspects of project and program management, project control, project cost control and analysis and contracting management.

EXPERIENCE

2009 - Present **Vice President and Program Director, WorleyParsons, Houston, TX**

Saudi International Petrochemical Company (Sipchem). Currently managing a $1 billion grassroots polymers plant, consisting of three process units (ethylene vinyl acetate, polyvinyl acetate, and polyvinyl alcohol) and related utilities, infrastructure, and product handling and storage facilities. The plant will be built in Jubail, Saudi Arabia. WorleyParsons is providing project management services from the process design package stage through project startup.

2007 - 2008 **Project Director, WorleyParsons, London, UK**

Ferrexpo – Iron Ore Expansion Projects. Managed the feasibility phase of the $2 billion development of an iron ore mine and ore processing facilities and the $500 million expansion of Soviet-era iron ore processing facilities in Ukraine. Involved open pit mining of low grade magnetite ore and processing into blast furnace grade pellets. Executed study work in Ukraine, South Africa, United Kingdom, Australia, and Kazakhstan and included cooperation with multiple Ukrainian design institutes. Worked with the following project components: mine design, process design, facilities layouts, environmental impacts, capital and operating cost estimates, and development of a detailed project execution plan that emphasized maximum use of Ukrainian engineering, manufacturing, and construction capabilities. Provided engineering, procurement, and construction management (EPCM) of critical "early works" facilities to support pre-stripping operations for the new mine.

2006- 2007 **Project Director, WorleyParsons – SNC Lavalin Joint Venture, Adelaide, Australia**

BHP Billiton – Olympic Dam Expansion Pre-Feasibility Study. Managed the $30 million pre-feasibility study for the ore processing facilities for a US$20-plus billion expansion of the Olympic Dam copper and uranium mine facilities. The one-year study included 30% design and +/-25% capital and operating cost estimates for the concentrator, hydrometallurgical, smelting, refinery, and process plant infrastructure greenfield facilities. Executed the engineering simultaneously in Australia, Chile, Canada, and China due to a tight time schedule and required metallurgical specialties. The project included the unprecedented (in the mining industry) use and long-distance ground transport of mega-modules. Served simultaneously as a Manager of the WorleyParsons - SNC Lavalin unincorporated joint venture that executed the study.

2005 - 2006 **Project Director, WorleyParsons, Perth, Australia**

Fortescue Metals Group, ltd. – Pilbara Iron Ore Development, Western Australia. Served as Deputy Project Director of a client-contractor integrated project management team executing a

greenfield $1.7 billion iron ore mining infrastructure project. The project included design and construction of facilities to deliver 45 million tonnes of iron ore per annum, consisting of crushing, screening, conveying and loading facilities at the mine, a 255 km railroad (rail bed and rolling stock), port facilities to offload trains, stockpile ore, and load ships and more than 70 separate contracts. Presented with special project challenges that included a "fast track" highly compressed schedule, very tight budget constraints, special environmental and cultural heritage restrictions, and "tight" personnel and contractor resources due to an overheated resources industry market. Served simultaneously as Project Director for the WorleyParsons incentive-based contract for Front End Engineering Design (FEED), detailed design, procurement, and construction management services.

2001 - 2005 **Project Director, Parsons E&C/WorleyParsons, London, UK**

Sakhalin II Onshore Gas Processing Facility Project, Sakhalin Island, Russia. Managed WorleyParsons' London-based team executing definition engineering, detailed design, procurement, and construction management services for a completely self-supporting 1.8 BSCFD, $800 million gas processing facility. Presented with special project challenges that included weather extremes, highly active seismic area, lack of local or regional infrastructure, requirements for high levels of local content, management of simultaneous engineering in London and Russian design institutes, extremely bureaucratic governmental approvals process, and uniquely sensitive environmental area.

1998 - 2000 **Program Director, Parsons E&C, Houston, TX**

Houston Special Projects Operations. Managed the Houston-based division of Parsons E&C (now WorleyParsons), which designed and constructed projects valued up to $50 million for Gulf Coast region hydrocarbon and chemical process plants. Managed over 300 people and a work program, with annual revenues of $65 million.

1991 - 1998 **Manager of Projects and Program Director, McDermott International, Houston, TX**

Sakhalin II Project Phase I Development, Sakhalin Island, Russia, 1996-1998. Seconded to client management team for first phase of $10 billion oil and gas development project offshore Far East Russia. Managed construction planning for $200 million in contracts, overall planning and scheduling, support effort to the Russian approvals, permitting and licensing process, and document control and records.
1994-1996. Developed McDermott's engineering and construction operations for the Sakhalin II project, including establishing alliances with Russian companies, managing three joint venture companies with Russian entities, negotiating engineering contracts, and managing McDermott's office on Sakhalin Island, Russia.

1966 - 1991 **Officer, US Army Corps of Engineers**

Served in progressive leadership and staff positions, including Platoon Leader, Company Commander, Battalion Commander, Pentagon Staff Officer, Executive to the Assistant Secretary of the Army, and Commander of the New Orleans Engineer District.

EDUCATION

MSCE, Stanford University

BS, U.S. Military Academy, West Point

WorleyParsons
resources & energy

James P. Kukucka
Program Manager

Resume

SUMMARY

Senior level maritime industry professional with 27 years of experience in terminal master planning, operations management, automation design, evaluation, and integration; including vessel, yard, and gate, equipment, terminal expansion, layout and construction, IT systems, labor relations, and management/supervision of container and marine and waterfront facilities. Extensive hands-on experience in daily container terminal operations, facility maintenance and engineering services. Served as Terminal Manager, Vice President of Asset Management and Executive Vice President at a major container terminal in the Port of New York/New Jersey. Specific areas of competence are project management, asset management, facility maintenance and engineering services.

EXPERIENCE

2010 - Present

Manager Coastal, Ports and Marine Infrastructure & Environment, WorleyParsons, Conshohocken, PA

- Senior Manager of coastal and marine infrastructure and environment projects.
- Provide lead and support services to business units throughout North and South America.
- Responsible for sales support, proposal and presentation preparation, conceptual design planning of marine facilities including development of order of magnitude costs and procurement of container terminal handling equipment.
- Provide industry specific knowledge on volume, capacity, throughput, gate operations, yard operations, marine and vessel operations, engineering, and maintenance.

2008 - 2010

Project Manager/Senior Port Planner, Halcrow Inc., New York, NY

Project manager and senior port planner in the Maritime Business Group. Senior vice president and technical advisor accountable in the areas of port planning and design, equipment procurement, and project management as owner's representative.

2010

USA, Ras Laffan Container Terminal, Qatar. Senior port planner and team member for the container yard layout, stacking arrangement, and striping plans for Phases 1 and 3 of the greenfield site development. Performed capacity and transit time analyses and terminal fluidity studies to confirm design. Travelled to Qatar and presented layout and design presentation to clients including Qatar Petroleum, Ras Laffan City, and Consolidated Contractors Group S.A.L. (CCC) representatives.

USA, Southport Container Terminal – Sub to Weston Solutions and the Commonwealth of Pennsylvania. Project manager for the conceptual design, development, and mode of operations for a $500 million green field container terminal on the Delaware River. Conceptual design and presentation of 30% design drawings, as well as Best Management Practices (BMP) manual.

Packer Avenue Marine Terminal, Philadelphia, PA – Sub to Urban Engineers and the Philadelphia Regional Port Authority. Senior port planner responsible for the redesign of the terminal's gate complex, as well as development of terminal operating system (TOS) specifications and Request for Proposal preparation for selection of a new TOS provider.

Pier A Column Settlement – Sub to H3 Hardy for Battery Park City Authority. Project manager to review design of engineering firm retained by the Battery Park City Authority for the renovation of the Pier A structure. Analysis of column settlement found in the 100-year old structure, required to allow the rehabilitation project to proceed.

2009

Port Authority of New York New Jersey (PONYNJ) – Strategic Business Assessment. Terminal operations consultant for a $700,000 port land-use optimization business assessment and optimization model development project for the PONYNJ. Project completed March 2009.

USA, Pier A Battery Park City Authority. Served as project manager for Pier A deck replacement design review.

2008

USA, Shell, Libya – Liquefied Natural Gas (LNG) Subsea Inspection. Served as project manager for subsea inspection of LNG wharf structure by engineer divers.

2007 - 2008

Vice President Engineering and Asset Management, Global Terminal and Container Services, Jersey City, NJ

Reporting to Chief Operating Officer. Oversaw $15 million crane replacement project from the specifications to the development, acquisition, and delivery of the equipment.

2001 - 2007

Executive Vice President, Global Terminal and Container Services, Jersey City, NJ

Reporting to President and CEO. Initiated and evaluated the bidding process for the design/build of a $60 million berth extension to the existing wharf. Acted as project manager for berth extension. Collaborated with the Port Authority of NY and NJ, Army Corp of Engineers, and the NJ DOT Maritime Division on the Port Jersey Channel dredging project.

2007

USA. Served as project manager for the design/build of a $60 million berth extension to the existing wharf. Coordinated with the NJDEP and Army Corps of Engineers for necessary permits.

2006

USA. Served as project manager for a $15 million crane replacement project from the specifications to the development, acquisition, and delivery of the machines.

WorleyParsons
resources & energy

Edward (Ted) Daly
Program Manager

Resume

SUMMARY

Senior Level Coastal and Marine Manager with 21 years of experience in coastal, ports, terminals, marine operations and engineering including automation planning and design, port master planning, detailed facility design, and construction supervision of major port infrastructure. Extensive experience in port and project planning, design, contracting and construction supervision of major infrastructure projects. Detailed understanding and experience with contract development and management of major equipment procurement projects. The unique ability to manage all types of projects/programs from conceptual planning and design cost estimating, design support, vendor management and vendor contract negotiations.

EXPERIENCE

2010 - Present **Manager, Coastal and Marine Infrastructure and Environment, WorleyParsons, Conshohocken, PA**

Senior Manager of coastal and marine infrastructure and environment projects providing lead and support services to WorleyParsons' business units throughout North and South America. Responsible for sales support, proposal and presentation preparation, conceptual design planning of automated and semi-automated marine facilities, development and presentation of order of magnitude costs, and the procurement of container terminal handling equipment.

2008 - 2010 **Senior Principal Engineer, Halcrow Inc, NY**

Ras Laffan Container Terminal Layout and Design – Ras Laffan, Qatar UAE. Lead project manager for the design and development of a **$220 Million** dollar, 1,400 meter three-berth container terminal in the City of Ras Laffan, Doha. Project included part of the Ras Laffan City development project on behalf of Qatar Petroleum which included dry docks, tug berths, and liquefied natural gas (LNG) facilities and future automated terminal implementation.

State of Pennsylvania – Sub Consultant to Weston Solutions, Southport Container Terminal Development, Philadelphia, PA. Principal engineer for the development of a $500 million terminal design concept and presentation of 30% design drawings in support of Weston Solutions' preparation of an environmental permit application. Responsibilities included conceptual design concepts, including phasing plans to meet environmental requirements. Automated and non-automated capacity analysis, including yard, OCR gate, and marine productivity requirements. Equipment mode of operations, including quay cranes, horizontal transportation, and yard equipment. Traffic volume analysis, including hourly daily gate volume, seasonal peaks, and local infrastructure impacts. Provided cost estimate for development, by phase, including operations and maintenance cost estimate for ongoing operations after civil development.

2009 **Port Authority of New York New Jersey (PANYNJ) – Strategic Business Assessment, NY.** Lead Terminal Operations Consultant for Port Land Use Optimization Business Assessment and Optimization Model Development Project. Responsible for development of a port-wide, terminal specific cost structure for the development of a business optimization model for the development of common fully automated gate complexes on the north and south sides of the port. Presentation included a detailed cost estimate for the construction and the cost of inputting state-of-the-art technology - $700 thousand.

Resume

2008 **King Abdullah Economic Development Corporation, Saudi Arabia.** Project manager responsible for overseeing development of 30% drawings for four 3,500 meter container berths and associated backland design. Provided conceptual level automation planning for ASC equipment within the yard. Provided conceptual design for an automated gate complex. $2 billion.

2003 - 2008 **Director of Engineering, Ports Newark Container Terminal, Newark, NJ**

Ports America, Newark, NJ – Port Newark Container Terminal (PNCT) Rehabilitation Project. Reported directly to the President of PNCT. Owner's representative and project manager responsible for the completion of a 182 acre, **$300 million** terminal rehabilitation project.

Port Newark Container Terminal, Newark, NJ – Terminal Expansion Project. Project manager of a 15-acre, $27 million terminal expansion project directly accountable for the design, construction, and daily management of the development of 15 additional acres. Construction contract value $27 million.

2007 **Port Newark Container Terminal, Newark, NJ – Terminal Expansion West End Phase I, II.** Owner's representative and project engineer responsible for all aspects of the design, layout, RFP work, cost control, and construction management. Construction contract value $15 million.

2000 - 2003 **Director CSX World Crane Services, Charlotte, NC**

CSX World Terminals – Caucedo Container Terminal Design and Development, Caucedo Dominican Republic. Lead Project design engineer for the design and layout of the container terminal and associated equipment operational plan for a **$220 Million** Dollar terminal development project. Directly accountable for the development of the equipment specifications, RFQ and RFP development and distribution, RFP analysis and negotiations of the manufactures construction, erection and testing contract for over $14 Million dollars of container handling equipment.

Pusan Newport Corporation – Port of Pusan New Port, Busan, Korea. Equipment Purchase, Owner's Representative, Project Director, **$950 million** dollar purchase of 18 Super Post Panamax quay cranes and 49 semi-automated GPS ready rail mounted gantry yard cranes for the new container terminal.

EDUCATION

B.S., Marine Transportation, State University of New York at Maritime, 1989

Completed several classes at Norwich University in pursuit of M.S. in Civil Structural Engineering, Projected Finish – February 2011

REGISTRATIONS/AFFILIATIONS

American Society of Civil Engineers

PUBLICATIONS/PRESENTATIONS

"Avoiding Expensive Pitfalls," Cargo Systems, November/December 2009
"A Recipe to Avoid Disaster," Container Port, September/October 2001

WorleyParsons
resources & energy

John A. Mott, P.E.
Program Manager

Resume

SUMMARY

Thirty-two years of project and management experience, including nine years with WorleyParsons, in project management, engineering management, and civil and structural engineering including supervising engineering projects. Experience also includes analysis and design of steel, concrete and masonry structures; site development, storm drainage, roads, rail, permitting; technical specifications, bid evaluations, planning, scheduling, cost estimates, and construction field support for power generation facilities (coal, oil, gas turbine and nuclear), chemical plants, and infrastructure.

EXPERIENCE

2007 - Present **Project Manager – *Improve* - Asset Services – WorleyParsons, Reading, Pennsylvania**

Public Service Enterprise Group (PSEG) – Responsible for oversight of all projects across the PSEG fleet of fossil plants under the General Services Agreement.

PSEG, Bergen Generating Station Unit 2, Electro Hydraulic Control Tubing and Supports – Responsible for the upgrade of existing GE electro-hydraulic turbine control tubing and supports, necessitated by excessive vibration that led to system failures.

PSEG, Linden Generating Station Unit 2, High Energy (HE) Pipe Supports, Insulation and Lagging – Responsible for the inspection of HE piping supports showing damage due to excessive movement and insulation and lagging that exhibit premature corrosion and failure.

PSEG, Bethlehem Energy Center, Clarifier Project – Responsible for the preliminary engineering services consisting of technical scoping and funding packages for this project with the goal of eliminating clarifier freezing problems along with disposition of excess heat recovery steam generator (HRSG) blowdown.

PSEG, Mercer Generating Station Units 1 and 2, Replacement of Circulating Water Traveling Screens Project – Responsible for preliminary engineering services consisting of technical, commercial, and funding packages for this project which is required to meet Clean Water Act Section 316b permit and consent decree requirements.

PSEG, Kearny and Essex Stations, Scoping and Estimate for LM 6000 Peakers – Responsible for preliminary engineering and cost estimating to develop bid packages for the Pennsylvania, New Jersey, and Maryland (PJM) capacity auction. Kearny was successfully bid and is now an Execute project.

PSEG Hudson Generating Station Unit 2, Back End Technology (BET) Project and Non-BET Plant Upgrade Projects – Responsible for owner's engineer services consisting of technical, commercial, and managerial guidance in support of PSEG's implementation of the BET project, consisting of dry scrubbers, baghouses, selective catalytic reductions (SCR) and booster fans. Responsible for numerous plant upgrade projects including boiler upgrades, plant-wide distributed control system upgrade, sootblower replacement, low NOx burner upgrade, air and gas duct repair/replacement, air compressor upgrade, and continuous environmental monitorings and mercury monitoring projects.

Resume

2005 - 2007 **Engineering Manager – WorleyParsons, Reading, Pennsylvania**

Progress Energy Carolinas, Roxboro Power Station, Flue Gas Desulfurization (FGD), 2500 MW – Responsible for the technical coordination of the multi-disciplinary team for detailed engineering and design services, and coordination of construction and outage support services for the addition of FGD systems and associated support facilities. Project includes FGD systems on four units.

2000 - 2005 **Lead Structural Engineer – WorleyParsons, Reading, Pennsylvania**

2003 - 2005 **Progress Energy Carolinas, Roxboro Power Plant, FGD, Units 1-4, Material Handling System, and Unit 2, SCR –** Responsible for structural discipline budget, schedule, procurement contracts, structural engineering coordination, design development of engineering documents, bid packages preparation, and cost estimates. Responsible for project inter-discipline coordination, project engineering budgets, construction estimates, and construction support.

2001 - 2003 **Conectiv Energy, East Donegal, 2 x 2 x 1 GE 7FA Combined Cycle Power Plant –** Responsible for structural discipline budget, schedule, procurement specifications, coordination of structural engineering, design development of engineering documents including structural design drawings, plant design criteria, preparation of bid packages, and cost estimates. Responsible for project inter-discipline coordination, project engineering budgets, construction estimates, and construction support.

2002 **Reference Plant, GE S109FB-SS –** Responsible for development of engineering documents including site general arrangement drawings, plant design criteria, inquiry specifications, initial design, and quantities tabulation for the preparation of this prototype reference plant. Prepared seismic maps of reference plant applicability comparing the requirements of UBC 1997 and IBC 2000 building codes.

2001 - 2002 **Gemma Power Systems, Hines Power Block II, Combined Cycle Project –** Performed analysis and design of circulating water in-take structure.

Milford Power Company, Milford HRSG Study – Performed structural (failure) analysis of a partially erected HRSG structure that collapsed during construction operations. Prepared a report of the analysis in preparation for providing expert witness testimony on behalf of the owner.

EDUCATION

B.S., Civil Engineering, The Pennsylvania State University, 1978

REGISTRATIONS/AFFILIATIONS

Registered Professional Engineer – Pennsylvania, New York (inactive), New Jersey, West Virginia, South Carolina, Tennessee (inactive), and North Carolina

Member, American Society of Civil Engineers (ASCE)

Member, American Institute of Steel Construction (AISC)

SPECIFIC TECHNICAL EXPERTISE/SPECIALIST COURSES

STAAD-III, Microsoft Office, MicroStation

WorleyParsons
resources & energy

James A. Linenberger
Health and Safety

Resume

SUMMARY

Health, Safety, and Environment Regional Manager with more than thirty years of experience in development and implementation of safety programs for heavy construction, power plants, and industrial/commercial facilities, including ten years with WorleyParsons. Maintained innovative Zero incident safety and health programs, and provided programs for both the employer and employee safe work practices. Conducted safety audits and wrote safety reports to construction managers. Computer skills include MS Office.

EXPERIENCE

2004 - Present **Health, Safety, and Environment (HSE) Regional Manager – WorleyParsons, Reading, Pennsylvania**

Oversee the Health, Safety, and Environment management systems.

Responsible for program development and accountable for managing safety programs for the design, engineering, and construction management (CM) of major industrial projects.

Communicate and promote cooperation and trust between all WorleyParsons employees, subcontractors, and customers in the HSE arena.

Coordinate, develop, and present HSE training programs. Evaluate projects on HSE performance and compliance with established policy, procedures, and practices.

Coordinate all HSE activities on a management level to promote and support the "Zero Harm" philosophy in order to pursue and maintain an incident free environment for the reduction of personal injuries, equipment and property damage, and the protection of the environment.

OSHA Outreach Trainer providing 10-hour and 30-hour safety training to the Reading Operations' staff.

2003 - 2004 **Site Safety Manager**

Santee Cooper, Generating Station Unit 3, Cross, South Carolina – Managed and monitored construction safety and health programs for a multi-contractor construction project.

2001 - 2003 **Regional Safety Supervisor – The Haskell Co., Jacksonville, Florida**

Accountable for overseeing project safety for various construction projects throughout Florida, Texas, and Mexico. Implemented and coordinated corporate safety programs. Developed site-specific programs to reduce occupational injuries, illnesses, and fatal accidents. Coordinated specialized safety training needs. Conducted OSHA 10- and 30-hour training.

1999 - 2001 **Regional Safety Manager Florida Division – J. A. Jones/Metric, Charlotte, North Carolina**

Responsible for implementing and enforcing corporate safety and health policies throughout projects in the Florida division. Conducted safety audits in construction projects. Provided OSHA construction 10- hour training. Safety consultant to sub-contractors.

1997 - 1999 **Project Safety Manager – Bechtel, Houston, Texas**

Responsible for two maintenance projects in Charlotte, North Carolina (Dreyfus Research Park and Celgard LLC –BECON).

1995 - 1997 **Senior Safety Representative/Loss Control – ITT Hartford, Hartford, Connecticut**

ITT Hartford – Assigned to an integrated safety team located in Mulberry Florida with the CM, Bechtel, and owner of Polk Power Station Tampa Electric Company on a combined cycle state-of-the-art gasification project.

1994 - 1995 **Project Safety Engineer – The Industrial Co., Steamboat, Colorado**

Tampa Electric Company – Assigned to two separate projects including outage renovation project and new construction at Mobile Mining.

1991 - 1994 **Project Safety Manager – WorleyParsons, Reading, Pennsylvania**

Managed and monitored construction safety and health programs for a multi-contractor CM project for Santee Cooper.

1990 - 1991 **Safety Director – S & E Contractors, Clearwater, Florida**

Managed and developed company safety and health policies for an underground utility contractor. Developed New Employee Orientation.

1985 - 1989 **Loss Control Counselor – FEISCO-FCCI Fund, Sarasota, Florida**

Florida Employers Insurance Service Corporation, Workers Compensation Insurance Fund – Responsible for field underwriting prospective members.

1981 - 1985 **Project Safety Manager – WorleyParsons, Reading, Pennsylvania**

Tampa Electric Company – Managed and implemented construction safety and health programs for a multi-contractor site.

1978 - 1981 **Project Safety Engineer – Stearns Rogers, Denver Colorado**

Supervised and directed construction safety, health, and fire protection programs.

1977 - 1978 **Compliance Officer – COSH, Colorado State Department of Labor, Denver Colorado**
Colorado-OSHA- Occupational Safety and Health administration-compliance with Colorado State law and adopted Federal OSHA standards.

EDUCATION

Degree Program – Occupational Safety & Health, Arapahoe Community College, 1975 – 1977

REGISTRATIONS/AFFILIATIONS

Board of Certified Safety Professionals – CSP, Certificate Number 14508, since 1996

Professional Member, American Society of Safety Engineers, since 1981

OSHA 500 Outreach Trainer

WorleyParsons
resources & energy

Andrew M. Donaldson, P.E.
Project Management Lead

Resume

SUMMARY

Director of Major Projects with over 35 years of experience, including 18 years with WorleyParsons, in multi-disciplined engineering/procurement/construction project direction for fossil power generation projects for industrial and utility clients. Project management experience of major projects such as; fossil utility power plants, cogeneration plants, and independent power projects. Roles included program and project management of all aspects of construction such as; civil, mechanical and electrical processes and procedures. Technical experience in project development, project management, contracting and contract management, feasibility studies, plant design, cogeneration and independent power project design, heat balance cycle, and plant optimization.

EXPERIENCE

2004 - Present **Director of Major Projects, WorleyParsons, Reading, PA**

2006 - Present Responsible for major projects including new generation (gas turbine, combined cycle, and solid fuel), air quality, and renewable projects.

2004 - 2006 Responsible for new generation projects including combined cycle, gas turbine and solid fuel projects. Responsible for the project managers managing the projects

1994 - 2008 **Project Manager – WorleyParsons, Reading, PA**

2006 - 2008 **Husky Energy – Sunrise Oil Sands Project.** Project Sponsor for the 9.5 million pounds per hour energy island project supporting the development of the 200,000 bbls per day Bitumen production facility near Fort McMurray, Alberta, Canada.

Progress Energy – New Coal Plant Project. Responsible for the conceptual design and permit support for a new two-unit, 750 MW supercritical pulverized coal plant.

2005 - 2007 **Florida Power & Light – South Florida Coal Project, Preliminary Design Manager.** Responsible for the preliminary design and site certification application basis for two supercritical pulverized coal-fired units, each rated approximately 1000 MW net output.

2003 - 2004 **Western Greenbrier – Cogeneration Project, Rainelle, West Virginia.** Project Manager for the DOE Clean Coal Technology project for a 100 MW circulating fluidized bed boiler plant burning waste coal and utilizing the ash in a processing and manufacturing facility.

1999 - 2003 **Constellation Power Development – Holland Energy Facility Project, Beecher City, IL.** Project Director for the Joint Venture (Holland Engineers & Constructors). The facility is a 660 MW combined cycle facility in a 2-on-1 configuration. The gas turbines are GE frame 7FA machines rated at 171 MW. The steam turbine is a sliding pressure steam turbine generator rated at 343 MW. The project is a joint venture with TIC.

1997 - 1999 **Greater Toronto Airports Authority – Expansion of the Lester B. Pearson Airport, Cogeneration Development Project.** Responsible for the conceptual design of the cogeneration facility, the

preparation of the request for quotation document to select a developer of the combined cycle cogeneration facility and owner's engineer review of the design and installation of the plant.

1997 - 1998 **Power Block – Star Refineries Delaware City Repowering Project.** Responsible for the conceptual design and procurement to award major equipment for the power block portion of the petroleum coke integrated gasification project. The major equipment in the power block included 2 GE 6 FA combustion turbines, 2 Nooter Ericson Heat Recovery Steam Generators and a Praxxair air separation unit. The project is an integral part of the Star Delaware City, Delaware refinery.

1996 - 1998 **Westinghouse – Asir/Jizan Simple Cycle Project.** Responsible for the engineering for the addition of two D5A combustion turbines at the Asir (Saudi Arabia) site and two D5A combustion turbines at the Jizan (Saudi Arabia) site.

1995 - 1996 **Freehold Cogeneration Project – Freehold, NJ.** Responsible for engineering and procurement as part of the EPC contract being performed by the Dick-Gilbert joint venture. The project is a 120 MW gas turbine combined cycle cogeneration facility.

1994 - 1995 **Panda Kathleen Project, Lakeland, Florida –** Responsible for permitting, feasibility study, site development, and engineering for the Walsh Gilbert joint venture. The project is a 120 MW gas turbine combined cycle cogeneration facility.

EDUCATION

M.S., Mechanical Engineering, Stanford University, Stanford, California, 1971

B.S., Mechanical Engineering, Worcester Polytechnic Institute, Worcester, Massachusetts, 1970

REGISTRATIONS/AFFILIATIONS

Professional Engineer – California (1977) and New York (1975)

American Society of Mechanical Engineers (Fellow)

Industry Committees:

Member, ASME Executive Committee for Power Division (1993 – Present, Chairman 1997-1998)

Member, ASME Code Committee 0n Turbine Water Damage Prevention (1998 – Present)

Member, ASME Power Division Committee on Steam Turbines (1979-Present, Chairman 1987-88)

Member, ASME Power Division Committee on Cogeneration and Combined Cycles (1984-Present, Chairman 1991-1992)

Member, ASME Power Division Committee on Government Technical Relations (1983-Present, Chairperson 1984-87)

Member, ASME/IEEE Joint Working Committee on Turbine-Generators (1982-1993)

Chairperson of ASME Combined Cycle Users Group

WorleyParsons
resources & energy

Michael R. DeLallo
EcoNomics Facilitator

Resume

SUMMARY

Over thirty-five years of experience, including thirty years with WorleyParsons, in project management, business development, engineering management, and system analysis for utility and industrial power generation, air quality control, and research and development (R&D) facilities. Progressive technical and project management responsibility in gasification and carbon dioxide reduction power plant design, specification, construction management, operation and maintenance, and environmental compliance. Currently the WorleyParsons' Director of Gasification and Carbon Services, leading the development of market strategies, project execution, and delivery in our strategic markets.

EXPERIENCE

2007 - Present **Vice President and Director, Gasification and Carbon Services – WorleyParsons, Reading, Pennsylvania**

Responsible for identifying, planning, and implementing the business strategy for business initiatives in gasification and carbon reduction services. Assist location Managers/Directors of Projects in the direct management of projects under their profit and loss (P&L) responsibility through establishing market specific project execution practices and guidelines. Support business development, proposal preparation, and the development of markets and clients. Work with the department managers building and directing development of resources in gasification and carbon dioxide capture and transport technologies related to power generation. Member of the National Coal Council and Executive Board Member representative to the Gasification Technologies Council.

2002 - 2006 **Director, Business Development – WorleyParsons, Reading, Pennsylvania**

Responsible for Gasification and Government market sectors in North America. Services provided included engineering, procurement, construction management, and operations and maintenance in the power, industrial, and refinery markets. Lead responsibility for development and implementing market strategy, formation of risk profile and business alliances, identification and selection of prime opportunities, and contract negotiation. Company's Technology Manager for Integrated Gasification Combined Cycle projects.

2000 - 2002 **Project Manager – WorleyParsons, Reading, Pennsylvania**

Reliant Energy (formerly Orion Power), Cheswick (525 MWe) – Selected catalytic reduction (SCR) projects. Managed the preliminary and final engineering and design for erection of retrofit SCR. Responsible to Reliant Energy and coordinating with Babcock & Wilcox for final design documentation of the SCR balance-of-plant including engineering, fabrication, and construction drawings; procurement and construction specifications; and design reports.

1998 - 2000 **Department of Energy (DOE), National Energy Technology Laboratory (NETL)** – Responsible for engineering, design, process analyses, and project control for client programs and projects in advanced power generation and environmental control systems.

1993 - 1998 **DOE, Morgantown Energy Technology Center (now NETL-Morgantown)** – Responsible for engineering, design, construction management, and project control for client facilities and projects in fossil power generation systems.

1989 - 1993 **Duct Injection Test Facility –EPRI High Sulfur Test Center** – Responsible for the facility engineering, operation and maintenance activities. Directed a staff of 33 engineers, operators, and maintenance technicians responsible for continuous operation of a multi-unit flue gas control facility.

1986 - 1989 **Engineering Manager – WorleyParsons, Reading, Pennsylvania**

DOE, Pittsburgh Energy Technology Center – Directed a staff of 73 engineers, chemists and technicians in design, construction, startup, operation, testing, and maintenance. Areas of activity included new and modified combustion test equipment for research on combustion of coal and related fuels and in advanced air quality control technologies. Responsibilities included review and approval of all task budgets, schedules, preliminary designs, and construction cost estimates. Responsible for task management, and interface between engineering and technical functions through status reviews and design reviews. Designed advanced NOx/SO2 pilot scale test facility including P&ID, piping, vessels, and process control. Directed complete test facility support systems design, operation, and maintenance.

1983 - 1986 **Task Manager – WorleyParsons, Reading, Pennsylvania**

Mechanical engineering and project management for utility power generation involving the utility and industrial application of beneficial coal as a fuel for conventional boiler and gas turbine operation and alternative energy conversion systems.

1980 - 1983 **Energy Systems Engineer – WorleyParsons, Reading, Pennsylvania**

Responsible for advanced power cycle performance analysis of utility systems including pulverized coal steam cycles, gas turbine/steam combined cycles, fuel cells, and fluidized-bed combined cycles.

1978 - 1980 **Applications Engineer – Institute of Energy Conversion, University of Delaware**

Project engineering in utilization of latent heat thermal energy storage in conventional and solar energy systems. Co-principal investigator for a program directed toward utility load management through residential and commercial utilization of solar and energy storage technology.

1975 - 1978 **Mechanical Engineer – Singer Kearfott**

Responsible for heat transfer and structural engineering design of aerospace inertial guidance systems.

EDUCATION

M.B.A., Financial Analysis, Saint Joseph's University, 1984

M.S., Mechanical Engineering, Fairleigh Dickinson University, 1978

B.S., Mechanical Engineering, Clarkson University, 1975

WorleyParsons
resources & energy

John Jaroszeski
Rail/Transportation Expert

Resume

SUMMARY

Mr. Jaroszeski has over 16 years of experience in the rail industry. He has acquired expert knowledge of logistics, complex networks and supply chain management and health and safety within the industry. Mr. Jaroszeski has been responsible for compliance monitoring and implementation on railroad and trucking service design packages, analysis, development and execution of plans to optimize of railcar fleet utilization, productivity, fuel efficiencies and savings, mechanical repair, engineering, purchasing, disaster recovery, technology improvements and implementation of DuPont and United States Federal Railroad Administration health and safety programs and training. He has directed system wide train movements for the network, analyzing and evaluating traffic flows and patterns to apply resources based on supply and demand.

EXPERIENCE

2010 - Present

Transportation Specialist – WorleyParsons, Houston, TX

Confidential Client – Project Manager and lead analyst on condition assessment, operations analysis, risk register, and economic evaluation study of a mine, railway, and port operation in South America.

United States Steel Lorain Ohio Tubular Plant – Project Manager - Supplied analysis of current, planned and projected analysis for logistics multiple railway, railway rolling stock, multiple trucking, health and safety, and analysis to support multiple steel mill production operations to optimize resources for a $90 million project.

Confidential Client - Ethiopian Djibouti Railway/Red Sea Railway Project - Responsibilities included assessing infrastructure, rolling stock, workshops, maintenance assessment of current and projected operations planning of railway and ports, conducting stakeholder interviews, current and future organization alignment, forecasting capacity and logistics support to multiple personnel and equipment.

2008 - Present

Instructor – University of Phoenix, Phoenix, AZ

Instructor facilitating the following coursework to undergraduate college students: Management, Logistics, and Supply Chain Management

2007 - 2009

General Manager of Rail Logistics/Health and Safety – Trans Load America, South Orange, NJ

Duties included monitoring $50,000,000 fleet of 800 railcars, supply and demand for rail cars at six transfer/recycling stations and five landfill locations, daily interaction with six class one railroads and multiple short line railroads, logistics and supply chain management for aforementioned facilities, accounts receivable and payable, implement, monitor and control OSHA/FRA health and safety program, creating freight and waybills, implemented and measured for compliance railroad and trucking service design packages, optimized the utilization of railcar fleet, freight rates, worked with various federal, state and local government agencies to maintain compliance, drive budgetary num-

bers, implemented SOP, improved and implemented new processes and procedures utilizing Six Sigma skills.

2004 - 2007 **General Manager, Locomotive Operations – CSX Transportation, Jacksonville, FL**

In the role of General Manager, responsibilities included monitoring all aspects of CSX Transportation's $8,000,000,000 fleet of 4,000 locomotives over a 21,000 mile network. Major responsibilities included safely managing and development of a department with 30 employees that worked 24 hours per day 365 days per year. Developed and executed short and long term budgetary commitments and supply and demand locomotive strategies.

1998 - 2004 **Assistant General Manager/Director Locomotive Distribution – CSX Transportation, Jacksonville, FL**

Supervised and lead the daily operation of CSX Transportation's Locomotive Distribution Group for maximum utilization of its locomotive fleet. Ensured efficient use of yard and local locomotives to maximize customer satisfaction and minimize operating expense. Minimize fuel costs by controlling vendor fueling and optimizing vendor fueling.

1995 - 1998 **Manager, Locomotive Distribution – CSX Transportation, Jacksonville, FL**

Responsible for supply and demand and continuous evaluation and the distribution of locomotive power to obtain maximum resource utilization while using the minimum operating expense

1994 **Yardmaster – CSX Transportation, Toledo, OH**

Responsibilities included safely supervising crew, mechanical, engineering, car department, train crews and railcar switching movements within five rail yards and rail yard terminal limits.

EDUCATION

MBA, Business Administration, Jacksonville University, Jacksonville, FL 1997
BA, Criminology, University of South Florida, Tampa, FL 1993

SPECIFIC TECHNICAL EXPERTISE/SPECIALIST COURSES

- Expert Knowledge of Logistics, Complex Networks, and Supply Chain Management
- United States Department of Labor Occupational Safety and Health Administration Certified.
- Strong Communication and Leadership Skills
- Proficient in all Microsoft Office Programs
- Exceptional Analytical and Problem Solving Skills
- Six Sigma Green Belt Trained

WorleyParsons
resources & energy

Martin Donegan
Project Controls

Resume

SUMMARY

Senior Project/Program Manager with over 15 years of experience. Worked on several major projects located throughout the U.S., China, South America, and Europe. Representative projects include circulating fluidized bed boilers (CFB), sub-stations, and various power plant outages and refinery turnarounds. Worked on many of these projects from contact award through unit start-up in the field. Responsible for implementing Primavera Enterprise solutions, including developing the plan, setting up global and project attributes, rolling-out, importing of existing project, training, and executing new projects. Over 10 years of significant large project experience with cost control and containment, contract compliance, and construction completion processes and procedures.

EXPERIENCE

2008 - Present **Senior Project Controls Manager, WorleyParsons, Reading, PA**

Kleen Energy – Richmond County Phase 5 Combined Cycle Projects. Primary responsibilities include managing schedule and cost. This includes progress and reporting of the project schedule, earned value tracking, resource forecasting, schedule variance, and construction schedule integration with the client.

1988 - 2008 **Project Controls Manager/Project Controls Engineer, Foster Wheeler/Ahlstrom Pyropower, Perryville, NJ**

Primary responsibility from the fall of 2000 to fall of 2008 included implementation and management in the Foster Wheeler Power Group Primavera Enterprise Initiative. This included coordinating with network administrators during the server/software installation and configuration, establishing the global EPS and OBS, setting up Earned Value Management Rules within Primavera, managing consulting services during the initiative, importing existing P3.1 projects into P3e/c, introducing and training new users and administrators, and continuing on-going improvements and upgrades. Additionally, responsibilities included cost and schedule tracking of various outages, refinery turnarounds, and cogeneration projects.

2003 - 2004 **Scheduler/Project Controls Manager, Areva T&D, Eddystone, PA**

Responsibilities included cost and schedule tracking of all North American substation projects from the proposal phase through unit commissioning and close-out. This included analyzing periodic progress for home office and site activities to determine risks, cost, and schedule impacts and opportunities.

1982 - 1988 **Engineer Assistant/Release Analyst/Engineer, Cubic Defense Systems, San Diego CA**

As an Engineering Assistant and Release Analyst, responsible for the design group's hourly forecasting, data submittals, configuration control of drawing changes, and various drafting and administrative tasks. These tasks required constant interfacing and coordinating between logistics, manufacturing, material/production control, design, and engineering. As an Aeronautical Engineer, responsibilities included the design, testing, and implementation of the roll and dive modules for

Ground Collision Avoidance System (GCAS). The purpose of GCAS is to signal a warning to the pilot should controlled flight into terrain be imminent.

EDUCATION

B.S., Aerospace Engineering, San Diego State University, 1984

A.S., Flight Operations, Monterey Peninsula College, 1979

SPECIFIC TECHNICAL EXPERTISE/SPECIALIST COURSES

Certificate, Primavera Advanced Training Course 106 - 2007

Project Management Professional, 1993

WorleyParsons
resources & energy

John F. Blekicki
Procurement & Contracts

Resume

SUMMARY

Project Procurement Manager with over 25 years of experience in purchasing, including 12 years with WorleyParsons. Over 15 years of experience in project, program, and purchasing management specializing in contract development and negotiations multi million dollar infrastructure projects. Experience focuses on developing project procurement programs, negotiation of vendor agreements, coordination of all purchasing activities including the developing and implementing of client based strategies. Lead negotiator of company-wide and worldwide purchasing agreements with hands on experience in the design and development of contracts for material and equipment procurement.

EXPERIENCE

1998 - Present **Project Procurement Manager, WorleyParsons, Reading, PA**

2010 - Present **Jo-Carroll Energy – Sand Prairie Station.** BFB Boiler and accessories associated with the construction of the Jo-Carroll Energy Bio-Fuel Project. The station is to be constructed near Thomson in York Township, Carroll County, IL. Responsibilities included the solicitation of proposals, negotiations, and award for major engineered equipment and construction contracts.

2009 - 2010 **PSEG Power LLC – Kearny Plant Site, Kearny, NJ.** Installed four General Electric (GE) LM-6000 PC Sprint aero-derivative gas turbines identified as Kearny Units 13a, 13b, 13c, and 13d and associated auxiliary equipment. Responsibilities included the solicitation of proposals, negotiations, and award for major engineered equipment and construction contracts.

PSEG New Haven LLC – New Haven Plant Site, New Haven, CT. Installed three General Electric (GE) LM-6000 PC Sprint aero-derivative gas turbines identified as New Haven Units 2, 3, and 4 and associated auxiliary equipment. Responsibilities included the solicitation of proposals, negotiations, and award for major engineered equipment and construction contracts.

2008 - 2010 **Mirant Potomac River, LLC Phase 1 Fugitive Dust Controls Project located in Alexandria, VA.** The project included the implementation of emissions controls with respect to fugitive dust and fine particulate matter emissions. Responsibilities include the solicitation of proposals, negotiations, and awards for engineered equipment, electrical and mechanical equipment and all construction related contracts.

2008 - 2010 **RC Cape May Holdings, LLC – B. L. England Unit 2 Emissions Control Project.** The B. L. England Generating Station (BLES) is located on a 442 acre site along the Great Egg Harbor Bay in the town of Beesley's Point, Cape May County, New Jersey. Responsibilities include the solicitation of proposals, negotiations, and awards for major engineered equipment including the selective catalytic reductions (SCR) catalyst, electrical and mechanical balance-of-plant (BOP) equipment and all construction related contracts including site services, foundations, flue gas desulfurizations (FGD) and electro-static precipitator (ESP) modifications, construction, and installation packages.

2006 - 2007 **ArcLight Capital Partners, LLC – Beech Hollow Power Project Waste Coal-fired Generating Station.** WorleyParsons is responsible to perform engineering, detailed design, construction management and support services for the 300 MW CFB project. Responsibilities include the solicitation of proposals, negotiations, and awards for major engineered equipment including the steam turbine generator, electrical and mechanical BOP equipment and all construction related

contracts including site services, concrete chimney, roads, foundations, piping and mechanical equipment construction and installation packages.

2006 - 2008 **SG Construction Management Company, LLC, River Hill Power Project Waste Coal-fired Generating Station.** WorleyParsons is responsible to perform engineering, detailed design and support services for the 300 MW CFB project. Responsibilities include the solicitation of proposals, negotiations, and awards for major engineered equipment including the steam turbine generator, electrical and mechanical BOP equipment and all construction related contracts including site services, dynamic compaction, concrete chimney, roads, foundations, piping and mechanical equipment construction and installation packages.

2003 - 2006 **Progress Energy Carolina – Asheville Units 1 and 2, and Roxboro Units 1, 2, 3, and 4 Coal-fired Generating Stations.** WorleyParsons is responsible to perform engineering, detailed design and support services for the FGD projects. Responsibilities include the solicitation of proposals, negotiations, and awards for major engineered equipment including the transformers, switchgear, SCR catalysts, continuous emissions monitorings (CEM), coal unloading system, limestone and gypsum handling systems, ammonia system, wastewater treatment systems, tanks, dampers, ID fans and motors, expansion joints, and miscellaneous other BOP equipment for the FGD and SCR systems.

2002 - 2003 **Santee Cooper – Cross Generating Station Cross Unit No. 3, Coal-fired Generating Station.** WorleyParsons is responsible for all necessary services for the engineering and design, procurement of equipment, preparation of construction specifications, management of construction, and supervision of the start-up test; and placing into commercial operation of Cross Unit 3, a 600 MW coal-fired plant to be constructed adjacent to Units 1 and 2 in South Carolina. Unit 3 is scheduled for commercial operation in January 2006. Responsibilities included the solicitation of proposals, negotiations, and awards for major engineered equipment including the condenser, circulating water and condensate pumps, limestone handling, conveying and preparation systems, water treatment systems, tanks, and miscellaneous other BOP equipment for the construction of the power plant.

2000 - 2002 **Elk Hills Power Project – Bakersfield, California.** The project is a joint venture with TIC for a two-on-one combined cycle unit. The project owner, Elk Hills Power LLC is a joint venture between Sempra Energy Resources and Occidental Energy Ventures Corporation. Project schedule was completed in 26 months. Responsibilities included the solicitation of proposals, negotiations, and award for all major engineered equipment including the heat recovery steam generators (HRSG), condenser, transformers, cooling tower, pumps, water treatment systems, and all BOP equipment for the construction of the power plant.

1998 - 2001 **Termocentro and LaSierra Power Projects – Colombia, South America**. The projects were joint ventures with GE and Parsons' South American partner Inelectra for the conversion of simple cycle combustion turbines to two-on-one combined cycle units. The projects were for two of Colombia's major utilities. Project schedules were 22 months. Responsibilities included the solicitation of proposal negotiations and award for all major engineered equipment including the steam turbine, HRSGs, condensers, transformers, cooling tower, pumps, water treatment systems, transportation, and BOP equipment and material for the construction of the projects. Both projects were completed on schedule and under budget.

EDUCATION

B.S., Business Administration, Drexel University

WorleyParsons
resources & energy

Stephen M. Cisek, P.E.
Engineering Manager

Resume

SUMMARY

Thirty-seven years of experience in project and engineering management, which includes twenty-five years with WorleyParsons, in the project management, engineering, design, and construction of flue gas desulfurization (FGD) and selected catalytic reduction (SCR) systems, fossil-fueled generating plants, combustion turbine-based and nuclear generating stations, switchyards and power distribution systems, and in utility bulk power system operations. Roles included project and program management, contract control, and construction completion services for major infrastructure projects.

EXPERIENCE

2010 – Present **Manager of Engineering – WorleyParsons, Reading, Pennsylvania**

Manage and lead the multi-discipline engineering and design resources for all power (gas turbine/combined cycle, fossil/hydro services), infrastructure and environment, and minerals and metal customer sector groups and project feasibility/development projects for the Reading, Pennsylvania office currently totaling over 400 engineering and design personnel. Also responsible for the technical integrity and assurance for the U.S. Eastern Operations sub-region of WorleyParsons U.S./Latin America/Caribbean region which includes the Reading, Pennsylvania; Chattanooga, Tennessee; and Chicago, Illinois offices. Responsible for automation technology implementation, quality and technical competency of services, staffing projects, salary administration, recruiting, and professional development.

2007 – 2010 **Project Manager – WorleyParsons, Reading, Pennsylvania**

O&G Industries, Kleen Energy Project – A two-on-one 620 MW combined cycle project based on Siemens 501F combustion turbines and steam turbine with anticipated commercial operation date of June 2010 – Responsible for all engineering, design, and procurement services in the areas of conceptual and detailed engineering and design.

2003 - 2007 **Progress Energy, Carolinas, Asheville Units 1 and 2 Coal-fired Units, Honorable Mention for Project of The Year (2006), each rated 200 MW –** Responsible for all project management, engineering, design, and procurement services, as well as coordinating with technology supplier and constructor, and start-up support for a wet FGD system and a SCR system added to each unit. Unit 1 FGD system went into commercial operation in November 2005, the Unit 2 FGD and SCR systems went into commercial operation in May 2006, and the Unit 1 SCR system went into commercial operation April 2007.

Progress Energy, Carolinas, Robinson Unit 1 Coal-fired Unit, rated 174 MW – Perform a technical evaluation of alternative FGD technologies, prepare conceptual design and cost estimate for FGD installation including supporting an economic analysis. Selection will be based on net present value for each technology.

2001 - 2003 **Combustion Turbine (CT) Production Unit Director/Project Manager – WorleyParsons, Reading, Pennsylvania**

Overall responsibility for all engineering services contracts whose plants use combustion turbines. Responsible for project administration program development, projects' staffing, training and

development, engineering process improvement, promoting consistency in engineering and design deliverables, business development and proposal support, and salary administration for engineering and project managers in the production unit.

2002 - 2003 **Project Manager – WorleyParsons, Reading, Pennsylvania**

SK Engineering & Construction, Kwang-Yang, 1000 MW combined cycle plant consisting of two 500 MW, 2 x 1 blocks – Responsible for all consulting services in the areas of conceptual engineering and design, detailed combustion turbine generator (CTG), and steam turbine generator (STG) foundation design, plant start-up support, and technology transfer.

2003 **Engineering Manager – WorleyParsons, Reading, Pennsylvania**

Tractebel Wise County and Hot Spring Plants, Two-on-one 750 MW each Combined Cycle – Engineer/procure/construct projects based on SWPC 501G combustion turbines with anticipated commercial operation dates in 2004 and 2005.

1996 - 2001 **Chief Engineer – WorleyParsons, Reading, Pennsylvania**

Control Systems and Electrical Engineering Department – Responsible for program development, technical direction, projects' staffing, employee training and development, engineering/design quality, engineering process improvement and development of standard specifications, drawings and design guides, business development support, development and management of operating budget, and salary administration for a department of control systems, electrical, and transmission/switchyard engineering personnel.

The department provides consulting, design engineering, and systems integration services for process control and automation systems and power distribution and other electrical systems. These services are for electric utility and independent power generation plants, cogeneration plants and industrial energy plants including their environmental controls.

Prepare proposals for coal-fired and combined cycle power plants. Assist on-going projects with study and calculation review, approval, and general engineering support.

EDUCATION

B.E.E., Electrical Engineering, Manhattan College, 1973

REGISTRATIONS/AFFILIATIONS

Professional Engineer – Texas (1982), Arkansas (2002), and Pennsylvania (1990)

Member, Institute of Electrical and Electronic Engineers

WorleyParsons
resources & energy

Walter MacFarland
Construction Management

Resume

SUMMARY

Director of Construction with over 20 years of demonstrated growth and success developing and executing corporate initiatives, creating and executing strategic/business development plans, and driving to achieve/exceed growth and profit performance targets, in both the public and private sectors within the construction industry. Experience in all disciplines of construction – civil, structural, mechanical, and electrical. Project work in all areas of construction – fossil, renewable energy, and nuclear; electrical transmission, distribution, and substation construction; paper plants and oil, petroleum, and refinery construction. Extensive knowledge and development experience in vendor and third party service provider contracting development and administration.

EXPERIENCE

2010 - Present **Director of Construction – Eastern Operations, WorleyParsons, Reading, PA**

Manage regional office and field construction activities to provide complete construction programs. Apply an extensive knowledge of various disciplines to be used during construction as well as the methods and techniques to be utilized for installation. Become thoroughly familiar with required contractual obligations and technical aspects of all facilities to be erected.

2008 - 2010 **Group President, Energy, Mastec, Inc., Coral Gables, FL**

Scope of duties centered on leading and directing the successful development and implementation of strategic business plans for the Energy Group, comprised of three operating companies – both a union and non-union company responsible for both overhead and underground infrastructure, including transmission, distribution, and substation work. The third company was a wind energy company responsible for balance-of-plant design/procure/install installations. Focus included growth of all three businesses to gain greater market share; integration of acquisitions into MasTec 3 development, and implementation of processes to support growth and improve profitability.

2007 - 2008 **Independent Consultant, Philadelphia, PA**

Provided consulting services to the industrial services business sector.

2005 - 2006 **Executive Vice President, Electric, Infrasource Services; Media, PA**

Scope of duties centered on directing the successful development and implementation of strategic business plans for the Electric Business Unit, comprised of three operating companies, responsible for above-ground electric infrastructure and oversight of all strategic corporate accounts. Focused on establishment of best practices of three operating companies to maximize EBITA and optimize utilization of limited resources in the market; increase of senior management talent pool in operating units to support growth and profitability; development and refinement of operating processes to increase profitability; and increased effectiveness of integrated resources for strategic accounts.

Responsibilities included:

- Led executive recruitment effort to strengthen and broaden senior management experience within all three operating companies of the Electric Business Unit. Hired seven outside executives and promoted three from within – positions from Unit President to Divisional VPs.

- Directed the organizational realignment of all three operating companies, including creation of a COO position within two units and the development of a double-breasted (union and non-union) operating unit with the third company.
- Initiated the expanded engineering capabilities from regional support of one operating unit to support all corporate operating units.
- Initiated capabilities integration strategy across the Electric Business Unit to develop 'best in class' processes across the operating companies.
- Grew revenue 30% while increasing profitability by 15% over a year and a half.
- Led Strategic Account team in development of improved processes, providing better alignment with client's goals, resulting in improved profitability for corporation.
- Initiated an Electric Business Unit strategy to improve project management/project controls functions, and processes to support key projects within corporation.

2000 - 2004 **Chief Operating Officer, The Hake Group Of Companies, Eddystone, PA**

Scope of duties centered on directing the successful development and implementation of strategic business plans focusing on integration and establishment of full service capabilities for five heavy industrial construction companies.

- Increased annual revenue within four years from $87 million to $450 million while simultaneously improving profit margin by a factor of three.
- Integrated five business unit operations (electrical, mechanical, civil/structural, boiler, heavy rigging) in order to facilitate a new marketing strategy and enlarge customer base. As a result, grew annual revenues 500% over a 4-year time frame.
- Developed and implemented major process improvement initiatives/organizational changes to support growth potential. Subsequently, awarded and implemented larger contracts with new and existing clients.

1999 - 2000 **Independent Consultant; Philadelphia, PA**

Provided business development services for clients in the engineering and IT management industries for WorleyParsons. Projects included:

- Guided technical development while assisting in preparation of proposal for enterprise asset management software analysis for a major company. (DMR Consulting Group, Inc. - A Fujitsu Company; Edison, NJ)
- Collaborated in the formulation of a strategy for presentation to venture capitalists for a third-party partnership for asset acquisition. (Parsons Corporation; Reading, PA)

EDUCATION

M.B.A., Widener University; Chester, Pennsylvania, 1989

B.S., Engineering, Widener University; Chester, Pennsylvania, 1971

REGISTRATIONS/AFFILIATIONS

Professional Engineers License, Pennsylvania – [redacted]

INPO Senior Nuclear Plant Managers Certificate – 1994

Member, American Society of Mechanical Engineers

WorleyParsons
resources & energy

Lora L. Pinkerton, P.E.
Estimating Manager

Resume

SUMMARY

Estimating Department Manager with over 29 years of experience with WorleyParsons in cost estimating and engineering, planning, scheduling, and structural design engineering for fossil, integrated gasification combined cycle (IGCC), nuclear, and industrial facilities. Domestic and international experience in estimating new and retrofit projects on a lump sum turnkey (LSTK); engineer, procure, construct (EPC); and program management or traditional engineer, procure, construction management (EPCM) basis for independent power producers (IPPs), utilities, and government clients. Additional responsibilities include cost consulting, review and analysis of management programs and procedures, and risk analysis modeling.

EXPERIENCE

2004 - Present **Estimating Department Manager, WorleyParsons, Reading, PA**

Responsible for the administration and technical supervision of all estimating services performed in the Reading, Pennsylvania operations center. Specific responsibilities include: Performing estimate reviews, providing technical advice and guidance, developing and scheduling resources, monitoring budget compliance, and interfacing with project teams, clients, and executive management. In addition, continue to act as an Estimating Sponsor on larger or more complicated projects.

Major projects include:

- Stanwell – ZeroGen IGCC, Australia, Phase 1. Initial phase feasibility study
- E.ON – Western Kentucky IGCC, 600 MW. Initial phase feasibility study
- Southern Company – Plant Scherer. Selective Catalytic Reduction (SCR) and Flue Gas Desulfurization (FGD) Projects, 4-unit, 3600 MW
- Xcel Energy – Western Colorado IGCC, 650 MW. Initial phase feasibility study estimate
- FutureGen – IGCC. Multiple design and plant site configurations for FutureGen Alliance3 – Initial phase feasibility study

2000 - 2004 **Chief Estimator and Project Estimating Group Leader, WorleyParsons, Reading, PA**

Responsible for oversight of both the definitive and conceptual project estimating groups, including estimate reviews, supervision of personnel, scheduling of resources, training, and mentoring. In addition, continue to fill the role of Lead Estimator or Estimating Sponsor, and provide on-going project support on a variety of projects.

Major projects included:

- Progress Energy Carolinas – North Carolina Clean Air Program, Roxboro Power Station (four-unit, 2400 MW) and Asheville Power Station (two-unit, 400 MW). FGD and SCR projects
- Santee Cooper – Cross Unit 3. 600 MW pulverized coal power plant (supercritical)
- Dominion Energy – Dominion Person Combined Cycle Facility. 1000 MW combined cycle power plant
- Oxychem/Sempra, – Elk Hills Power Project. 500 MW combined cycle power plant re-estimate
- Mirant – San Severo Power Plant, Italy. 400 MW combined cycle power plant
- Allegheny Energy Supply – St. Joseph's County Generating Facility. 550 MW combined and simple cycle power plant

- Constellation Power – Endless Mountains Energy Facility. 750 MW combined cycle power plant
- Constellation Power – Gateway Power Plant. 800 MW combined cycle power plant
- Dynegy – Renaissance Power Project. 500 MW simple cycle power plant

1998 - 1999 **Project Estimator, WorleyParsons, Reading, PA**

Lead Estimator for a number of lump sum turnkey (LSTK) engineer, procure, construct (EPC) proposals for combined cycle and nuclear decommissioning projects as well as a variety of conceptual estimates and studies. Responsibilities included: Coordination of cost estimates and final price development; overall estimate accuracy; development of indirect costs and cash flows; oversight of discipline estimators; preparation of proposal schedules and expediting of team members for schedule compliance; interface/coordination with engineering, management, partners, owners, and other third parties; participation in technical, commercial and management reviews; and support of bid negotiations.

Major projects included:

- Electricidad de Caracas – El Sitio Power Project, Venezuela. 500 MW combined cycle power plant
- Electricidad de Caracas – Arrecifes Power Project, Venezuela. 525 MW combined cycle power plant
- Pluespetrol Energy S.A., San Miquel de Tucuman Power Station, Argentina, 370 MW combined cycle power plant
- CSW Energy Inc. – Eastex Cogeneration Project. Combined cycle power plant
- Maine Yankee Nuclear Generating Station. Decommissioning
- Consumers Power Company – Big Rock Point. Major component decommissioning

1991 - 1997 **Project Cost Engineer, WorleyParsons, Reading, PA**

International Energy Agency (IEA) – Greenhouse Gas R&D Programme. Responsible for the development of capital and operating cost estimates, economic evaluations and sensitivity analyses for comparative studies of a variety of plant configurations associated with the production of electricity and/or chemical products. Traditional screening methods were utilized to determine a required cost of electricity or cost of product based on plant capital and operating costs combined with plant performance.

EDUCATION

B.S., Civil Engineering, The Pennsylvania State University, 1979

REGISTRATIONS/AFFILIATIONS

Registered Professional Engineer – Pennsylvania, 1986

American Society of Civil Engineers

Reading Branch, ASCE Board of Directors, 1982 - 1983

WorleyParsons
resources & energy

Stephen J. Ericke, P.E.
Estimating

Resume

SUMMARY

Over twenty years of experience, including nine years with WorleyParsons, in project planning, estimating, engineering, and construction services at fossil, nuclear, industrial, and commercial facilities for developers, utilities, and government clients. Estimating experience includes screening studies, order of magnitude (OOM) estimates, definitive estimates, and lump sum turnkey (LSTK) proposals. Estimates prepared using engineering, procurement, and construction (EPC) approach and engineering, procurement, and construction management (EPCM) approach for gas-fired combined cycle and coal-fired power projects. Experience in the review and analysis of conceptual, detailed, and for construction drawings of major engineering and architectural projects. Ability to work with all levels of management and contractors while developing cost estimates and revised cost estimates during project management.

EXPERIENCE

2000 - Present **Principal Project Estimator – WorleyParsons, Reading, Pennsylvania**

Lead estimator on several solar augmentation power projects, air quality control (AQC) projects for coal-fired plants and LSTK EPC proposals for combined cycle projects, including substation and power delivery estimates. Responsibilities include assuring estimating accuracy; orchestrating estimate development; planning resources; supervising discipline estimators; reviewing technical and commercial proposals; scheduling compliance; and interfacing with engineering, management, construction management, construction partners, owners, and various third parties. Activities include technical review of preliminary design, development of indirect and other costs, development of final price, cash flow development, participation in executive proposal reviews, support of bid negotiations, conversion to control estimate upon project award, and preparation of estimates to support change orders.

Major Projects include the following:

- EPRI, Progress Energy Mayo Electric Generating Station Solar Augmented Steam Cycle Project, 27.7 MW – Development of project screening estimate.
- EPRI, Tri State Generation Escalante Energy Facility Solar Augmented Steam Cycle Project, 35.8 MW – Development of project screening estimate.

1997 - 2000 **Senior Project Controls Engineer – Bechtel**

Prepared capital cost estimates ranging from Order-of-Magnitude (OOM) to LSTK estimates for domestic and international projects. Coordinated with engineering to determine the scope and objectives of the estimate; quantification of equipment and associated bulk commodities; and developed and/or applied the appropriate labor unit rate and equipment costs for the developed quantities. Participated in estimate reviews, presentations to business development, and team reviews with engineering, chief estimator, owner, and turnover to execution team. Project support provided in terms of preparing estimates for scope changes, reviews with the project team on optimization of design changes to minimize EPC costs.

Major projects included:

- PG&E Generating Company, Athens Power Project, 1000 MW, 4 x 2 "G" Technology Combined Cycle Generating Facility, Athens, New York.
- PG&E Generating Company, Millennium Power Project, 360 MW, 1 x 1 "G" Technology Combined Cycle Generating Facility, Charlton, Massachusetts
- InterGen, Millmerran Power Project, 840 MW Coal-fired Generating Facility, Queensland, Australia
- InterGen, Callide Power Project, 840 MW Coal-fired Generating Facility, Queensland, Australia
- InterGen, Sidi Krir, 680 MW Combined Cycle Generating Facility, Alexandria, Egypt
- Calpine, Sutter Energy Center, 500 MW Combined Cycle Generating Facility, Yuba City, California

1990 - 1997 **Electrical Engineer, Fossil and Nuclear Power Plant Projects – Bechtel**

Fossil power plant experience included preparation of specifications, calculations, technical evaluations, and coordination with suppliers for the motor control centers, UPS system equipment, panelboards, local control stations, and master/slave clock system. Prepared the 6.3 kV/400 V transformer sizing calculation and associated design documents for the above equipment, including one-line diagrams, block diagrams, schematics, and sketches using Microstation. Interfaced with procurement and project controls for change orders and equipment pricing.

Major projects included:

- Saudi Consolidated Electricity Companies (SCECO), Ghazlan Power Plant, 2400 MW Combined Cycle Generating Facility, Ghazlan, Saudi Arabia
- Public Establishment for Power Generation and Transportation (PEEGT), Aleppo Power Project, 1000 MW Combined Cycle Generating Facility, Aleppo, Syria
- Southern Nuclear Operating Company, Joseph M. Farley Nuclear Plant, 1800 MW PWR Nuclear Generating Facility, Dothan, Alabama
- Southern Nuclear Operating Company, Edwin I. Hatch Nuclear Plant, 1800 MW BWR Nuclear Generating Facility, Baxley Georgia

EDUCATION

M.S., Engineering Management, The University of Maryland, 1999

B.S., Electrical Engineering, The Pennsylvania State University, 1987

REGISTRATIONS/AFFILIATIONS

Registered Professional Engineer

Maryland, License Number [redacted] (2002)

Pennsylvania, License Number [redacted] (2000)

Virginia, License Number [redacted] (1993)

Member, Penn State Engineering Society

Section D
Relevant Experience of Firm

Section D Relevant Experience of Firm

Client	Location	Project Description	Project Start Date	Project End Date	Total Project Cost Contract Cost	Owner's Contact Information
Progress Energy Carolinas	North Carolina	WorleyParsons is the A/E (providing program/project management, procurement, and engineering/design) for Progress Energy's flue gas desulfurization (FGD) program in North Carolina. The project will extend through 2012, with an estimated 1 million man-hours to install FGD systems on 11 of the company's coal-fired plants. The work will proceed in an alliance comprised of WorleyParsons, Progress Energy, the OEM, and the constructor.	2002	2012	$800 million $80 million	Tom Cornell General Manager Project Development Tel: [redacted]
Sinclair Oil Company	Tulsa, Oklahoma	PMC, offsites, and utilities front-end engineering design (FEED), and overall construction management for the Heavy Crude Processing and Expansion (HCPE) Project, including the following grassroots units: 40,000 BPD hydrocracker; 115,000 BPD crude unit and naphtha splitter; 82 MMSCFD hydrogen plant; 30,000 BPD delayed coker; and three150 TPD sulfur units.	2007	2010	$1.260 billion $20 million (FEED portion only)	Jim Branch Project Director Sinclair Oil Corp Tel: [redacted] Mailing Address: P.O. Box 30825 Salt Lake City, Utah 84130-0825
Cross Generating Station – Units 3 and 4	Cross, South Carolina	Provided project management, engineering, procurement, construction management, start-up and testing services for Cross Generating Station Units 3 and 4.	2001	2009	$1.4 billion $81.7 million	Santee Cooper will only grant reference contact on a case by case request basis. Blanket reference approval is not granted by Santee Cooper.
Petrobras	Brazil	Integration and PMC services, front-end engineering design for utilities and offsites, and other technical services for the Rio de Janeiro Petrochemical Industrial Project (COMPERJ) to increase Brazil's heavy oil refining capacity and produce first- and second-generation petrochemical products for the internal and external markets.	2007	2013	$8.4 billion $110 million	Fernando A. S. Oliveira PMP - Sector Manager PetrÃ³leo Brasileiro S.A. Av. Almirante Barroso, 81 - 13th Floor – Centro 20031-004 Rio de Janeiro, RJ, Brazil Telephone: [redacted] Fax: 55-21-3229-3250 [redacted]
Saudi Aramco	Ras Tanura, Saudi Arabia	PMC, front-end engineering design (FEED) development, contract bid package development, detail design support, detail design package preparation, and construction management services for the Saudi Aramco East Coast Refinery Project.	2007	2012	$8 billion $75 million	Amer Shihabuddin Aramco Services Company/Saudi Aramco 181 West Huntington Drive Suite 200 Monrovia, CA 91016 Tel: [redacted]

						Fax: (713) 432-5711 [redacted]
Orifuels Sinoven SA	Venezuela	Front-end engineering design (FEED) and Project Management Consultancy for orimulsion complex. Facilities at Jose and Morichal include120,000 BPD extra heavy crude oil production facilities, crude desalting, diluent blending, pipeline, utilities, infrastructure, and 220,000 BPD orimulsion production facility.	2003	2006	$880 million $7 million	Lou Gongxun President CNPC Latin America Torre BVC Piso 8 Av. Intercomunal Sector Lasgarzas Barcelona Edo Anzoategui Venezuela Tel: [redacted]
Chevron Phillips	Al-Jubail, Saudi Arabia	Front-end engineering design (FEED), Program Management, and Construction Management for petrochemical complex, based on natural gasoline as feedstock, to produce styrene, propylene, and ethylbenzene as final products, along with by-product suitable for sale as motor gasoline blend stock.	2002	2007	$1.4 billion $85 million	Nigel Carling Principal Project Manager Chevron Phillips Tel: [redacted]
Kuwait Oil Company (KOC)	Kuwait	Five-year PMC consulting contract for optimizing capacity and enhancing facilities to reach goal of 4 million BPD production by 2020. Services include project management, coordination, planning, design, engineering, construction management, contracting, procurement, project controls, training, and other services for the construction of new facilities, upgrading of existing facilities, and transfer of technology.		2012	$305.6 million	
OPR	Geraldton, Western Australia	WorleyParsons is acting as the Program Management Team to conduct the final budget and engineering study for OPR's Bankable Feasibility Study (BFS) including management of design and engineering and capital and operating estimating for the deepwater port and associated heavy haulage rail network. The management of the site investigation activities together with the FEED activities for various aspects of the project works also forms part of the management team's scope.	2009	On-going	$200 million $26 million	Geoff Cowie Project Director Level 3 33 Richardson Street West Perth, Western Australia, 6005 PO Box 9031 Nicholson Rd Subiaco, Western Australia 6008 Mobile [redacted] Tel: [redacted] Fax: +61 8 9486 0799

Section E
Detailed Description of Proposed Management Approach

Section E **WorleyParsons Proposed Management Approach**

1. Proposed Organizational Structure

As one of the world's largest project management firms, WorleyParsons understands the importance of establishing a strong dedicated team whose sole objective is to deliver to the client professional quality services on time and within budget. To meet the objectives of this Port Authority of New York & New Jersey (PANYNJ) project we have put together an organizational structure that includes all the elements necessary to successfully deliver on the requirements for the project.

Project success starts at the top. For this project we have developed an organizational structure that provides the Port Authority with direct access to a seasoned Project/Process management engineering professional, John D. Pauling, P.E.

Mr. Pauling, through his experiences working within the region and through his work on many on-call contracts for the PANYNJ since 1986, is uniquely qualified to be the main point of contact for the PANYNJ. It is envisioned that Mr. Pauling would be the first point of contract for the PANYNJ on any task order associated with this RFP. Working together with the PANYNJ from the staff proposed for this work Mr. Pauling will identify the most qualified program management professional (PMP) specifically qualified to direct and lead the staff in the completion of the project. The PMP professional will be appointed based upon the type, location, and scope of the task order to be carried out.

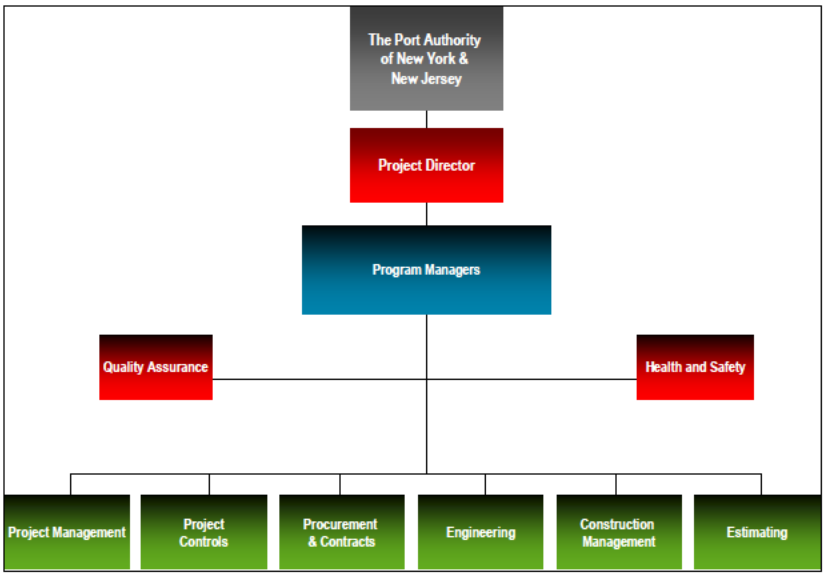


Figure 1.0
Project Team Organization

Once the PMP professional has been appointed the PANYNJ will have full access to that person as the main contact for the performance of the day-to-day operations and coordination of activities. It is further envisioned that our team will become an integrated part of the PANYNJ team providing seamless support with all aspects of the task order. The Program Manager will collaborate with the Engineering, Estimating, Procurement and Contracts, Project Controls, and Project Management leads to arrange for the required support. Other specialists, described below, will be defined within the categories outlined in figure 1.0 above, the organizational chart, and will be provided on a full or part time basis to the project as necessary. Some specialists may be full time at the beginning of the project to set

up procedures and establish a working relationship with the architectural and engineering company. The PMP professional will have access to the WorleyParsons team resources and through regular communications, web based and in person, will ensure that the PANYNJ needs are not only met, but exceeded.

WorleyParsons project team understands that the Architectural and Engineering Company will perform the EPC work, and that our goal will be to ensure that they are meeting contractual requirements and the needs of the Port Authority. The objective of the leadership team will be to ensure compliance with all technical requirements by the Port Authority, while keeping the team lean.

1.1 Role of Project Director

The Project Director will lead the overall effort and will concentrate on the following:
Manage the overall contract performance of WorleyParsons and will be the primary contact on all issues related to the performance and delivery of the on-call projects. The role and responsibilities of the Executive Sponsor will include, but not be limited to, the following items:

- Coordinate project team alignment and team building meetings
- Provide support to senior management of the Port Authority on any new business issues
- Make presentations to the Port Authority Management on project progress and concerns

1.2 Role of Program Manager(s)

The Program Manager will lead the overall technical team and will concentrate on the following areas:

- Prepare the roles and responsibilities of all the engineering specialists assigned to the project
- Monitor and review for the completion of technical deliverables by the Architectural and Engineering Company
- Supervision of engineering specialists and providing the day-to-day guidance to provide technical oversight with the Architectural and Engineering company and construction contractors. Engineering discipline specialists will include the following disciplines: Civil, Structural, Architectural, HVAC, Mechanical, Electrical, Instrumentation and Control Systems, Process, Process, Safety and Fire Protection, Environmental, Materials, Corrosion, Piping and Layout, and Engineering Systems.
- Monitor preparation of RFPs for the technical content and technical evaluation of bids and follow up of issues with the bidders
- Prepare an engineering execution plan for the engineering specialist and monitor adherence to the plan
- Evaluate the need for third party specialists and make recommendations to the Port Authority for approval. Manage the work of third party specialists.
- Perform QC surveillance of technical documents produced by the Architectural and Engineering Company and construction contractors
- Manage the project schedule for all technical activities with the Architectural and Engineering Company, construction contractors, and third party consultants
- Conduct weekly meetings with the Architectural and Engineering Company and record all minutes and issue for review and action
- Maintain an action item list and needs list and update weekly

- Make presentations to the Port Authority management on project progress
- Ensure that the design of the Infrastructure facilities is safe, operable, and reliable, which meets the Port Authority objectives

1.3 Quality (QA)

A WorleyParsons QA engineer will work with the Architectural and Engineering Company and the Port Authority to ensure that a project oversight plan is developed for the work. This plan will establish key requirements for review of critical project documents using an agreed document distribution matrix (DDM) and the timing of subsequent follow-up audits.

The QA position will be a part-time position.

1.4 Health Safety & Environment (HSE)

The project team will ensure that HSE practices and principles are brought into all phases of the project, starting with the Architectural and Engineering Company. Any work performed in the field with WorleyParsons' supervision will ensure that job safety assessments are performed prior to commencing work and that all contractors performing this work understand work scope and hazards. HSE will coordinate with the Architectural and Engineering Company and construction contractors to ensure that all required national codes and regulatory requirements are followed.

1.5 Roles & Responsibilities of the Project Support Team by Discipline

1.5.1 Scheduling

WorleyParsons will provide a Project Planner to prepare an overall project implementation schedule to include permitting, other regulatory studies, etc.

The schedule will be prepared in Primavera P6 with critical path fully identified.

WorleyParsons will monitor and report progress to the Port Authority and give early warning of any activities that are potentially impacting the overall end date of the project desired by the Port Authority.

WorleyParsons will also manage several workshops with all stakeholders to review the EPC project schedule.

The scheduling position will be a full-time position.

1.5.2 Cost Control

We will track expenditures by all parties for the project: Architectural and Engineering Company, construction contractors, WorleyParsons, and third party specialists and prepare a consolidated monthly report for the Port Authority. Cost Control will be a full-time position on the project.

1.5.3 Procurement and Contracts

The Procurement & Contracts Manager will provide procurement and contract support. The initial activities will be to prepare the Request for Proposal (RFP) for the selection of Architectural and Engineering Company for the EPC contracts, organizing and managing the bidding process, and communicating with bidders. This position ensures that the contract and bid packages comply with the client's requirements and expectations, properly document contractor responsibilities, comply with the applicable laws, and protect the contractual interests of the client. The Procurement & Contracts Manager will also monitor procurement activities during the execution phase of the project Typical Bidding Process.

WorleyParsons has had extensive experience in the process required for successfully bidding, awarding, and executing large EPC scope packages. We have helped other Owners award numerous contracts for projects ranging in value from $15 million up to $5 billion dollars. We have listed below the typical steps that we follow in this process, they are:

- Pre-market survey and EPC Contractor interviews
- EPC Contractors Expressions of Interest
- Issue Request for Proposal (RFP)
- Prequalification Discussions
- Site Visit
- Individual Pre-Bid Meetings Held with Each Bidder
- Execution and Technical Proposals Received
- Commercial Proposals Received
- Proposal Clarification Period
- Updated Scope and Bill of Quantities Released
- Updated Commercial Proposals Due
- Validate Cost (Selected Bidder)
- Award EPC Contracts
- Notice to Proceed

1.5.4 Engineering Discipline Specialists

The project team will have the following Engineering Specialists (Lead Discipline Engineers) and may be deployed full time or part time depending on the project phase.

- Civil/Structural/Architectural
- Heating, Ventilation, and Air Conditioning (HVAC)
- Mechanical
- Electrical
- Instrumentation and Control Systems
- Process
- Safety and Fire Protection
- Environmental
- Geotechnical

Section E WorleyParsons Proposed Management Approach

- Materials
- Corrosion
- Piping & Layout
- Engineering Systems

Every effort needs to be made during the engineering evaluation phase of the project to ensure that a well-defined, high quality, detailed engineering package issued for construction deliverables is produced. This package will look to incorporate value engineering, where possible, providing savings during the construction phase.

The Engineering Team should be in full alignment with the Architectural and Engineering Company's engineering team from Day One to produce the most productive environment for design optimization and for cost and schedule reduction.

Following are the highlights of the key activities of the engineering discipline specialists during the definition, detailed engineering, and construction phase of the project for which WorleyParsons will provide oversight, guidance, review, checking, and validation of engineering deliverables to achieve a quality design and cost estimate.

- Support the preparation of the technical scope of work and list of engineering deliverables required for the definition phase of the project and detailed engineering phase of the project. The list of deliverables need to be developed so that the list is included in the Request for Proposal (RFP)
- Support the preparation of the technical portion of the Request for Proposal for the Architectural and Engineering Companies and construction contractors
- Support the bid review and evaluation process and make recommendations for the technical portion of the work for the Architectural and Engineering Company and the construction contractors
- After project award, attend the project initiation kick off meeting with the Architectural and Engineering Company and Construction contractors
- Review the Architectural and Engineering Company's engineering execution plan and provide input
- Review the 90 day look-ahead resource-loaded schedule and deliverables to be produced during this period
- Review the list of engineering deliverables for the package and make recommendations for any new additions
- Preparation of the BEDD (Basic Engineering Design Data) document to be provided to the Architectural and Engineering Company
- Review of Architectural and Engineering Company's project specifications for customization to include functional requirements such as performance parameters, operating and design philosophy, and criteria for the overall facility.
- Review equipment data sheets
- Review all engineering design drawings
- Participate in 3D model reviews
- Review the Architectural and Engineering Company's recommendations on items that require engineering resolution
- Attend weekly progress meetings during engineering phase and construction phase
- Prepare a technical review matrix of all the deliverables that require approval by the project team

- Scrutinize equipment design philosophies, sizing guidelines, recommended practices and working procedures, and provide comments as necessary
- Evaluate engineering change notices and make recommendations
- Review commonality of equipment to reduce spare parts
- Check the level of detail of design deliverables
- Verify the design margin to limit the allowed design margin deviation
- Coordinate visits to fabrication shops
- Ensure consistent project philosophies are used
- Evaluate engineering schedule and the timelines for completion of deliverables
- Provide support for the development of the cost estimate to the estimating group and estimate validation effort
- Maintain and manage the completion of action items and needs list
- In the areas of advanced process controls, ensure that the best technology is selected
- Review the monthly progress report
- Monitor construction progress and review actual and forecasted progress with respect to schedule
- Evaluate request for change orders and make recommendations for approval
- Review the estimating plan and provide input
- Review and validate bulk material take-offs
- Review plot plan and provide on-going input to finalize with coordinates
- Participate in final cost estimate reviews
- Validate the final cost estimate report

1.5.5 Construction Management

The Construction Management team will provide leadership and management in the following areas:

- Provide support to review the construction contracts developed by the Architectural and Engineering Company
- Provide support to evaluate the construction bids and recommend for award
- Provide oversight at the construction site to ensure that all construction work is completed within schedule and budget
- Provide input to weekly and monthly progress reports
- Provide direction to the field construction supervisors and inspection personnel on various activities during the construction phase

1.5.6 Estimating

As an experienced contractor managing and designing facilities, WorleyParsons will provide an independent view of the Architectural and Engineering Company's EPC cost estimate and we will provide key analysis of hidden profit, contingencies, and risk monies in the estimate.

WorleyParsons will assign a full time Cost Estimator to the project to establish the key documents and philosophies. They will work with the Architectural and Engineering Company for the following activities:

- Establish an agreed work breakdown structure for the EPC cost estimate
- Assist in developing the cost methodology for labor, materials, and construction subcontracts
- Manage several workshops with all stakeholders to review the EPC cost estimate.

Independently, WorleyParsons will establish benchmarks for critical activities by unit rate, or more specific detail required by the Port Authority, to provide confidence to the Port Authority for the final cost estimate. These benchmarks will come from other worldwide facilities executed by WorleyParsons.
The Cost Estimator position will be a part-time position, as required.

2. Proposed Project Approach

The project management approach described herein is for a typical Project Management Consultancy (PMC) Role to act as the Owner's Engineer for The Port Authority of NY & NJ. This role will need to be further defined and developed in more detail; customized to meet the execution and contracting strategy for the specific type and size of project.

After project award, staffing plans will be developed to meet the work scope and the overall project schedule: The initial staffing plans will represent the best estimate of WorleyParsons for the resources required to execute the understood scope and will be progressively modified as more information becomes available. A formal process for allocation of personnel to the project will be used and the staffing will be presented to the Authority for review and approval. The aim of the process is to ensure appropriately skilled and qualified people are assigned to the project.
The Project Management team supplied by WorleyParsons will support and integrate with The Port Authority of NY & NJ for the awarded project to lead the effort(s) for the following key activities:

- Develop and implement a project execution plan for the project consistent with the Agency's guidelines
- Pre-qualify professional architectural and engineering companies and construction companies to bid on projects
- Develop the scope of work for the project and the contracting strategies to execute the work. The contracting strategies will consider what type of contract will be used e.g. cost reimbursable time and material, cost reimbursable with fixed fee, fixed price, negotiated (sole source), existing alliance, existing evergreen contract, fee at risk
- Develop a risk management plan and risk mitigation strategies
- Prepare the Request for Proposals (RFPs) for Professional Architectural and Engineering companies to bid on engineering work. Prepare RFPs for construction companies to bid on construction work
- Evaluate the bids and make technical and commercial recommendations for award of work
- Prepare contractual documents for the award of the project to the Architectural and Engineering companies and construction contractors
- Lead the effort to negotiate engineering, procurement, and construction (EPC) contracts
- Ensure sufficient technical oversight and guidance is provided to the Architectural and Engineering Company and construction companies
- Manage the project completion within budget and schedule
- Ensure the design is safe, operable, and meets reliability and availability goals
- Ensure vendor lists achieve the desired reliability and cost effectives objectives desired by the Port Authority

Section E WorleyParsons Proposed Management Approach

- Provide overall schedule integration plus other project activities undertaken by The Port Authority
- Ensure that the project execution plan proposed by the Architectural and Engineering company is achievable within economical guidelines and contains adequate risk mitigation measures
- Provide interface management with all entities
- Work with the Port Authority to prepare an overall Basic Engineering Design Data (BEDD) incorporating all information available for the project.
- Prepare an overall project schedule that incorporates all activities incorporating the project management approach
- Provide support services for updating the project management manual of standards and procedures and development of new procedures
- Provide support to maintain a document control system
- Provide support for other Port Authority activities outside the project area such as electrical ROW, other permits, etc.
- Provide local regulatory, environmental support.

The project management process, provided under this On-Call, will follow the WorleyParsons Project Management Process (WPMP), which has been developed to ensure quality, efficiency, and consistency in the WorleyParsons approach to project delivery. WPMP provides a common framework for project execution, which is intended to be applied to all business sector project activities throughout the WorleyParsons Group.

The WPMP is a risk-based process for developing (and supporting) a Project Execution Plan that is suited to the needs of the project. They key determinants are:

- Project Risk Classification
- Phase of Project

The majority of what the WPMP delivers is useful guidance on project delivery best practice. Application of this guidance will be at the discretion of each project/program manager. It is not intended that the content be rigidly followed in a 'cook book' approach. It will continue to be expected that project personnel will apply best judgment regarding the extent of application of project management systems, depending on specific project circumstances, and the value add to be gained.

Mandatory elements have been kept to a minimum and are clearly designated as such. The process has been designed to be scalable as a function of project size and risk. The larger, more complex projects would be expected to employ more of the WPMP elements than the smaller, more routine projects.

In other words, all projects are expected to be performed in accordance with the WPMP, but much of the WPMP is intended to provide guidance and serve as an aid. The requirements that are mandatory and auditable have been kept to a minimum.

Each project is required to have a Project Execution Plan (PEP) and the requirements specific to the project will be captured in the PEP, including all mandatory WPMP requirements. It is the PEP that is then auditable.

Section E WorleyParsons Proposed Management Approach

The WPMP is based on a phased / gated project life cycle, consistent with the staged project delivery processes used by most major operating companies. At this stage, WorleyParsons is primarily involved in the Evaluate, Define, and Execute Phases. The Identify and Operate Phases are typically managed by the Owners. However, there is an increasing potential for greater involvement in these two phases, especially in environments where we have long term relationships with the Owners (e.g. alliances).

WPMP Phased Project Approach

Projects are divided into five phases, with each phase corresponding to a key decision point. The five phases are:

- Identify
- Evaluate
- Define
- Execute
- Operate

The phased approach is based on:

- A Gate at the end of each Phase, where a decision is reached on whether to proceed to the next Phase or not
- The decisions, the rationale behind them, and any uncertainties all being captured in the Decision Support Package (DSP) presented to the Client's Gatekeeper / Approval Body
- The activities planned within each Phase being those necessary to develop the information for the DSP
- The use of nine focus elements, consistent across each phase, to categorize the activities necessary to develop the DSP

The phased project approach is underpinned by the requirement to optimize the level of Front End Loading (FEL), and thereby maximize project value.

A more detailed indication of typical activities performed in each Phase is provided in Fig. 1.1 below.

Section E — WorleyParsons Proposed Management Approach

	Phases			
1	2	3	4	5
IDENTIFY →	EVALUATE →	DEFINE →	EXECUTE →	OPERATE
Project Feasibility Business Strategy	Evaluate Development Options Execution Strategy	Finalize Scope Sanction Project	Produce Asset	Operate Asset
Identify resource Field/Resource Exploration Asset performance assessments Identify concepts/development options Preliminary analysis Preliminary budgets – Produce Class 1 Cost Estimate (+/- 50% accuracy) Preliminary planning Market Studies Build initial business case Test for Strategic fit	Field Resource Appraisal Confirm Concept Options Conceptual engineering Concept evaluation & selection Technology selection Concept Cost estimating – Produce Class 2 Cost Estimates (+/- 30% Accuracy) Prelim. Development strategies and plans Address environmental/ regulatory requirements Refine Business Case	Front-End Engineering Design (FEED) Key/long lead procurement Tender preparation for major contracts Bid evaluation Develop Key Execution Plans Asset development plan Field development plans Sanction Cost Estimate. Produce Class 3 Cost Estimate (+/- 10% to 15% accuracy) Finalise Business case	Detailed engineering Control Estimate (optional) on Completion Detailed Engineering. Produce Class 4 Cost Estimate (+/- 5% to 10% accuracy) Procurement Construction Commissioning Performance Testing/ Acceptance	Evaluate Asset's Performance against Specification and Business Case Operations & maintenance Asset management Shutdowns/Turnarounds Regulatory Compliance Farm-in opportunities Infills & tiebacks Optimize asset plan Decommissioning Rehabilitation

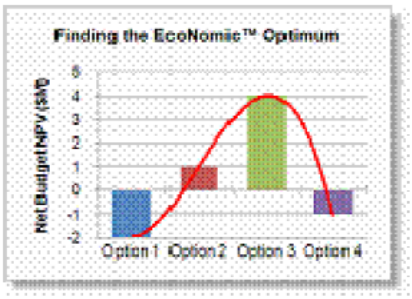
Figure 1.1
Typical Activities in Phases

Section E **WorleyParsons Proposed Management Approach**

3. Value Added Services

WorleyParsons can assist the The Port Authority of NY & NJ through this Program/Project Management contract with alternative/options evaluation on projects by using our EcoNomics process and the Delta financial modeling tool.

The EcoNomics™ Assessment (ENA) methodology and Delta financial modeling, developed by WorleyParsons, have the ability to help port clients better manage environmental and social risk. Fundamentally, the methodology quantifies sustainability through a process of monetization and thereby realizes triple bottom line accounting. This allows for the objective incorporation of sustainability into the decision making process and greatly assists stake-holder communication on high profile issues. This tool has been used around the globe to identify the "optimum" alternative for capital projects where risks to and from the environment and society are recognized. Recently, WorleyParsons was awarded a contract with the Port Metro Vancouver to use the process on various aspects of a 10-year terminal construction project. Specifically, Port Metro Vancouver will be using EcoNomics™ to better integrate the engineering work with sustainability challenges and to assess options for pre-build habitat compensation banks to offset the future environmental impacts associated with the project.



The advantage of this methodology over other cost benefit approaches are that sustainability is built into the process in an objective and non subjective way and that the results of the analysis can therefore have greater stakeholder (community and regulatory) acceptance.

4. Communication Approach to Ensure Quality

As one of the world's leading program management firms, WorleyParsons understands the importance of managing all the component parts of a complex program equally. We pay close attention to the small tasks that, if overlooked, can create a chain reaction affecting major schedule milestones or costs. This is a cornerstone of our approach to project management.

WorleyParsons is committed to responsive service and on-time, on-budget project delivery. To achieve this, our project team will apply the following directives to everything we do over the course of this contract:

- Clear and frequent communication with the Port Authority
- Prompt response to requests from Port Authority Project Managers
- Attention to the long-term goals and objectives of the Port Authority

The procedures above have been developed over many decades and thousands of WorleyParsons projects. They are adaptable to projects and tasks of all scopes and sizes. They ensure that goals are achieved, budgets and schedules are met, progress is reported, and deliverables meet the needs of the client. To keep the Port Authority

up-to-date, the Program Manager will meet regularly with the project team to discuss progress, risks, technical issues, contractor performance, schedule, and budget. Generally these project team meetings occur at least monthly either in person or via conference call.

Quality Assurance of Work Products

Overall guidance for the quality of the work is derived from the requirements of the WorleyParsons Enterprise Management System. This Management System includes a formal documented Quality Manual, the development of Project Specific Execution Plans, the effective implementation of Project Management, and the application of appropriate procedures for each project. The Quality Manual, based on ISO 9001-2008 requirements, describes the activities that assure quality and establishes a system for verification and assessment of activities associated with project execution. The requirements of the Quality Manual are implemented by established and controlled WorleyParsons Enterprise Management System that includes policies, procedures, and instructions that govern all project activities. These activities include, but are not limited to: Project Management, Engineering, Materials Management, Quality Assurance, Construction Management, and Project Completions activities. This program is applicable to all work performed by WorleyParsons.

Project Execution Plan (PEP)

Each Project executed by WorleyParsons has a Project Execution Plan that combines client, contractual, and WorleyParsons Program requirements into a document to describe and control the work. The Project Execution Plan (PEP) prescribes the Division of Responsibility, the Project Organization, the project deliverables, identifies project risks and the risk mitigation plans, and details the procedures both WorleyParsons and the client that will be applied to the performance of work on the Project.

The PEP sets forth project requirements in distinct phases and is implemented as required by the contracted service:

- Design phase – assures that adequate controls in engineering and design and development of contracts for the project to ensure that they reflect the client's and WorleyParsons standards.
- Procurement phase – assures that material and equipment purchased and fabricated be performed as specified.
- Construction phase – includes monitoring the work so that the facilities are constructed in accordance with the contracts.
- Completions phase – verifying that the facilities are commissioned and started in accordance with the contracts and will perform as anticipated.
-

The PEP also includes the methods to monitor, verify, and document the achievement of the above noted project requirements.

Quality Organization

A Project Quality Manager (PQM) will be assigned to the project and will be responsible for monitoring the effective implementation of the PEP requirements. The PQM is independent of any line responsibilities for the project and

reports to a sufficient level of management that quality problems can be reported to the appropriate level of management.
The PQM is responsible for verifying that the PEP requirements are effectively implemented by WorleyParsons personnel, vendors, contractors, and subcontractors. This includes the monitoring and review of project related quality activities and conducting quality audits. The PQM is supported by WorleyParsons Domestic and International Source Inspection Group, who provide global procurement inspection services to the project.

A Site Quality Control Manager will be assigned prior to the commencement of construction activities. The Site Quality Control Manager reports to the Construction Manager on a day-by-day basis and to the PQM on quality matters.

Quality Oversight Responsibilities

The WorleyParsons project assigned quality personnel activities include as a minimum:

- Quality monitoring and oversight of major functions (engineering, procurement, construction, and start-up)
- Maintaining the project corrective action program
- Monitoring the lessons learned program
- Providing and coordinating shop surveillance services to monitor contractor and vendor fabrication and procurement output documents.
- Scheduling and performing quality audits for the project at appropriate project milestones. These audits will be performed by qualified personnel and the results provided to project management
- Assisting in vendor surveys/qualifications reviews
- Reviewing and approving contractor quality manuals and quality plans
- Reviewing contractor inspection and test plans (ITPs) and identifying appropriate inspection points
- Monitoring the implementation and effectiveness of the contractor quality plans for maintaining a level of quality consistent with the project-specified standards
- Assisting project personnel/contractors/subcontractors by recommending and interpreting quality standards and specifications
- Assisting project personnel/contractors/subcontractors in the interpretation of contract documents for quality requirements
- Monitoring contractor/subcontractor quality performance
- Monitoring the contractor/subcontractor non-conformance process
- Monitoring the process for receiving, inspecting, storing, warehousing, and maintaining incoming materials and equipment
- Providing quality support of start-up, testing, and turnover

Section F
Names, Titles, and Hourly Rates for Engineering and Technical Personnel

Section F — Names, Titles, and Hourly Rates for Personnel

WorleyParsons Names, Titles, and Hourly Rates for Personnel is shown below.

Name	Position	Billing Rate
John Pauling	Project Director / Executive Sponsor	$220.50
Steve Cisek	Engineering Manager	$200.00
Rick Gorski	Quality Assurance	$220.50
Name	**Position**	**Hourly Rate**
James Kukucka	Program Manager	$80.00
Ted Daly	Program Manager	$80.00
John Mott	Program Manager	$71.27
Marty Donegan	Project Controls	$66.78
John Belkicki	Procurement & Contracts	$53.12
Walt MacFarland	Construction Management	$103.85
Lora Pinkerton	Estimating Lead/Manager	$78.09
Steve Ericke	Estimating	$58.96
Andy Donaldson	Project Management	$91.29
Greg Nadeau	Project Manager	$81.33
Jim Linenberger	Health & Safety	$76.37
Stan Krumsky	Risk Management	$80.82
Lowell Leaman	Civil	$41.34
Richard Wells, P.E.	Structural Engineer	$53.98
Mike Borden	Mechanical Engineer	$64.30
Wayne Bloch	Electrical Engineer	$60.00
Ayode Adeyefa	Geotechnical	$46.72
Jay White	Process Engineer	$66.78
Patrick Adams	Safety & Fire Protection	$57.13
Graig Cilluffo, E.I.T.	Corrosion Engineer	$48.10
Michael DeLallo	EcoNomics Manager	$120.70

Other Direct Costs (ODCs)

An allowance equal to $6.50 per home office man-hour, invoiced to cover general reproduction services including photocopying, bindery, reprographics, photography, and technical publications; word processing; communications services such as long distance telephone calls and fax (excluding international calls); computer services, such as 2D and 3D CAD; and domestic postage (excluding courier and special delivery services).

Section G
Minority/Women-owned Business Enterprise

Section G Minority/Women-Owned Enterprise Requirements

Minority/Women Owned Enterprise Firm Compliance

Consistent with the PANYNJ "Draft" Agreement, Paragraph 20, sub-section D, WorleyParsons acknowledges and understands the PANYNJ requirements to contract with Minority/Women-Owned Enterprise firms. To meet these requirements across a large array of business, WorleyParsons maintains working relationships with subcontractors, many of which are Disadvantaged Business Enterprises (DBE). These DBEs include Disabled Veteran Business Enterprises (DVBE), Minority Business Enterprises (MBE), Small Business Enterprises (SBE), and Woman-Owned Business Enterprises (WBE). WorleyParsons has methods for choosing the most qualified subcontractors in order to offer The Port Authority of New York & New Jersey the most comprehensive, technically proficient, and best-suited team. Additionally, WorleyParsons frequently uses firms local to the client because of their area knowledge.

Areas that might be advantageous to be subcontracted include:

- Health and Safety
- Civil Engineering (survey work if required)
- Corrosion Protection
- Fire Protection

Although WorleyParsons has the technical skills and staff qualifications to complete all the works for this project, we feel it is necessary to develop and nurture those relationships while ensuring compliance to all aspects of the RFP. We also feel it is good business practice to contract with firms who specialize in certain areas whereby adding strength to the delivery team. In doing so it is our intention to exceed the PANYNJ requirements per section 20, sub section D, of the agreement.

Section H
Complete List of Affiliates

Section H — Complete List of Affiliates

WorleyParsons Group Inc. has one affiliate company:

WorleyParsons of New York, Inc.
2675 Morgantown Road
Reading, Pennsylvania 19607

Section I
Conflicts of Interest

Section I Conflicts of Interest

Item I from the RFP states:

If the Proposer or any employee, agent or subcontractor of the Proposer may have, or may give the appearance of a possible conflict of interest, the Proposer shall include in its proposal a statement indicating the nature of the conflict. The Authority reserves the right to disqualify the Proposer if, in its sole discretion, any interest disclosed from any source could create, or give the appearance of, a conflict of interest. The Authority's determination regarding any question(s) of conflict of interest shall be final.

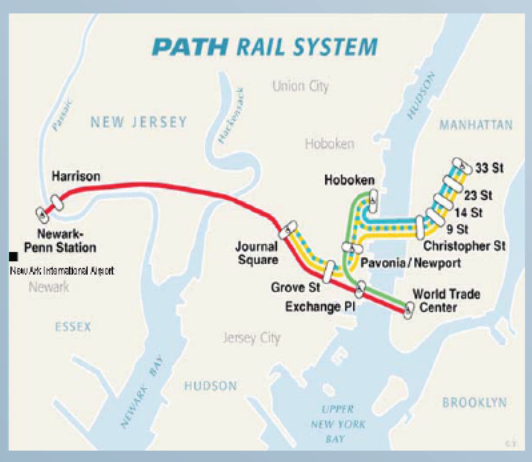
Response: WorleyParsons has no conflicts of interest.

Section J Standard Agreement, Terms, and Conditions

Section J — Standard Agreement, Terms, and Conditions

Please see suggested additions and edits to The Port Authority of New York and New Jersey's "Standard Agreements" and its related terms and conditions under separate cover.

THE PORT AUTHORITY
OF NY & NJ



Hatch Mott
MacDonald

Request For Proposals For Performance Of Expert Professional Project Management Services As Requested On A "Call-In" Basis During 2011, 2012, 2013, and 2014

RFP Number 22388

October 21, 2010

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Rates	Section F.
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List of Firm's Affiliates	Section H.
Conflict of Interest Disclaimer	Section I.
No Exceptions Statement	Section J.

Hatch Mott MacDonald

Hatch Mott MacDonald

475 Park Avenue South, 10th Floor
New York, NY 10016
T 212.532.4111 F 212.532.3907
www.hatchmott.com

October 21, 2010

RFP Custodian
The Port Authority of New York & New Jersey
One Madison Avenue, 7th Floor
New York, NY 10010

SUBJECT: REQUEST FOR PROPOSALS FOR THE PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014. RFP Number 22388

Dear RFP Custodian:

Hatch Mott MacDonald (HMM) is pleased to submit our proposal for Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis to the Port Authority of New York & NJ (PANYNJ) on key elements of the existing PANYNJ infrastructure.

HMM understands the current economic conditions and how project funding has become a challenge for many agencies. We also understand the Authorities revenue projections have been changing due to reduced activity at the revenue generating authority facilities, higher debt service, and lower financial income. The good news is that the construction costs with the current competitive market are favorable. Based on the current climate, the quicker a team can deliver the budgeted projects and programs, the more likely they'll receive a favorable bid. **Success is dependent on the continued ability to plan, execute, anticipate, manage and mitigate risks, and capitalize on opportunities timely.**

HMM is an employee owned multi-disciplinary A/E and PM/CM firm with a North American staff of more than 1,900 in 60 offices nationwide. The roots of HMM date back more than 107 years and currently provide a worldwide pool of over 20,000 employees to draw upon. HMM is a leading North American consulting engineering firm with a century of worldwide experience. HMM has designed and managed some of the world's most prominent projects. Proud of our role in major ventures across North America, we provide comprehensive engineering services in all areas of rail, transportation, tunnels, water, wastewater, airport, environmental, parks and recreation, pipeline, and utility markets. HMM has performed, or is currently performing, Project/Program Management Service agreements on a national, regional, and a local basis for clients across North America. **Projects/Programs under its United States umbrella, to name a few, include projects and programs at BART (SF Transbay Terminal), MTA LIRR East Side Access, JFK, LAX (midfield A380 terminal), Toronto-Pierson, Buffalo, and Washington International Airports.** Under its employee owned parent companies of Hatch from Canada and Mott MacDonald (MM) Group from the United Kingdom, HMM has performed or currently performing **Project/Program Management Service agreements on an international level for clients such as Sydney International Authority, British Airport Authority (Heathrow), London Underground, London Cross Rail, Taiwan High Speed Rail, Hong Kong Check Lap Kok, Athens Airport, and Dubai UAE.**

We feel we have assembled a best in class team to address the RFP requirements and to meet the defined goals of this RFP. Hatch Mott MacDonald is joined by Hill International, TranSystems, McLaren Engineering Group, McKissack & McKissack (W/MBE), and Envision Consultants, Ltd. (W/DBE) for this proposal. HMM is fully committed to both the spirit and to the detail of using Women and Minority Businesses on our projects. HMM has successfully met contract-required WBE and MBE goals on previous contracts with state and local agencies by maintaining flexibility in assigning work tasks to suitably qualified (W/MBE) subcontractors.

Hatch Mott MacDonald

Our proposed **Program Manager, Bradford Townsend, PE**, has over 34 years of construction and engineering design experience with projects and programs in North America and internationally. Currently, Mr. Townsend is leading HMM efforts for a multi-billion dollar program on the west coast that will be phasing out for him in the near future. He is supported by an experienced team of airport, bridge, rail, marine, tunnel, and transportation professionals, many of whom also have the valuable practical experience of working locally but also have an international perspective to bring new ideas to the challenges.

We are proud of our ISO 9001 Quality Environment and Safety (QES) System. Our many "Call-In" assignments attest to our ability to deliver high quality projects that fulfill the client's objectives. HMM's QES-manual is identical to the company's Project Management manual.

We have a proven track record in the metro NY area and understand that a successful project will take a responsive firm and deliver a high-quality product, on schedule, and within budget. On behalf of our more than 20,000 employees worldwide, please consider this proposal our corporate commitment to delivering such services to the Port Authority of New York & New Jersey.

Sincerely,

Roland A. Ericsson
Vice President - Area Manager

Attachment B – Agreement on Terms of Discussion

Section A.

ATTACHMENT B

PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014

AGREEMENT ON TERMS OF DISCUSSION

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority's Freedom of Information Policy and Procedure adopted by the Port Authority's Board of Commissioners on November 20, 2008, which may be found on the Port Authority website at: *http://www.panynj.gov/corporate-information/pdf/Freedom-of-Information-Policy-and-Procedure.pdf*, not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

Hatch Mott MacDonald New York, Inc.
(Company)

(Signature)

Vice President
(Title)

October 20, 2010
(Date)

ORIGINAL AND PHOTOCOPIES OF THIS PAGE ONLY.
DO NOT RETYPE.

Attachment C – Company Profile

Section B.

ATTACHMENT C

COMPANY PROFILE

REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

1. Company Name (print or type):

   _____

2. Business Address (to receive mail for this RFP):

   _____

   _____

3. Business Telephone Number: _____
4. Business Fax Number: _____
5. Firm website: _____
6. Federal Employer Identification Number (EIN): _ [redacted]_____
7. Date (MM/DD/YYYY) Firm was Established: _____/_____/_____
8. Name, Address and EIN of Affiliates or Subsidiaries (use a separate sheet if necessary):

   _____

   _____

9. Officer or Principal of Firm and Title:

   _____

10. Name, telephone number, and email address of contact for questions:

    _____

    _____

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? □ Yes □ No

    If yes, please attach **Port Authority** certification as a part of this profile.

    If your firm is an M/WBE not currently certified by the Authority, see the Authority's web site – http://www.panynj.gov/business-opportunities/supplier-diversity.html, to receive information and apply for certification.

Attachment

Hatch Mott MacDonald NY Inc.

Officers

Nicholas M. DeNichilo	President	16 Marion Lane Scotch Plains, NJ 07076 USA
Albert N. Beninato	Vice President	124 Palisade Drive Freehold, NJ 07728 USA
David P. White	Secretary	29 Lariat Court Walnut Creek, CA 94596-6633 USA
Jeffrey T. Hilla	Treasurer	22 Windham Way Englishtown, NJ 07726 USA

ATTACHMENT C

COMPANY PROFILE

REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

1. Company Name (print or type):

   Envision Consultants, Ltd.

2. Business Address (to receive mail for this RFP):

   P.O. Box 536

   Mullica Hill, NJ 08062

3. Business Telephone Number: 856-223-0800

4. Business Fax Number: 856-223-8884

5. Firm website: www.eclimited.com

6. Federal Employer Identification Number (EIN): [redacted]

7. Date (MM/DD/YYYY) Firm was Established: 12/4/94

8. Name, Address and EIN of Affiliates or Subsidiaries (use a separate sheet if necessary):

   N/A

9. Officer or Principal of Firm and Title:

   Victoria Malaszecki, President

10. Name, telephone number, and email address of contact for questions:

    Victoria Malaszecki vicki@ecclimited.com

    Envision Consultants, Ltd. P.O. Box 536 Mullica Hill, NJ 08062

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? ☒ Yes ☐ No

    If yes, please attach **Port Authority** certification as a part of this profile.

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REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

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3. Business Telephone Number: _____
4. Business Fax Number: _____
5. Firm website: _____
6. Federal Employer Identification Number (EIN): [redacted]_____
7. Date (MM/DD/YYYY) Firm was Established: _____/_____/_____
8. Name, Address and EIN of Affiliates or Subsidiaries (use a separate sheet if necessary):

   _____

   _____

9. Officer or Principal of Firm and Title:

   _____

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    _____

    _____

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4. Business Fax Number: _____
5. Firm website: _____
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    _____

    _____

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? ☐ Yes ☐ No

    If yes, please attach **Port Authority** certification as a part of this profile.

    If your firm is an M/WBE not currently certified by the Authority, see the Authority's web site – http://www.panynj.gov/business-opportunities/supplier-diversity.html, to receive information and apply for certification.

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REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

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6. Federal Employer Identification Number (EIN): [redacted]_____
7. Date (MM/DD/YYYY) Firm was Established: _____/_____/_____
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   _____

   _____

9. Officer or Principal of Firm and Title:

   _____

10. Name, telephone number, and email address of contact for questions:

    _____

    _____

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? ☐ Yes ☐ No

    If yes, please attach **Port Authority** certification as a part of this profile.

    If your firm is an M/WBE not currently certified by the Authority, see the Authority's web site – http://www.panynj.gov/business-opportunities/supplier-diversity.html, to receive information and apply for certification.

ATTACHMENT C
COMPANY PROFILE
REQUEST FOR PROPOSALS FOR PERFORMANCE OF EXPERT PROFESSIONAL PROJECT MANAGEMENT SERVICES AS REQUESTED ON A "CALL-IN" BASIS DURING 2011, 2012, 2013 AND 2014 (RFP #22388)

1. Company Name (print or type):
TranSystems Architect & Engineer, P.C.

2. Business Address (to receive mail for this RFP):
Empire State Building, 350 Fifth Avenue, Suite 924
New York, NY 10018

3. Business Telephone Number:
(646) 346-1874

4. Business Fax Number:
(212) 244-4488

5. Firm website:
www.transystems.com

6. Federal Employer Identification Number (EIN):
[redacted]

7. Date (MM/DD/YYYY) Firm was Established: 10 / 15 /1964

8. Name, Address and EIN of Affiliates or Subsidiaries (use a separate sheet if necessary):
See a complete section of the firm's affiliates attached

9. Officer or Principal of Firm and Title:
John C, Deerkoski, P.E., Senior Vice President

10. Name, telephone number, and email address of contact for questions:
John C, Deerkoski, P.E, (646) 346-1874, jcdeerkoski@transystems.com

11. Is your firm certified by the Authority as a Minority-owned, Woman-owned or Small Business Enterprise (M/W/SBE)? ☐ Yes X No

If yes, please attach **Port Authority** certification as a part of this profile.
If your firm is an M/WBE not currently certified by the Authority, see the Authority'web site –http://www.panynj.gov/business-opportunities/supplier-diversity.html, to receive information and apply for certification.

Qualifications & Experience of Staff

Section C.

The Port Authority of New York & New Jersey

Hatch Mott MacDonald Organization Chart

Expert Professional Project Management Services On A "Call-In" Basis

THE PORT AUTHORITY OF NY & NJ

Program Manager
- Bradford Townsend, PE (HMM)

Executive Committee
- Roland Ericsson (HMM)
- Malcolm McLaren, PE (MEG)
- James Palmer, PE (HI)
- Steven M. Tafuro, ASID (TS)

Quality Assurance/ Quality Control
- Nishant Nayan, PhD (HMM)

Aviation Project/Program Managers
- Andrew Linder, PE (HMM)
- Curtis F. Wright, PE (HMM)
- Kin Chow, PE (HMM)
- John Recco III, PE (HMM)
- James Armstrong, PE (HMM)
- Michael J. Brothers (HI)
- Karen Mohlenbrok, PE, PMP, LEED® AP HI

Tunnels, Bridges, Terminals Project/Program Managers
- Andrew Thompson (HMM)
- Zhengi Cai, PhD, PE (HMM)
- Amber Rose France, LEED AP (HI)
- Marco V. Levoyer, PE (HMM)
- Ron Klinczar, PE, LEED® AP(HMM)
- Mark Cosmedy, PE (MK)
- George Brosius, PE (TS)
- Mi ha l h l nik, AIA ,T ,

Port Commerce Project/Program Managers
- Erik Stromberg (HMM)
- James V. Green, PE (MEG)
- Brian C. Moody, PE (MEG)
- Matthew J. Daniels, PE (MEG)
- Christopher Mase, PE (MEG)
- Todd Manson (MEG)

Path Project/Program Managers
- Frank Facciolo, PE (HMM)
- John Lehman, PE (HI)
- Frank Colucci, PMP (HI)
- Mike Loehr, PE (HMM)
- Darryl Brogan, PE (HMM)
- Richard Buck, PE (HMM)
- George Duda, PE (HI)
- Robert McDermott (MK)
- Edward Nicholson, PE (HI)
- Frank Miller, PE (TS)
- Gary Matz, PE (TS)

WTC Project/Program Managers
- James Mortimer, Jr., PE (HI)
- Jose Diaz, PE (HI)
- Gurcharan Chopra (HI)
- Edward Fox (HI)

Support Services

Project Controls (Estimating & Scheduling)
- Harry Jarnagan, PE, CCE (HMM)
- Bob Nosal (HMM)
- Glenn Knapp (MK)
- John C. Campbell (EC)
- Anthony Duca, PMP (EC)
- Keith Skilling, PE, PMP, PSP (MK)
- Paul Giangreco, PE (HI)

Environmental/LEED/Sustainability/Value Engineering
- David Coffield, PE, LEED® AP (HI)

LEGEND
HMM – Hatch Mott MacDonald
HI – Hill International, Inc.
TS – TranSystems
MEG – McLaren Engineering Group
MK – McKissack & McKissack (W/MBE)
EC – Envision Consultants, Ltd. (W/DBE)

Hatch Mott MacDonald

Bradford F. Townsend, PE

Education

BS, Natural / Environmental Science, Johnson State College, 1979

MS, Civil Engineering, University of New Hampshire, 1985

Mechanical Excavation Short Course, Society of Mining Engineers (SME), Seattle, WA. 2002

Grouting for Underground Construction, Master Builders Technology (MBT), Taipei, Taiwan 2001

Asphalt Pavement Design and Production, Shell Petrochemical, HaNoi Vietnam 2000

New England Seismic Design Lecture Series, ASCE, Structural Group/Boston Society of Civil Engineers Section, Fall 1991.

Basic Surface Blasting Applications, by Explosives Technology International (ETT), Denver, CO 1991

Registration

Professional Engineer

NH, [redacted] 1990
VT, [redacted] 1999
CA, [redacted], 2007

Years in Practice – 34

Memberships

American Society of Civil Engineers

International Society of Soil Mechanics and Foundation Engineering

Society of Professional Engineers Thailand

American Underground-Construction Association

International Tunneling Association

Experience Summary

Mr. Townsend has 34 years of construction and engineering design experience involving tunnels, heavy civil and commercial building experience that includes design, cost estimating and construction services. He is experienced with both hard and soft ground tunneling, mined tunnels (SES and NATM), using traditional excavation techniques, mechanical, drill/blast and TBM as well as cut & cover. Significant experience with deep excavation bracing (diaphragm walls, tie-back, struts, rakers, sheet pile, soldier pile & lagging), groundwater control (deep well, vacuum well points), micro-tunneling, pipe jacking, grouting (jet grouting, permeation grouting, compaction grouting), underpinning, up-down construction techniques, surface & marine blasting, geotechnical instrumentation, and utility relocation. He has designed and managed the construction of tunnels for highways, subways, railways, pipe transmission lines and water/wastewater conveyance, and treatment projects, including coordination with public agencies and project stakeholders. In addition, Mr. Townsend is a recognized author of numerous tunneling papers and articles and serves on committees and working groups for both the UCA of SME North American Tunnelling Conference and ITA-AITES Working Group Nr. 19 Conventional Tunneling which is focused on "Contractual Practices" and "Monitoring" of mined excavations and stability.

Selected Project Experienc

Transbay Transit Center, Transbay Joint Powers Authority, San Francisco, CA

Project Manager for the Transbay Transit Center Downtown Extension (DTX) Project. The Transbay Transit Center Development Program is a landmark project for the San Francisco Bay Area. The multi-modal program will enhance transit service to the region by improving the bus and rail connectivity of six Bay Area transit providers at one facility in downtown San Francisco. The approximately $4.2 billion program, which will be the largest transit-integrating, inter-modal center west of New York City, will replace the existing terminal and provide public access to all local bus and rail services. As a critical element within the Transit Center Program, the principal objectives of the DTX Project are to enhance access to downtown San Francisco through provision of improved commuter rail service, and provide access for future high-speed rail service to the new Transbay Transit Center. The DTX Project incorporates the design, construction and operation of the following infrastructure; a 1.5-mile tunneled extension of Caltrain rail service along Townsend and Second Streets to the new Transit Center building, a new subsurface station in the vicinity of Fourth and Townsend Streets, improvements to the existing Fourth and King surface station, reconfiguration and improved functional layout of the existing Caltrain yard.

Taiwan High Speed Rail Project, Taiwan High Speed Rail Corporation, Taipei, Taiwan

Deputy Chief Director Engineering/ESC for the approximately 220 mile Taiwan High Speed Rail project consisting of 56 tunnels, embankments, bridges and viaducts. Responsible for management of preliminary, detailed and as-built design and construction of an approximately 30 miles of tunnel works with associated adits and shafts in this $5.3 billion project. Responsible for review of all technical works and design submissions for the 12 Design-Build contracts for all viaducts, bridges, embankments tunnels and ancillary structures. Tunnels works focused on confirming regional geology, site investigations, method statements, tunnel geometry for up to approximately 50-ft. span and safety requirements, tunnel support requirements, final lining designs, excavation sequencing, progress and resolution of technical issues. The underground works consisted of 42 mined tunnels with up to more than 40 of the planned 80 excavation faces open at any given time.

Hai Van Pass Tunnel Construction Project, Ministry of Transportation, Da Nang, Vietnam
Project Team Leader responsible for all the engineering of approximately 4.32 miles of highway, four miles of tunnel and 1.12 miles of bridge work, for this $350 million project. Project requirements as the Project Team Leader required developing design schedule and budgeting of man-hour tasks for work to be completed for detail design and contract tender. The 36 feet wide by 26-ft. high hard rock tunnel design/construction was based on drill and blast excavation and advanced using the head and bench method. A pilot bore was constructed along a secondary alignment approximately 2,625 feet in advance of the main bore, positioned and sized to an aspect ratio to assist in structural rock mass assessment as required to determine expected main bore tunnel excavation and support requirements. Developed Contracts with local and international subcontractors for both engineering design and exploration related work, inclusive of coordination with the military to conduct work within designated military sensitive areas.

Silicon Valley Rapid Transit, Santa Clara Valley Transportation Authority, San Jose, CA
Tunnel Engineer. Responsible for evaluation of use of permanent station walls for support of excavation and development of permeation grouting requirements and excavation sequencing for cross-passage ways between tunnel drives. Work included review of preliminary design drawings, tunnel methodology reports and assistance in management of station and tunnel work integration.

IBM Building 973 Pedestrian Tunnels, IBM, Essex Junction, VT
Project Engineer, responsible for construction of five soft ground tunnels below an existing manufacturing operation of which three tunnels were mined below existing clean room facilities and sensitive computer manufacturing operations which had to remain operative 24 hours a day. Innovative tunneling system integrated jet grout underpinning, grouted drilled-in pre-support elements in an arch configuration, steel rib sets supported on pre-cast concrete footings with cast-in-place and shotcrete lining.

Marine Blasting Program Immersed Tube Tunnel Central Artery Tunnel Contract 4A, Boston, MA
Resident Project Engineer, responsible for submarine excavation for the Third Harbor Immersed Tube Tunnel. Requirements included management of blasting company personnel, scheduling, design of blast rounds, training and management of other support personnel, coordination with harbor patrols and instrumentation crews aboard a US Naval missile frigate located in the adjacent dry dock under routine repairs for each blast. Design of 350 ton explosive charge for tunnel portal construction.

MBTA Blue Line Station Modernization and Platform Lengthening Project, Metropolitan Boston Transit Authority (MBTA), Boston, MA
Project Manager/Engineer. Project involved schematic and final design for the extension of two subway station railway platforms, State Street Station and Aquarium Station, in downtown Boston. Design required evaluation of existing tunnel and station structures and previous methods of construction, local geology, groundwater conditions, and sequencing of construction for proposed additions to facilitate surface traffic management requirements and structural interaction with proposed depression of I-93 at Aquarium Station. Evaluation of both cut-and-cover tunneling and soft ground mined tunneling techniques were conducted. Final recommendation for cut-and-cover tunneling using concrete diaphragm wall method in conjunction with soldier pile and lagging. The associated contract documents were provided to the lead design team architect.

B&A Clearance Project – Bridge Rehabilitation, Consolidated Rail Corporation (CONRAIL), MA
Project Manager/Engineer, responsible for design and construction of bridge abutment stabilization program at 17 locations across the state of Massachusetts for increase in bridge clearance along the Boston-Albany rail alignment. Conduct stability analyses, develop design recommendations, develop contract drawings and specifications, and provide staff for monitoring contractor's compliance with contract documents. Bridge abutment stabilization typically consisted of permanent tieback installation and one case of ground modification/stabilization by permeation grouting.

Roland A. Ericsson

Education
BS, Marine Engineering, Royal Marine Academy, Malmö, Sweden, 1975

Certifications and Registration
40-hour training on NYC Building Code, subchapter 19, Site Safety Manager.

40-hour OSHA site safety certification.

80-hour fire and life safety training, The Royal Naval Academy, Stockholm, Sweden.

60-hour tanker safety training, Southampton School of Navigation, UK.

Years in Practice – 34

Professional Affiliations
-Co-Chair, Nation's Port, a regional coalition for sustainable goods movement

-INCOSE – International Council of Systems Engineering

-Action Long Island, Transportation Task Force

-American Society of Highway Engineers (ASHE), Past President and co-founder, NY Metro Chapter

-Construction Management Association of America (CMAA)

-New York Building Congress (NYBC), Past Chair of Brownfields Committee

-Society of American Military Engineers (SAME)

-American Council of Engineering Companies (ACEC)

Experience Summary

Mr. Ericsson is a Vice President and the Area Manager of Hatch Mott MacDonald's New York City operations. He is responsible for the day-to-day management of the 50-person office as well as for a planned expansion and growth into other business areas. The NYC office is a full service location, providing design, engineering and construction management services for national and international transportation and infrastructure clients. Specialties include tunneling design and construction, rail/transit and tunneling ventilation and fire/life safety. Mr. Ericsson has until recently also led the implementation of environmental sustainability in all of HMM's 59 offices in North America. This work included internal procedures as well as assisting clients in realizing opportunities for sustainability within their own organizations,

Mr. Ericsson is a dynamic leader with in-depth knowledge of many industries and operations, including rail/transit, bridge and highway, marine transport, facilities (commercial and specialty), and manufacturing/process industry.

Select Project Experience

Rehabilitation of the Queensboro Bridge, New York City Department of Transportation (NYCDOT), New York, NY
Principal-in-Charge for this $45 million contract (No. 6 of 6) The project involves major repairs on the bridge, including concrete placement, installation of new lighting system at lower bridge deck, installation of a new concrete barrier and cleaning of the towers, etc. The project also includes the repair of steel arches and anchor piers; placement of micro-surfacing overlay on the upper roadways; replacement of columns on inner and outer roadways on the Queens side of bridge; improvements to NYCDOT parking facility; rehabilitation of 2nd Avenue Plaza kiosk; replacement of retaining wall along York Avenue; installation of new overhead signs, electrical system upgrades, aviation warning lights and street lighting; replacement of promenade floors above upper roadways at all four piers; and installation of fencing and site improvements.

Grand Central Terminal Steam System Study and Design, MTA-Metro North Rail Road, New York, NY
Design Manager for this project that will serve to survey, document and upgrade the high-pressure steam system under Grand Central Terminal in New York City. The project makes extensive use of laser scanning technology to document current conditions and the collected information will provide the basis for a redesign of the system, eliminating unnecessary redundancies while upgrading and modernizing the system.

The New Croton Aqueduct Rehabilitation, New York City Department of Environmental Protection, New York, NY
Principal-in-Charge and the coordinator of all field services for this project. The New Croton Aqueduct is a horse-shoe shaped brick lined tunnel constructed 100 years ago to provide drinking water from the Croton Watershed in Upstate New York to New York City. Groundwater intrusion is causing the brick liner to fail and HMM is performing construction inspection services for the repair work in a two mile section of the tunnel.

Public-Private Partnership (PPP) Tunnel Design, Port of Miami Tunnel, State of Florida DOT, Miami, FL
Mr. Ericsson was the Program Executive for this $1.3B highway tunnel project in Miami, FL. The project is a design/build Public Private Partnership (3P) and was at the time in a bid development stage where design drawings and calculations are developed in order to provide a proposal for Florida DOT. The 3,900 feet long, 36 feet diameter Port of Miami Tunnel will have two tubes, each with two lanes for traffic and is intended to provide direct access between the harbor and the Interstate roadway system. In addition to the tunnels, work includes widening and improvements to the McArthur Causeway Bridge, ramp connections to and from McArthur Causeway on Watson Island, ramp connections, and roadway improvements on Dodge Island, relocation of FEC railroad track and associated facilities as well as reconstruction of the Seaman's Center on Dodge Island. Surface traffic flow, right-of-way, and existing land use constraints are additional major issues included in the project. When built, the tunnel will connect directly to the Interstate system and thus remove most port related traffic, including heavy trucks and buses from downtown Miami.

I-84 Platform Underpass Illumination System, Connecticut Department of Transportation, Hartford, CT
Project Manager for engineering design services for the replacement illumination system for the underpass along I-84, near its intersection with I-91 in downtown Hartford. The previous lighting system had been deemed inadequate, and needed to be replaced by one that meets all current codes and standards. HMM provided an evaluation of the existing system and platform underpass conditions and made recommendations for proposed lighting levels and surface treatments of the tunnel and approaches. After approval of the study recommendations, HMM proceeded through preliminary and final design, followed by preparation of bid documents. HMM also provided MPT drawings for this congested and complex intersection, which was then included in the specifications. Finally, HMM provided contract packaging and bidding support services. Based on a recently performed life-cycle cost analysis, the project will undergo a review to determine if a redesign including LED-light fixtures is warranted

Program Management Oversight Consultant, New York City Department of Transportation, New York, NY
Program Management Oversight Consultant (PMOC) for the three newly acquired passenger ferries for New York City Department of Transportation's (NYCDOT) Staten Island ferry service. The program was federally funded and the work was performed on behalf of the Federal Transit Administration (FTA), Region 1. The ships were being built in Marinette, Wisconsin, and each is capable of transporting 3,500 passengers per trip. The assignment expanded to provide review and comments on the overall preventive maintenance system in preparation for database handling for all ships in the entire service.

Construction Management, Dormitory Authority of the State of New York (DASNY), Chief Medical Examiner's Office- Kings County, NY
Project Manager for all mechanical installations during the construction of this new $15 million morgue on the grounds of Kings County Hospital, Brooklyn. The work included tie-ins to the hospital's steam and condensate systems during planned and coordinated shut-downs; installation of refrigerators, fully automatic dissection tables with related waste handling systems, and HVAC systems; and tie-ins to electrical service (ConEd).

Employment History
Managing Director, Disab International Deutschland GmbH, Hamburg, Germany
Full responsibility for the establishment of this subsidiary for vacuum truck manufacturer. Achieved 18% market share in Germany in less than two years. Continue successful development of the German and European markets while managing day-to-day operations (1990-1992)

International Sales Manager, Disab International AB, Lund, Sweden

Purchasing Manager, STC Recylcing (Volvo subsidiary), Malmoe, Sweden

James W. Palmer, PE

Hill International, Inc. Principal-in-Charge

James W. Palmer is Senior Vice President and Director of Hill's Transportation Group. Mr. Palmer's broad-based experience in rail transportation translates into nationally recognized, award-winning projects. He possesses a unique ability to develop solutions and transform difficult situations using strong analytical skills and control systems. Mr. Palmer's background includes the integration of design, construction, maintenance and operations, as well as aggressive and efficient team building. His work with state transportation and planning departments, as well as top-level positions with major transportation corporations, exemplify his commitment to efficiency and results-oriented performance.

Port Authority of New York, New Jersey (PANYNJ), Downtown Restoration Program of Service, New York City, NY

The PANYNJ initiated a program ($3.1 billion) to restore service from North Jersey into Lower Manhattan. Destroyed by the collapse of the World Trade Center and the subsequent recovery, rebuilding the Port Authority Trans-Hudson (PATH) train service was deemed critical for economic recovery of the World Trade Center area and the Financial District from the terrorist attack and devastation that followed. The Program involved converting an underground station, Exchange Place, into a Terminal so trains could be turned back there within a year and a half, as well as the reconstruction of the train station and the two miles of connecting tunnels at the World Trade Center Station itself in two years. This $540 million program has not been designed at that time so Mr. Palmer worked with the Authority to develop a strategy to get this done. The strategy included a phased design and construction approach that broke the program into design packages that would be released and built as each package was completed. As the lead technical and constructability advisor, Mr. Palmer developed the initial design and construction packaging and staging plan that included long-lead procurements, technical approaches and sequences of construction. He presented to, and received validation from, a Peer Review Group that included local and international experts in design and construction.

Washington Metropolitan Transit Authority, General Engineering Consultant, Washington, DC

Mr. Palmer was Program Director responsible for the development of project scopes, negotiation of task and program management of the work product, and adherence to schedule and budget. The Washington Metro used the GEC contracts to implement their full capital program which included: **Infrastructure Renewal Program**; **Largo Extension Design Build**; **New York Avenue Infill Station**; and **Core Capacity Analysis**.

Education:
B.C.E., Civil Engineering, Queens University, Ontario, Canada, 1974

Registrations:
Professional Engineer, Maryland, New Jersey, Pennsylvania, New York

Professional Memberships:
Transportation Research Board

American Society of Civil Engineers

American Public Transportation Association

American Railway Engineering and Maintenance-of-Way Association

Awards/Honors:
James G. Hellmuth Unit Citation, PANY&NJ 9/11 World Trade Center Loss Recovery Project

Employment History:
Delaware and Hudson Railway Company, 1974-1976

National Railroad Passenger Corporation, (Amtrak), 1976-1978

Booz, Allen & Hamilton, 1978-1980

SEPTA, 1980-1984

Baker Engineers, 1986-1988

SEPTA, 1988-1996

Edwards and Kelcey, 1996-1998

DMJM, 1998-2001

Hill International, Inc., 2001-Present

New Jersey Department of Transportation Merger (NJ DOT), Trenton, NJ

Mr. Palmer was responsible for supporting NJ DOT in its negotiations with the railroads and filings before the Surface Transportation Board (STB) with respect to the proposed Conrail-CSX, Norfolk Southern Merger. His role included strategy development, participation in negotiations, evaluation of the railroads' filings, and the development of the State's case before the STB.

North Jersey Transportation Planning Authority, Rail Freight infrastructure and Improvements Study, NJ

Mr. Palmer was project manager responsible for developing an issues and early action plan for the State of New Jersey in response to the proposed Contrail/CSX/Norfolk Southern merger. This report (one of the first public sector reports developed in response to the proposed merger) has been widely used by officials within the state, as well as federal officials of other Northeastern states. The study made effective use of geographical information systems as a tool in defining the various options and their impacts on freight and passenger movements within the state.

Secaucus Transfer Project, New Jersey Transit Project Oversight

The project was to construct a multi-modal transportation facility that tied Amtrak's Northeast Corridor, NJ Transit's North Jersey commuter rail lines and the New Jersey Turnpike together with on-site economic development. In addition to performing a general review of this $450 million program, Mr. Palmer focused specifically on construction risk mitigation and contract cost reduction in response to excessively high bids for caisson work.

Southeastern Pennsylvania Transportation Authority (SEPTA), Philadelphia, PA

As the Assistant General Manager of Railroad Division, Mr. Palmer was directly responsible for 1,500 employees, including 250 managers and 1,250 agreement employees represented by nine different contracts. Mr. Palmer managed a $250 million annual budget, consisting of a $175 million operating budget and a $75 million capital budget.

Vine Street Expressway, Philadelphia, PA

Mr. Palmer was senior project manager for the project which tied two major highways, I-95 and I-76 together, as well as providing access for both to Center City Philadelphia. It included extensive staging to construct the six-lane highway in cut and cover while maintaining main cross-town street traffic. Let as multiple contracts, strict management of contractor interfaces was key to the project's success.

Schuylkill Expressway, Philadelphia, PA

Mr. Palmer was Manager, Civil and Structural Engineering for an extensive reconstruction of the existing roadway, I-76, built in the 1930's. A major intersection was added that required the use of proprietary retaining walls and complicated staging to maintain traffic and not adversely impact the adjacent Schuylkill River. He also oversaw the design preparation of contract documents.

Southeastern Pennsylvania Transportation Authority (SEPTA), Philadelphia, PA

As general superintendent for track, Mr. Palmer managed the design, construction and maintenance of Philadelphia's track systems including a 160-mile trolley system; 60 miles of rapid transit lines; and a 240-mile commuter rail system. He was responsible for a $40 million budget and 340 employees.

Steven Tafuro, ASID
Senior Vice President

Mr. Tafuro has more 30 years of experience providing aviation design services throughout North America and Europe. He has been responsible for many of TranSystems' airport terminal, airport retail, and airline branding projects, including the American Airlines Terminal 8 project at JFK International Airport, along with San Jose Car Rental Facility. Mr. Tafuro has worked on aviation, retail, and corporate facilities as large as two million-square-feet and more than $1.2 billion in construction costs.

Registrations
Interior Designer: CT, 1990

Education
B.I.D., Industrial Design
Pratt Institute, New York, 1974

Affiliations & Memberships
American Society of Interior Designers, Member
Connecticut Interior Design Society, Member
Transportation Research Board,

Years of Experience
35

Years with TranSystems

American Airlines Terminal 8 Redevelopment JFK International Airport, Jamaica, NY
Project Principal and Design Director for the Interior Architecture for the project. Mr. Tafuro directed TranSystems' effort in planning, programming, interior design of all public and support areas, concessions master planning of 60,000 square-feet, FIS planning, all millwork and FF&E as well as FIDS design, signage, lighting and all airline clubs, lounges and VIP areas for the $1.2 billion project.

The Hudson Group Retail Store Design Various Airports Worldwide
Project Principal and Account Manager for all Hudson Group Projects. Mr. Tafuro oversees the design effort for over 400 news and specialty retail stores including National Brand names and propriety brands to Hudson in more than 50 airports, amounting to over $200 Million in construction costs. Sales have increased from $35 Million to over $500 Million during the timeframe of TranSystems' involvement.

British Airports Authority (BAA) Concession Program Boston Logan International Airport, Boston , MA
Project Principal and Client Liaison to BAA, overseeing the design of the Concession Program. The project consisted of the overall planning, design and demising documents including two food courts and multiple individual tenant units at a construction cost of $10.8 million.

Terminal One Management Inc, Signage and Wayfinding Modifications JFK International Airport, Jamaica, NY
Project Principal and Design Director overseeing the signage design and implementation. Assignment was to analyze the 400,000-square-foot terminal and redesign the signage and wayfinding system to add enhancements, additional gate, directional signs and directories and Brand Integration to improve passenger flow and decision making.

American Eagle Commuter Gates JFK International Airport, Jamaica, NY
Project Principal, responsible for the overseeing and management of the architectural design services for the 18,200-square-foot, five-gate regional jet facility attached to the existing concourse.

American Airlines, Inc. Terminal 8 Redevelopment, Phase Three JFK International Airport, Jamaica, NY
Project Principal overseeing the management of architectural design services for revisions to the concourse, main building, and baggage handling spaces.

American Airlines, Inc., Terminal 8 Concourse C Admirals Club
JFK International Airport, Jamaica, NY
Project Principal overseeing the architectural and interior design efforts for 12,500-square-feet of a new club lounge, which includes a business center, bar, shower complex, media lounge, and children's room.

American Airlines, Inc., Satellite Expansion Newark Liberty International Airport, Newark, NJ
Project principal and Design Director, managing renovations to 20,000-square-feet, providing interior designs for a two-level building addition, club lounges, a baggage handling facility, and administrative offices at the 600,000-square-foot American Airlines facility.

Southwest Airlines, Central Terminal Building
LaGuardia Airport, New York, NY
Project Principal. TranSystems performed interior renovation where tentative spaces are not currently occupied. This renovation included the development of floor and ceiling plans for the gate hold room, check-in facilities and operation offices, etc. The project scope included schematic design phases and plan submissions to PANYNJ.

Employment History
Silvester & Tafuro (now TranSystems) 1985-2004

Nishant Nayan, PhD, AIChemE

Education
BEng (Hons.) Chemical Engineering, 1999

PhD, Computational and Experimental Fluid Dynamics, 2003

Years in Practice 6

Memberships
Associate Member of Institution of Chemical Engineers (AMIChemE)

Experience Summary

Dr. Nayan has several years of multidisciplinary experience in the application of Computational Fluid Dynamics (CFD) to solve a variety of chemical and mechanical engineering applications, including airflow analysis, HVAC, and fluid mixing applications. He has successfully completed projects involving warehouse ventilation, pharmaceutical packaging and mixing vessel design. Dr. Nayan also has expertise in the design of mechanical ventilation systems. He is knowledgeable in experimental velocity analysis and electrochemical concentration measurement. In addition to his role as a consultant engineer, Dr. Nayan has also previously held the position of Quality, Environmental and Safety (QES) Management System Representative and lead the NYC office for ISO-9001 recertification.

Select Project Experience

Grand Central Terminal Complex –Project No. 65900, MTA Metro North Railroad (MNR), New York, NY

Mechanical Engineer participating in the visual assessment of the Steam Tunnels. The assessment will complement production of the existing conditions drawings. Final deliverables include a report identifying remedial repairs and design recommendations for traps, expansion joints, anchors, pipes, valves, and other system elements.

Grand Central Terminal Complex –Task Order 12, MTA Metro North Railroad (MNR), New York, NY

Mechanical Engineer participating in the design of emergency ventilation and cooling for the control room at Grand Central Station. Involved in the development of the design drawings and assisted in the preparation of the 60% design package for MNR.

Cortlandt Street Ventilation CFD Study, Metropolitan Transportation Authority, New York, NY

As the Project Manager and Lead Engineer for the Cortlandt Street ventilation upgrade Computational Fluid Dynamics (CFD) analysis, responsible for performing the computation analysis to study the effect of mechanical ventilation for control of smoke in the station. The station's retrofit includes the design of an over-ceiling duct in order to exhaust smoke and links with the ventilation system of the PATH station underneath. Also participated in the design activities and discussions on the construction of the station ventilation.

Vancouver RAV (Richmond-Airport-Vancouver Rapid Transit Line), Lavalin, Vancouver, Canada

The Vancouver RAV is a subway line under construction in Vancouver, Canada. CFD analysis was conducted on this line to confirm the effectiveness of the ventilation system for smoke removal and its ability to maintain a tenable environment at the Broadway underground station. This was accomplished in accordance with the requirement and methodology set out in the 2003 edition of NFPA 130, "Standard for Fixed Guideway Transit and Passenger Rail Systems".

George Washington Bridge Redevelopment, Port Authority of New York & New Jersey, New York, NY

Lead Engineer responsible for ventilation design. As part of the redevelopment of the

Port Authority Bus Garage on the Manhattan side of the George Washington Bridge, tunnel ventilation design and analysis was performed in the due diligence phase. A feasibility study was performed to examine the proposed design covering the roadway ceiling. As there was no dedicated mechanical ventilation, conceptual longitudinal and semi-traverse ventilation schemes were investigated using CFD.

LA Eastside LRT, Los Angeles County Metropolitan Transportation Authority, Los Angeles, CA
Project Engineer responsible for constructing and simulating the 3D CFD models for Mariachi and Soto underground stations. The scope of work was to review information and prior simulations from other clients and construct new models for ventilation analysis. The simulations demonstrated the effectiveness of the proposed ventilation in the tunnel and stations. The study also encompassed Subway Environmental Simulation (SES) 1-D analysis for development of the CFD boundary conditions. August 2006-July 2007

Empire Line Overbuild Ventilation, AMTRAK, New York, NY
The scope of this analysis included five kilometers of track from Penn Station to the west side of Manhattan. The roadway is a depressed Guideway, which at several locations has been covered by roadway developers with high-rise building of varying size. These overbuilds have created short sections of tunnels for which a comprehensive airflow and fire scenario ventilation analysis was performed. Mott MacDonald's proprietary 'Hotflow' software was used for modeling purposes. The study developed a report which provided recommendations to Amtrak for ventilation system operation in accordance with NFPA guidelines, and set minimum ventilation requirements and plant sizes for any future overbuild work. As a part of the project, several site surveys were also performed.

Dulles Airport Tunnels, Metropolitan Washington Airports Authority, VA
Lead Engineer responsible for ventilation and safety analysis of a 460 foot compartment of graded pedestrian tunnel linking Tier 1 and Tier 2, using Computational Fluid Dynamics (CFD). The ventilation system design includes the ventilation of the tunnel during emergency operations of the ventilation system. The tunnel was integrated with the primary water suppression systems and compartmentalized to contain the incident section for reduction in the spread of smoke and fire. The results from the CFD analysis demonstrated the effectiveness of the smoke extraction system and provided data for visualization of smoke and prediction of visibility.

CFD Models, Eli Lilly & Co. with Purdue School of Engineering and Technology, Indianapolis, IN
Research Associate responsible for developing CFD models of 'isolators' and providing input for improvement in design. Isolators are being phased in as a replacement for cleanrooms in the pharmaceutical industry. The isolator is a smaller environment than the cleanroom and decontamination is achieved using chemical vapor. The major aspect of this project was to coordinate activities between industry and academic environments for design modifications, keeping FDA guidelines in consideration. A six-member team was directed for developing three-dimensional models to predict the temperature, chemical concentration, and velocity. The data from CFD analysis was compared to field experiments and locations with poor vapor distributions were successfully identified. The analysis led to a reduction in turnaround time of an isolator by 50 to 60 percent and procurement of new isolators with improved design.

Employment History

Eli Lilly & Co (2004 - 2006)

Jet Environmental Techniques (2003 - 2004)

University of Birmingham, UK (1999 - 2003)

Andrew Linder, PE

Education
BS, Civil Engineering, State University of New York at Buffalo, 1982

Registration
Professional Engineer
PA, [redacted] 002
NY, [redacted] 1988

Years in Practice – 28

Memberships
American Society of Civil Engineers

Experience Summary

Mr. Linder has over 28 years of diverse experience in aviation, site development, surface transportation, and security projects in the public and private sector. He has been involved with both domestic and international projects. His experience involves various aspects of program and project management, as well as the planning, design, and construction of multi-discipline transportation and infrastructure projects. In addition, he has been involved with several business and organizational development initiatives.

Mr. Linder's management responsibilities include serving as client liaison, agency coordination, the preparation of contract agreements, budgets, and invoices and development of program schedules. He has managed multi-disciplinary teams of engineers, architects, planners, environmentalists and technicians. He has provided technical input to engineering reports, participated in public hearings, performed constructability reviews, developed conceptual and preliminary designs, prepared final construction documents, and provided construction support services.

Select Project Experience

Los Angeles International Airport (LAX), Los Angeles World Airports, Los Angeles, CA
Deputy Project Manager for engineering design and planning services for the new Midfield Satellite Concourse (MSC) and the Tom Bradley International Terminal (TBIT) expansion program. This $5 billion modernization program includes infrastructure improvements, tunnels, central utility plant, and other related projects. With HMM as the prime consultant of LAWA's Engineering Services team, responsible for managing the development of all airfield elements associated with the MSC and TBIT programs. Program airfield elements include construction phasing, enabling facility demolition, taxiway and apron pavements, passenger boarding bridges and associated ramp services, airfield lighting and signage, hydrant fueling, storm water drainage, sanitary sewers, power and communications, and roadway design. The overall program is schedule driven and implemented through the award of multiple fast track construction packages using Design-Bid-Build, Design-Build, and Construction Manager at Risk contract delivery methods.

LaGuardia Airport (LGA), American Airlines, Queens, NY
Project Manager for civil site engineering for the airport's Central Terminal Building C/D Connecting Corridor project. Serving as a subconsultant to Corgan Associates Architect's, HMM's role consists of airfield paving and utility design directly impacted by terminal building construction between Concourses "C" and "D," as well as the building modifications along the two concourses. HMM is also providing layouts associated with the proposed relocation of Passenger Boarding Bridges (PBB) and assistance in validating aircraft layout and maneuvering scenarios for the relocated passenger gates.

Program Management Services for Security Capital Program, Port Authority of New York & New Jersey, NY & NJ
Project Manager in a program management team responsible for the implementation of a $485 million security capital program. Responsible for the management of various security projects for the agency's port commerce and railroad (PATH) divisions. Project scopes consisted of blast and vulnerability studies in the PATH system and the construction of security infrastructure, including fences, gates, guide rails, guard booths, and CCTV surveillance cameras throughout the marine port facilities. Project contract values ranged from $100,000 to $5,000,000.

I-287 Cross Westchester Expressway (CWE) Viaducts, NYSDOT, Westchester, NY
Civil Project Engineer for the design of approach roadways and entrance ramps for a 1,000-foot (305-meter) long viaduct over the Saw Mill River Parkway. The design involved raising the approach roadway vertical profile over five feet (1.5 meters), widening the roadway section to accommodate a future high occupancy vehicle (HOV) lane and introducing a 50-year pavement section for the expressway mainline and three entrance ramps. Responsibilities included supervising horizontal and vertical highway design for 60-mile-per-hour (mph) design speed, developing maintenance and protection of traffic (MPT) and construction staging plans, and preparing final contract documents.

Shore Parkway Bridge over Fresh Creek Basin, NYSDOT, Brooklyn, NY
Design Engineer responsible for the study of highway alignment elements and the preparation of contract plans on a rehabilitated bridge. The study involved evaluating the impacts of implementing a 65 mph design speed as it related to stopping distance, super elevation transitions, and acceleration and deceleration lane lengths. In addition, as a result of proposed changes to the bridge's profile and roadway cross slope, prepared contract plans for a revised drainage system on approach roadways. The design included inlet spacing analysis and closed drainage system hydraulics.

Delaware Memorial Bridge, Delaware River and Bay Authority, DE
Project Engineer for the widening of the Delaware River and Bay Authority's toll plazas. Prepared final construction plans, specifications, and cost estimates. Tasks included pavement design, construction sequence plans, and utility relocations.

Meadowbrook Parkway Bridge over Sloop Channel, NYSDOT, Nassau County, NY
Project Civil Engineer for the design of approach roadways for NYSDOT's rehabilitated Meadowbrook Parkway Bridge. Prepared final contract plans, specifications and estimates, and developed maintenance and protection of traffic (MPT) plans.

Route 9A, Miller Highway Viaduct, 42nd Street to 59th Street, New York State Department of Transportation (NYSDOT), New York, NY
Design Engineer for preliminary design of viaduct, entrance/exit ramps, and at-grade roadways for NYSDOT. Tasks included development of alternative highway and ramp alignments and intersection layouts. Assisted in the preparation of the draft design report.

Employment History
Hatch Mott MacDonald (2006 - Present)
Parsons Brinckerhoff (2001 - 2006)
TAMS Consultants (1995 - 2001)
Frederic R. Harris (1991 - 1994)
HNTB (1988 - 1991)
Goodkind & O'Dea (1986 - 1988)
Andrews & Clark (1982 - 1986)

Education
BS, Civil Engineering Technology, Old Dominion University, 1984

Registration
Professional Engineer
VA [redacted] 1989
CA, [redacted] 1992
MT, [redacted] 1998
NC, [redacted], 2008
NY, [redacted], 2008
MD, [redacted] 008
FL, [redacted] 2009
NJ, Pending

Years in Practice – 26

Memberships
The Aviation Council of Alabama, Inc.

Florida Airport Council (FAC)

American Association of Airport Executives, Southeast Chapter (SEC-AAAE)

Mississippi Airports Association (MAA)

Airports Consultants Council (ACC)

Experience Summary

Mr. Wright has over 26 years of diversified civil engineering experience with public, military and private clients. He has personally planned, managed, and designed projects with construction budgets ranging from small $5,000 projects up to over $12 billion. He has completed hundreds of projects in his engineering career. Several of his projects have been award winners. He has nationwide aviation experience, and his airport planning, design, and construction experience includes airport landside and airside improvements at civilian (air carrier, cargo and general aviation) and military airfields (fixed and rotary wing), runways, taxiways, aprons, helicopter facilities, hangars, terminal site civil, terminal roadways, parking, revenue control, airport master planning, airport site selection, air traffic control towers, automated people movers, mechanical systems, baggage handling systems, and airfield electrical. His overall civil engineering experience includes highways, freeway interchanges, grade separations, traffic signals, railroads, storm drains, telecommunications, sewage pumping stations, water distribution systems, sanitary force mains, commercial, industrial, and subdivision developments. Mr. Wright has been involved as a Project Manager or task manager in the following projects:

Selected Project Experience

Runway 17-35 Emergency Pavement Repairs at Pensacola Gulf Coast Regional Airport (PNS), City of Pensacola, Pensacola, FL
Under an as-needed engineering services contract, Mr. Wright served as the Task Manager for the emergency repairs to a group of failed PCC joints. Runway 17-35 is the primary ILS runway. Partial-depth concrete joint repairs were specified. Mr. Wright's role included providing design, and construction phase support services. Cost = $5,000

Runway 16L-34R Pavement Assessment, Design, and Construction Administration at Jackson-Evers International Airport (JAN) for the Jackson Municipal Airport Authority, Jackson, MS
Project Manager for the rehabilitation of the surface asphalt pavements on Runway 16L-34R (east runway). The runway is 8,500 feet in length, and the asphalt surface had experienced various forms of deterioration including weathering, raveling, block and alligator cracking, and rutting. The Airport is founded on subgrades that include expansive Yazoo Clays. Runway 16L-34R has experienced differential heave at a few locations resulting in "bumps". Hatch Mott MacDonald prepared the PS&E for the surface rehabilitation and the complete reconstruction of the "bump" area, approximately 500 ft of the runway. HMM also performed a pavement assessment (including non-destructive testing – NDT) to determine the optimal long-term solution to the repairs. Additionally, HMM provided construction phase support services including inspections, materials testing and resident engineer services. The project also included the re-alignment of runway centerline, and touch down zone (TDZ) lights.

Utilities Relocation and McCain Road Preliminary Engineering in Support of the Implementation of Master Plan Improvements at San Diego International Airport (SAN), for the San Diego County Regional Airport Authority (SDCRAA), San Diego, CA
As part of an on-call, as-need contract with SDCRAA (3.5 years, $5million) and while employed by another firm, Mr. Wright served as the Project Manager for the preliminary engineering and concepts planning for the relocation and protection of dry (10-inch high pressure gas, communications/data, and 12kV electrical) and wet utilities (114-inch and 96-

inch sanitary gravity sewers, local sewer laterals, and drainage), and the design of a new access roadway at SAN. Expansion of Terminal 2, West requires the relocation of the utilities and the new access roadway. The study included a traffic impact analysis, coordination with SDGE, the US Navy and the City of San Diego. The project also was coordinated with the clean-closure of an inactive landfill located on former US Navy land.

State Route 60/71 Four-Level Interchange PS&E in Caltrans District 7, City of Pomona, CA
While employed by another firm, Mr. Wright served as the Project Engineer responsible for the design and production of the PS&E including: Title Sheet, Typical Sections, Layouts, Profiles, Superelevation Diagrams, Contour Grading Plans, Construction Details, Retaining Walls, Drainage Plans/Profiles, Chino Creek (double 14 feet by 14 feet reinforced box culvert – Los Angeles County DPW standards) relocation, Edge Drains, Roadwork Quantities/Cost Estimate and Special Provisions. The project included 11.5 miles of freeway, connectors, ramps and local streets, fourteen (14) bridges, two (2) bridge widenings, right-of-way acquisitions, and major drainage improvements. The design effort won the 1993 Caltrans' *Excellence in Transportation (Category Xc , Project Delivery)* award in statewide competition. Construction support services were also provided including, pre-construction conference attendance, resolution of field changes, shop drawing review, and general design clarifications. Cost = $76 million

Repair Railroad Trackage Curves, Yermo Annex, Marine Corps Logistics Base (MCLB), in Barstow, California for the Naval Facilities Engineering Command, Southwest Division
As part of an indefinite quantity (IQ) contract, and while employed by another firm, Mr. Wright served as the Project Engineer supervising the preparation of the trackage PS&E. Using the American Railway Engineers Association (A.R.E.A.) standards, NAVFAC specifications and the MCLB desires to accommodate a 90 foot long car. The project was designed to include two new rail spurs, several No. 8 turnouts, No. 8 double slip switches, demolitions, repairs of existing turnouts, and the upgrading of + 25 ladder tracks located within the yard. The horizontal curve radii of the existing ladder tracks were too small to accommodate the 90-foot rail car. The design included the relocation and rehabilitation of the existing 100# RE rail stock. The No. 8 double slip switch was designed to be electronically-thrown using switch machines with remote controls. Construction support services were also provided. Cost = $1.8 million

At-Grade Railroad Crossings and "Quad-Gates" Along Alameda Corridor-East for the Alameda Corridor-East Construction Authority, Pomona, CA
While employed by another firm, Mr. Wright served as the Civil Task Leader for the preparation of the PS&E for the installation of medians, curbs, minor geometric modifications, video detection systems, and "quad-gates" at the five (5) at-grade railroad crossings on the Alameda Corridor East. The project objective is to create a safer crossing. The quad-gates and medians prevent vehicles from crossing the tracks while the gates are down. The video detection system is employed to sense if a vehicle is "trapped" within the quad-gate area. If a vehicle is detected, the downstream gate will immediately rise to prevent entrapment, thus allowing the vehicle to safely exit the crossing. The designs were coordinated with the City of Pomona, Alameda Corridor-East Construction Authority, and BNSF.

Tongue River Railroad, Design / Build Project in Southeast Montana for WESCO Resources, Inc.
While employed by URS Corporation, Mr. Wright served as the Project Engineer for the preparation of the preliminary (15%) design plans, specifications and quantities estimates for over 116 miles of new, heavy-freight rail to access coal reserves in the Ashland, Montana and Wyoming state line regions. The firm Mr. Wright was employed with, was part of a joint venture with a heavy construction firm. The project is located in the very remote, Tongue River valley region of southeastern Montana. Coal harvested from the Spring Creek, East Decker, and West Decker mines located along the Wyoming state line will be transported to Midwestern coal markets via this new railroad. The Tongue River Railroad (TRR) offers a direct, downhill route from Sheridan, WY to Miles City, MT, and provides access to the future Cook Mountain and Montco mining projects located near Ashland. The TRR traverses across Big Horn, Rosebud and Custer counties. Although the alignment does not encroach on to reservation lands, a 39-mile segment of the TRR alignment is adjacent to the Northern Cheyenne Indian Reservation.

Hatch Mott MacDonald

Kin Chow, PE

Education
BS, Civil Engineering, Polytechnic University of New York, 1979

Registration
NCEES Certification #[redacted] 2000
Professional Engineer
NY-[redacted], 1985
NJ-[redacted]1986
PA[redacted], 2001
CT[redacted],2002
SC-[redacted]2006
FL[redacted]2001
MI-[redacted] 003

Years of Practice – 30

Memberships
National Council of Examiners for Engineering & Surveying
American Association of Airport Executives
American Petroleum Institute
National Petroleum Management Association
Society of American Military Engineers

Experience Summary

With over 30 years in the profession, Mr. Chow has been responsible for project administration and negotiations and managing the firm's multi-disciplinary projects. These have included new construction, renovation and rehabilitation of administrative, educational, institutional, residential, commercial, municipal, industrial and operations, vehicle and aircraft maintenance facilities; site planning, site utilities, pavement design, parking facilities, fire protection, water supply and storage systems, drainage systems and flood control and aviation systems.

Mr. Chow has been directly in charge of the firm's vast petroleum systems capability including fuel delivery and storage facilities, aviation fuel systems, aircraft hydrant fueling systems, underground fuel storage tank systems, aboveground bulk fuel facilities and fueling systems master planning. He possesses comprehensive design of industrial, aviation and petroleum fuel facilities for numerous International Airports and Military installations throughout the country. He has extensive knowledge and working experience with the Federal Aviation Administration using the latest petroleum system equipment industry standards. Over the years, Mr. Chow has been involved in the design and construction of fuel farms for storage, pumping and distribution of fueling systems for numerous projects. Mr. Chow has been Program Manager, Project Manager or Lead Designer on over 500 projects for numerous municipal, public, private and governmental clients.

Select Project Experience

Repair Aerospace Ground Equipment (AGE) Facility, New York Air National Guard, Stewart Air National Guard Base, Newburgh, NY
Program Director for design services to modify the existing AGE facility, including the addition of a wet pipe sprinkler system, renovation of toilet rooms, inclusion of a bridge crane in the maintenance bay and improvements to the mechanical systems.

Conditions Assessment Surveys, New York Air National Guard at Stewart International Airport, Newburgh, NY
Program Director responsible for technical inspections of the current conditions of the Airport's mechanical, fire protection and aircraft fuel storage and dispensing systems in support of the PANY&NJ'S negotiations to acquire the existing airport operations lease from the existing lease holder. Inspections were performed on the Main Passenger Terminal, Hangars A and B and Fuel Storage and Dispensing Facilities.

Repair Water Distribution Systems, New York Air National Guard Base at Stewart International Airport, Newburgh, NY
Program Director responsible to analyze the existing water distribution system and to determine the type and extent of repairs needed to improve the quality of the potable water delivered to each building at the Base.

Relocation of Base Entry Road, New York Air National Guard at Francis O. Gabreski Airport, Westhampton Beach, NY
Program Director/Project Manager responsible for the development of three different alternatives to solve the problems with the vehicular traffic circulating through the Main Gate and the South Gate that communicate the National Guard Facility with the main public road.

Renovate Munitions Maintenance Trailer Shop, New Jersey Air National Guard at Atlantic City International Airport, Atlantic City, NJ
Program Director responsible for design and construction services to repair the 177th Fighter Wing's trailer shop.

Upgrade, Repair Hydrant and Isolation Valve Pits/Repairs to POL Product Reclaim Systems
New Jersey Air National Guard at McGuire Air Force Base, NJ
Program Director for the evaluation and design services to develop the construction documents necessary to address deficiencies in the POL and hydrant fueling systems serving the Air National Guard at McGuire Air Force Base.

Repair Building 3327, New Jersey Air National Guard, McGuire Air National Guard Base, Wrightstown, NJ
Program Director responsible for design for the renovation of an existing Building (26,000 square feet) to house facilities for Wing Headquarters, Comptroller, Inspector General, Public Affairs, Support Group, Support Services, JAG, Chaplain and Honor Guard for the 108th Air Refueling Wing.

C-17 Alter General Maintenance Hangars, US Army Corps of Engineers, March Air Reserve Base, Riverside, CA
Program Director responsible for design of alterations to the existing fuel cell hangar and existing multi-purpose maintenance hangar to accommodate KC-135 aircraft maintenance hangar and C-17 aircraft; modified lighting, reconfigured tool cribs and administrative offices, electrical/fuel fume ventilation system and hangar doors.

Construct Power Source Virtual Testing Facility, US Army Corps of Engineers, US Army Garrison, Fort Monmouth, NJ
Program Director for the preliminary design of a one-story facility with approximately 21,000 square feet in floor area that houses a Research Development and Engineering Center and a Logistics Readiness Center.

HVAC Repairs, Buildings 300, 301 & 302, US Navy, Naval Marine Corps Reserve Center, Stewart International Airport, Newburgh, NY
Program Director for design of modification of the existing air handlers, fans, pumps, dampers, valves etc. and connection to the Building Automation System. Included complete installation of a Building Automation System; replacement of exhaust fans, actuators for motorized dampers associated with exhaust fans and repair/replacement of hot water heating system pumps; test and balance heating, ventilation and air conditioning systems.

Repair Building C-39 for MSNAP Training, US Navy, Naval Weapons Station Earle, Colts Neck, NJ
Program Director for design and construction services to convert an existing barracks building (Building C-39) into a training facility complete with offices and other ancillary spaces including training areas, toilet facilities and kitchenette and lounge areas for the Merchant Ship Naval Augmentation Program (MSNAP). The program, developed by MSNAP with Public Works Engineering included renovations to the interior and exterior of the barracks building, modifications to the existing parking lot and landscaping adjacent to the building.

Field Maintenance Shop, NYS Office of General Services, Queensbury Industrial Park, Queensbury, NY
Program Director for the design and construction of a new 16,400 square foot Field Maintenance Shop. The new state-of-the-art facility accommodates the administration, storage and maintenance of military vehicles assigned to the Army National Guard unit. The new building includes administrative and office areas, classrooms, personnel area (bathroom, lockers, etc.), work bays for tractor trailers and other vehicles, battery room and flammable material storage, instrumentation repairs, small arms repairs and vault, bulk Petroleum Oils Lubricants (POL) storage and controlled waste facility and an enclosed unheated storage area. Special mechanical systems include separate lube oil systems, compressed air and tail-pipe exhaust systems.

Hatch Mott MacDonald

John Recco III, PE

Education
BS, Civil Engineering, Polytechnic Institute of New York, 1991

Registration
Professional Engineer:
NY- [redacted] 2001
OSHA Confined Space Entry, 2004

Years in Practice - 19

Memberships
American Society of Civil Engineers

American Petroleum Institute

Experience Summary

Mr. Recco is one of the Lead Engineers for the firm's petroleum fueling systems projects. He has over 19 years of extensive experience in the design and construction management of petroleum systems, utility systems, and drainage plan preparation. Responsibilities include project design, project administration, feasibility studies, consultant coordination, and construction documentation. Mr. Recco possesses the capability to handle multiple task orders simultaneously. His experience also includes performing field investigations, design review, coordination, permitting, and construction inspection services. He is knowledgeable of the latest petroleum system equipment industry standards, safety, and environmental regulations.

Mr. Recco has also been involved in the planning, design, construction, maintenance, and upgrade of civil/sitework projects including site planning and development, pavement systems, site utilities, grading and drainage systems, and storm water management systems.

Most recently, Mr. Recco has mainly been involved in the project management of fueling systems projects for an On-Call Contract with the Port Authority of New York & New Jersey for the design of USTs and Aviation Fueling Systems and for a Military Fuel Design/Build IDIQ Contract with the US Army Corps of Engineers Omaha District's POL Center of Expertise for petroleum, oil, and lubricants, fuel storage complexes with associated fuel distribution systems for Army and Air Force Bases and installations Nationwide.

Selected Project Experience

Camp Edwards CACTF Homeland Security Feasibility Study for the Massachusetts Army National Guard, Camp Edward, MA

Project Manager responsible for a feasibility study of the HVAC, electrical, and telecommunications systems for the construction of a new Combined Arms Collective Training Facility (CACTF). Work involved identifying requirements, developing project documentation, proposing project sites, identifying and outlining site development processes for proposed projects. The CACTF simulates an urban warfare environment complete with roads, alleyways, underground infrastructure, parks, and 17 buildings.

Temporary Fueling Facilities (Design/Build), US Army Corps of Engineers, Fort Drum, Watertown, NY

Project Manager/Engineer responsible for design documents for temporary fueling station facilities for a design/build project. The design included the installation of aboveground fuel storage tanks, fuel dispensers, fuel off-loading equipment, fuel gauging/hi-level alarm/overfill prevention equipment, oil/water separators, site grading and drainage, pavements, electrical power, and controls.

Installation of Bottom Loading System, US Army Corps of Engineers, Fort Irwin, CA
Project Manager/Engineer-of-Record for this design/build project which involved design documents to convert three existing top loading fill stands to bottom loading.

Underground Storage Tank Upgrades for Regulatory Compliance, The Port Authority of New York & New Jersey, Various Port Authority Bridge and Tunnel Facilities
Project Manager/Engineer responsible for the inventory and assessment and design documents to remove/replace underground storage tanks at various Port Authority Bridge and Tunnel facilities. The project involved the evaluation of all underground storage tanks at the TB&T Facilities against all applicable underground storage tank (UST) Federal, State and local codes and regulations. Also responsible for development of UST monitoring program information binders containing pertinent testing, design drawings, system pictures, and record documents for each UST.

Storage Tank Inventory and Survey, The Port Authority of New York & New Jersey,
Various Port Authority PATH Facilities
Project Manager/Engineer responsible for inventory and assessment of underground storage tanks at various Port Authority PATH facilities.

PATH – Engineering Support Services for Inclusion of RPZ Units into Database Management System, The Port Authority of New York & New Jersey, Port Authority PATH Facility
Project Manager responsible for database management services (configuration and input) for RPZ units identified and itemized by the Port Authority.

Meadowlands Maintenance Complex Facility Expansion, NJ Transit, Kearny, NJ
As Project Engineer, responsible for preliminary and final design to relocate system structures to accommodate the expansion of lift stations, underground tanks, waste compactors, and oil/water separators for the expansion of the Meadows Maintenance Complex. The expansion included the construction of a new 7,500 square foot train washer and 2,400 square foot support building, the expansion of the service and inspection building, the expansion of the car hoist building, the addition of a wheel boring, parts cleaner, wheel press, and hot lube oil tank, and the construction of a new 6,560 linear foot Switching/ Layover Yard and related components.

Southern New Jersey Light Rail Transit System, NJ Transit, Camden, NJ
Project Engineer responsible for providing contract documents for the construction of a new diesel fueling system including aboveground storage tanks, truck unloading station, and fuel dispensing systems.

Fueling Facility for NYCDEP Pike Street Garage and Yard Facility, New York, NY
As Project Engineer, designed the upgrade to the existing fueling facility to accommodate the DEP's needs and requirements for additional program space and utility upgrades. The design included fuel storage tanks, fuel delivery system, fuel dispensing system, fuel inventory and monitoring system, fuel leak detection and alarm system, and Types I & II vapor recovery system.

Hatch Mott MacDonald

James Armstrong, PE

Education
BS, Mechanical Engineering, SUNY at Buffalo, 1976
AAS, Mechanical Engineer, SUNY at Farmingdale, 1967

Registration
Professional Engineer:
NY- [redacted] 1978
Costa Rica –TEMP- [redacted] 2009

Years of Practice – 39

Memberships
American Society of Mechanical Engineers

Experience Summary

Mr. Armstrong has over 39 years experience in project management, facility planning and engineering for aircraft fueling equipment and systems, design of airport fuel storage and dispensing facilities, specialty aircraft refueling vehicles for NASA's 747 Shuttle Carrier, army water transport trucks, fire trucks, military specialty fire fighting trucks, fuel and water metering and pumping systems, facility design including civil, mechanical, and electrical systems, quality control, and all research and development. He has expertise in the design and application of various ground service pits, stationary fueling equipment, mobile fueling equipment, power generation systems, large and small tank farm configuration and design, and aboveground and submarine pipelines.

Mr. Armstrong has performed master planning, facility planning, technical studies, and analyses for various facilities in the marine environment. He has provided technical assistance during construction for all aspects of mechanical engineering for projects such as airport terminals, schools, large postal facilities, munitions testing facilities, correctional facilities, parking garages, tank farms, industrial buildings, medical buildings, and site utilities. He is responsible for United States Patent 4,669,625 "Easy Open Lid" for large aircraft ground service pit covers.

As an Associate with Han-Padron Associates, Mr. Armstrong performed Project Management, master planning, facility planning using the visioning methodology, technical studies, and analyses for various facilities in the marine environment. Projects included the preparation of the Norfolk Naval Ship Yard Waterfront Development Plan; preparation of permit application documentation for an offshore scientific monitoring station and a electric power station for the Cape Wind 440 MW wind turbine generation station in Nantucket Sound, MA; technical consultant for the installation of a Kinetic Hydro Power Generation project (hydro turbines) in New York City's East River; marine terminal feasibility studies; design of floodgates for shore protection; final design of a major port extension for container ships in Port Raysut, Oman; tanker terminal feasibility study for coastal tankers in Oman; ferry terminal marine works design; and tanker/barge berth modernization and upgrade.

In addition, Mr. Armstrong was the Director of Technical Support for the Facility Services Division of Ogden Corporation providing technical as well as project sales and implementation support including site surveys, staffing analysis, staffing requirements, organizational configurations, staffing and materials / subcontracting costs, budget analysis and determinations, proposal preparation, technical assistance for project start-up, development of site operation plans, development of maintenance procedures and frequencies, development of standard procedures, pre-qualification of Architects and Engineers for capital improvement projects at client's sites, pre-qualification of Ogden for NY City agency Program Management work, trouble shooting and on-site and off-site correction of "problem" contracts, development of project and site management procedures, and participation in client presentations and interviews.

Select Project Experience

Repair Fuel Pits, Restore Fuel Storage, Construct Fuel Point, Construct Containment and Install Stairways, (Design/Build), US Army Corps of Engineers, Fort Hood Army Airfield, TX
Project Manager/Engineer responsible for engineering design services and minor construction support services related to the upgrade of the existing fuel farm facilities for five

separate projects including: Repair Fuel Pits at Fort Hood Army Airfield; Restore Diesel Fuel Storage and Issue Capability; Construct E-85 Fuel Point at West Fort Hood Tank Farm; Construct Spill Containment at Robert Gray Rapid Refuel Area; and Install Stairways at Robert Gray Army Alert Tank Farm.

Upgrade J3 Pump House (Design/Build), US Army Corps of Engineers, Davis Monthan AFB, Tucson, AZ
Project Manager/Engineer responsible for design and construction support services to renovate the pump house located at the Air Force Base. Work involved modifying existing underground piping systems from the pump house to hydrant and meter pits; providing aboveground and underground piping with leak detection; concrete pavements, and modifications to pump control panel and instrumentation panels.

Repair Water Distribution System, New York Air National Guard at Stewart International Airport, Newburgh, NY
Project Manager responsible for developing a study report complete with a budget construction cost estimate to reduce the potable water turn-over rate to improve water quality and to establish the basis of the final detailed design and construction bid documents. Work included a preliminary piping system configuration and preliminary pipe sizes for a new potable water distribution system to service all buildings, performing a hydrant flow test to determine the available water flow rate; calculating the potable water demand for each plumbing system; determining the fire water and non-potable water demand; determining the fire water/non-potable water storage requirement; analyzing the water distribution system configuration to determine the best location to isolate the fire demand system from the potable water demand system using the water supply.

New York City Transit Authority, Inspection of the first 837 Transit Buses for New York, NY
Project Manager for the inspection of the first 837 General Motors Corporation transit buses to be delivered to the City of New York as replacements of the Grumman Flexible transit buses. The inspection was conducted in Pontiac, Michigan and successfully managed from New York. Bus structural components and bodies, drivelines, suspensions, steering, electrical, air conditioning, control systems, interiors and exteriors were inspected, reports of deficiencies issued and repairs inspected, and vehicle data and shipment data were recorded and forwarded to the New York City Transit Authority for payment and logistics considerations.

New York City Transit Authority, Rehabilitation of Eight (8) Bus Depots
Project Manager for the construction services phase of the rehabilitation of eight New York Transit Authority bus garages built in the early 1900s. The rehabilitation work included the upgrading of the HVAC systems, boiler replacements, plumbing system modifications related to the installation of new bus washing equipment, structural modifications for the mechanical equipment, roofing system replacement and replacement of the defective underlying structural components of roofs, new vehicle exhaust systems, new vehicle maintenance pit ventilation systems, and electrical work in association with the mechanical rehabilitations. The work included conducting periodic construction meetings with contractors, issuing directives as required, processing contractor's requests for payment, issuing of change notices, estimating the value of the change notices, negotiating the change notice price with contractors, managing the resident inspectors at each of the eight sites, filing monthly progress reports, reviewing the resident inspectors daily log books and their individual and collective performance, and providing additional design services to remedy latent conditions that developed during construction such as designing a repair of the roof structure where a small piece of construction equipment fell through the roof of the 146th street bus depot into an electrical duct bank.

Employment History
Han Padron Associates (1996 - 2004)
Ogden Facility Services (1994 - 1996)
Ammann & Whitney Consulting Engineers (1989 - 1994)
Garsite Products, Inc. (1984 - 1989)
Frederic R. Harris Consulting Engineers (1981 - 1984)
Burns & Roe Consulting Engineers (1976 - 1981)
Dravo VanHouten Consulting Engineers (1975 - 1976)

Michael J. Brothers

Project Manager / Construction Manager

Michael J. Brothers has 21 years of experience in project and construction management, project administration, and budgeting for various projects. He has created scopes of work and provided plans for project implementation; coordinated subcontractors, consultants, architects, engineers, and vendors; worked on project budgets, schedules, bid negotiations, bid packages, change orders, and site logistics; and managed requests for proposals and potential change orders. Mr. Brothers has also overseen the design and construction of retail, hotel, and restaurant projects ranging from a 1.5 million square feet retail outlet to a 60-room boutique hotel. His specialized computer software skills include AutoCAD 2000, and he has a working knowledge of French.

Recent and Relevant Experience

Jet Blue Terminal 5, JFK International Airport, OTG at JFK T5 Venture, LLC, New York, New York.

Hill International provided Owner's Representative services for the interior fit-out of 22 individual food concession spaces located inside Jet Blue Terminal 5 at JFK International Airport. The development consists of various concessions located throughout the 635,000-square-foot terminal. Hill was responsible for contract administration, project controls, coordination of design issues with the design team, and liaison between the owner and contractor.

Various Projects, Cultural Institutions Unit, New York City Department of Design and Construction (NYCDDC), New York, Project Manager.

Hill International is providing program management and oversight for several projects for the NYCDDC for renovations, alterations and expansions to museum, libraries and zoos. Hill holds the contracts with each contractor in compliance with the City's procurement regulations for design and engineering services by architects under contract with the NYCDDC. Mr. Brothers is Hill's Resident Engineer and is responsible for the New Plaza and Auditorium for the Brooklyn Public Library project. Prior Experience:

Jazz at Lincoln Center, New York City Department of Design and Construction, New York, Project Manager.

Working for a major national general contracting and construction management firm, Mr. Brothers served for three years as Project Manager for this 101,000 square foot, $120 million theater project. His responsibilities included overall project coordination, acting as a liaison to the client. He was responsible for insuring the project's success, including quality, financial performance and delivery to the client. He also oversaw all budget issues, contract negotiations, engineering, safety, daily performance, and adherence to project schedules. He also was responsible for OSHA requirements and

Education:

B.A. Architecture Temple University Pennsylvania 1995

Professional Memberships:

Project Management Institute

Awards / Honors:

Project Manager of the Year Hill International Inc. (2008)

Employment History:

Self-Employed General Contractor 1986-1990

Ray King Studio's 1990-1995

Rockwell Group 1996-1999

Theo Kalomirakis Theaters 1999-2001

Turner/Santa Fe 2001-2004

Turner Construction Company 2004-2005

Hill International Inc. 2005-Present

City of New York Building Department, Construction, Life & Safety Code compliance. Working for an institutional client on this project, required maintaining up-to-date, impeccable records and meticulous bookkeeping at all times.

Various Ultra High-End Residential Entertainment Projects, Theo Kalomirakis Theaters, New York, Director of Design and Production.

The company specialized in high-end residential entertainment design. Mr. Brothers served as the primary contact for an exclusive residential client base. He was involved in each project from creation of the initial contract to the final turnkey and sign-off by the client. Project construction costs started at $800 per square foot, and sizes could range from a small one-room conversion to a 25,000 square foot, multi-level subterranean addition. All projects employed the latest cutting edge technology in all disciplines from architectural and structural to HVAC and MEP. Mr. Brothers' responsibilities included preparing all contracts, reviewing and cataloging all documentation, establishing schedules and budgets, and coordinating the progress of each project during all phases of design and construction. Working with high profile, multi-national clientele demanded a high level of quality and professionalism, strict confidentiality, a high level of tact, and advanced understanding of confidential project management. Projects, both residential and commercial, included:

- Tuscan Thunder, Sea Island, Georgia
- Davis Theater, Pleasant Valley, Arizona
- Winchell Theater, Las Vegas, Nevada
- Tsubota Complex, Newport Beach, California
- Iola Theater, Dallas, Texas
- Bronfien Theater, Baltimore, Maryland
- Yellman Theater, San Ramon, California
- Sussman Theater, Pleasant Valley, Arizona
- Kinsey Complex, Pebble Beach, California
- Kelleher Theater, Kalispell, Montana
- Klimik Complex, Newport Beach, California
- Laube Engel Theater, Big Sur, California
- Zahid Complex, Al Khobar, Saudi Arabia
- Silver Screen, Pacific Design Center, Los Angeles, California
- Design Center, Magnolia Hi-Fi, Seattle, Washington

Various Retail, Hotel, and Restaurant Projects, Hospitality and Entertainment Design Firm, New York, Project Architect.

Mr. Brothers was responsible for overseeing the design and construction of hospitality and entertainment projects. He created and monitored project schedules, prepared code analysis, established project files and notebooks, and coordinated and managed the progress of the project team. He also acted as liaison between principals and team members, made all design decisions, coordinated all phases of documentation, and reviewed all documentation. He assisted in bidding negotiations, and ensured that proper contract administration and construction administration were carried out. At the end of the project he completed project closeout activities. Mr. Brothers also served as Construction Administrator, Job Captain and Designer.

Karen Mohlenbrok, PE, PMP, LEED AP

Project Manager / Construction Manager / Project Engineer

Karen Mohlenbrok, a Project Management Professional, is a civil/construction engineer with more than 20 years of experience in the management, design and construction of a wide range of large scale civil engineering projects. Ms. Mohlenbrok's experience involves design and construction of waterfront structures, including capacity analysis of piers, bulkhead and pile repairs, wind, wave and current analysis, materials handling systems and utilities. Her experience also encompasses design and planning studies for mass transit, highway and bridge structures.

Recent and Relevant Experience

CM Build for NYC Schools, Various Locations, New York City Department of Design and Construction (DDC).

Ms. Mohlenbrok was Assistant Project Manager of Hill's $100 million school construction and rehabilitation project for the DDC. Hill International was retained to provide a DDC-type of construction management service called CM-Build for the New York City Department of Design and Construction's (NYC DDC) capital program to rehabilitate the City's schools. In this service, Hill International acted as an agent of the owner, but held the contracts. Hill also provided professional staff to the DDC for various assignments such as design review, building condition surveys, estimating, scheduling and special studies and assignments.

PM Support for Program Management Division--NJ Airports, Port Authority of New York and New Jersey.

Ms. Mohlenbrok was a Project Manager working on Hill's program management services contract for the Port Authority. Projects included:

- North Area Drainage - Western Section of Brewster Road: Directed the development of contract documents for the installation of a 5'h x 7'w concrete culvert and concrete chambers to direct large scale drainage flow to the on-site "Peddie Ditch." The project also included the excavation, on-site treatment and disposal of hazardous soil materials encountered during excavation operations.
- North Side High Pressure Water Line: Directed the development of a study to evaluate the high pressure fire protection system at the north side of Newark Liberty International Airport. The objective of the study was to determine if the operation of the fire pumps could have any influence on the reported sprinkler piping failures within tenant developed facilities.
- Backflow Prevention Devices for Buildings (Phases I, II, and III): Project Manager for a program to meet New Jersey Department of

Education:

M.S. Civil Engineering Columbia University 1996

B.S. Cum Laude Civil Engineering Syracuse University 1985

Coursework Civil Engineering City University of London 1983-1984 0

Certificate 4 Hour User/Erector Supported Frame Scaffold Safety Training Total Safety Consulting New York 2006

Registrations:

Professional Engineer New York

Project Management Professional

LEED Accredited Professional

Professional Memberships

Whos Who in Science and Engineering Among Young American Professionals and of Emerging Leaders in America.

Tau Beta Pi (Engineering Honor Society)

Chi Epsilon (Civil Engineering Honor Society)

Project Management Institute

American Society of Civil Engineers

Awards / Honors

Valentine Prize (City University of London)

George M. Berry Award for Technical Distinction

Team Spirit Award (The Port Authority of NY & NJ)

Employment History:

Sverdrup Corp. 1986-1990

Han-Padron Assoc. 1990-1993

DMJM & Harris 1993-2001

Hill International Inc. 2001-Present

Environmental Protection's Safe Drinking Water Act Regulations by installing backflow prevention devices and also requiring tenants to install backflow prevention devices at all water service lines within all existing buildings at the Newark Liberty International Airport.

- Building 42 - Install Landing Platforms for Ejector Pumps: Project Manager for the development of design documents for the installation of two landing platforms to improve the safety of ejector pump hoisting operations during servicing.
- Newark Airport General Sitework Work Order Contract: As Project Manager, developed and assembled a specification booklet, advertised project and received bids from contractors in terms of overhead and profit percent of mark-up for this "requirements type" contract used for performing various types of work at the Airport.
- Bay Water Pump Station - Cleaning of Intake Flume: Developed contract documents for the general removal and disposal of sediment in the intake flume, sediment chambers and pump station at Newark International Airport's Bay Water Pump Station located at Port Newark.
- Relocation of North Area Fire Alarm Cable and Installation of New Fire Alarm Pedestals: Supervised the design of new underground fire alarm communication and power cable, and the installation of new fire alarm boxes as manufactured by Gamewell Worldwide to tie-in to the City of Newark's Fire Department system.
- Terminal A-Replace Concrete Fascia Panel Clip Angles: Supervised the development of details for replacing steel clip angles connecting the pre-cast fascia panels to the concrete box girders along a bridge at the arrivals level at Terminal A. Allowance was made for thermal expansion with slotted holes drilled into the bent plate to accommodate movement in two directions.

Prior Experience:

Metro-North Commuter Railroad, Rehabilitation and Upgrade of Grand Central Terminal Sanitary Sewer System.

As Project Engineer, Ms. Mohlenbrok prepared monthly progress reports and schedules, supervised subconsultants, performed field inspections and testing, developed conceptual design alternatives report, and developed contract documents for new sewage ejector stations, drainage pump stations, piping, electrical controls and electrical power for accommodation of retail expansion and north end access improvement projects at Grand Central Terminal.

Old Colony Commuter Rail Line, Massachusetts, Massachusetts Bay Transportation Authority.

Ms. Mohlenbrok was Engineer responsible for the development of horizontal and vertical track alignment for the Old Colony commuter rail line.

Stony Brook Station Improvements, Stony Brook, New York, Long Island Rail Road.

Ms. Mohlenbrok was Assistant Project Engineer for detailed design for a new railroad station platform, track realignment, a handicapped access ramp, and at-grade crossing.

JFK 2000 Program, Queens, New York, Port Authority of New York & New Jersey.

As Project Engineer, Ms. Mohlenbrok performed detailed structural inspection and preparation of condition survey report and repair recommendations for JFK Airport Hangars 15 and 16.

Hatch Mott MacDonald

Andrew J. Thompson

Education
BEng (Hons) Mining Engineering, University of Newcastle-upon-Tyne, 1986

MSc Construction Management, University of Bath, 2006.

Registration
Chartered Engineer

Years in Practice - 23

Memberships
Institute of Materials, Minerals and Mining

British Tunnelling Society

Construction Management Association of America

Experience Summary

Mr. Thompson has extensive experience in the program/construction management, design management and contract administration of underground facilities for water, wastewater and transportation projects. He has project experience in a range of tunnelling and shaft-sinking methods, including TBMs (hard rock, EPB and slurry), raise boring, drill and blast and roadheader/mechanical excavation.

Select Project Experience

East Side Access Project, Metropolitan Transportation Authority Capital Construction, New York, NY

Program Manager - Construction. Reporting to the MTA-CC Project Executive and responsible for leading the Construction Management team on the FTA's largest (as of 2009) infrastructure project in the USA. The Project involves the construction of a new rail link to connect Long Island Railroad in Queens to a new terminal constructed beneath the existing Metro North Railroad Grand Central Terminal (GCT) in Manhattan. Includes the construction of seven miles of tunnels in Manhattan and Queens together with creation of two 1,200 foot long 60 foot high and 60 foot wide station caverns beneath GCT, as well as shafts, escalator shafts and associated caverns and tunnels for interlocking and crossovers, etc. Excavation of the Manhattan portion is undertaken using hard rock TBM's, roadheaders, drill/blast and raise bore techniques. Final lining of the tunnel elements includes the innovative use of permanent shotcrete lining, as well as pre-cast concrete linings, incorporating both systems elements and architectural finishes of the main station caverns which were procured using an Early Contractor Involvement approach, a first for MTACC. Construction in Queens includes excavation of tunnels using Slurry TBM's and pre-cast concrete segmental lining beneath active railyards and the LIRR and Amtrak main lines out of New York Penn Station. Sequential Excavation Methods in conjunction with ground freezing and jet grouting will be used to cross beneath NYCT Elevated tracks, as well as installation of over 25 new track switches and associated railroad systems.

East Side Access Project, Metropolitan Transportation Authority Capital Construction, New York, NY

Design Package Manager within the MTA Program Management Team with responsibility for managing the preparation of Construction Contracts. Responsibilities included: Management of the General Engineering Contractor's design activities, liaison with railroad force account and liaison with other Government Agencies. Also included preparation and review of specifications, Supplemental Conditions of Contract, establishment of milestones, contract packaging, risk analysis etc. Also responsible for implementation of Data Management system for all shift report data for underground contracts.

Seymour-Capilano Project, Metro Vancouver, BC, Canada

Provided advice and assistance concerning Target Cost Contracts for the preparation of the RFP for the completion contracts following default of the original Contractor. RFP was structured to include a Target Cost in addition to Unit Rate Proposal.

Edison Force Main Tunnel, Middlesex County Utilities Authority, Middlesex, NJ
Preparation of contract specifications, GBR, construction quantities, review of constructability issues for 3,900-foot tunnel to be constructed beneath the Raritan River using Pressurized face TBM and precast concrete segments. Review of procurement alternatives and preparation of contractor prequalification criteria and documents, which included liaison with owners counsel and NJ Department of consumer affairs to ensure no challenge could be initiated by contractors deemed to be non-qualified.

Western Regional Conveyance Tunnel, Northern Kentucky Sanitation District No.1, Northwestern Kentucky
Assisted in preparation and review of alignment alternatives, procurement options and selection of TBM and lining technology together with preparation of specifications, drawings and contract documents.

West Area Combined Sewer Overflow (CSO) Storage Tunnel and Pumping Station Facilities, City of Atlanta, Atlanta, GA
Resident Engineer responsible for construction management and supervision of the tunnels, shafts, associated intake facilities and pump station. The project included 8.5 miles of 27-foot diameter hard rock TBM tunnels, 1,600 feet of drill and blast connecting tunnels and deaeration chambers, four construction shafts of 45-foot diameter varying in depth from 150 to 300 feet, five auxiliary ventilation shafts and drop shafts up to 20 feet in diameter and constructed by raise boring, an overflow shaft and associated intake structures. The tunnels had to be partially lined with cast-in-place concrete final liner. The system will provide more than 150 MG of CSO storage for peak inflows in excess of 10,000 cfs with the largest vortex intake shaft capable of handling inflows in excess of 5,000 cfs.

Elizabethtown 72-inch Eastern Transmission Reinforcements, Phase 2, Elizabethtown Water Company, Somerset County, NJ
Resident Engineer responsible for the construction management and supervision on this 1,200-foot tunnel constructed beneath the Raritan River and D+R Canal. The tunnel was driven between two shafts in water bearing and contaminated ground using a Lovat TBM. Primary support of the tunnels was by full circle steel arch ribs and lagging and the final lining is a 72-inch grouted steel pipe. Shafts were constructed by liner plate and sheet pile methods in the soft overburden and then by mechanical and drill and blast methods in the rock sections. This contract utilized a two-stage target cost contract to manage the client's risk by incorporating the contractor's comments on constructability issues prior to completion of the final design to prepare a negotiated target cost.

Mersey Kingsway Tunnels Upgrading, Merseytravel, Liverpool, England
Project Manager responsible for the construction management of a two stage negotiated target cost contract utilizing NEC Option C for three new 50-foot long road level cross passages, together with two sub road level escape tunnels, between the existing operational twin tubes of the Kingsway Road Tunnels beneath the River Mersey. Following completion of comprehensive ground treatment and the installation of remote monitoring systems to check for lining deformations, the tunnels were driven by hand and track mounted hydraulic breaker in water bearing sandstone. The primary support utilized pre-cast concrete segments and a secondary cast-in place lining provided the final internal lining.

Employment History
Hatch Mott MacDonald (1988 - Present)
Anglo American Corporation (1986 - 1988)

Zhenqi (Jenchi) Cai, PhD, P.Eng.

Education
Ph.D., Geotechnical Engineering, Queen's University, Canada, 1992
M.Sc., Geotechnical Engineering, Queen's University, Canada 1987
B.Eng., Hydro Power Engineering, Hohai University, China, 1983

Registration
Professional Engineers of Ontario, [redacted], 1997

Years in Practice – 18
Memberships
Underground Construction Association of SME
American Society of Civil Engineers

Experience Summary

Dr. Cai is currently Tunnel Design Manager of HMM's New York City office. He has 18 years of engineering experience in heavy civil projects, including tunnel engineering for rail transportation, highways, and water/wastewater conveyance. His broad area of expertise encompasses site investigation, geotechnical and rock mechanics analysis, structural design, project management and construction supervision. Specific skills include the use of state-of-the-practice methods of analysis and design principles for underground structures excavated using either TBM, drill and blast, or sequential excavation methods. He is experienced in the design of deep shafts, slurry walls, underpinning, and support of deep excavations. Dr. Cai also has extensive site supervision experience of civil works and associated system installation interfaces for transit/rail projects.

Select Project Experience

Trans Hudson Express (THE) Tunnel Project, New Jersey Transit, Hoboken, NJ

Lead Tunnel Engineer and Proposal Manager for prebid design for the Palisades Tunnels Design Build Contract. THE Tunnel Project will provide two new tracks just south of Amtrak's existing Northeast Corridor (NEC) between the west side of the Frank R. Lautenberg Station and the west side of the Palisades in New Jersey. The proposed tunnels will then descend and turn under the Palisades through Union City, North Bergen, and Hoboken. The new tunnels will cross under the Hudson River from Hoboken and under the east shore bulkhead in New York City near West 28th Street, then continue east and pass under West 34th Street to the site of the new NY Penn Station Expansion (NYPSE).

THE Project's Palisades Tunnels design-build package starts east of Tonnelle Avenue and ends at the Hoboken Shaft on the eastern edge of the Palisades ridge. The design-build package includes the following:

- Construction of the 126-foot diameter Hoboken Shaft
- Construction of an approximately 300-foot long open cut and tunnel portal
- Construction of two 5,100-foot long parallel bored tunnels by tunnel boring machine (TBM)
- Construction of six emergency cross-passages at intervals of not more than 800 feet

The bid has been successful and the project is currently underway.

Elm Road Generating Station Water Intake Tunnel below Lake Michigan, Wisconsin Electric, Oak Creek, WI

Lead Tunnel Engineer responsible for tunnel design and shaft design for this design/build hard rock tunnel project. Project includes approximately 9,200 LF of 27.5 foot diameter tunnel in dolomitic limestone below Lake Michigan. Shaft sizes included 18-foot, 26-foot, and 30-foot through both soil and rock up to depths of 300 feet. Other responsibilities included development of Geotechnical Baseline Report as part of the successful contractor's bid, preparation of the tunnel/shaft-related method statements and specifications for the contractor. Completion of the new Elm Road Generating Station is anticipated for 2010, at which time both units will have an estimated 1,230 MW combined total output.

Kentucky East End Approach Tunnel, Kentucky Transportation Cabinet (KYTC), Louisville, KY

Deputy Project Manager and Lead Tunnel Engineer responsible for the preliminary design and geotechnical data and baseline reports for the $260 million, twin-bore 2,000 LF large

span cavern/tunnels (75 feet wide) in hard rock (limestone and shale). Scope of project included studies to determine optimal tunnel cross-sections and alignments; geotechnical and structural analysis and design of rock excavation and initial support including rock bolts, shotcrete, steel arches, lattice girders, and canopy tubing. Tasks also included the design of pilot bore explorations and pre-construction roadheader performance studies and testing programs. Tunnel design had to also consider homeland security issues, emergency response and egress, tunnel operational support systems, risk management studies, and public involvement.

Cross Sound Link Tunnel, Polimeni International, New York, NY
Lead Project Engineer for the conceptual design of this estimated $10 billion tunneled highway crossing of the Long Island Sound between Syosset and Rye, New York. Project involves construction of 18 miles of triple bore tunnel consisting of two 55-foot diameter running tunnels, each containing three traffic lanes in each direction and one central service tunnel of 38 feet in diameter. Expected ground conditions include rock, soil, and mixed face under the Long Island Sound. Excavation will be by pressurized face TBMs being driven to a mid-point sub-aqueous junction under the Long Island Sound. On completion, this will be the world's longest highway tunnel.

Atlanta CSO Re-Design of Construction Shafts, Drop Shafts, and Deaeration Chambers, City of Atlanta, Atlanta, GA
Design Manager responsible for the revised design and analysis of construction shafts, drop shafts, associated intake facilities and ventilation pipes for this $250 million project. The project includes 8.5 miles of 27 foot diameter hard rock TBM tunnels, 1,600 feet of drill and blast connecting tunnels and deaeration chambers, four construction shafts of 45-foot diameter varying in depth from 150 to 300 feet, five auxiliary ventilation shafts and drop shafts up to 20 feet in diameter and constructed by raise boring, an overflow shaft and associated intake structures. The tunnels will be partially lined with cast-in-place concrete final liner. The system will provide more than 150 MG of CSO storage for peak inflows in excess of 10,000 cfs with the largest vortex intake shaft capable of handling inflows in excess of 5,000 cfs.

Tunnel Option Study of the Brooklyn-Queens Expressway from Atlantic Avenue to Sands Street, Kings County, Brooklyn, NY
Lead Project Engineer for development and analysis of two three-mile rock tunnel scoping alternatives for the Scoping Phase of the BQE Feasibility Study. Two tunnel conceptual alternatives will be developed, a below grade tunnel under Brooklyn Heights within the existing expressway alignment and project limits and an at-grade tunnel enclosure of the existing triple cantilever section.

Heartland Corridor Clearance Improvements, Norfolk-Southern Railroad, Roanoke, VA
Tunnel Design Reviewer responsible for detailed design and constructability review of the underground tunnel modifications to enable double stack container trains a direct route from the Port of Norfolk through Virginia, West Virginia and into Central Ohio and Northern Kentucky. There are 28 tunnels that require sectional clearance improvements for the double stack trains with one tunnel "day-lighted" using sloped cut.

Employment History
Hatch Mott MacDonald Inc. (2005 - Present)
DMJM + Harris (2002 - 2005)
Bombardier Transportation (1996 - 2002)
Dept. of Civil Engineering, Royal Military College of Canada, Kingston (1992 - 1996)
Canadian Institute of Guided Ground Transport, Queen's University, Kingston, Ontario, Canada (1990 - 1992)

Amber Rose France, LEED AP

Project Manager / Construction Manager

Amber R. France has over nine years of experience in project management and scheduling for museums, stock exchange facilities, office buildings, community centers, and transportation projects, including airport terminals and highways. Ms. France has defined the scope of work for and managed various trades working on these projects. She has also created and updated progress schedules on a recurring basis in accordance with the various project requirements. Ms. France has also performed traffic surveys and translated them into models using the HCM program. Her specialized computer skills include MS Project, Primavera, Suretrak, HCM Traffic Modeling, AutoCAD and Prolog Manager.

Recent and Relevant Experience

Jet Blue Terminal 5, JFK International Airport, OTG at JFK T5 Venture, LLC, New York, New York.

Hill International provided Owner's Representative services for the interior fit-out of 22 individual food concession spaces located inside Jet Blue Terminal 5 at JFK International Airport. The development consists of various concessions located throughout the 635,000-square-foot terminal. Hill was responsible for contract administration, project controls, coordination of design issues with the design team, and liaison between the owner and contractor. As Resident Engineer Ms. France worked hand-in-hand with the architect, owner, governing agencies and contractor in coordinating and managing this very fast-paced project.

Bronx County Hall of Justice, Dormitory Authority of the State of New York (DASNY), Project Manager.

Hill International is providing change order services, punch list inspection, allowances, schedule delay analysis, parking garage and pre-cast inspection, and claims support services as part of DASNY's team. Hill also represents DASNY in dealing with subcontractors and other matters as required. Ms. France serves as Project Manager responsible for managing contractors' coordination issues and field conditions. Ms. France also reviews the work in place to verify quality assurance and to ensure that the necessary items are suitable for acceptance.

Schomburg Center for Research in Black Culture, New York City Department of Design and Construction (DDC), New York, New York, Resident Engineer.

The $10 million project was the renovation of the interior staff offices, galleries, reading rooms, and other public areas. Ms. France served as

Education:

B.S. Civil Engineering
Polytechnic University
New York 1998

Certificate 4 Hour User/Erector Supported Frame Scaffold Safety Training Total Safety Consulting New York 2006

Registrations:

LEED Accredited Professional

Awards / Honors

2000 Interior Design/Fit-Out Project of the Year for the NYSE Trading Floor Expansion Project

Employment History:

New York State Department of Transportation 1996

Parsons de Leuw Cather 1997-1998

AMEC/Morse Diesel International Inc. 1998-1999

AMEC Construction 1999-2004

Hill International Inc. 2004-Present

Resident Engineer responsible for managing the general contractor, and the mechanical, electrical, and plumbing contractors' work. The project scope also included the demolition of the old mechanical units and the installation of a new chiller, cooling tower, air handling units, boilers, and associated equipment. The scope also included the installation of a curtain wall system that added floor space to the Schomburg. Ms. France prepared estimates and change orders for the client's information and action. She also took part in resolving conflicts by meeting with the client, the design team, and the contractor to determine feasible solutions to the coordination conflicts. She also revised and updated the overall project schedule on a regular basis and generated specific schedules as required by the client.

Weeksville Heritage Center, New York City Department of Design and Construction (NYCDDC), Brooklyn, New York, Resident Engineer.

The $15 million project is the construction of a new 23,172 square foot building, which will include a multi-purpose room, black box theatre, exhibition space, educational workshops, a gift shop, resource center and library, administrative offices and conference room, and facility support system spaces. The building will accommodate the current program operated by the Society for the Preservation of Weeksville and Bedford- Stuyvesant History. The project is currently in pre-construction phase, and Ms. France is responsible for review of construction documents for constructability and creation of the project schedule. She will serve as Resident Engineer during the construction phase and will monitor and manage the day-to-day activities of the project, ensuring that the project is governed by NYCDDC standards. Prior Experience:

Museum of Modern Art Expansion, New York, New York, Project Manager/Assistant Project Manager.

As Project Manager/Assistant Project Manager on this $265 million project to renovate the galleries, offices and back of house spaces, as well as the construction of new gallery floors, a 16-story office tower and machine rooms, Ms. France defined the scope of work for and managed the miscellaneous metals, elevators, escalators, millwork, and window washing equipment trades.

New York Stock Exchange Trading Floor Expansion, New York, New York, Project Manager/Assistant Project Manager.

The $30 million expansion of the trading floor included the installation of state-of-the-art trading booths and kiosks. Ms. France helped to define the scope of work for and managed various trades, including the millwork, ornamental, and glass work. The work involved the coordination of the trades' work with the data device interface.

New York Stock Exchange (NYSE) Supply and Exhaust Fan Replacement, New York, New York, Project Manager/Assistant Project Manager.

Ms. France managed the mechanical and electrical work which involved the installation of new supply and exhaust fans and air handling units for the NYSE maintenance areas and cafeteria. The new fans and units were constructed and tied into the existing systems with minimal schedule shutdowns. The project scope also included the demolition of the old mechanical units upon the testing and operation of the new fans and units.

Marco V. Levoyer, PE

Education
BEng, Civil, Stevens Institute of Technology, 1986

Registrations
Professional Engineer
NJ, [redacted], 1991
FL, [redacted] 2009

Years in Practice – 23+

Memberships
American Society of Civil Engineers

American Concrete Institute

Training
Load & Resistance Factor Design Seminar – 2000

NHI Value Engineering Workshop – 2001

AECOM Project Management Training - 2001

Strengthening Structural Steel Beams - 2009

Innovative Designs for Intersection Capacity - 2009

Skyline Applications for Foundation Steel – 2009

Experience Summary

Mr. Levoyer has over 23 years of experience in design, construction, inspection, and management of transportation engineering projects. His experience consists of scoping, conceptual, preliminary, and final design for highway and railroad projects, including the development of plans, specifications, and estimates. In addition, his professional background includes construction inspection, inspection and evaluation of existing structures, construction support services, and temporary structures engineering.

Select Project Experience

Rehabilitation of Parsonage Hill Road Bridges, Essex County, NJ
Project Manager for design and construction inspection services for the rehabilitation of bridges carrying Parsonage Hill Road over Canoe Brook and JFK Parkway. The Canoe Brook Bridge is a steel three girder-floorbeam span which required concrete deck replacement and floorbeam concrete encasement removal to improve the load carrying capacity. The JFK Parkway Bridge is a two-span precast, prestressed concrete voided slab beam structure which required a complete span replacement over southbound JFK Parkway and a partial span replacement over the northbound roadway.

Scoping Study for Bridges W7, W8 and W9, Monmouth County, NJ
Chief Bridge Engineer for a scoping study addressing three structures that connect two municipalities and serving as primary access for the area. Bridge W-7 (Green Avenue over Debbie's Creek), is a fixed, seven-span timber bridge supported by pile bents. Bridge W-9 (Brielle Road over the Glimmer Glass), consists of an historic, single-leaf, cable lift bascule bridge with rolling counterweights and 16 fixed timber trestle approach spans. The bascule bridge is believed to be the last of its type in the United States. Alternative studies for the structures were performed addressing regulatory, navigation, and cultural resources issues. Also involved oversight of life cycle cost analyses and support for environmental assessment phase of the project.

Replacement of the Sakonnet River Bridge, Rhode Island Department of Transportation, Tiverton, and Portsmouth, RI
Deputy Project Manager for peer review services for the design of the precast concrete segmental alternative of this 3,160-foot long bridge. The central 1,950-foot long main spans will be bid as segmental concrete and steel box girder alternatives. Peer reviews were developed at the 30% and 90% levels. Specific elements of work included contractor type cost estimating, construction methodology for foundations, piers and superstructure, design criteria review and a detailed superstructure design check.

Atlantic City Expressway, South Jersey Transportation Authority, Atlantic, and Camden Counties, NJ
Deputy Project Manager for the widening of the Atlantic City Expressway from milepost eight to 31. The widening provided an additional lane for a total of three travel lanes in the westbound direction. The project entailed extensive environmental/permitting tasks, hydraulics/drainage work, along with bridge widenings, new retaining walls and sign support structures, roadway lighting, and ITS facilities.

Driscoll Bridge Rehabilitation, New Jersey Turnpike Authority, Middlesex County, NJ
Project Manager for the rehabilitation of the approximately 4,400-foot long, high-level Garden State Parkway Bridge over the Raritan River and construction of a new parallel structure. The existing 129-foot wide bridge will be reconfigured to carry eight northbound lanes and shoulders. The rehabilitation will consist of deck replacement, structural steel replacement, and seismic retrofitting. Alternative bid designs were provided for the new 96-foot wide, seven lane, southbound bridge: post-tensioned segmental concrete and steel plate girder superstructures.

Route 29, New Jersey Department of Transportation, Mercer County, NJ
Principal Engineer for the final design of the Route 29 project in Trenton. This $70 million, design/build project included a twin-cell tunnel structure, a scour/retaining wall along the Delaware River, a 150-meter long multi-span vehicular bridge, two multi-span pedestrian bridge structures, seven retaining walls, and a sign structure.

Route 514 / Raritan Center Parkway Interchange, Middlesex County Improvement Authority, NJ
Principal Engineer for the replacement of the existing intersection with a grade-separated interchange carrying Route 514 over Raritan Center Parkway. Supervised structural design for this fast track project, which included a 100-foot long single span, steel plate girder bridge with pile supported substructures, three sign support structures, and two temporary retaining walls.

Ramp from Middlesex-Essex Turnpike to SB Garden State Parkway, New Jersey Highway Authority, Middlesex County, NJ
Project Manager for construction of a ramp adjacent to NJ Transit's MetroPark station to the SB GSP at Interchange 131B in Woodbridge Township. The project included substantial environmental coordination, an underground protective structure for a 48-inch water main, bridge widening, and retaining walls.

Yankee Stadium Station Pedestrian Bridge Piers, Metro-North Railroad, Bronx, NY
Project Manager for structural engineering services for the piers of the pedestrian bridge at the new Yankee Stadium Station on Metro-North's Hudson line. The station will provide service for the Harlem and New Haven lines on game days. The preliminary substructure design called for cast-in-place concrete piers; however, precast-concrete segmental piers with vertical post-tensioning were selected to expedite construction on this design/build project.

Route 27 & Evergreen Road, New Jersey Department of Transportation, Middlesex County, NJ
Project Manager for the construction of a replacement structure for the Evergreen Road Underpass carrying Amtrak's Northeast Corridor Line in Edison Township. The project was undertaken to alleviate substandard vertical clearance and roadway geometry at the underpass and improve traffic operations. The existing arch bridge was replaced with a roll-in structure.

McClellan Street Underpass, City of Newark, Essex County, NJ
Project Manager for a scoping study to repair, widen or replace the existing McClellan Street Underpass carrying Amtrak's Northeast Corridor (NEC) Line in the City of Newark. The project required engineering and environmental work to develop alternatives addressing the substandard vertical clearance at the underpass, alleviate existing flooding problems, and improve traffic operations and safety in the project area. One of the alternatives consisted of tunneling under the NEC embankment for a separate eastbound crossing.

Employment History
Hatch Mott MacDonald (2008 - Present
Weidlinger Associates (2006 - 2008)
DMJM Harris (1996 - 2006)
Bettigole Andrews & Clark (1986 - 1996)

Ronald J. Klinczar, PE, LEED® AP

Education
MBA Studies
BS Civil Engineering, SUNY at Buffalo, New York, 1986, M.C.L
AAS Civil Technology, Erie Community College, Buffalo, New York, 1979

Registrations
Professional Engineer
NY, # [redacted] 1990
OH, # [redacted], 1994
Leadership in Energy and Environmental Design (LEED®) Accredited Professional, The Green Building Certification Institute, 2009

Years in Practice – 31

Memberships
WNY Southtowns Scenic Byway Committee, 2008-present
Association of Bridge Construction and Design, WNY Chapter Historian and Past President
Engineering Society of Buffalo, Board of Directors, 2003-2005
Buffalo-Niagara Partnership, Transportation Committee
NYSDOT Statewide Conference on Local Bridges, Past Member, Steering Committee
Guest Lecturer, SUNY at Buffalo, Civil, Structural, and Environmental Engineering, Topic: Sustainable Design and the Environment
Workshop Director and Presenter, Managing Effective Public Meetings, Canisius College

Experience Summary

Mr. Klinczar has over 31 years of experience in the design and management of various transportation projects. He has managed several large highway, airport, water resource, and structural design projects from their initiation through public participation and document preparation, under both NEPA and State requirements. His background also includes transportation planning, traffic engineering, toll facility design, ITS design, and CSO facilities design. As Principal Project Manager, Mr. Klinczar is responsible for the overall design team and client coordination to ensure efficiency in work produced for clients. He also serves in a Senior Engineering capacity where he directs the design of larger and significant projects in the transportation field. Mr. Klinczar has undertaken many assignments of various size and complexity where he has been responsible for agency coordination, public participation, and serving as the client liaison.

Select Project Experience

Goodrich Road Drainage Study, Erie Co. Department of Public Works, NY
Project Manager for Hydrology and Hydraulic Study for assessment of closed drainage system alternatives. The study assessed flood conditions on adjacent streams, including backflow into Black Creek and to the surrounding communities. These conditions were evaluated to establish alternative closed drainage configurations and to estimate the flood flow at which any closed drainage system would be rendered inoperative. Soils types and sedimentation potential were also evaluated.

Design of Prospect Street Truss Replacement, NYSDOT, Niagara County, NY (*Association for Bridge Construction and Design, WNY Chapter, 2005 Bridge of the Year*)
Senior Project Manager for the design of an 83m (268 ft) truss bridge over the Erie Canal, Lockport, New York. The new truss was required to be historically correct to satisfy the requirements of the SHPO. Adjacent to the truss foundation is a portion of the old Erie Canal wall, which consists of unmortared stone. Developed a concept to support the proposed retaining wall foundation while maintaining the integrity of the stone wall. Due to restrictions on sediment disturbance within the canal the truss was erected on a barge downstream of the final placement location, floated into place, and the barge sunk with water ballast to drop the truss on its bearings.

Design of Borden Street Bridge Replacement, NYSDOT, Erie County, NY
Project Manager for design Phases I-VI for preparation of design report, preliminary and detailed engineering, structural design, highway design and traffic signal modification for the existing two-span Borden Road Bridge over the Buffalo River for NYSDOT, West Seneca, New York. The structure consists of high piers and abutments founded on shallow bedrock at stream level. The design incorporated sheet pile wall retaining system, and improved the backwater flood channel by eliminating a pier restriction while not changing the hydraulic discharges downstream along the Buffalo River.

Emergency Rehabilitation of CR 27 Bridge, NYSTA, Montgomery County, NY
Senior Project Manager for the emergency inspection and rehabilitation of the County Route 27 Bridge (Moveable Dam 8) over the Erie Barge Canal/Mohawk River,

Montgomery County for New York State Thruway Authority (NYSTA). This five-span structure consists of three approach spans and two truss spans that support 16 moveable dam gates. The project involved the emergency inspection of the flood-damaged structure in conjunction with the completion of complete contract documents within six weeks. Design components included bottom lateral replacement, gate rehabilitation, inner bottom chord replacement, truss member rehabilitation, and a lightweight exodermic deck system design. Responsible for quality assurance and quality control management of the contract documents.

Rehabilitation of NY 103 Bridge/Moveable Dam, NYSTA & NYSDOT, Schenectady County, NY
Project Manager for a $14 million rehabilitation of the six-span, 750-ft long Route 103 bridge/moveable dam structure over Erie Barge Canal/Mohawk River, Rotterdam, New York, for NYSDOT and NYSTA. Responsible for all facets of the rehabilitation, including project scoping, preparation of a Canal Rehabilitation Project Report (CRPR), short-term mitigative measures, and preparation of contract documents. Scoping included an in-depth inspection and evaluation of all foundation, superstructure, gate/mechanical, electrical, and safety and access elements. A recommendation was made to completely replace the truss span decks, deck floor system, and north and south approach spans. The recommendations also included refacing truss piers, repairing scoured foundation areas, rehabilitating gates and mechanical systems, improving safety and access elements, and upgrading electrical system components.

Rehabilitation Study of Nine Moveable Dams on the Mohawk River, NYSTA, Montgomery, and Schenectady Counties, NY
Project Manager responsible for development and implementation of an evaluative program for the NYSTA involving determination of scope, concept and cost for rehabilitation of nine Mohawk Dam type truss structures. The evaluation included investigation of scour conditions and recommendation, and detailed design of scour countermeasures for truss foundations. Foundations consisted of piers, abutments and aprons founded on soft scourable rock. The third project included redecking and approach span replacement of a six-span bridge utilizing the moveable dam truss superstructure.

Design of Hulberton Road Lift Bridge Rehabilitation, NYSDOT, Orleans County, NY
Preparation of a Multidisciplined Canal Rehabilitation Project Report documenting deterioration and substandard features for a three-span truss lift bridge over Erie Barge Canal in Hulberton, New York, for NYSDOT. The report included results of in-depth inspection and level one load rating for the structure. Coordination of mechanical, electrical, and architectural inspections and recommendations.

Design of NY 98 Bridge Replacement, NYSDOT, Orleans County, NY
Preparation of a design report and preliminary studies for replacement of the Route 98 pony truss bridge over Marsh Creek in Carlton, New York. Alternative alignments were prepared and studied to determine least cost/benefit design. Potential impacts included removal of residential buildings and/or commercial structures, wetland acquisition and filling, involvement with SHPO deemed historic structures, erosion control and bank stabilization, and sequencing of construction to minimize negative impacts to commercial businesses.

Employment History
Hatch Mott MacDonald (2004 - Present)
Acres International Corporation, Amherst, NY (2001 - 2004)
TVGA Engineering, Elma, NY (1991 - 2001)
Acres International Corporation, Buffalo/Amherst, NY (1986 - 1991)
C&S Engineers, Buffalo, NY (1982 - 1986)
Soderholm Engineering, Depew, NY (1969 - 1982)

Mark A. Cosmedy, PE, Project Manager

Career Profile

Mr. Cosmedy has 30 years of experience in the construction industry, particularly in bridge design and inspection. He has managed projects for most NY agencies requiring bridge and transit expertise. In positions ranging from Project Engineer to Project Manager, Mr. Cosmedy has successfully completed projects while building valuable relationships with clients and fellow staff alike.

Project Experience

- **Port Authority of New York and New Jersey, Repaving of Hudson Terrace, Fort Lee, NJ**
  Served as Project Manager providing bridge design services for a widening of an existing bridge to improve turning radius from Hudson Terrace onto the upper level of the George Washington Bridge. A conceptual report with recommendations was prepared and final design services were performed.
- **Port Authority of New York and New Jersey, JFK Airport Bridge Repair, Queens, NY**
  Served as Project Manager responsible for the preparation of a concept report and preliminary through final plans for the design of repairs to 27 bridges located at JFK International Airport. Also provided support during construction including shop drawing review.
- **Port Authority of New York and New Jersey, LaGuardia Taxiway Strengthening, Queens, NY**
  Served as Project Manager providing construction inspection services for several projects on the structural deck at LaGuardia Airport including strengthening of the deck to support heavier loads from newer aircraft.
- **Port Authority of New York and New Jersey, LaGuardia Airport Taxiway Alignment, Queens, NY**

  Served as Project Manager for the preparation of preliminary through final plans for the installation of taxiway centerline lights on the structural deck at LaGuardia Airport. The lights had to be located away from the structurally-sensitive post-tensioning steel in the deck.
- **Metropolitan Transportation Authority Independent Engineering Consultant, New York, NY**
  Served as Project Manager providing independent engineering services on several large projects for the TBTA, Long Island Rail Road, Metro North Railroad and New York City Transit, including the Fulton Street Transit Center and the South Ferry Terminal Station.
- **NYS Department of Transportation, Van Wyck Expressway Rehabilitation, Queens, NY**
  Served as Assistant Project Manager responsible for three of the five monolithic Bridge Deck Rehabilitation Design stages. A 326-span viaduct was

Education

BS, Civil Engineering, Rensselaer Polytechnic Institute

inspected and contract drawings prepared for its rehabilitation. The work entailed overlay installation, slab repair /replacement, deck joint replacement, rehabilitation of drainage systems, and miscellaneous superstructure and substructure repairs.

- **NYS Department of Transportation, Preventative Maintenance of Bridges, Van Wyck Expressway/Grand Central Parkway Interchange, NY**
  Served as Project Manager responsible for the preventative maintenance design of five bridges on the Van Wyck Expressway/Grand Central Parkway Interchange complex. Work included development of new overlays, new bearings, and joint replacements.
- **NYS Department of Transportation, Nassau Expressway/John F. Kennedy Expressway, Nassau and Queens County, NY**
  Served as Structural Engineer responsible for various bridge and wall designs as part of the Nassau Expressway project in Queens, NY. Project tasks included several continuous and simple span steel bridges, as well as concrete retaining walls.
- **NYS Department of Transportation, Bridge Vulnerability Assessment, New York, NY**
  Served as Project Manager and Quality Control Engineer for the preparation of reports assessing the vulnerability of concrete details to failure for over 90 NYSDOT – owned bridges. Structural integrity Evaluations were performed for three of the bridges.
- **NYS Department of Transportation, Biennial Inspections, New York County, NY**
  Served as Quality Control Engineer for the 1998 portion of the inspection bridges in Manhattan.
- **NYS Department of Transportation, Biennial Inspection of the Outerbridge Crossing and the Bayonne Bridge, Staten Island, NY**
  Served as Quality Control Engineer for the approach viaducts and main spans of the facilities.
- **NYS Department of Transportation, Biennial Inspection of the Henry Hudson Bridge, New York, NY**
  Served as Project Manager and Quality Control Engineer for the biennial inspection of the approach and main spans of the Henry Hudson Bridge. The project also included deck evaluation reports for the four bridges including the lower level of the Henry Hudson.
- **NYS Department of Transportation, Biennial Inspection of Arterial Bridges, NY**
  Served as Team Leader for the inspections of 75 spans on arterial bridges in Manhattan and Bronx, as well as 150 inspections in Brooklyn and Queens.
- **NYS Department of Transportation, Biennial Inspection, Queens, NY**
  Served as Quality Control Engineer for 1993-1994 inspection of all bridges in Queens and Technical Adviser for review of same bridges in 1995-1996.

George Brosius, PE
Project Manager

Mr. Brosius has 40 years of experience in structural engineering and project management, primarily with bridges and buildings in the New York City metropolitan area. His experience includes familiarity with the criteria and standards of many New York agencies, including NYCDOT, NYSDOT, and the NYSTA.

Registrations
Professional Engineer (General): NY, 2005
Professional Engineer (General): PA, 1975

Education
B.S.C.E., Civil Engineering
Pennsylvania State University, 1970

Years of Experience
40

Years with Firm

PANYNJ Design of Five Bridges, Depressed Roadway and Retaining Walls for the Palisades Interstate Parkway Connector Ramp to the George Washington Bridge Lower Level Fort Lee, NJ
Principal Structural Design Team Leader for the design of the new, 2,700-foot long 2-lane ramp from the PIP to the lower level of the GWB, consisting of the following structures: a 200-foot long, 3-span composite concrete deck, curved, steel plate girder bridge carrying the ramp over Hudson Terrace in Fort Lee; three, 50-foot long concrete rigid frame bridges carrying local streets over the ramp; 200 feet of cantilevered concrete frame and retaining walls with concrete deck carrying the Service Street roadway over the ramp; and rock face tie backs at the toe of 180-feet of existing concrete retaining walls supporting Service Street. All ramp structures were designed in accordance with the AASHTO Load Resistance Factor Design Specifications except for the 3-span, curved, plate-girder bridge which was designed in accordance with AASHTO Load Factor Design Specifications including seismic design.

PANYNJ International Arrivals Terminal 4 at JFK International Airport Queens, NY
Structural Design Project Manager for the superstructure and substructure design of the landside arrivals and departures ramp bridges. The work included the structural design and preparation of drawings, specifications and quantity estimates for a total of 4,000-linear feet of multilane viaduct bridges carrying the terminal's arrival and departure levels traffic. The ramp bridge superstructures consisted of bifurcated, curved, continuous multi beam, steel plate girders with integral steel piers and concrete decks. The substructures consisted of pile-supported concrete piers and abutments and approximately 1,400-linear feet of retaining walls. The bridges were designed for AASHTO and the New York State Department of

Transportation Load Factor and Seismic Design Specifications, including soil liquefaction. The construction was staged to maintain traffic access to the terminal and 300-linear feet of temporary bridges were constructed to maintain terminal access throughout construction.

NYSDOT Bridge Design Phases I-IV for Rehabilitation of 8 Bridges at or near Grand Central Parkway/Clearview Expressway Interchange, Queens, NY

Senior Project Manager for Phases I-IV preliminary design for the rehabilitation and deck replacement of five, multi-level interchange bridges carrying the mainline Grand Central Parkway (GCP) and ramps over the mainline Clearview Expressway (CVE). The interchange bridges and ramps will be investigated to determine work for their restoration and safety upgrading. All existing environmental, operational and safety conditions will be documented, evaluated and incorporated, if feasible, in the final design phases. The two bridges on the 3rd level of the interchange consist of 4 simple supported spans, with multiple steel stringers, each carrying one lane of traffic from the GCP to the CVE. The two bridges on the 2nd level of the interchange consist of 2 simple supported spans, with multiple steel stringers, each carrying one lane of traffic from the CVE to the GCP. The bridges on the 2nd level cross northbound and southbound lanes of the CVE. All interchange bridges are supported by a common steel pier bent at the center of the interchange. The evaluations for rehabilitation of three, additional multi-span grade separation bridges crossing or conveying the GCP and CVE, are also included in this project.

NYSDOT Design Phases V-VI for Deck Replacement and Rehabilitation of Nassau Expressway/Southern Parkway Ramp Interchange

Senior Project Manager for Phases V-VI final design services for the rehabilitation of two, multi-level, bridges. The upper level of the interchange carries two lanes of traffic from Southern Parkway eastbound to Nassau Expressway eastbound. The middle level of the interchange carries two lanes of Nassau Expressway eastbound traffic over South Conduit Avenue. Both the upper and middle level bridges are three-span continuous superstructures with multiple steel girders. Phases V-VI design includes bridge live load ratings, fatigue analysis, seismic analysis and retrofit, preliminary design plans and PS&E contract documents for bridge rehabilitation, including deck replacement.

Michael Chelednik, AIA, CxA
Senior Architect

Mr. Chelednik has worked on multiple airline and transportation projects around the country in planning, design, security and management and has served as Architect of Record on numerous airline projects. He's been responsible for the design team, construction administration, and client relations, and understands that maintenance and operations people are responsible for the facility and is therefore an advocate of building commissioning and a firm believer in team work and collaboration. He has a passion to provide the best process to deliver a facility that is ideally suited for the Owner's requirements with sustainable operability.

Registrations
Registered Architect: AZ, CT, IL, MD, NY, TX, VA

Education
B.S., Architecture
Temple University, 1983
A.A., Architectural Engineering
Norwalk State Technical College, 1979

Affiliations & Memberships
American Institute of Architects, (AIA)
Building Commissioning Association (BCA),
AABC Commissioning Group (ACG)
United States Green Build (USGBC)

American Airlines JFK New Terminal 8 Project
JFK International Airport, NY
Architect of Record for several temporary facilities, including the Old Terminal Eagle Hold Room. When construction began Mr. Chelednik was asked by American Airlines to be on the Commissioning Team. As construction progressed, American asked Mr. Chelednik to be their Owner's Representative responsible for Commissioning and PANYNJ inspections for the new Terminal. In 2005, American Airlines asked TranSystems to take the design lead and Mr. Chelednik became the Architect of Record. His responsibilities included the design team, all of the design consultants, commissioning team, closing the PANYNJ punch list comments, construction administration and opening the remaining phases of the Terminal. The new Terminal was built between two existing Terminals; 8 & 9. The project had to be completed in phases while the existing Terminals were being operated.

American Airlines Partial Main Terminal, Concourse C and Tunnel, Terminal 8
JFK International Airport, NY
Owner's Representative, responsible for commissioning the Concourse and Tunnel, coordinating the concessions program, and Architect of Record for the Premium Services Lounge and five concessions. The Premium Services Lounge is for special waiting area for VIP guests flying on American Airlines.

American Airlines Remaining Main Terminal & Concourse B, Terminal 8 JFK International Airport, NY
Design Lead/Architect of Record, responsible for the Commissioning Team, construction administration and PANYNJ Inspection to attain permission for occupancy. When the new Terminal opened, existing Terminal 9 was demolished for the completion of the West Phase of the Main Terminal and Concourse B.

American Airlines Gates 14 / 16, Terminal 8 JFK International Airport, New York
Design Lead / Architect of Record, responsible for the Commissioning Team, construction administration and PANYNJ Inspection to attain permission for occupancy. With the completion of the West Phase, it was time to demolish old Terminal 8 and complete the final two gates on Concourse B East, Gates 14 /1 6.

American Airlines JFK Old Terminal 9 Eagle Hold Room JFK International Airport, Jamaica, NY
Architect of Record, responsible for consultant coordination, construction documents, construction administration and commissioning of the system for a new 7,500-square-foot addition with 6 gates, new elevator, escalators and stairs connecting to the existing AA Terminal. The program included Offices for American Eagle, rooftop HV/AC units, power distribution, toilets and fire alarm systems.

American Airlines JFK Terminal 9 Renovations JFK International Airport, Jamaica, NY
Project Manager, responsible for consultant coordination, construction documents, construction administration and commissioning of the systems for Terminal 9 expansion. An analysis of the mechanical, electrical and fire alarm systems was performed. Entire Terminal was renovated, including new mechanical equipment, provided redundancy for the 5kv power, and designed a new digital fire alarm system. New finishes, the infrastructure was upgraded, including toilets, communication closets and the electrical closets. A new Concessions program, new Admirals Club and offices were implemented.

American Airlines JFK New Terminal 8 Admirals Clubs at Concourse C JFK International Airport, Jamaica, NY
Architect of Record, responsible for consultant coordination, construction documents, construction administration and commissioning of the systems for AA's new 10,000 square foot Admirals Club

Employment History

John Snyder Architect	1984-1985
James Walden Architect	1985-1986
Charles Flayhan Associates	1986-1988
Silvester & Tafuro (now TranSystems)	1988-2004

Hatch Mott MacDonald

Erik Stromberg

Education

BS, Political Science, University of Washington

Masters of Marine Affairs, University of Washington, Seattle, Washington

Memberships

American Association of Port Authorities: Honorary Member, and member of Harbors, Navigation and Environment, Facilities Engineering and Maritime Economic Development committees

Transportation Research Board: Chairman, Asset Management and Enterprise Risk Management Subcommittee, Ports and Channels Committee

Coalition for America's Gateways and Trade Corridors: Member, Executive and Policy committees.

Experience Summary

Port industry executive with proven abilities in port authority and port industry leadership and management, program management, strategic and business planning, organizational development and communication.

Experience

Port strategic, business and transportation planning, government and public relations, risk and asset management strategies, project/program management, public/private financing strategies, and organizational development/governance assessments.

- Competitive Analysis of South Atlantic Ports—Commercial and environmental feasibility assessment for North Carolina State Ports Authority.
- North Carolina Statewide Logistics Plan, in conjunction with NC State University Institute for Transportation Research and Education, for North Carolina General Assembly.
- Seaport asset management program development for Transportation Research Board.
- Annual Marine Terminal Management Training Program development and on-site leadership for the American Association of Port Authorities.

Hatch Mott MacDonald

Ports and Harbors Practice Leader; Responsible for the development of HMM's ports practice; cultivating, managing and leveraging HMM's existing capabilities in multimodal transportation facility design and engineering, program and construction management, and alternative delivery strategies.

- Developed strategic teaming relationships with major and regional port planning and engineering firms to bid and win port projects.
- Actively engaged with port and maritime trade associations, government and academic organizations through presentations, papers and articles. Increased HMM's visibility throughout US and Canada.
- Introduced HMM's alternative delivery capabilities to port industry. Advised US ports on public/private partnership (PPP) strategies for landside access and facility development. Assessed PPP trends in US port industry for major international port client.
- Led HMM program development in areas of asset management and environmental sustainability for port and related freight transportation industries.
- Identified, assessed and solicited strategic hires and acquisitions.
- Won port and related freight transportation projects throughout the US and Canada with HMM cumulative revenues over $5 million.

Booz Allen Hamilton, Wilmington, NC, 2005

Port Practice Leader; Developed and led the maritime/port division within the firm's transportation strategic management consulting sector.

- Conducted feasibility analysis of a new port and industrial zone in the Middle East.
- Provided independent market and feasibility review of port expansion plans for major Gulf coast port.
- Assessed and recommended investment in ocean carrier service for a major international investment firm.
- Developed port security training programs for the US Transportation Security Administration.

North Carolina State Ports Authority, Wilmington, NC, 1995-2004

Chief Executive Officer. Responsible for all facets of NCSPA management, including

strategic and business planning, facility development, public and governmental relations, operations and security.

- Initiated and managed the largest capital development program in the State Ports' history, including the $440 million, 42-foot Cape Fear River channel improvement project and $130 million in marine terminal improvements and new construction.
- Led strategic, master facility and business planning efforts that provided the necessary credibility and basis for the revitalized capital support by the State of North Carolina.
- Grew revenues from $25 million to $30 million, flattened the organization and reduced employee headcount from 330 to 290.
- Partnered with regional economic development agencies and State Department of Commerce to bring port related business opportunities to North Carolina; created economic development team within port organization.
- Reactivated and teamed with the Ports Advisory Council—a statewide organization comprised of major importers and exporters.
- Diversified North Carolina Ports' customer base and strengthened all lines of business, including inaugural passenger cruise service.
- Transformed corporate culture at the Ports Authority to business-like objectives, management and operations, including the creation of the first NC Ports performance review and employee development program.
- Led organization in development of port security initiatives resulting from 9/11; established industry leading emergency planning protocols for hurricanes and security incidents.
- Extensive and successful relationships developed with local, state and federal government officials and agencies; testified before US Congress and NC General Assembly on port security, water resources, capital funding and environmental programs.

American Association of Port Authorities, Alexandria VA, 1985-1995
President and Chief Executive Officer, 1987-1995.
Spokesman and principal advocate for public ports throughout the western hemisphere, responsible for the development and conduct of all AAPA activities.

- Led port advocacy initiatives for US ports at national and international levels, expanding the influence of the AAPA and achieving success in critical port policy initiatives affecting US ports, including landmark water resources, tax, trade and intermodal surface transportation (ISTEA) legislation.Developed first-ever industry wide port public awareness campaign.
- Led the Association's inaugural strategic planning initiative.
- Expanded Association education and training programs to address port industry's changing business and public stakeholder requirements; fostered the development of the first-ever professional port management certification (PPM).
- Enhanced AAPA's presence and services among Latin and Caribbean ports, increasing membership and participation.
- Facilitated process changes in key policy committees to assure transparent and equitable decision making processes.

Federal Maritime Commission, Washington, DC, 1983-1985
Analyst, Office of Policy and Planning. Responsible for review and development of port industry regulatory policy, including implementation of the 1984 Shipping Act.

Office of Representative Glenn M. Anderson, Washington, DC, 1982-1983
Sea Grant Fellow and professional staffer assigned to Chairman's Anderson's subcommittee on Merchant Marine.

James V. Green, P.E.
Senior Engineer/P.E. Diver
Project Role: Senior Project Manager

Education:
M.S. Candidate, Structural Engineering, Manhattan College
B.S., Civil Engineering, Manhattan College, 1992
A.S., Engineering Science, Rockland Community College, 1988

Registration:
Professional Engineer: New York, New Jersey, Connecticut, Pennsylvania, Maryland, Delaware, Virginia, California

Certifications:
National Bridge Inspection Standards (NBIS), 2005 – Course [redacted]
American Red Cross – Adult CPR and Standard First Aid
Association of Diving Contractors, Commercial Diver Certification, [redacted]
Open Water Diver Certification, 1994
OSHA Confined Space Entry and Fall Protection, 2006

Work History:
1996-Present – McLaren Engineering Group
1995-1996 – The RBA Group
1993-1995 – NYC Department for the Aging
1991-1993 – New York State Thruway Authority
1985-1991 – 2x2 Development, Stony Point

Experience:
Mr. Green is a structural engineer and diver with over 19 years of experience. His background encompasses resident engineering, field investigation, and construction inspection services, as well as review of shop drawings, subaqueous investigation, and extensive structural design. He has worked on underwater inspection and assessment programs and construction inspection programs for the PANYNJ, NYCDOT, NYSDOT, ConnDOT, NHDOT, NJDOT, and the NYSTA. His background includes experience in all facets of structural and civil engineering design on the waterfront, including ferry terminals, shipping facilities, piers and wharves, and foundation engineering. He is involved in the preparation of permit applications, EIS documentations, and consistency review documents, and coordination with and between agencies on permitting issues to include the Army Corps of Engineers, the Department of Environmental Conservation, the Department of State, National Marine Fisheries Service, the Fish and Wildlife Service, and other local agencies.

- Design of an Oceanfront Pier, Ferry Terminal and Waterfront Destination; City of Long Branch, New Jersey; Lead Marine Engineer/ P.E. Diver for the full marine and structural engineering services needed for design and construction of a new oceanfront pier in Long Branch, New Jersey. The pier will include a multi-functional retail and entertainment facilities, a ferry terminal providing commuter access to New York City, renewable energy resources, and a learning center. The pier is a critical aspect of the City's redevelopment plan, enhancing its identity as a premier United States destination.
- New Jersey Marine Terminal Priority Marine Rehabilitation; for PANYNJ; Team Leader/P.E. Diver for the performance of expert professional engineering services for PANYNJ Contract 415-09-065. Mr. Green provided the necessary waterfront structural engineering services associated with the inspection, evaluation, design and preparation of contract drawings, construction cost estimates and construction phase services for the priority repair work orders.
- Port Elizabeth Berths 88-98 & Turntable; Newark/Elizabeth; for PANYNJ; P.E. Diver for a condition survey of Berths 88, 90, 92, 94, 96, 98, and Turntable located at Elizabeth – Port Authority Marine Terminal. Involved with underwater inspection of timber and steel piles, pile caps and extensions and assessment of the concrete

edge beam, wharf topside, and steel sheet pile bulkhead. Mr. Green assisted in the preparation of a report indicating inspection findings, presenting pertinent photographs, and making priority repair recommendations.

- Waterfront Structural Engineering Services for the New Jersey Marine Terminal; Elizabeth, NJ; for PANYNJ; Structural Engineer/Inspection Team Leader responsible for providing waterfront structural engineering services for the inspection, evaluation, and rehabilitation design for the New Jersey Marine Terminal structures. Mr. Green prepared contract drawings and construction cost estimates for priority repairs for the structures, which included berths, a turntable, mooring dolphins, and timber walkways.
- Underwater Condition Inspection of Bulkheads at Piers 2, 3, 4 & 5 at the New York Marine Terminal; Brooklyn, NY; for PANYNJ; P.E. Diver for this high and low-level inspection of the relieving platforms and bulkheads. The project involved visual inspection of all above water elements including the deck underside, edge beams, reinforced concrete pile extensions, and stay lathing/bracing, as well as detailed underwater inspection services for the bulkheads between Piers 2 and 3 and Piers 4 and 5.
- Underwater Inspection at JFK Airport; Queens, NY; for PANYNJ; Team Leader/P.E. Diver for the underwater inspection of a 3,000-foot-long timber pile system pier at Runway 4R. Included report preparation, underwater photos, and repair recommendations.
- Underwater Inspection of Piers 6, 7, 8, 9, 9A & 12 at the New York Marine Terminal; Brooklyn NY; for the PANYNJ; Team Leader/P.E. Diver for underwater inspection of more than 10,000 timber piles and bulkhead, including a 10 percent in-depth inspection to determine marine borer infestation. A comprehensive report was prepared including condition assessment, repair recommendations, and cost estimates.
- Engineering & Inspection Services for Marine Structures; Manhattan, NY; Battery Park City Authority; Inspection Team Leader/Structural Engineer for the repair of the esplanade including piles, precast concrete seawall skirt, and the riprap slope protection that surrounds the perimeter of the Battery Park City Authority parcel in lower Manhattan. Mr. Green was responsible for the assessment of and design of repairs for approximately 3,500 precast concrete piles that support the relieving platforms at the esplanade. He also helped perform a testing program to investigate "hot spots" (areas of significant deterioration), statistical analysis of inspection data, and development of repair alternatives with cost estimates.
- SUNY Maritime Rehabilitation and Expansion; Kings Point, NY; for SUCF; Senior Engineer responsible for design and construction services in a project involving the 200-foot extension of the college pier, an addition to the approach pier, and an expansion of the working pier. Mr. Green is also involved with the management of NYSDEC and Army Corp permitting processes. The project includes rehabilitation of floating docks, pile repair and bulkhead remediation.
- Williamsburg, The Edge Waterfront Development; Brooklyn, NY; for Douglaston Development; Senior Engineer for the physical inspection, preliminary pier design and management of permitting issues for this waterfront development project along the East River. Project responsibilities included inspection of piers and bulkheads, evaluation of soil conditions, site/civil inspection, feasibility studies for water related activities, and design drawings.
- Rehabilitation of the Astoria Site Waterfront Dock and Bulkhead; Queens, NY; Con Edison; Structural Engineer/Inspection Team Leader responsible for performing professional engineering, design and construction support services associated with the rehabilitation of the Astoria Site Waterfront Dock and Bulkhead. Mr. Green was responsible for developing repair and replacement designs for these structures. Structures included: sheet piles, rip-rap revetment, existing steel pile hardware, fender systems and pump station intakes.

Brian C. Moody, P.E.
Senior Engineer/P.E. Diver
Project Role: Senior Project Manager

Education:
1999, Manhattan College, MSCE, Structural and Geotechnical Engineering
1997, Manhattan College, BSCE, Structural Engineering

Registrations & Certifications:
Professional Engineer - New York
National Bridge Inspection Standards (NBIS), 2005 -- Course #[redacted]
Association of Diving Contractors, Commercial Diver Certification #[redacted]

Work History:
2004-Present - McLaren Engineering Group
1997-2004 – Thornton Tomasetti / LZA
9/95 – 12/95 – Eschbacher & Associates
6/95 – 9/95 – NYS Thruway Authority

Experience:
Mr. Moody has over 13 years experience with underwater condition assessment, inspection, and structural design projects. He has worked on all types of structures, including bridges, marine structures, canal structures, roadways, buildings, and foundations. His responsibilities have included inspection, design and analysis, report preparation, and construction inspection. He has worked on projects for the NJDOT, NJT, NYCDOT, NYSDOT, NYSTA, New York Canal Corporation, Port Authority of NY and NJ, EDC, NHDOT and for various NJ Counties. As a Team Leader and P.E. Diver, Mr. Moody has performed the above and below water inspection of many bridges, piers, bulkheads, dams, and culverts. Representative projects for include:

- **Condition Survey Inspection of Berths 51-63, at Port Elizabeth Marine Terminal; PANYNJ;** Team Leader/PE Diver responsible for the cyclical condition survey of the New Jersey Marine Terminal, Port Elizabeth Berths 51, 53, 55, 57, 59, 61, and 63. The condition survey included an underwater inspection of the treated timber piles, steel H-piles, steel pipe piles, timber bulkheads, and an above water inspection of the concrete pile extensions, deck soffit, and top of deck. A Conditions survey report was also provided.
- **Condition Survey Inspection of Brooklyn Pier 12 and Bulkhead – New York Marine Terminal; PANYNJ;** Team Leader/PE Diver responsible for the field survey of Pier 12. Services included visual inspection and a ten percent hands-on inspection of all timber, and steel piles; all pile cap beams and pile extensions; all exposed and accessible surfaces along the entire length of the timber and steel sheet pile bulkhead, including ultrasonic thickness measurements of steel sheet pile bulkhead and soundings were taken along the bulkhead; a twenty percent hands-on inspection of the deteriorated portions of the deck soffit; and a visual inspection of the concrete edge beam and wharf topside. A Conditions survey report was also provided.
- **New York Marine Terminal Inspection of Piers 2, 3, 4, 5, & 11; Brooklyn, NY; for PANYNJ;** Team Leader/Marine Engineer for underwater inspection and assessment of bulkheads (timber piles, steel H-piles, pile cap beams, pile extensions, steel sheet piles) between Piers 2 and 3, Piers 4 and 5 and along Pier 11. A topside inspection of the concrete seawall and wharf was performed to determine its general condition.
- **Staten Island Homeport Bulkhead/Seawall Rehabilitation; Staten Island, NY; for NYCEDC;** Engineer for the design and construction support services for long-term rehabilitation of a collapsed portion of steel sheet pile bulkhead located at Staten Island Homeport. Services provided include engineering analysis and design for a replacement tied back bulkhead. A full set of construction drawings and technical specifications were prepared, as well as construction cost estimates and assistance with bidding.
- **Underwater Condition Inspection of Bulkheads at Piers 4, 5, & 11 at the NY Marine Terminal; Brooklyn, NY; for PANYNJ;** Team Leader/Marine Engineer for the Underwater Inspection and Assessment of the bulkhead between Piers 4 & 5 and along Pier 11.

Brian C. Moody, P.E.
Senior Engineer/P.E. Diver
Project Role: Senior Project Manager

- Greenpoint Openspace Improvements; Brooklyn, NY; Team Leader/Marine Engineer for open space improvements that include a pier, waterfront esplanade, and a waterfront park with the objective of giving the community much needed recreational space, connecting residents to the waterfront and accommodating future ferry service. Services performed included underwater inspection of timber low-level relieving platform and concrete seawall, schematic design, and consultation for the proposed park.
- Condition Survey of the Hoboken Ferry Terminal - PANYNJ; Team Leader/PE Diver responsible for the condition survey which consisted of an above water and underwater inspection of all structural elements comprising the Hoboken Ferry Terminal including pile caps, beams, bulkheads, piles, deck surface, and underside. Specifically, the structures include the following: the Pullman Immigrant Building and Cordoned-off Pier, the Rail Pier, two barges (Floating Terminals), and associated ramps, passageways, and gangways. The purpose of the inspection was to determine the overall condition of the structures and to identify structural and non-structural deficiencies. A report of findings and repair recommendations was also provided.
- Civil Engineering Waterfront Structures Inspection Program – Former Kent Avenue Generating Station; Consolidated Edison Company; Team Leader/PE Diver responsible for the inspection of a 600 ft. bulkhead for the overall condition and structural integrity; the concrete intake and discharge tunnels; and the Ash Pit Wall along the Wallabout Channel. Soundings were also taken of the river bottom along Wallabout Channel. A final report of findings was prepared.
- Waterfront Revitalization 4th & 5th Street Piers, Kent Avenue; Brooklyn, NY; RD Management Corp; Team Leader/Marine Engineer during the design phase of this redevelopment project along Williamsburg's waterfront in Brooklyn. The 4th & 5th Street Piers are being revitalized in two phases: demolition phase and construction phase. McLaren is performing detail design, construction inspection and construction administration services during these phases. McLaren performed an investigation of the waterfront structures including existing pile fields and bulkheads, and a hydographic survey of the project site area. McLaren provided a boring plan, waterfront site investigation and permitting services, and conceptual designs in addition to supervising the taking of geotechnical boring samplings.
- Green Street Pier Inspection; Brooklyn, NY; for Park Tower Group; Assistant Project Manager for the inspection of the existing Greet Street Pier. Responsible for marine engineering services, including a condition survey of the existing pier and adjacent bulkhead, a condition report of the pier and bulkhead, an alternatives study of at least three repair options for the pier, designs for the pier and for the new bulkhead, design of a water taxi landing and marina, and construction support services.
- Assessment of the Water Club Marginal Wharf and Pier 11 Fender System; Manhattan, NY; for New York City Economic Development Corporation; Team Leader/Marine Engineer for the Underwater Inspection and Assessment of the Water Club Marginal Wharf and the Pier 11 Fender System in Manhattan, NY for the New York City Economic Development Corporation.
- Gowanus Substation Waterfront Structures Inspection; Con Edison; Team Leader/PE Diver responsible for the routine inspection of the Gowanus waterfront. The 600 linear foot bulkhead is comprised of a wood bulkhead constructed of wood piles tied back into the supported large stone riprap and a small steel sheet pile bulkhead. A report of findings and repair recommendations was provided.
- Engineering Services in Support of the Rehabilitation of the Bulkhead at Con Edison 74th St. Station; Consolidated Edison Company; Team Leader/PE Diver responsible for the engineering and construction inspection services in support of the rehabilitation of the bulkhead at the Con Edison 74th Street Station. Field reports noting the construction progress, quality, adherence to detail, as well as any deficiencies requiring correction were provided.

Matthew J. Daniels, P.E.
Senior Engineer/P.E. Diver
Project Role: Project Manager

Education:
B.S., Civil Engineering, Manhattan College, 2000

Active Registration:
Professional Engineer: New York ([redacted], Delaware (Reciprocity Pending)

Certifications:
National Bridge Inspection Standards (NBIS) -- Course [redacted]
Bridge Inspection Workshop (2005), NYSDOT
Annual Bridge Inspector's Training (2005), NYSDOT
NICET Level I
NAUI Certified Open Water Diver
ADCI Entry-Level Tender/Diver

Work History:
2008-Present - McLaren Engineering Group 2000-2008 – Boswell Engineering

Experience:
Mr. Daniels has over nine years of experience as a Team Leader on above and underwater condition surveys, Project Manager, Resident Engineer, fathometric surveyor, and design engineer. He has participated in structural integrity inspection and evaluation projects for various bridges, culverts, and marine structures, including assignments for the Port Authority of New York & New Jersey, NYSDOT, NYCDOT, DELDOT, and various private clients. In addition, he has performed over 300 fathometric surveys associated with bridge scour assessments and is proficient in preparing reports and drawings utilizing Autodesk Land Desktop 2006. Mr. Daniels also has experience in preparing fathometer survey contour drawings based on hydrographic positioning techniques. His expertise includes design of marine structures, including rehabilitation designs and cost estimates. Representative projects include:

- Waterfront Structural Engineering Services for the New Jersey Marine Terminal; Elizabeth, NJ; for PANYNJ; Senior Engineer/Inspection Team Leader for the above and underwater inspection of New Jersey Marine Terminal structures, which includes berths, a turntable, mooring dolphins, and timber walkways. Mr. Daniels led an inspection team in performing detailed inspections to determine needed repairs and is supporting the design process and construction cost estimating.
- Port Newark Marine Terminal, Berths 2 through 36; for PANYNJ; Resident Engineer/Team Leader for the diving inspection and construction quality assurance of the substructural rehabilitation repairs throughout the 16,500 LF of active shipping terminals located in Port Elizabeth, NJ.
- Port Elizabeth Marine Terminal, Berths 50 through 62 and 76 through 86; for PANYNJ; Functioned as Team Leader for the diving inspection and construction quality assurance of the sub-structural rehabilitation repairs throughout the 8,500 LF of active shipping terminals located in Port Elizabeth, NJ.
- Ferry Shore Facilities – Miscellaneous Engineering Services (On-Call); for New York City Department of Transportation; Senior Engineer/Diver for structural reconstruction of ferry facilities and other miscellaneous work when and where directed by the NYCDOT. Mr. Daniels is managing the replacement of elevated slabs at Slips 4, 5 and 6, an effort that involves slab design – from demolition through construction documents – construction cost estimates, and bid phase support. In a separate task, he was involved with the inspection and damage assessment at St. George Ferry Terminal Slip 5.

Matthew J. Daniels, P.E.
Senior Engineer/P.E. Diver
Project Role: Project Manager

- Engineering and Inspection Services for Marine Structures; Manhattan, NY; for Battery Park City Authority; Senior Engineer/Diver for the performance of construction administration and inspection services associated with marine structure repairs at the Battery Park City Authority parcel in lower Manhattan. Mr. Daniels performed above and underwater inspection of pile repairs under the Battery Park City Esplanade (Phase 1) and will perform additional inspections for similar repairs, scheduled to begin in Spring 2010 (Phase 2). The project involves the assessment of and repair recommendations for approximately 3,500 precast concrete piles that support the relieving platforms at esplanade, as well as timber piles that support a platform at the north end.
- Repair of Floating "Trim Tank" System at Peter Jay Sharp Boathouse; New York, NY; Project Manager/Diver for inspection and design services needed for repairs at Peter Jay Sharp Boathouse. Mr. Daniels was involved with review of existing construction documents as well as a dive inspection of the Boathouse and its external flotation "trim" tanks. He directed preparation of a letter report of inspection findings, recommendations for repairs, and repair design. Construction documents were prepared and bid phase support was provided. Construction administration and inspection are ongoing.
- Survey and Inspection of Coney Island Outfall; Brooklyn, NY; for Malcolm Pirnie/Baker Engineering; Senior Engineer/Diver for the condition inspection of the Coney Island Outfall. Mr. Daniels was involved with underwater inspection/reconnaissance of the damaged section of the Outfall. Project also included topographic and hydrographic survey, including location of surrounding structures; and side-scan sonar for entire length of Outfall pipe.
- Inspection of Ellis Island Seawall; for HDR Engineering; Senior Engineer/Diver for the underwater and topside inspection of the Ellis Island Seawall and preparation of Class C, Class B and Class A Construction Cost Estimates. Mr. Daniels performed a "hands-on" inspection on 5,333 LF of existing seawall and has prepared a condition survey report. His effort also included preparation of construction cost estimates for schematic and preferred alternatives as well as the final design.
- Construction Inspection of FDR Drive Sinkhole Repair; for New York City Department of Transportation; Senior Engineer who provided topside support for the underwater construction inspection of emergency repairs to the platform structure below the FDR Drive near 15th Street in Manhattan.
- Investigation of Piers C & D; Weehawken, NJ; for Hartz Mountain; Senior Engineer/Diver for construction administration and inspection services for repairs at Piers C and D.
- Pier 61 Damage Assessment; New York, NY; Senior Engineer/Diver for investigating pile failures at the two locations of Pier 61, Chelsea Piers. Mr. Daniels was involved with the field inspection, dive inspection, document research, structural analysis/modeling, meetings, and a report of observations and assessment for each failure location.
- Village of Dobbs Ferry Waterfront Park; Dobbs Ferry, NY; Senior Engineer for the evaluation of existing riprap condition along the Village's Hudson River shoreline. Project also includes design of shoreline stabilization improvements, which may include new riprap, and/or sheet piling; preparation of cost analysis for construction; meetings with Village Officials; and environmental permitting. Construction documents will be prepared and construction administration will be provided.
- Military Ocean Terminal Bayonne; Project Engineer for the underwater structural inspection of all submerged structural components of Berths N1, N4 and N5 including in-depth condition surveys of the timber and steel bulkheads and mudline profiles beneath the wharf.

Christopher M. Mase, P.E.
Marine Engineer
Project Role: Project Manager

Education:
B.S., Civil Engineering, University of Delaware, 2005

Registration:
Engineer In Training, 2004, Delaware

Work History:
2006-Present – McLaren Engineering Group

Experience:

Mr. Mase is an engineer with extensive construction management and construction inspection experience, coupled with expertise in design of marine structures and components, such as piers, piles, pile caps, and bulkheads. He has provided these services in projects for several private clients, as well as for public agencies like the PANYNJ, NYCDOC, and NYSDOT. His construction management experience includes bid phase support, coordination with contractors, shop drawing review, responding to RFIs, and site visits. Mr. Mase is also well versed in permit preparation for the NYCDEC, Army Corp, and Department of State. Representative projects include:

- Battery Park City Ferry Terminal; Battery Park City, NY; for PANYNJ; Project Engineer responsible for providing construction administration services for the 32,000sf floating ferry terminal valued at $70 million in construction cost. Responded to all RFIs, provided shop drawing review, and made minor design recommendations during construction phase. Also was involved with design of below-deck supports. The terminal consists of a mono-hull main terminal with five ferry slips with variable height landing systems.
- Beach Channel High School Seawall Remediation and Upgrades; Far Rockaway, NY; Project Engineer for the design of a new revetment at the Beach Channel High School Seawall. Optimized shoreline protection by altering the position of the seawall and using the existing seawall to provide support. Produced design drawings for the new revetment and then prepared joint permit application for the NYCDEC, Army Corp, and Department of State. The Seawall's deterioration had caused subsidence and sinkholes in an access path above it.
- Piermont Seawall Repair Design; Piermont, NY; Engineer preparing contract documents and providing bid phase support in the repair of upland sinkholes. Issued bid set and provided review support.
- Newport Bulkhead Study and Rehabilitation; Jersey City, NJ; Project Engineer for the modification and upgrade of the Newport Bulkhead. Designs were to prepare the bulkhead for extension of the Hudson River Walkway, which runs along the bulkhead. Performed calculations and structural analysis of the existing bulkhead in order to identify and design the necessary support, such as concrete cut-off walls. Also was involved with the design of low-level decking repairs to eliminate sinkholes at the Newport Tennis Pier.
- Waterfront Revitalization – 4th and 5th Street Piers at Kent Avenue; Brooklyn, NY; for RD Management Corp; Project Engineer for the revitalization of the 4th and 5th Street Piers at Williamsburg, Brooklyn. Involved with both design and construction management of the project. During construction, was responsible for site visits, preparing progress reports, and acting as a point-of-contact for the contractor and client. On the design side, assisted in the design of the pre-cast piers, pre-cast piles and a cantilevered sheetpile bulkhead wall. The project has included detailed underwater inspection,

hydrographic survey, geotechnical services, design services, construction inspection services, and construction administration services.

- Williamsburg, The Edge Waterfront Development; for Douglaston Development; Project Engineer for the design of pile caps, a concrete cut-off wall, and an irrigation room at this widespread waterfront development project along the East River. Overcame significant challenges in the pile cap design caused by variable elevations at the site, due to various stairs, pathways and structures, and differing construction materials. McLaren performed an in-depth physical inspection of piers and bulkheads, evaluated soil conditions, produced feasibility studies for waterborne activities, and provided design drawings.
- Vernon C. Baim Center Dry Docking Inspection and Repair Design; New York, NY; for NYCDOC; Project Engineer involved with the inspection and design of repairs for the Vernon C. Baim Center barge and upland facilities. Coordinated above and underwater inspection of the barge, which involved a non-destructive testing program, with field team. Based on inspection findings, then provided design recommendations for the sheetpile bulkhead repair and replacement of the barge fendering system. Recommended use of plastic lumber for the new fendering system.
- Columbia (Little Pea) Island Pier Boat Landing Dock; New Rochelle, NY; Engineer for the preparation of permit applications and construction documents, and construction management services for a boat landing dock at the existing pier on the west side of Columbia Island. Construction documents included ferry landing plans and technical specifications for piles, gangways, operating equipment, fendering, and navigational lighting. Construction administration included shop drawing review and site visits.
- Raritan Yacht Club Condition Assessment; Perth Amboy, NJ; Junior Engineer for a condition survey of the above water and underwater elements which comprise the various structures of the Raritan Yacht Club. Prepared necessary permits for the repairs. McLaren inspected the structures for possible deterioration, damage, and marine borer activity and prepared construction documents of the repairs.
- Design of NYCDOC Passenger Ferry Ramp Landing; Astoria, Queens; Project Engineer for the design of an emergency ferry landing positioned off Con Edison's A-11 dock. The landing was proposed to accommodate transport to and from Riker's Island, and its design needed to incorporate an ability to disconnect from the Con Edison bulkhead. Design thus included a cantilevered platform and a guide beam connection system, which was set to circumvent the dock's timber fendering system and attach to the bulkhead. The guide beam's rollers were to provide ample support for the docked vessel and facilitate easy disconnect of the landing.
- Design of Crew Access Structures at Hoboken Ferry Terminal; Hoboken, NJ; for NY Waterway; Engineer responsible for the design of a 30X90 barge and eight 12X50 Kentucky floats at Hoboken Ferry Terminal. Designed the appropriate gangways and platform off existing bulkhead. Also was involved with pile design, which involved careful consideration and analysis of the soil quality at the site. The structures were intended to provide storage for NY Waterway's vessels and were essentially platforms off the existing bulkhead at the Terminal.
- U.S. Gypsum Pier Extension; Stony Point, NY; Engineer for structural and marine engineering support, pier rehabilitation, and construction inspection. Produced a feasibility study and designed mooring dolphins, similar to an offshore oilrig, to accommodate a 20,000-ton cargo vessel. Also prepared construction documents for the project, which included structural analysis, environmental evaluation and geotechnical investigation.

Todd Manson
Marine Engineer
Project Role: Project Manager

Education:
B.S., Ocean Engineering, University of Rhode Island, 2007

Computer Software & Languages:
Matlab, Maple, Microsoft Office

Work History:
2007-Present – McLaren Engineering Group

Experience:
Mr. Manson is a Marine Engineer with a wide array of design, structural evaluation and inspection experience. He is an active participant in the inspection, design and assessment of bridges, piers, wharves, terminals and other associated waterfront structures. Representative projects include:

- Design of an Oceanfront Pier, Ferry Terminal and Waterfront Destination; City of Long Branch, New Jersey; Engineer for the marine and structural engineering services needed to design and construct a new, $89 million oceanfront pier in Long Branch, New Jersey. Mr. Manson has been involved with the environmental forces study and initial planning for ferry operations at the proposed pier. The pier will include multi-functional retail and entertainment space, a learning center, a ferry terminal providing commuter access to New York City and incorporating renewable energy resources.
- Battery Park City Ferry Terminal; Battery Park City, NY; for Port Authority of New York & New Jersey; Marine Engineer provided design and construction administration services for the construction of a 32,000sf floating terminal valued at $40 million in construction cost, consisting of a mono-hull main terminal with five ferry slips with variable height landing systems.
- Mariner's Cove & The Landing; Edgewater, NJ; for SSR Realty; Engineer provided marine engineering and design services for the repairs to the Riverwalk walkway at Mariner's Landing in Edgewater, NJ which was damaged during the storms of March, 2010. Mr. Manson was involved in all phases of the project which included inspection/investigation, preparation of repair design documents, permitting and construction administration.
- NYPD Marinas; Randall's Island/ College Point, NY; for Skanska/NYCEDC; Marine Engineer for the professional engineering and design services associated with two marinas owned by the NYPD. Responsibilities include condition inspection and design of upgrades, analysis of geotechnical borings for the structural design, as well as replacement of the marinas and other coastal structures. Mr. Manson is also providing Construction Administration Services for this contract.
- Design of Crew Access Structures at Hoboken Ferry Terminal; Hoboken, NJ; for NY Waterway; Marine Engineer for the design of a 30X90 barge and eight 12X50 Kentucky floats at Hoboken Ferry Terminal. The design included appropriate gangways and platform off existing bulkhead. Mr. Manson also participated in the pile design, which involved careful consideration and analysis of the soil quality at the site. The structures were intended to provide storage for NY Waterway's vessels and were essentially platforms off the existing bulkhead at the Terminal.
- Point Street Landing, Yonkers Waterfront, Underwater and Underdeck Preliminary Investigation; One Point Street, Inc./Homes for America Holdings, Inc.; Marine Engineer for the underwater and underdeck preliminary investigation of waterfront structures at One Point Street in Yonkers, NY (Point

Street Landing). The purpose of the inspection was to determine the basic structural configurations of the waterfront structures, and conceptualize repair methodologies. A letter report of conditions and recommendations were provided.

- Vessel Siting Study – Pier Planning and Design; Beacon, NY; City of Beacon; Marine Engineer for the planning and marine design services required at Beacon Harbor. The City of Beacon's Harbor Management Plan defines how the Harbor could accommodate research vessels, vessel facilities, and a docking pier associated with the addition of a state-of-the art research center. Mr. Manson assisted in the assessment of potential locations for the research vessels and their facilities, the performance of site and environmental studies, selection of a preferred location, obtaining regulatory permits and approvals, and design of the associated vessel facilities, pier, and fendering.
- Vernon C. Baim Center Dry Docking Inspection and Repair Design; New York, NY; for NYCDOC; Marine Engineer for the inspection and design of repairs for the Vernon C. Baim Center barge and upland facilities. Coordinated above and underwater inspection of the barge, which involved a non-destructive testing program, with field team. Based on inspection findings, then provided design recommendations for the sheetpile bulkhead repair and replacement of the barge fendering system. Recommended use of plastic lumber for the new fendering system.
- River Barge Park Shoreline Stabilization and Marina Design; Carlstadt, NJ; for NJ Meadowlands Commission; Marine Engineer for the provision of structural engineering and marine design services in developing a sheet pile design along the boundary between River Barge Park and the Hackensack River as well as design of a full service marina. The main design challenge was to properly incorporate architectural elements into the new designs, while considering geotechnical and environmental conditions around the area. Mr. Manson also provided permitting support.
- Engineering Inspection of Blenheim-Gilboa Power Plant; Gilboa, NY; for New York Power Authority; Marine Engineer for the assessment of the dewatered vertical shaft and transition elbow at the Blenheim-Gilboa Power Plant, which consisted of a visual examination of the upper reservoir intake structure, the shaft and elbow. Mr. Manson helped categorize new or previously identified deficiencies; and assisted in providing repair recommendations and cost estimates for remediation.
- Reconstruction of Atlantic Marine Pier; Jacksonville, FL; for Atlantic Marine Property Holding Company; Marine Engineer for the replacement design of Atlantic Marine Pier. Mr. Manson assisted with the preparation of demolition plans for the existing Pier and the development of design plans for construction of a new pier using the existing piles, bents and integral berthing dolphins. Mooring designs were also performed. The new pier was designed to moor a CG-47 class Navy warship.
- Long Dock Park, Hotel & Conference Center; Beacon, New York; Marine Engineer for the design of marine structures for waterfront improvements at Long Dock Park in Beacon. Mr. Manson assisted in the design process, which included shoreline stabilization, retaining walls, and other structures, and culminated in construction documents. He was also involved with the development of a wetlands remediation plan, as well as the permitting process. He is now providing assistance with the bid phase support and will provide construction administrative services.
- Public Place Shoreline; Brooklyn, NY; for Hudson Companies; Marine Engineer for the provision of engineering and inspection services for the remediation of the shoreline and adjacent structures at "Public Place" on the Gowanus Canal, Brooklyn, NY.

Frank Facciolo, PE

Education
BS, Physics, Syracuse University (UC), 1988

Registrations
Professional Engineer
CA, [redacted] 1997
NY, [redacted], 1999

Years in Practice - 21

Memberships
Construction Management Association of America (CMAA)

American Society of Military Engineers (SAME)

American Society of Civil Engineers (ASCE)

National Society of Professional Engineers (NSPE)

Experience Summary

Mr. Facciolo has been project executive, project sponsor, senior manager, and engineer for traditional designs, design-build (fast track projects), construction management, and on-call service contracts. He brings over 21 years of experience in infrastructure, transportation and design-build related projects in the New York Metropolitan Area and the State of California. Mr. Facciolo's experience ranges from planning through final design phases to construction support services and construction management projects.

Select Project Experience

Yankee Stadium Station, MTA Metro-North, Bronx, NY
Manager for a design-build contract with an overall value at $91 million for the Design and Construction of the Yankee Stadium Station in Bronx, NY. As Engineer of Record, managed the design completion of the project which finalized all engineering plans and specifications, and provided construction support services (shop drawing reviews, engineering field support) for the new passenger rail station which included the following major elements: overhead mezzanine structure, 270' long truss bridge, track bridge, substation, utility relocations, and passenger platforms. Accomplishments: Expedited design schedule. Directed the design team in performing Value Engineering, specifically: changing from micro-piles to H-piles, changing bridge bearings to isolation bearings to reduce seismic loads, changing bridge and track bridge design and construction approach to Prefabricated Bridge Units (PBU), changing cast-in-place bridge piers to post-tensioned pre-cast piers, changing location of electrical duct run from under RR tracks, modified WST to address Con-Ed transformer redundancy requirement. The Project was featured in Design Build Institute of America (DBIA) magazine. 2008 Design Build Project of the Year Award - New York Metro Chapter.

Conceptual to Final Design for Hudson Line Station Rehabilitation, Metro-North Railroad, Westchester County, NY
Project Manager responsible for the conceptual, preliminary, and detailed design of the rehabilitation of eight Metro-North train stations along the Hudson Line, in Westchester County and the Bronx. As part of this project, a condition survey was performed at all stations. Involved replacement of structural elements such as pedestrian overpasses, high-level platforms and canopies, while introducing new elements to certain stations to make them ADA compliant, such as elevators. At the same time, the appearances of certain stations were required to reflect the historic nature in which they were originally built. Supervised and managed the development of design alternatives, attended periodic client meetings and interfaced with the client, prepared structural calculations, structural quantities, specifications, and construction plans. Also supervised the coordination with architectural and electrical subconsultants. Awards: 2006 Tappan Zee Award - ASCE Lower Hudson Valley Branch. Construction Value $98 million.

Design-Build of Eight Hudson Line Stations, Metro North Railroad, Westchester County, NY
Served as the Project Manager for the design-build of eight commuter rail stations. The project included the following major design elements: pile supported platforms, pedestrian overpasses, stairways, elevators, and utility upgrades. The project was designed to a 60 percent design level for the client and then let out for a design-build award. The project involved architectural, civil, structural, mechanical, and electrical disciplines. During the construction phase, provided construction support services and also supervised the shop drawing reviews / approvals, responding to Requests for Information. Attended site visits to resolve any issues that may have occurred during construction. Construction Value $48 million.

Project Management Oversight Program, Region No. 9, Federal Transit Administration, San Jose, CA
Part of a project management team that provided management oversight for the federal government on Full Funding Grant Agreement (FFGA) projects. Individual project tasks included assisting in oversight on an intermodal passenger facility (Cahill Station), the Valley Transportation Authority (VTA) - a $400 million dollar "Tasman West" Light Rail Project and the "Pullman Way Facility" a new joint central maintenance facility for CalTrain Commuter Rail and Amtrak Inter-city rail services.

LRT System: NC-2 Section, Dallas Area Rapid Transit, Dallas, TX
Project Engineer responsible for developing the vertical and horizontal alignment from the 10% level to the 100% design stage for a new light rail transit system. All design adjustments were computed using Intergraph MicroStation's InRoads computer design program.

Intermodal Railroad Yard Upgrade Project, Southern Pacific Transportation Company, Industry, CA
Project Engineer/Construction Manager responsible for providing construction management, specification review, permitting services, design services, and cost monitoring for the Intermodal/Automobile SFRR Yard's upgrade in the Los Angeles area. Developed drainage plans for the final design of this project. As Project Engineer responsible for the calculations and recommendations for a large storm drainage system to service a 68 acre site. Unique characteristics included addressing environmental concerns, on-site as well as off-site flows, construction staging during a fully operational railroad facility. The design included a hydrology report, hydraulic analysis, flow rate calculations, pipe size requirements, and environmental mitigation of off site liabilities. The project involved heavy coordination with local authorities and was designed to meet state and federal regulations. The following codes or design guidelines were used or referenced during the design task: American Railroad Engineering Association Standards, City of Industry /Los Angeles County Standards and specifications.

Trailer on Flat Car Facility (TOFC), Atchison, Topeka & Santa Fe Railroad, San Diego, CA
Civil Engineer/Construction Manager responsible for providing engineering and field services for the railroad's Trailer on Flat Car Facility (38-acre site). Responsibilities included the preparation of final design drawings including drainage, paving for straddle car loading/unloading of containers, comfort station, maintenance of equipment facilities, oil/water separators and utility and track geometric design for a freight railroad yard. Helped support construction management services, including permitting, environmental remediation of soil/groundwater with soil/cement application, technical reviews, and client representation with applicable authorities.

Employment History
Hatch Mott MacDonald (2010 - Present)
Shaw Environmental & Infrastructure, Inc. (2002 - 2010)
Stone & Webster (1998 - 2002)
Gannett Fleming, Inc. (1989 - 1998)

John H. Lehman, PE

Project Manager

John H. Lehman has over 35 years of experience in the transportation sector. Mr. Lehman has directed multi-disciplinary, multi-national engineering design teams on rail car manufacturing and large construction projects. He specializes in heavy equipment design, maintenance and operation, construction, and operations analysis for rail car procurement, rail car manufacturing facilities and car repair and locomotive servicing facilities. Mr. Lehman has prepared engineering and economic studies on equipment selection and maintenance, transportation operations, and plant location.

Port Authority of New York and New Jersey, World Trade Center Transportation Hub, New York, NY

Mr. Lehman is providing support to Port Authority Engineering in the areas of train operations, project phasing, and program cost estimation for the restoration of PATH train service and the rebuilding of the World Trade Center. Mr. Lehman also prepared operating plans and participated in the peer review activity, which determined the preferred location, track layout, and construction phasing scheme for the replacement of the World Trade Center PATH station.

State of Connecticut, Office of Policy and Management, New Haven Rail Maintenance Facility Expansion, Hartford, CT

Hill International was retained to provide a review and analysis of the New Haven Rail Maintenance Facility Expansion Project. As part of the review of the Connecticut Department of Transportation's proposed expansion and modernization of the facilities, Mr. Lehman was asked to review the scope of the proposed storage yard and rail vehicle maintenance facilities with respect to the maintenance needs of the new technology M-8 Series cars and the existing New Haven Line fleet operated by Metro-North Railroad.

New York State Metropolitan Transportation Authority (MTA), MTA Independent Engineer's Certification Program, New York, NY

Mr. Lehman is responsible for evaluating the adequacy of the maintenance budgets and the efficacy of the maintenance programs for the rolling stock and track departments of MTA's operating agencies. The reviews include: New York City Transit - Car Equipment and Track and Right-of-Way; Long Island Rail Road - Maintenance of Equipment and Maintenance of Way-Track; Metro North Railroad - Engineering Department-Track.

Washington Metropolitan Area Transit Authority (WMATA), Washington, DC

Mr. Lehman is providing Project Management Oversight (PMOC) for the Federal Transit Administration (FTA) for the WMATA rail car procurement.

Education:

Master of Management, Transportation, JL Kellogg School of Mgmt, Northwestern University, 1980

B.S., Mechanical Engineering, University of Illinois, Urbana-Champaign, 1972

Registrations:

Professional Engineer, Illinois

Professional Engineer, New Jersey

Employment History:

Illinois Central Gulf Railroad, 1972-1984

Cole, Sherman & Associates, 1984-1987

STV/Seelye, Stevenson Value & Knecht, 1987-1990

Kawasaki Rail Car Inc., 1991-2000

Transportation Construction Services, Inc., 2000-2001

Hill International, Inc., 2001-Present

Oversight includes evaluation of budgeting, rail fleet acquisition and maintenance planning, and issues related to manufacturing, testing and acceptance. His projects include: 5000 Series new cars, 192 cars, $383 million; BREDA Rehabilitation Project (2000/3000 Series), 364 cars, $400 million; and the 6000 Series new cars, 184 cars, including options, $378 million.

Metropolitan Washington Airports Authority, Dulles Corridor Metrorail Extension, Vienna, VA

Mr. Lehman is providing Project Management Oversight for the FTA for the Dulles Corridor Metrorail Extension project that was begun by the Virginia Department of Rail and Public Transit. Services include monitoring; risk analysis; and evaluation of scope, cost, and schedule. The project cost is in excess of $2 billion.

Various Projects, Federal Transit Administration (FTA), Washington, DC.

Mr. Lehman provides a variety of Project Management Oversight services to the Federal Transit Administration. Projects include:

- Central Florida Commuter Rail (Orlando) – Scope Review, Monitoring.
- Utah Transit Authority Draper Rail Transit Extension – Risk Analysis.
- Utah Transit Authority Weber County Commuter Rail Project – Risk Analysis, Monitoring.
- Utah Transit Authority Mid-Jordan Light Rail Transit Project – Risk Analysis, Monitoring.
- Tren Urbano, Puerto Rico – Change Order Review.South Florida RTA (Tri-Rail Commuter Service) – Monitoring.
- Nashville Regional Transportation Authority Commuter Rail Project – Monitoring.
- SEPTA Silverliner V Commuter Car Procurement – Monitoring.
- Delaware Transit Corporation Wilmington to Newark Commuter Rail Improvements – Monitoring.
- Programmatic Task Order – Documentation Quality Control Review Procedures.

New York State Metropolitan Transportation Authority (MTA), Independent Engineering Consultant, New York, NY

Mr. Lehman served as an independent engineering consultant to the MTA with oversight responsibility for $5 billion of vehicle procurement and new construction. His projects included: New York City Transit Authority (NYCTA) new subway cars program, 1,762 cars, $2.7 billion; Long Island Rail Road (LIRR) electric cars, 326 cars, $785 million; and the LIRR Jamaica Station Improvements. He also contributed to a special study on proposed shop layout revisions to NYCTA's 207th Street Overhaul Shop.

MetroLink, St. Louis, MO

Mr. Lehman participated in an evaluation of design completion and extra work for the Cross County MetroLink Extension light rail transit project.

Frank A. Colucci, PMP

Project Manager / Construction Manager

Frank A. Colucci has over 30 years of diversified experience on a variety of projects covering the transportation, industrial, institutional and utility business sectors. He has established a track record demonstrating his ability to manage, motivate, direct and lead project teams to achieve aggressive milestones within tight budgets and compressed time frames while effectively utilizing company resources to meet or exceed all project goals. Mr. Colucci also has a broad range of knowledge and expertise in cost engineering, estimating and project controls; contract administration; change order preparation and negotiation; quality assurance; total quality management; claims management; and pressure vessel and piping stress analysis.

Recent and Relevant Experience

Downtown PATH Restoration Project, Port Authority of New York and New Jersey.

Mr. Colucci was assigned as a Project Manager on Hill International's project for the Port Authority to restore rail transit service between New Jersey and lower Manhattan. He had overall responsibility for the preparation of replacement-in-kind estimates to support the FEMA/Insurance reconciliation process pertaining to the World Trade Center disaster losses, as well as for the preparation and reconciliation of check estimates for work packages associated with the temporary World Trade Center PATH Station, Hudson River Tunnels E&F and the PATH Exchange Place Station. Mr. Colucci also provided overall program management and technical support services and was responsible for facilitating completion of various technical reports and review of design work order packages, managing and meeting schedule commitments, monitoring project expenditures and deliverables, and tracking and maintaining internal budgets.

Long Island Rail Road (LIRR) Estimating Services, Capital Project Management Department, Metropolitan Transportation Agency (MTA) and Long Island Rail Road, New York, Project Manager.

Mr. Colucci is serving as Project Manager on this task order contract, which is currently providing estimating services for the LIRR's 2005-2009 Capital Program Infrastructure Improvements Program.

New York City MTA Capital Projects.

Mr. Colucci performed five years of project management/construction oversight on New York City MTA capital projects exceeding $2 billion. He quickly became recognized for rendering qualified, innovative recommendations and solutions which enabled those agencies to effectively manage and facilitate construction completion on various projects in their capital program. Under

Education:

M.B.A. Business Administration
Wagner College 1988

M.E. Mechanical Engineering
City College of New York 1977

B.E. Mechanical Engineering
City College of New York 1972

Registrations:

Project Management Professional

Professional Memberships

Project Management Institute

American Society of Mechanical Engineers

Employment History:

Curtiss Wright Corporation
1972-1975

Stone and Webster Engineering Corporation 1975-1977

Curtiss Wright Corporation
1977-1979

Gibbs & Hill Inc. 1979-1987

Stone and Webster Engineering Corporation 1987-1997

Transportation Construction Services 1997-2001

Hill International Inc.
2001-Present

Hill International's Independent Engineering Consultant (IEC) contract with the MTA, Mr. Colucci provided oversight on the programs and projects.

- Major Station Reconstruction Program, New York City Transit Authority. Major reconstruction of the subway stations at the Times Square Complex, 72nd Street Broadway/7th Avenue Line; Atlantic Terminal Complex, and Lexington Avenue/53rd Street Queens Boulevard Line. The total project cost was $434 million.
- Atlantic Terminal Improvements Project Long Island Rail Road (LIRR). The reconstruction of the LIRR Terminal at Flatbush Avenue in downtown Brooklyn. The total project cost was $93 million.
- Station Reconstruction Program, Metro-North Railroad. The reconstruction of stations along the Hudson, Harlem and New Haven Lines. The total project cost was $185 million.
- Yards and Maintenance Facilities, Metro-North Railroad Shops and Yards. Construction of several yard maintenance facilities at Woodbine Yard, Croton-Harmon Maintenance Facility and Highbridge Yard. The total cost of all projects was $207 million.
- Elevator and Escalator Rehabilitation Program, New York City Transit Authority. The rehabilitation of 32 elevators at 17 locations and 66 escalators at 28 locations for a total cost of $298 million.
- Public Address/Customer Information (Phase I) Rehabilitation Program, New York City Transit Authority. The rehabilitation of these systems at 139 locations for a total cost of $50 million.
- Public Address/Customer Information (Phase II) Rehabilitation Program, New York City Transit Authority. The rehabilitation of these systems at 71 locations for a total cost of $147 million. Another 106 additional locations were added for a cost of $112 million.
- M-7 Electric Multiple Unit Procurement, Long Island Rail Road and Metro-North Railroad. Procurement of 226 cars with a value of $599 million.

5th Avenue Residential Renovation, New York, New York, Owner's Representative.

The project is an $8 million renovation of an 8,000 square foot duplex cooperative apartment. As Owner's Representative, Mr. Colucci was in charge of monitoring and reporting to the Owner on the progress of the work. He reviewed the project scope, change orders, and payments; expedited the schedule; and resolved any issues that arose.

New York City Public Library, New York City Department of Design and Construction, Project Manager.

Serving as Project Manager, Mr. Colucci was responsible for this emergency investigation and repair project involving the various balusters, cornices, keystones, column capitals, and pediments comprising the façade of the building.

Queens Theatre in the Park, New York City Department of Design and Construction, Contract Administrator.

Mr. Colucci served as contract administrator on this project, which involved the renovation and addition of a new maintenance and multi-level use 3-story wing. The new wing will include the installation of a freight elevator, kitchen, pantry, dressing rooms, and mechanical and electrical rooms. The project also includes the renovation of the building exterior and roofing, modifications to the existing loading dock, re-grading, and paving.

Education
BS, Civil Engineering, Rensselaer Polytechnic Institute, NY, 1978

Registration
Professional Engineer
NY # [redacted] 1986
PA # [redacted] 1992
NJ # [redacted], 2002
VA # [redacted] 2009
GA # [redacted] 2009
NC # [redacted] 2010
MD # [redacted], 2010
IL # [redacted]

Years in Practice –31

Memberships
American Railway Engineering & Maintenance of Way Association
National Society Professional Engineers
American Society of Civil Engineers
American Society of Highway Engineers
Transportation Research Board

Experience Summary

Mr. Loehr has more than 31 years of extensive engineering design and construction expertise on a wide variety of projects in the railroad industry. This includes ten years with Consolidated Rail Corporation (Conrail) and over 20 years of consulting. His experience and knowledge have been gained on commuter rail transit facilities, freight rail installations, railway bridges, parking lots and highways. He has been trained as an FRA Roadway Worker Protection Trainer for CSX, an FRA qualified Track inspector, and has been qualified on NORAC Operating Rules.

Select Project Experience

Program Management

Program and Project Management Consultant Services, Virginia Department of Rail and Public Transportation, Richmond, VA
Director of Programs / Project Manager for the Program and Project Management Consultant (PPMC) Services contract with the Virginia Department of Rail and Public Transportation (DRPT). PPMC staff was embedded as full time employees of DRPT. As staff, the PPMC staff developed procedures, reviewed agreements, performed construction monitoring, assisted DRPT with the development of the Resource Allocation Plan, and interfaced with grantees and regulators about projects funded by DRPT.

The PPMC Team also performed specific large scale projects to support DRPT. The PPMC Team developed the Statewide Rail Plan, Alternative Specifications, Designs, and Estimates to support the selection of a preferred alternate route between Richmond and Doswell, VA as part of the Richmond to Washington High Speed Corridor.

The PPMC Team developed the Corridor Development Plan and Service Development Plan for the Virginia I-95 High Speed Rail Corridor that forms part of the Southeast High Speed Rail Corridor. The report was developed and synthesized data from previous reports and sources to meet the requirements of the FRA's stimulus (ARRA) funding applications

Transit

Transbay Terminal Center, Caltrain Downtown Extension Project, Transbay Joint Power Authority, San Francisco, CA
Part of an engineering team that reviewed the design criteria for a 1.5 mile tunnel to extend Caltrain and Amtrak service to a proposed new multimodal transportation center in San Francisco. The design criteria combined the requirements of four major potential users and encompassed a wide range of equipment and operational criteria.

Sound Transit Section D770, Airport Link, Seattle, Washington
Senior Rail Engineer for the alignment and trackwork design on section D770, the 1.7 mile extension of Central Link to Sea-Tac International Airport. The project included an elevated guideway section of approximately .9 miles, .8 miles at grade guideway and a signature elevated station a the southern terminus of the alignment.

SEPTA, Broad St. Subway, Philadelphia, PA
Regional Engineer responsible for the investigation of alternate fastening systems and installation methods to provide increased stray current protection. The existing direct track

fixation system was allowing excessive amounts of traction return current to enter the tunnel slab reinforcement resulting in excessive corrosion and damage to buried utilities.

WMATA, Washington, DC
Regional Engineer responsible for the investigation of alternate repair and installation methods to provide increased production for the direct track fixation system repairs performed by WMATA's forces.

Beijing Airport Planning Study, William Nicholas Bodouva & Associates, Beijing
Senior Railroad Engineer on the conceptual design of a new automated people mover for the expansion of the Beijing Airport.

Orange County Transportation Authority, Centerline Project Value Engineering, Orange County, FL
Senior Project Manager on the Value Engineering team evaluating the Centerline Project. The project involved dual mode electric LRV's, elevated guideway and stations, street running segments, and a tunnel section.

CyberTran International Inc., APM, Albany, NY
Senior Railroad Engineer on the project to determine the feasibility of connecting the Capitol Plaza with the new CDTA intermodal center at Rensselaer. The study included Line and grade studies using the median of the existing Dunn Memorial Bridge.

Yards & Facilities/Sidings

Program and Project Management Consultant Services, Virginia Department of Rail and Public Transportation, Richmond, VA
Director of Programs for layover and terminal yard locations for the Crescent Corridor.

National Steel Car, Car Manufacturing Facility Barton, AL
Project Manager for the design of a new industrial support yard at the new railcar manufacturing facility in Barton, AL. The yard encompasses over 58,000 feet of tracks on both the industry's property and Norfolk Southern's right of way.

US Pipe, Plant track, Birmingham, AL
Project Manager for the design of new in-plant tracks to support the expansion of the facility. The design included two new crossing diamonds.

Woodbine Yard Rehabilitation Project, Metro-North Railroad, Spring Valley, NY
Senior Rail Engineer responsible for the design of a new end-of-the-line storage yard on New Jersey Transit's Pascack Valley line in Spring Valley, NY. The construction-phasing plan allowed construction of the tracks and utilities while maintaining yard operations.

Employment History
Hatch Mott MacDonald (2003 - Present)
Clough Harbour & Associates (1995 - 2003)
Hilti (1993 - 1995)
GSGSB (1989 - 1993)
Consolidated Rail Corporation (1978 - 1988)

Education

BS, Civil Engineering, Carnegie Mellon University, 1971

MS, Civil Engineering, Carnegie Mellon University, 1973

MBA, General Management, Robert Morris College, 1994

Certified Project Management Professional, 1993

Registration

Professional Engineer

CA, [redacted] 1977
PA, [redacted] 1972
NY, [redacted] 1995
NJ, [redacted] 1995
OH, [redacted] 1996
TX, [redacted] 992
WV, [redacted], 1996
CT, [redacted] 2005
FL [redacted] 2006
VA, [redacted], 2008

Years in Practice – 41

Memberships

Peters Township Planning Commission, Past Member

CEC/PA Western Chapter, Past President

American Society of Civil Engineers, Fellow

Engineering Society of Western Pennsylvania

Pennsylvania Society of Professional Engineers, Past President, Pittsburgh Chapter

American Society of Highway Engineers, Past Board Member, Pittsburgh Chapter

Experience Summary

Mr. Brogan has over 40 years of structural design, development, and management experience for transportation, heavy industry, and commercial building clients. Mr. Brogan has served as a project manager for the rehabilitation of transit tunnels, rail maintenance facilities, and light rail projects. He also specializes in creating innovative approaches to solving civil and structural engineering problems.

Select Project Experience

Transportation - Tunnels/Bridges/Stations

Program and Project Management Consultant Services, Virginia Department of Rail and Public Transportation, Richmond, VA

Deputy Program Director for the Program and Project Management Consultant (PPMC) Services contract with the Virginia Department of Rail and Public Transportation (DRPT). PPMC staff is embedded as full time employees of DRPT. The PPMC staff developed procedures, reviewed agreements, performed construction monitoring, assisted DRPT with the development of the Resource Allocation Plan, and interfaced with grantees and regulators about projects funded by DRPT. The PPMC staff developed the FRA ARRA Funds applications for Track 1 and 2 for Virginia I-95 High-Speed Rail Corridor improvements which is part of the Southeast High-Speed rail Corridor.

The PPMC Team also performed specific large scale projects to support DRPT. The PPMC Team developed the Statewide Rail Plan, Alternative Specifications, Designs, and Estimates to support the selection of a preferred alternate route between Richmond and Doswell, VA as part of the Richmond to Washington High Speed Corridor.

A/E Services for Final Design E-55th Rapid Transit Station, GCRTA, Cleveland, OH

Project Manager and Engineer-of-Record for the design of the rehabilitation for the East 55th Street Rapid Transit Station. HMM is the prime contractor with a team that includes an architectural firm and several DBE subcontractors. The project includes the final design of an ADA compliant station for the Light Rail and Heavy lines. The scope primarily includes track realignment, catenary design, drainage, lighting, station architecture, signage, Park 'n Ride lot, traffic signals, surveying, and public involvement. The station is adjacent to the rail storage and maintenance facility with all rail vehicles passing through this station. The final deliverable is a set of stamped contract drawings and contract specifications for this project.

North Shore Connector, Port Authority of Allegheny County, Pittsburgh, PA

HMM Project Manager for preliminary design of twin subaqueous 2,200 LF TBM-bored rail tunnels linking the downtown central business district and the North Shore under the Allegheny River. Portals involved cut and cover construction. Scope also included a new rail link to the Convention Center constructed partly in bored tunnel and partly cut and cover. HMM served as specialty tunnel subconsultant for the DEIS and Preliminary Engineering Phases of the project. HMM's scope included twin bore structural tunnel design, tunnel fire life safety, tunnel emergency ventilation, tunnel lighting and electrical,

fire protection, drainage and station ancillary space HVAC. Developed the 30% engineering package for above systems including fire life safety analysis, drawings, draft specifications, SES modeling, design calculations, design criteria, construction cost estimates and QA.

Brookpark Tower to Airport Trackwork Phase I, GCRTA, Cleveland, OH

Project manager and engineer-of-record for the design of the new crossovers in the GCRTA Red Line Airport Tunnel. The project included the study of two proposed alternates and the final design of a diamond crossover in the tunnel similar to the original configuration. The existing tunnel track did not include the crossovers but a survey was conducted to locate the existing conditions. The final deliverable was a set of stamped contract drawings and contract specifications for this project.

Wabash HOV Highway Tunnel, Port Authority of Allegheny County, Pittsburgh, PA

Project Manager and Civil/Structural Engineer of Record for the structural and MEP systems rehabilitation of two-lane, 3,600 LF Wabash HOV highway tunnel. The initial task was the inspection and assessment report of the tunnel to determine the repairs necessary for the next phase. The design scope included removal and replacement of tunnel drainage, roadway slab, ventilation, lighting, PLC's and all tunnel life safety systems. This project then moved into the bid support and construction services phase with shop drawing reviews, RFIs witnessing Emergency Jet Fan Tests, taking luminance measurements, acceptance testing the PLC logic, repairing that logic, and acceptance of the tunnel for the owner. The tunnel was then placed into a maintenance period for 18 months so that the other project elements could be finished.

Berry Street Tunnel, Port Authority of Allegheny County, Pittsburgh, PA

Project Manager and Civil/Structural Engineer-of-Record for the sequenced demolition, enlargement, waterproofing, and relining of the $28 million 2,900-foot two-lane highway tunnel. The initial task was the inspection and assessment report of the tunnel to determine the repairs necessary for the next phase. The design scope included widening the tunnel from 25 feet to 30.5 feet to accommodate two bus lanes; extending the north end of the tunnel approximately 520 feet with a 850 foot cut and cover section; installing tunnel lighting, ventilation, fire protection, and drainage; and constructing two portal buildings that house the electrical and mechanical controls for the tunnel ventilation and emergency systems.

Subway Ventilation Improvement Project, Chicago CTA, Chicago, IL

Project Manager for replacing fans on the State and Milwaukee/Dearborn Subways with new, NFPA 130-compliant equipment, capable of controlling the smoke and hot gases which may result from a below-ground incident. The initial scope of work was a MEP inspection and assessment report of the tunnels to determine the repairs needed for the next phase. This design phase provided the additional ventilation capacity required to control these flows, additional fans were installed in existing blast shafts and in a totally new ventilation facility. Control of the fans and related equipment are via the new SCADA system (procured and installed by others).

Employment History

Hatch Mott MacDonald (2001 - Present)
Earth Tech (2000 - 2001)
ICF Kaiser Engineers (1989 - 2000)
EPIC Metals (1987 - 1988)
Roll Form Products (1986 - 1987)
H.H. Robertson (1975 - 1986)
Chester Engineers (1974 - 1975)
U.S. Bureau of Mines Pittsburgh Technical Center (1971 - 1974)
Carnegie Mellon University (1968 – 1971)

Richard H. Buck, PE

Education
BS, Civil Engineering, State University of New York at Buffalo, 1986

Registration
Professional Engineer
NY, # [redacted] 001

Years in Practice – 23

Memberships
Institute of Transportation Engineers

American Railway Engineering Association

Specialized Training
FHWA – Design & Operation of Work Zone Traffic Control

NYSDOT – Guiderail III Seminar

NYSDOT Traffic Signal Testing Training

ASCE – Hydraulic Design of Culverts

The Railway Educational Bureau – Track Foreman Training Course

The GWU – Railway Signaling and Control

AppliCAD – Civil Design Basics (Integraph Inroads)

Northwestern University Traffic Signal Workshop

Erie County Soil and Water Conservation - Urban Hydrology for Small Watersheds

SSPC QP-1 Training in Coatings Application and Inspection Procedures

SSPC QP-2 Training in Hazardous Paint

Removal Operations of Steel Structures

Primavera – P3, CPM Scheduling

Experience Summary

Mr. Buck has over 22 years of experience in the design and management of various transportation projects. He has managed large highway and bridge construction inspection projects, design of highway and railroad projects from their initiation through public participation to final document preparation. As Principal Project Manager, Mr. Buck is responsible for the project team and client coordination to ensure efficiency in work produced for clients. Mr. Buck has undertaken many assignments of various size and complexity.

Selected Project Experience

Virginia State Rail Plan/Shortline Railroad Program, DRPT, Richmond, VA

Project Manager for the development of a Statewide Shortline Improvement Program and Shortline Rail Plan. The work included interviews with the managers of the shortlines to determine needs of the railroad; a field verification of the track charts to validate the conditions at a representative number of locations, and of differing infrastructure components for each shortline railroad; a conceptual level needs estimate of the shortline railroads; identifying Public Funding Sources and Private Funding Levels; and developing a single document encompassing the Statewide Shortline Improvement Program and Shortline Rail Plan.

Heartland Corridor Clearance Improvements, Norfolk-Southern Railroad, Roanoke, VA

Deputy Project Manager, preliminary engineering and Project Manager for final design on the Heartland Corridor Project that is part of a regional Public-Private initiative to allow double stack container trains a direct route from the Port of Norfolk through Virginia, West Virginia and into Central Ohio and Northern Kentucky. In the Preliminary Engineering stage, we performed geometric and condition investigations of the 42 existing tunnels and 33 tunnels will require clearance improvements for the double stack trains. Alternative methods were then developed to achieve the desired clearance improvements that will be implemented; maintaining structural integrity without disrupting scheduled train traffic. To date, five construction contracts have been awarded and the project is on schedule to be completed in 2010.

Plattsburgh Rail Yard Relocation, CP Railway, Plattsburgh, NY

Project Manager for this NYSDOT funded project. Three separate bid packages were designed and let to increase the rail storage at the existing Bluff Point Rail Yard, three new yard tracks were added giving 10,000 feet of additional storage. The project also included the installation of a trans-loading facility on the former Air Base. The project required constant coordination with the various railroad departments to secure materials, schedule work between B&B, MOW, and provide railroad protection. During the design phase, a detailed design report was prepared for NYSDOT, including SEQR (long form), SHPO, and permitting. The project went through the Town of Plattsburgh's Planning Board review process for the P.A.R.C. site and a public crossing hearing was required for the temporary rail crossing needed for construction access, because Amtrak operated on the Main Line.

Northwest Yard and Maintenance Facility Improvements Phase 1, Amtrak, Seattle, WA
Performed design reviews for the development of a phasing plan that allowed the construction of the new tracks and buildings without disrupting Amtrak's maintenance operations. The project also required the design of shoo-fly tracks, road crossings, permanent track alignments and profiles, tie-in of new tracks to existing, site drainage, protection of utilities, design of a new 20" diameter street main and service connections, fire main layout and analysis, and the demolition of the existing locomotive shed and yard tracks.

Design-Build: MCA Deployment Facilities, Fort Lewis, Seattle, WA
Rail designer for the development of a new deployment yard at Fort Lewis. The rail yard was designed to deploy a battalion of 640 vehicles every 24 hours. Required phasing plans that allowed the construction of the new tracks without disrupting the Fort's ability to deploy forces as required. The project also included the rehabilitation of the lead tracks from BNSF and the installation of two crossovers to improve switching operations.

General Mills Track Improvements, Erie County Industrial Development Agency, Buffalo, NY
Project Manager for design and construction inspection services for the removal of existing tracks and No. 6 turnouts at the General Mills cereal docks. New track and No. 10 turnouts were installed in conjunction with a "Premier" modular concrete crossing. This work was successfully completed during the 2002 Easter shutdown.

Dunlop Tire Corporation Rail Rehabilitation, Erie County Industrial Development Agency, Tonawanda, NY
Project Engineer for the survey and development of contract plans, specifications and estimates for upgrading 5,000 feet of trackage, four new turnouts, drainage improvements and two Nelson Chair crossings. Mr. Buck was Resident Engineer on this project and his duties included field layout, assuring compliance with plans and specifications, field measurements and calculating quantities, preparing monthly estimates and checking shop drawings. Due to 24 hour plant operation, Mr. Buck was also in charge of coordinating construction operations to not interfere with Dunlop's rail shipments. This project was also funded by NYSDOT; therefore, all record keeping was in accordance with MURK.

Center Road Bridge over CONRAIL, Erie County Department of Public Works, Buffalo, NY
Resident Engineer for the demolition of a 172 foot three span structure and construction of a 70' single span steel girder bridge. The project also included the construction of reinforced earth retaining walls and gas line relocation. Duties included the daily review of the contractor's operations, quantity calculations, review of certified payrolls and EEO reports, checking material certifications and preparing monthly estimates. All records were kept in accordance with NYSDOT and Erie County MURK procedures.

Utica R.R. Bridge Over the Mohawk River, Mohawk Adirondack and Northern Railroad, Utica, NY
Engineer in Charge for the repairs to the Mohawk Adirondack & Northern Railroad's bridge over the Mohawk River. Duties included the review of inspector's reports, site visits to inspect the contractor's operations, and preparing monthly estimates. All records were kept in accordance with NYSDOT MURK procedures.

Rail Freight Terminal Improvements Erie and Niagara Counties, NYSDOT, Buffalo, NY
Design and Project Engineer for the design and development of plans, specifications and estimates for the removal of abandoned railroad bridges over roads, streams and other railroads. Mr. Buck was directly involved with eight P.S. & E's with approximately 40 bridge and 10 track removals. Projects consisted of field surveys, grading plans, drainage analysis, geometric design (horizontal and vertical) and demolition plans for steel and concrete structures.

Employment History
Hatch Mott MacDonald (1986 - Present)
Hatch Mott MacDonald (1985 Part Time)
Millard & MacKay (1984)

George E. Duda, PE

Project Manager / Construction Manager

George E. Duda is a Hill Project Manager with over 30 years experience in areas of project and construction management, engineering analysis and design, construction, resolution of construction claims, and litigation support. Projects have included high rise commercial buildings, educational facilities, bridges, highways, airports, railroad facilities, rail transit car procurement, electrical generating stations, landfills, and various smaller projects.

Recent and Relevant Experience

New Jersey Turnpike Authority Statewide Traffic Management Center (NJTA STMC), Woodbridge, New Jersey, Project Executive.

Mr. Duda is presently serving as the Project Executive for construction of management of the new $24 million, 3-story, NJTA STMC project. The project is a steel frame and concrete structure adjacent to the existing Administrative Building. The site is very constrained and the adjacent Administrative Building with State Police functions must be kept operational 24/7. His responsibilities include Project Administration functions, as well as technical responsibility for design reviews for structural steel, concrete and site utilities; resolution of design related construction issues; and claims avoidance.

Capital Improvement Program, Atlantic City International Airport, South Jersey Transportation Authority (SJTA).

Mr. Duda served as Hill's Project Manager for the SJTA $77 million Capital Improvement Program at the Atlantic City International Airport. Hill provided project management and construction management services for 31 projects which included airfield improvements, extension of the existing terminal and parking areas, roadway improvements and additional signage. Services include conceptual engineering to implement projects contained in the Airport Master Plan, design consultant monitoring, grant preparation and construction management.

Bunker Hill Middle School, Washington Township, New Jersey.

Mr. Duda served as Construction Manager for the new Bunker Hill Middle School and technology upgrades to four existing middle and elementary schools. The schools were part of a $54 million referendum program, which included six elementary schools, four existing middle schools and two high schools. Mr. Duda's responsibilities included construction management, inspection, review and approval of payment applications, document control, change order administration, and project closeout.

Education:

M.S. Civil Engineering
Drexel University 1977

M.S. Engineering Geology
Drexel University 1997

B.S. Civil Engineering
Drexel University 1975

Registrations:

Professional Engineer
Pennsylvania

Professional Engineer
New Jersey

Professional Memberships

American Society of Civil Engineers (ASCE)

The Metropolitan Railway Club of New York

Construction Management Association of America (CMAA)

Employment History:

Bechtel Power Corporation 1972-1975

Consolidated Rail Corporation 1977-1979

Stone & Webster Engineering Corporation 1979-1985

Hill International Inc. 1985-Present

Engineering Building, Rowan College of New Jersey, Glassboro, New Jersey.

Mr. Duda completed an assignment as the Construction Manager for the foundation and site preparation phase of the new $27 million Engineering Building at Rowan College of New Jersey. Pre-construction responsibilities included design reviews, preparation of contract documents, and acquisition of the NJDEP Water Allocation Permit. Construction responsibilities included field construction administration for the pile supported foundations, site utilities; and structural steel erection.

Harrah's Horseshoe Hammond Casino, Hammond, Indiana, Harrah's Entertainment, Construction Consultant.

The Architect, Friedmutter Group, retained Hill International to provide project management support services for the construction of a new $500 million, 350,000 square foot casino barge. When Hill was retained, the structural steel fabrication and erection schedule was falling behind a very demanding schedule. As a structural steel consultant, Mr. Duda provided coordination and management services. He participated in the shop drawing review process; coordinated the structural steel with contractor submittals, RFI responses, and land-based facilities; participated in the final building design; and provided construction assistance on site during steel erection. The efforts resulted in the structural steel erection being completed on schedule.

Vista Cana Golf Resort and Country Club, Punta Cana, Dominican Republic, Groupo Angulo Abierto Internacional, S.A. (AAI), Senior Construction Manager.

Mr. Duda served as Senior Construction Manager for Grupo Angulo Abierto Internacional, S.A. to oversee the construction of the $125 million site infrastructure program and the $135 million planned Phase One with 502 housing units, a country club, spa, clinic, and 27-hole golf course.

Newark Housing Authority Hope VI Program, Newark, New Jersey.

Mr. Duda was the Project/Program Manager for the Newark Housing Authority Hope VI Program. This $55 million program includes the demolition of 498 units in 13 multi-floor complexes and the replacement with 498 townhouses on three sites. His responsibilities include the preparation of Developer Requests for Proposal for construction of the new townhouses, design reviews, resolution of design and construction issues, and overseeing Hill's inspection role for quality assurance. He also prepared separate contract documents for the demolition and phasing of six high-rise structures, while maintaining operations in the existing buildings and the Community Center.

U.S. Embassy Building, Lead Project Engineer.

Hill International provided estimating and quantity surveying services to a general contractor, for construction of a U.S. Embassy building. Mr. Duda was Lead Project Engineer and provided quantity survey for material to complete construction.

Newark Housing Authority

Prepared construction contract documents for multiple building demolition and utility phasing while maintaining existing operations.

Guam Housing Project

Evaluated the proposed structural changes to the foundations.

Robert A. McDermott, Senior Director, Rail & Transit

Career Profile

Mr. McDermott has more than 30 years experience in the rail industry serving in senior management positions with both the Long Island Railroad and the New York Metropolitan Transportation Authority. During the course of his career, he has been involved in rewriting regulations relative to railroad communications, authoring more than 300 operational edicts, and publishing the first complete revision to the original SOP written in 1994. Examples of Mr. McDermott's achievements include developing and chairing a company wide tabletop drill in 1997 which was attended by more than 200 operational employees and the completion of a two-year writing project for the Federal Railroad Administration which resulted in the promulgation of 49CFR Part 220 in 1998.

Education

AA, Management and Communications, Adelphi University

Continuing Studies:

Graduate of School Management Studies, Cornell University

Teaching Occupational Education, New York Institute of Technology

Achieving Breakthrough Customer Service, Harvard University

Applied Engineering Program, George Washington University

Project Experience

- **Atlantic Yards/Nets Arena, Long Island Rail Road (LIRR) Vanderbilt Yard Relocation, Brooklyn, NY**
  The scope of the project includes new track, switches, traction power and substation, upgraded signal system, toilet servicing and structures as well as the demolition and replacement of the Carlton Avenue bridge, replacement of retaining walls, installation of foundations to support a future overbuild, site and street utility relocations, and a cut and cover tunnel under Atlantic Avenue. The work is phased to allow continued LIRR operations in the yard.

  As Senior Project Manager/LIRR Operation Liaison, Mr. McDermott's responsibilities included the supervision of project staff and the oversight of force account planning, negotiating with the LIRR on behalf of the developer on all design, construction and railroad operation aspects of this $300 million infrastructure project.

- **Jamaica Station Interlocking Improvement Project, New York, NY**
  McKissack was retained to provide engineering services for Survey work, Operational Analysis, Conceptual Design and estimating to study the benefits and engineering feasibility of various Jamaica Station and Interlocking improvements located in Queens, New York. The project entails the upgrade of Jamaica Station and the interlocking complex around it for maximum peak capacity in a way that will serve the system and the region's needs well into the next century. Given the new need to serve the future East Side Access (ESA), LIRR's operations will require a heavier reliance on interlocking routes feeding/receiving trains to/from four (4) line-haul tracks of the Main Line between Jamaica and Harold interlocking. As Senior Project Manager, Mr. McDermott directed the formation of a recommendation package of improvements that will support reliably the LIRR future operating needs of two Manhattan terminals, establish with reasonable confidence the constructability and operability of the improvements, provide cost estimates and preliminary construction staging plans.

Robert A. McDermott, Senior Director, Rail & Transit

- **Parson's Brinckerhoff Transit and Rail Systems, Newark, NJ**
  As Senior Principal/ Technical Specialist, Mr. McDermott performed operational analyses on various rail projects including Penn Station Access, Calif. High Speed Rail, Mid-Atlantic Rail Study, 2012 Olympics, Access to the Regions Core (ARC), Florida Tri-Rail, and San Francisco TransBay. He prepared Technical Papers, spreadsheets and associated documents for various clients and served as Project Manager for the Forest City Atlantic Yards Project, a $4.3M development project to redesign LIRR's Brooklyn VD yard.
- **East Side Access Project (MTA), New York, NY**
  Mr. McDermott was selected to serve as the first Director of Rail Operations for the New York City MTA East Side Project. He was responsible for coordinating the efforts of outside consultants relative to construction of rail link between LIRR in Queens, New York and Grand Central Station in Manhattan. He ensured all railroad operational aspects were addressed and included in design, construction and ultimate operation to provide a safe and efficient transportation facility. He ensured compliance with applicable Federal Railroad Administration regulations and LIRR operating rules.
- **Long Island Rail Road, New York, NY**
  As Superintendent in charge of the LIRR's Movement Bureau, Control Towers and Energy and Equipment Department, Mr. McDermott was responsible for the safe and efficient movement of all trains over the entire Long Island Railroad. He oversaw a workforce of approximately 160 employees that coordinated train movements through major storms, service disruptions as well as major LIRR construction projects including Harold Interlocking Reconstruction, Herrick's Road Grade Elimination, and Main Line Concrete Tie installations.

  As Training Specialist, he was responsible for teaching LIRR Operating Rules and Physical Characteristics to all employees. He prepared lesson plans, assessed student progress, implemented training sessions and made departmental presentations to various groups, as well as developed the first classroom-based training program on signal hut (CK) operation.

Career Experience

Long Island Railroad	1974 - 1998
Metropolitan Transportation Authority	1998 - 2000
Parsons Brinkerhoff	2000 - 2006
McKissack & McKissack	2006 - Present

Edward F. Nicholson, PE

Project Engineer / Inspector

Edward F. Nicholson, a Professional Engineer, has over 30 years of experience in all phases of rail rapid transit systems. Mr. Nicholson provided project management oversight to major transit authorities, and has overseen the planning, design and construction of capital projects for several major city transit agencies, including New York City Transit Authority and the Port Authority of New York and New Jersey. He has overseen the design and construction of rail control centers, rehabilitation of major stations, shops and yards, as well as bridge and tunnel rehabilitation projects. Mr. Nicholson managed the Port Authority Trans-Hudson's (PATH) Transportation Division, as well as their Signals and Communications Division, and was named as Port Authority Transportation Person of the Year in 1996.

Recent and Relevant Experience

PATH Station Reconstructing, World Trade Center, Port Authority of New York and New Jersey.

Mr. Nicholson provided technical support for the restoration of PATH rail service between New Jersey and lower Manhattan. On this project, Mr. Nicholson was part of the program management team overseeing the design and construction of a new rail transit terminal on the site of the former World Trade Center PATH station. In addition, he supported the design and installation of new power, signal and communications systems to replace those destroyed in the attack on September 11, 2001. Mr. Nicholson also provided technical support in the negotiation of insurance and FEMA claims.

MTA-Independent Review, Metropolitan Transportation Authority, New York, New York, Independent Engineering Consultant.

As the Program Manager, Mr. Nicholson oversaw the planning, design and construction of capital projects for the NYMTA's three major transit systems: the New York City Transit Authority (NYCTA), the Long Island Railroad (LIRR) and Metro-North Railroad (MNR), as well as its Bridges and Tunnels Agency. Examples of the programs that he oversaw include the rehabilitation of major stations, shops, and yards, as well as bridge and tunnel rehabilitation projects; the design and construction of a new rail control center with a new centralized train control system and new Communication Based Train Control System; and the design and implementation of direct LIRR train service into Grand Central Station. He also periodically reported the progress of these projects to the MTA's Board of Commissioners.

Tennessee Major Capital Projects, United States General Services Administration, Office of Accounting, Technical Review.

Hill provided contracting services for the FTA Region IV with Project

Education:

M.S. Transportation
Polytechnic University
of New York 1973

M.S. Electrical Engineering
New York University 1969

B.E. Electrical Engineering
Manhattan College 1965

Registrations:

Professional Engineer
Connecticut

Professional Memberships

APTA Rail Transit Steering Committee

APTA Computer Applications Subcommittee

Awards / Honors

Transportation Person of the Year (Port Authority 1996)

Employment History:

Port Authority Trans-Hudson Corp 1965-1996

NY Metropolitan Transportation Authority 1997-2001

Hill International Inc. 2001-Present

Management Oversight services for its Tennessee Major Capital Projects, including but not limited to the Memphis and Nashville Projects. Mr. Nicholson performed technical review, oversight and support of systems aspects for the Music City Star East Corridor Commuter Rail Project. He reviewed the signal system and grade crossing design and construction activities.

Washington Metropolitan Area Transit Authority (WMATA) Phase II, Washington, DC, Federal Transit Administration (FTA).

Hill was retained to provide project management oversight services to FTA for the Washington Area Transit Authority and the Virginia Department of Rail and Public Transportation Major Capital projects. Mr. Nicholson performs oversight and technical review of systems for WMATA's "Metro Matters" Program.

South Florida Regional Transportation Authority, Phase II, Federal Transit Administration (FTA), Miami, Florida, Project Manager.

Hill was retained to provide project management oversight (PMO) services to FTA. Mr. Nicholson performs oversight and technical review for the double tracking of 43 miles of tri-rail commuter rail line in Palm Beach, and Broward and Dade Counties.

Various Projects, US DOT Programmatic Task Order, Federal Transit Administration (FTA), Washington, DC.

Mr. Nicholson is part of the team providing a variety of project management oversight services to the Federal Transit Administration.

Prior Experience:

Port Authority Trans-Hudson Corporation PATH, Superintendent of Transportation.

As Superintendent of Transportation, Mr. Nicholson managed a staff of 460 people, and was responsible for all train operations on PATH, a rail rapid transit system operating between New Jersey and New York City, with a ridership of over 60 million passengers a year. His responsibilities included train operations, fare revenue collection, passenger information and assistance, budget development of $40 million annually, staffing, coordination and emergency response activities. A number of major capital projects were also completed successfully, including a new rail car maintenance facility, a new emergency ventilation system, a railcar overhaul program, and a new centralized fare collection system.

Port Authority Trans-Hudson Corporation PATH, Superintendent of Signals and Communication.

Mr. Nicholson managed a staff of 100 people and was responsible for all design, construction and maintenance activities relating to signal and communications systems. He was also directly responsible for developing and integrating sophisticated technological improvements into PATH's operations. Mr. Nicholson also provided oversight and direction during the design and successful completion of several major projects.

Various Projects, Port Authority Trans-Hudson Corporation PATH, Senior Rail Planning Engineer.

As Senior Rail Planning Engineer, Mr. Nicholson served as Assistant Project Manager for the PATH control center project and was responsible for development of electrical and communications systems integration, including radio, CCTV, emergency and passenger assistance telephones and remote control systems.

Frank Miller, PE
Project Manager

Frank Miller is a senior track engineer/manager with more than 26 years of experience in the planning, design, construction, inspection and project management of major railway transportation, track and facility engineering projects. Specializing in transit/railway engineering, Mr. Miller's assignments have included major rehabilitation, design-build, and new start projects for mass transit systems throughout the United States, including light-rail and heavy-rail transit systems and commuter, high-speed, and freight railroads. Mr. Miller has had managerial responsibility for all aspects of his projects including cost control, managing staff and quality control; working with clients to estimate project/contract fees; determining scope of work, preparing project proposals and contracts on large or multiple projects; and serving on the Transit and Freight Market Sector teams to successfully grow TranSystems' rail practice.

Registrations
Professional Engineer: PA, NC

Education
BST, Civil Engineering, Spring Garden College, 1994
AST, Construction Engineering, Spring Garden College, 1984

Affiliations
American Railway Engineering and Maintenance-of-Way Association, Vice-Chair, Committee 17, High Speed Rail Committee 11, Commuter and Inner-City Rail Systems - Chairman Sub-committee D-2 Corridor Planning

Years of Experience
26

PANYNJ Civil/Rail GEC Contract, Harrison Yard Maintenance Facility, Harrison, NJ
Project Manager responsible for contract administration and managing of task assignments including providing a new rail transfer yard in the North area and storage tracks in the South Loop area. Trackwork design includes horizontal and vertical alignment alignments, contact rail design, modifications to existing tracks as necessary and development of design documents to procure trackwork materials through the Port Authority Procurement office.

NYCT Capital Planning IDQ Contract Task Order No. 4 Route 1 & 9 Alternatives Analysis, New York, NY
Track Task Manager responsible for developing alternative trackwork alignments to restore subway service to the financial district in lower Manhattan. Options include rebuilding the existing route below the World Trade Center or relocating the alignment to the west and terminating in Battery Park.

SEPTA General Engineering Services, GEC Contract 99-01, Philadelphia, PA
Project Manager responsible for contract administration and managing of task assignments including the Schuylkill Valley Metro Technical Review for the Norfolk Southern. Work included identifying impacts to the NS physical plant based upon the MIS/DEIS preferred MetroRail alignment. Other tasks included performing Track Construction Cost Estimates and comparisons for Force Account work.

SEPTA General Engineering Services (1996-A1) for Light, Heavy, and Commuter Rail Infrastructure Projects, Philadelphia, PA
Deputy Project Manager responsible for the managing of engineering projects for SEPTA's Regional High Speed Lines, Market-Frankford Line, Subway-Surface Lines, and Trolley Lines including track, civil, signal, power engineering and surveying services; engineering inspections; feasibility studies; construction management services and other services on an as-needed basis.

Cuyahoga Valley Railway Indefinite Services Contract, Brecksville, OH
Track Project Engineer for open-end project for the National Park Service to provide engineering services for 26 miles of scenic railroad within the Cuyahoga Valley National Recreation Area. Assignments include track inspection and design; construction services and needs assessment for future track improvement programs.

AMTRAK Northeast Corridor Improvements Project between New York and Boston
Project manager/ engineer responsible for high speed curve modifications along the Metro North Commuter Railroad portion of the NEC between New Rochelle, New York, and New Haven, Connecticut. Frank performed analyses to determine the required realignment to achieve target speeds up to 150 miles per hour. The analysis included implementation of current European active tilt-train system criteria without compromising current timetable speed of both Metro-North and local freight service. His responsibilities also included the development of spreadsheet-based software for the analysis and design of these curves; civil engineering design, including track undercutting to provide vertical clearance for double stack freight; and the design of proposed passing sidings and upgrading of freight sidetracks at several Connecticut and Rhode Island locations for Conrail and the Providence & Worcester (P&W) Railroads.

Employment History
HNTB
DMJM Harris
Gannett Fleming
Railroad Construction Company
NYCT
SEPTA

Gary Matz, PE
Civil (Rail) Task Leader

Registrations
Professional Engineer: NY, NJ

Education
B.S., Civil Engineering; Virginia Polytechnic Institute and State University

Years of Experience
25

Years with Firm
<1

Affiliations
American Society of Civil Engineers

Mr. Matz brings 25 years of experience in the successful leadership of design and construction services for complex civil, structural, architectural and rail transit projects. He has served in a variety of organizational roles such as project manager, technical lead on mega projects and has managed staff levels of up to 80 individuals. Mr. Matz has also served as an advisor to senior client managers, providing technical support of high level third party coordination and negotiations.

PANYNJ PATH Capital Program Planning (2008-2016), Jersey City, NJ
Project Manager. Logistics Planning Support Services under this task order assignment. This task includes developing and implementing new management processes and procedures focused on long range planning and master scheduling of all PATH facility forces and equipment needs as well as track rights to support to the capital program through year 2016, on-going system repair and maintenance work and other various construction activities. The logistics planning group coordinates with PATH's Transportation, Way and Structures, and Power, Signal and Communications Divisions, as well as project managers from the Port Authority's Construction Management Division and the World Trade Center, preparing master monthly and weekly track usage plans, identifying and mitigating potential conflicts, and monitoring the day to day implementation of scheduled field activities. Responsible for technical support staffing, task budgets and invoices. Participated in Port Authority senior management and Chief of Capital Planning briefings.

NJ Transit/PANYNJ Trans-Hudson-Express (THE) Project, Secaucus, NJ and New York, NY
Third Party Coordinator (Final Design) (November 2009 to June 2010) Chief Civil Engineer/Technical Support Manager (Preliminary Engineering) (August 2006 to April 2008). Preliminary Engineering and Final Design for this $8 billion project. The project is 9.2 miles in length and includes the addition of new double track from Secaucus Transfer Station leading to the two new single track tunnels under the Hudson River. In Manhattan, the tunnels will lead to a new deep cavern; six-track passenger station built 150 feet below 34th Street in and between 6th and 8th Avenues, adjacent and connected to existing Pennsylvania Station. The project

also includes new train storage facilities at the new Kearny Rail Yard in New Jersey. Responsible for the concept and preliminary design effort including design and investigation reports, alternative alignment studies, civil plans (including track alignments, general sitework, grading and drainage, staging/MPT, ROW, street utilities, wetlands delineation and impacts), specifications, and cost estimates. Produced and monitored design task scopes, deliverables, schedules and budgets. Managed 25 full time staff and 5 major subconsultants. Coordinated with and reviewed design drawings and reports produced by all design disciplines.

MTA Capital Construction/NYCT Fulton Transit Center Dey Street Concourse Design/Build, New York, NY

Chief Civil Engineer for this $160 million design/build project. The project includes a 400 foot long cut-and-cover tunnel under a busy city street and operating subway lines that links the Fulton Street Transit Center with the World Trade Center Transportation Hub. Responsible for final design of all civil related work, including street utility relocations and new services, roadway restoration, traffic signals, and under-slab drainage. Produced and monitored design task scopes, deliverables, schedules, and budgets.

MTA Capital Construction/NYCT Second Avenue Subway Project, New York, NY

Chief Utility Engineer. Preliminary design of this $16.3 billion project; Final Design of the first operating phase. The project is a new 8.5 mile long subway line with 16 stations on the east side of Manhattan. The subway will connect to the existing subway system at three locations and to the existing bus system at almost every station. Tunneling will involve use of various techniques, including tunnel boring, cut-and-cover, and mined sections. The train control system will be an advanced communications-based system. Responsible for the concept, preliminary and final design for all utility relocation work, including design and investigation reports, studies, plans, specifications, and cost estimates. Produced and monitored design task scopes, deliverables, schedules, and budgets.

Employment History

AECOM	2002 - 2010
Gannett Fleming, Inc.	1999 - 2002
STV Group Inc.	1996 - 1999
Cashin Associates, P.C.	1990 - 1996
Hawkins Webb, Jaeger and Associates	1985 - 1990

James J. Mortimer, Jr., PE

Project Manager / Construction Manager

James J. Mortimer, a Professional Engineer, has over 30 years of experience in the construction industry. Mr. Mortimer has served as vice president, project manager, program manager, and resident engineer managing projects, which have included correctional, educational, transportation, museums and zoos, theaters, healthcare, housing, and industrial facilities. He has extensive experience as a construction supervisor and is knowledgeable in the area of contract administration. He also served as an Adjunct Professor at the New Jersey Institute of Technology.

Recent and Relevant Experience

World Trade Center Path Station Reconstruction, Port Authority of New York and New Jersey (PA/NY&NJ), New York, New York, Vice President.

Hill International was asked to provide consulting services to the PA/NY&NJ regarding the method proposed by the insurance company, Alliance/Axia, and their construction manager, The Gilbane Company, to decontaminate and deconstruct the Deutsche Bank Building. Mr. Mortimer reviewed documents, attended meetings, and evaluated Alliance/Axia's proposal, which was part of the process for acquiring the property by the Lower Manhattan Development Corporation.

Traffic Management Center, New Jersey Turnpike Authority (NJTA), Woodbridge, New Jersey, Project Manager .

As part of the consolidation between the New Jersey Turnpike Authority and the Garden State Parkway, the NJTA is expanding the existing Parkway building in Woodbridge to include a mission critical traffic management center. This new $21.5 million center will be the nexus for Turnpike and Parkway control. Mr. Mortimer was Hill's Project Manager for this fast-track building project, from the starting early in the pre-construction phase in April 2006 until completion in November 2008. His duties included definition of fast-track bidding packages, schedule and budget control, and overall responsibility for directing the consultant team and maintaining the project schedule.

Insurance and FEMA Claims – WTC Facilities, Port Authority of New York and New Jersey, New York, New York.

Mr. Mortimer organized and oversaw the initial effort to estimate the damages sustained by the Port Authority in the attack on the World Trade Center. Hill's estimates formed the basis of the Port Authority's settlement of claims with their insurance carriers and the Federal Emergency Management Agency (FEMA).

Education:

M.S. Civil Engineering
New Jersey Institute of Technology 1980

B.E. Civil Engineering
Manhattan College 1968

Registrations:

Professional Engineer
New Jersey

Professional Memberships

National Society of Professional Engineers

Construction Management Association of America

Awards / Honors

Project Manager of the Year (Hill International Inc. 2002)

Employment History:

Conforti and Eisele Inc. 1968

US Marine Corp 1968-1971

Mobil Oil Corporation 1971-1972

Tishman Construction Corporation 1972-1975

800 Constructors Inc. 1977-1978

Gambal and Associates Inc. 1979-1988

Hill International Inc. 1988-Present

New Jersey Schools Construction and Renovation Program, New Jersey Schools Construction Corporation, Project Manager.

The New Jersey Schools Construction Corporation (NJSCC) is undertaking a $12 billion program to rebuild schools throughout the State of New Jersey. Mr. Mortimer served as Senior Project Manager for $28 million in additions and renovations to Burlington City High School, the new $24 million Wilbur Watts Intermediate School, the new $22 million Joyce Kilmer Elementary School, the adaptive reuse and renovation of the Roebling Steel Factory into a new $70 million K-8 Elementary School, and the construction of a new $16 million Early Childhood Center in Pemberton. Mr. Mortimer managed a staff of 12 people taking projects from design development to project closeout.

CM-Build for New York City Schools, New York City Department of Design and Construction, New York, New York.

Mr. Mortimer was Hill's Project Manager for a construction management/build contract. Hill was assigned 14 construction projects at schools in Queens and Brooklyn. Hill's contracts required $44 million in construction to be put into place over four summers. The work included wood window repair, aluminum sash replacement and aluminum window replacement, exterior masonry repair, terracotta repair and replacement roofing, asbestos abatement, and lead-based paint abatement. Hill's team participated in the initial job kickoff and review of construction documents, bid all the work out to pre-qualified subcontractors, and administered and supervised the project from contract award to project closeout.

New York City School Construction Authority, 5 Boroughs, PLA Study, New York, New York.

Mr. Mortimer performed an economic analysis for the Capital Improvement Program work being performed under the proposed PLA. The projected savings was $500 million on the $6 billion worth of work being performed. The bulk of the savings came from working on a shift differential under the PLA in lieu of overtime, since most of the work had to be performed on off hours after school was over.

New York City Department of Design and Construction, School Construction Task Force, New York, New York.

Mr. Mortimer was Hill's Project Manager for a construction management/build contract. Hill was assigned 18 construction projects at schools in Manhattan and Brooklyn. Hill's contracts required $29 million of construction to be put in place over two summers. The work included wood window repair, aluminum sash replacement, and aluminum window replacement, exterior masonry repair, terracotta repair and replacement, roofing, asbestos abatement, lead-base paint abatement and some specialty items such as structural repairs to a pool, replacement of a cafeteria slab, and a synthetic gym floor. Hill's team participated in the initial job kickoff and review of construction documents, bid all the work out to pre-qualified subcontractors, and administered and supervised the project from contract award to closeout.

Museum of the City of New York, Slate Roof Replacement, New York City Department of Design and Construction, Cultural Affairs Unit, New York, New York.

Serving as Project Manager under a CM/Build Task Order Contract, Mr. Mortimer negotiated the task order to replace the slate roof. The work was done while the museum was in operation. He pre-selected a list of qualified bidders, received bids, and awarded a $1.7 million subcontract for the work.

Jose A. Diaz, PE

Project Manager / Construction Manager

Jose A. Diaz, a Hill Vice President, is a Civil Engineer with over 30 years of engineering and project management experience. Mr. Diaz has expertise in construction and project management, civil and environmental engineering, and construction claims analysis. He also has extensive experience in cost engineering, including the development of complex cost models relating to commercial interactions between stakeholders, including private developers and public agencies. His experience encompasses a wide variety of projects throughout the United States and overseas. Projects have included educational, retail, and commercial buildings; transportation facilities, such as highways and rail yards; major industrial facilities, such as pharmaceutical processing plants, fossil and nuclear power plants; sanitary and industrial waste landfills; superfund remediation sites; and chemical handling and recycling facilities.

Recent and Relevant Experience

World Trade Center (WTC) Downtown Restoration Program, Port Authority of New York & New Jersey (PANYNJ).

Hill is providing program management services in connection with the planning, design, and construction of the new facilities at the World Trade Center, including the new permanent PATH Terminal (Transportation Hub). On assignment at the WTC site, Mr. Diaz headed up a Hill International team responsible for providing program management services to PANYNJ related to the redevelopment of the project site. Services include scheduling, cost modeling, budgeting, and cost controls for all the capital programs planned for the WTC site valued in excess of $12 billion. Redevelopment programs include the WTC Transportation Hub, the WTC Memorial, site infrastructure, and retail and commercial facilities.

Insurance & FEMA Claims – World Trade Center & PATH, Port Authority of New York and New Jersey (PANYNJ).

Mr. Diaz served as project manager, on an assignment with the PANYNJ and working for the Assistant Chief Engineer, for the 9/11-related World Trade Center loss recovery effort. He was a member of the Loss Recovery Team and was responsible for managing the estimating efforts for the capital losses sustained by the PANYNJ and for presenting the estimated loss claims to the insurers and FEMA. The project involved over $1 billion in losses related to the World Trade Center buildings and the PATH system. Losses included the US Customs House and the tenant areas located throughout the complex which were formerly occupied by the Authority's staff.

Education:

M.S. Civil Engineering
Rensselaer Polytechnic Institute 1979

B.S. Civil Engineering
Rensselaer Polytechnic Institute 1976

Registrations:

Professional Engineer New York

Professional Engineer
New Jersey

Professional Engineer
Pennsylvania

Professional Engineer
Puerto Rico

Professional Memberships

American Society of Civil Engineers

Chi Epsilon - Civil Engineering Honor Society

Awards / Honors

James G. Hellmuth Unit Citation PANY&NJ 9/11 World Trade Center Loss Recovery Project

Employment History:

American Electric Power Service Corp 1977-1981

Public Service Electric & Gas Company 1981-1988

Soils Engineering Services Inc. 1988-1990

Clayton Environmental Consultants Inc. 1990-1993

Hill International Inc. 1993-Present

Hillsborough Board of Education, Hillsborough, New Jersey.

Mr. Diaz was assigned to oversee the completion of multiple construction contracts on a troubled school addition and renovation project. The project had experienced significant delays and cost overruns. Mr. Diaz coordinated the completion of remaining construction work, including coordination of multiple design and building code enforcement issues, negotiation and processing of change orders, and the procurement of additional services necessary for the completion of remaining work.

New Haven Rail Maintenance Facility, State of Connecticut, Office of Policy & Management, CN

Hill was retained by the Office of Governor M. Jodi Rell to review and analyze the scope, cost and budget of a proposed major expansion of the New Haven Rail Maintenance Facility, including the construction of new office, training, and employee wellness facilities. As Project Manager, Mr. Diaz was responsible for the analysis, development of recommendations and presentation of reports directly to the Governor and the Legislature. Our analysis and recommendations reduced estimated costs from $1.7 billion to approximately $850 million. Hill critically evaluated the adequacy of the original work scope and construction cost estimates; determined factors that were driving increases in estimated costs; performed independent cost estimates; reviewed scope to recommend ways to reduce project costs; provided budgeting options; reviewed DOT capital project budgeting and cost estimating procedures and protocols, including configuration management controls and conducted a project risk assessment.

Merck & Co., Inc., Somerset, New Jersey.

On assignment from Hill International at Merck's facility in Somerset, and functioning under the direction of a Merck Procurement Manager, Mr. Diaz served as a Senior Contract Administrator providing contract administration, commercial oversight, procurement coordination, and expediting for engineering and construction services in conjunction with Merck's capital projects. Projects include office, manufacturing, and warehousing facilities.

Capital Center II and Plaza Real, Turner Caribe, Hato Rey and Guaynabo, Puerto Rico

Hill International, Inc. was retained by Turner Caribe Construction Company to assist it in resolving disputes over the completion of two large multi-story building complexes. As Project Manager, Mr. Diaz prepared a claim against the owner for a multitude of issues related to changes in design which restricted site access and other issues that caused extensive delays to the project for Capital Center II (a 16-story office tower and associated multi-story parking facility). For Plaza Real (a high-rise condominium complex), Mr. Diaz prepared a claim against the owner for delays principally caused by constructability issues associated with a newly developed composite wall system design. Hill conducted a thorough analysis of project events, including a detailed schedule analysis and an analysis of the costs incurred by Turner Caribe.

American Electric Power Service Corporation (NY) and PSE&G (NJ).

As a corporate engineer for two large power companies, Mr. Diaz reviewed, studied, designed and managed a wide variety of civil engineering projects in six states. Projects involved warehouses, office buildings, and training facilities, as well as structures for the power companies' production facilities involving heavy equipment, such as electrostatic precipitators, turbines, and electrical transformers for power plants as large as 1300MW, and transmission and distribution facilities as large as 765KV. For many of the projects, Mr. Diaz faced complex design and constructability issues related to maintaining service during construction.

Gurcharan Chopra

Construction Manager / Project Engineer/ Inspector / Estimator

Gurcharan S. Chopra has over 40 years of extensive experience in electrical engineering in the management of design and construction of industrial and commercial projects. These include: power distribution, including standby generation, programmable controllers and control systems; lighting; and fire alarm and electronic security systems. Mr. Chopra's project experience includes office buildings and commercial facilities, hotels, industrial and manufacturing facilities, wastewater treatment, transportation, power plants, and petrochemical facilities. He has also provided construction management and project management oversight for various NYC Agencies' projects.

Recent and Relevant Experience

Downtown Restoration Program and Insurance and FEMA Claims-WTC Facilities and PATH, Port Authority of New York and New Jersey, New York, New York.

Mr. Chopra performed design review of the new electrical systems being installed and estimating for selected work packages for a fast-track project to restore the rail access to the World Trade Center after the September 11, 2001 damage. He also estimated the Traction Power System replacement costs for Insurance and FEMA claims after the 9/11 damage.

Bronx County Hall of Justice, Dormitory Authority of the State of New York (DASNY), New York, New York, Electrical Inspector.

The Bronx Criminal Courthouse Complex is a new facility to house the Supreme Court Criminal Team, which will include 47 courtrooms. The 744,000 square foot, $390 million complex will occupy a 2.5 block site near Grand Concourse and stand 11 stories tall. This facility is one of the largest court complexes in North America. Hill provided full spectrum construction management services to support DASNY. Mr. Chopra served as Electrical Inspector responsible for all electrical work. He researched old electrical change orders, issued rejection letters, and negotiated unfinished change orders. He was also responsible for preparing new estimates for the complete range of electrical work and estimating complex change orders for all electrical systems, including the Security and Antenna Systems, Telecom and Data Fiber and Copper Networks, and the Audio Video System.

Peter Rodino Federal Building, U.S. General Services Administration (GSA) IDIQ Contract, Newark, New Jersey, Project Engineer.

The project involved the waterproofing of the outdoor plaza deck, which covers the underground garage basement. Serving as Project Engineer, Mr. Chopra reviewed the design documents and assisted in finalizing the bidding documents for the Fire Alarm System.

Education:

B.S. Electrical Engineering
Banaras Hindu University
India 1953

Publications:

"Programmable Controllers at New Pellet Terminal" International Journal of Storing and Handling Bulk Vol. 1 No. 1 p. 119 (Published in West Germany 1981)

Seminars:

"Bulk Handling With Programmable Controllers " Detroit Engineering Society Detroit MI (1981)

Employment History:

General Electrical Co. of England 1953-1968

Crompton Greaves Ltd. 1965-1975

Hewitt Robins Inc. 1968-1969

Orba Corporation 1975-1988

P.L.C. Engineering Services Inc. 1988-1990

Transportation Construction Service Inc. 1990-2001

Hill International Inc. 2001-Present

Martin Luther King Federal Court House, U. S. General Services Administration (GSA), Newark, New Jersey.

Hill was retained to review the work of GSA's fire alarm consultant and prepare bidding documents and specifications for a fast-track upgrade of the existing fire alarm system. Mr. Chopra was responsible for the preparation of the bidding documents. Later, when Hill was awarded the Construction Quality management contract, he served as manager. The renovation of the fire alarm system in a fully occupied Federal Courthouse was executed at night and was completed on time and within the contracted price.

Emanuel Celler United States Courthouse, U. S. General Services Administration (GSA), Brooklyn, New York.

Hill is a member of a team led by Volmar Construction, Inc., providing CM-at-risk services during the modernization of this federal courthouse building. Hill's services include project management, project controls estimating and contract administration. Mr. Chopra provided design and constructability review of power, lighting, fire alarm, electronic security, and audio visual systems for this $100 million courthouse renovation project.

LaGuardia Community College Capital Improvement Project, Dormitory Authority of the State of New York, Long Island, New York.

Hill International is providing construction management services for the installation of a new fire alarm system for a 250,000 square foot building at LaGuardia Community College. Mr. Chopra served as Project Manager for the $3 million renovation of the fire alarm (150,000 devices) and smoke purge control systems (750 fire and smoke dampers) at the College. GSA Region 2 "PES,"

U. S. General Services Administration (GSA), New York, New York.

Hill was retained to provide construction management for the renovation and build out of 15 floors of the Peter Rodino Federal Building, Newark, New Jersey. Mr. Chopra supervised the installation and test of the electrical, security and communication systems for the Immigration and Naturalization space.

GSA, United States Secret Service (USSS) Headquarters Plaza, U.S. General Services Administration, Newark, New Jersey.

Hill was retained to provide construction management services for the renovation and build out of the 8th and 9th floors of the Headquarters Plaza for the Secret Service. Mr. Chopra provided oversight of the installation of the electrical, fire alarm, electronic security, and communication systems of the leased space for the USSS.

Rehabilitation of the United Nations Complex, Construction Management Services for the Preliminary Design Phase, United Nations, New York, New York.

Mr. Chopra performed design review of the preliminary concepts prepared by the Architect/Engineer for a billion dollar project for the renovation of the United Nations Campus in New York. He reviewed the electrical, lighting, fire alarm, electronic security, building management system, audio-visual system and the UN radio and television broach cast system.

Edward J. Fox

Project Manager

Edward J. Fox has over 35 years of progressive experience in planning, engineering, construction and management on a broad cross section of capital improvement programs, much of it in the public sector. Mr. Fox's assignments have included land development, educational buildings, housing and commercial projects. These assignments required the application of engineering, managerial and financial skills, as well as coordination and liaison with client and team members to solve complex problems.

Port Authority of New York and New Jersey, World Trade Center Station Reconstruction, New York, NY

Hill is providing program management services in connection with the planning, design and construction of the new World Trade Center Transportation Hub, including the temporary PATH Terminal, the new permanent PATH Terminal, and four major interrelated office towers. Mr. Fox is responsible for management procedures and manuals, monthly progress reports, scheduling, and financial planning.

New York Metropolitan Transportation Authority (MTA), Project Management Oversight, New York, NY

Mr. Fox was a member of the Hill independent consultant oversight team for the MTA, which has reviewed and prepared reports on the progress of bus depots and maintenance facilities, including several design-build facilities. He was responsible for oversight of design and construction of three bus maintenance and garage facilities and a major subway terminal. In addition, he oversaw various structural projects for the New York City Transit Authority subway system, including the design of a new multi-modal facility at Coney Island, New York. In this capacity, Mr. Fox also performed a number of continuing reviews of contractor developed Primavera CPM schedules.

Prior Experience:

Dallas Area Rapid Transit System, (DART),Light Rail System, Dallas, TX

Mr. Fox compiled and prepared the project closeout documentation packages for DART's Light Rail System, including the Fare Collection, Signals and the Communications and Central Control contracts.

U.S. General Services Administration, United States Federal Courthouse, Brooklyn, NY

Mr. Fox was the Document Controls Engineer for this $200+ million project. The project included the separation of an existing courthouse and the asbestos abatement and demolition of a Federal Office Building on the site

Education:
M.S., City and Regional Planning, Rutgers University, 1970

B.S., Civil Engineering, New Jersey Institute of Technology, 1964

Professional Memberships:
Chi Epsilon - Civil Engineering Honor Society

Awards/Honors:
James G. Hellmuth Unit Citation, PANYNJ 9/11 World Trade Center Loss Recovery Project

Publications:

Seminars:
"Project Management & CPM Seminars"

Employment History:
US Air Force, 1964-1968

Candeub, Flessig & Assoc. (Former Hill subsidiary), 1968-1988

High-Point Schaer, 1988-1992

Transportation Construction Service, Inc., 1992-2001

Hill International, Inc., 2001-Present

of the new construction. Also completed were a new, temporary entrance, a total change over to new electrical transformers, and construction of temporary parking in a city park to ensure the uninterrupted operation of the existing Brooklyn Federal Courthouse. He participated in the review of the project through the design and bidding phase. Mr. Fox also prepared the field office facilities and procedures for the start of the construction phase.

U.S. General Services Administration, Region 2, Indefinite Quantity Contract

Mr. Fox assisted with Contract Executive duties for the conclusion of the ongoing three year indefinite quantity contract. This work included contract administration during the construction phase of the latter task orders.

Housing Authority of the City of Newark, Multiple Projects, NJ

Mr. Fox was the Project Manager for five projects for the Newark Housing Authority. The five projects totaled 659 units constructed at 38 different scattered sites with a total construction program cost that exceeded $64 million. His responsibilities included constant coordination with five different general contractors, HUD, various departments of Newark Housing Authority; local utility authorities; state and federal labor boards; and a number of tenant groups. During Design Phase, Mr. Fox supervised the design review team which included SDB subconsultants. During the Construction Phase, he conducted all field and office construction management services, including utilizing SDB subconsultants. Construction types included prefabricated modular units, prefabricated panels and conventional construction. Services provided included developer selection evaluations, design and constructability reviews, and construction phase services

Multiple City Agencies, Residential Housing, High-rise Office Buildings and Hotels, Nationwide.

Mr. Fox has over 20 years of experience in urban and regional planning. Serving as Project Director, he worked with a number of clients to acquire and develop land for the construction of projects including residential housing, high-rise office buildings and hotels. He also served as Project Director for a major Master Plan for Washington, DC. Other clients included the City of Columbus Georgia; Fort Myers, Florida; and Lake Charles, Louisiana. He was responsible for a staff of engineers and subconsultants that provided general design, working drawings, specifications, constructability reviews, and construction consulting services for these projects totaling approximately $75 million.

Approximately 15 City Development Programs, Various Locations, Nationwide.

Mr. Fox served as a staff engineer responsible for the preparation and implementation of budgets and PERT/CPM schedules for all development programs in over 15 cities including Pittsburgh, Tulsa, Oklahoma City, San Antonio, Dade County, Florida, and Washington, DC.

U.S. Army Corps of Engineers, Multiple Projects, Various Locations

As Project Manager, Mr. Fox provided design reviews on numerous Corps of Engineers projects at Fort Monmouth, New Jersey; Fort Benning, Georgia; and Aubrey Lake, Texas. The work included the evaluations of buildings and facilities, cost-cycle analysis, environmental reviews, utility system analysis, and the development of training programs.

Hatch Mott MacDonald

Harry Jarnagan, PE, CCE

Education
BS, Applied Science and Engineering, U.S. Military Academy, West Point, 1975

Master of Engineering, Civil Engineering, Texas A & M University, 1984

Registration
Professional Engineer TX, [redacted]

Years in Practice – 30

Memberships
Member AACE International (program / project delivery and project controls professional association); Past President (2001 – 2002);

Member of the AACE Education Board. Certified as a Certified Cost Engineer (CCE) with AACE International since 1991.

Named as a Fellow of AACE International in 2005

Experience Summary

Mr. Jarnagan has extensive project controls and project management experience on a wide variety of projects including complex mega-projects. He is familiar with all of the project controls disciplines that support robust project management including estimating, planning and scheduling, risk management, budgeting and cost control, program change control and configuration management, earned value, project reporting, document management, the development of contract special conditions, contract change control, claims evaluations, and contract close-outs. He experienced with Primavera applications, is an expert user of Excel in performing cost and schedule analyses, and has experience in a number of Mainframe Management Information Systems such as JD Edwards, Oracle, and SAP.

Mr. Jarnagan has supervised and trained project controls staff, worked within integrated teams, and managed all elements of project controls on numerous projects including a $1.7-billion advanced technology design-build project, and a number of multi-billion-dollar rail and highway transportation improvement programs. He has worked closely with management in matrixed organizations providing analysis and recommendations for timely, cost-effective decision making. His management experience includes staffing, training, and supervising 50 project control staff located throughout the western U.S. and the Pacific, and he has been recognized by clients and employers for superior performance. Mr. Jarnagan previously served as the President of AACE International, a professional association of estimators, schedulers, and project controls engineers.

Selected Project Experience

Alaskan Way Viaduct & Seawall Replacement Project, Washington State Department of Transportation (WSDOT), Seattle, WA

Deputy Program Manager for WSDOT, reporting to the WSDOT Director of Operations and the WSDOT Director of Program Management. Directly oversees various program management functions in an integrated team environment, including Business Management, Project Controls and Reporting, Document Management, Change Control and Configuration Management, and Local Agreements. Supports the WSDOT Program Administrator in regularly scheduled Quarterly Progress Report preparation and reporting to senior WSDOT headquarters personnel. As the HMM project manager for the Project Management Assistance Contract to WSDOT (where HMM is an extension of WSDOT staff), is responsible to WSDOT for all contract-provided Program Management, Design Management, and Construction Management support. This 6.75km (4.2 mile) long, $3.1-billion program will replace the aging viaduct with what will be one of the largest boring machine-driven tunnels in the world that meets current safety and seismic design standards as well as providing long-term mobility in the corridor. Project challenges include completing the 54-foot-diameter soft-ground bored tunnel within an aggressive schedule in an urban environment, performing complex funding management, excavating through poor-quality backfill materials ranging from soft soil to large rock riprap to aged timbers, relocating a complex network of utilities, coordinating with a variety of third-party program stakeholders, and maintaining existing roadway traffic during construction of the tunnel.

Toll Bridge Seismic Retrofit and Regional Measure 1 Programs (TBSRP / RM1), Bay Area Toll Authority, Oakland, CA
Deputy Project Manager. Performed program management duties for the Bay Area Management Consultants (BAMC) and assisted BATA in its role of monitoring and overseeing the RM1 and TBSR projects. BAMC has developed a comprehensive baseline program cost forecast for both the RM1 and TBSR projects, and a database management system to track project costs and schedule performance. Produce weekly reports for BATA and Caltrans, monthly reports for the BATA Policy Board, and quarterly reports for the California State Legislature.

Measure B Transportation Improvement Program, Santa Clara Valley Transportation Authority, San Jose, CA
Program Controls Manager. Program was $1.4-billion, seven-year transportation improvement program consisting of light rail transit, heavy rail, highway, and highway interchange projects.
Provided all estimating, cost control, planning /scheduling, reporting, and management information systems support. Developed program cost estimates and schedules of work, which were adopted as cost and schedule performance baselines by Santa Clara County. Supervised the Program Controls organization as it measured budget and schedule performance, detected deviations from the program baseline that jeopardized budget and schedule goals, assisted management in the conduct of "what-if" studies and determined courses of action to eliminate/mitigate cost overruns or schedule delays. Developed and maintained a Revenue and Expenditure model used by VTA and the County to manage the financial aspects of the program. Developed and provided a variety of program reports to VTA management, the County executive, the VTA Board of Directors, and the County Board of Supervisors. Took a leading role in the implementation of an improved project management and control system using a variety of off-the-shelf software packages that was adopted by VTA as the project management system standard. Developed project controls and reporting procedures that are now being used at the VTA.

Various Environmental Remediation Programs, The IT Group, Pleasanton, CA
Project Controls Manager, Western Region. Projects consisted of environmental remediation programs of up to $250 million for the Department of Defense (Air Force Center for Environmental Excellence, Southwest and Pacific Divisions of the Navy, and Army Corps of Engineers), Department of Energy, the Federal Aviation Administration, and other governmental agencies.

Provided for and coordinated all scheduling and cost control support for all projects in the 11 western states, Alaska, Hawaii, and the Pacific. Developed and implemented a program to merge the project accounting and cost/schedule engineering organizations into one Project Controls Group consisting of 50 personnel. The group was designed along four major district lines and ensured that all projects were properly staffed with trained cost and schedule engineers. Provided project controls training to all project controls personnel, plus estimators and project managers within the region.

Underground Storage Tank Environmental Program, Eastman Kodak Co., Rochester, NY
Sr. Project Control Engineer. Construction and construction management of a $250 million project to inspect, and repair or replace more than 1,100 leaking underground industrial storage tanks and the supporting infrastructure. The scope of this high priority environmental project dealt with 50 percent of the total number of industrial storage tanks in the state of New York.

Used the Artemis project management system to perform cost and schedule control and reporting for this program. Provided forecasts and reports of cash flows using a resource-loaded schedule database. Assisted in establishing a system of cost rollup reporting from individual projects to the program level. Provided direct project control support to the two largest projects in the program. This included the development of project budgets and funding documentation, cost forecasting and control, variance identification, and earned value reporting. Worked with engineering, procurement, construction and startup personnel in the development and updating of CPM schedules. Reported deviations from the schedule baseline to management and assisted in developing recovery plans.

Hatch Mott MacDonald

Robert Nosal

Education
BS, Civil Tech, UMass Dartmouth, 1980

Years in Practice - 28

Experience Summary

Mr. Nosal has 28 years of experience in project controls for office and field administration, including a blend of project monitoring, planning, scheduling and cost estimating for both design and heavy construction management firms. His background includes interfacing with Federal, State and private sector clients in the areas of design, engineering, procurement, and construction. Projects have included multi-disciplined engineering and design for transportation, tunneling, commercial, industrial, and institutional facilities, as well as hydropower, cogeneration, power generation units and micro tunneling. His background also includes preparation of yearly strategic financial plans and providing project controls oversight.

Mr. Nosal also serves as the Coordinator for regional Project Controls for the Northeast offices. Core Clients have included, but are not limited to MBTA (now MassDOT-Transit Division), MTA, MHD, MASSPORT, MWRA, MDOT, NDOT, NBC, RIDOT, RIAC, and WASA. Responsibilities include monitoring, tracking, analyzing, forecasting and reporting on project budgets, estimates to complete (ETC), commitments and expenditures, project progress and productivity, work plans and schedules, estimate costs at completion (EAC), WBS cost coding, subcontracts, earned value performance measurement systems, and change management. This includes the initial set- up and monthly updating of multiple project controls systems, developing and loading Excel spreadsheets and special analysis and reports, as required. Mr. Nosal provides support for project pricing, analyzes data at the organization level, works closely with project and operations managers, accountants, and participates in monthly project reviews.

Select Project Experience

Old Colony Railroad Rehabilitation, Massachusetts Bay Transportation Authority, (now MassDOT-Transit Division), Southeastern Massachusetts

As Estimator/Scheduler, assisted in cost estimating and scheduling for this $500 million project that included the rehabilitation and construction of 40 bridges, 24 stations in compliance with ADA requirements, and over 80 miles of track work. Project successfully met financial and schedule milestones.

New Bedford/ Fall River Extension Preliminary Study, Massachusetts Bay Transportation Authority, (now MassDOT-Transit Division), New Bedford, MA

Estimator responsible for preparation of a feasibility estimate for a 43-mile $600 million commuter rail extension and rehabilitation project.

Freight Rail Extension, Value Engineering Study, Rhode Island Department of Transportation, RI

Estimator responsible for assisting the project team with the evaluation of a $140 million 22-mile freight rail extension, including alternative approaches to the complete project within the parameters of the proposed budget.

Maverick Station Rehabilitation, Massachusetts Bay Transportation Authority, (now MassDOT-Transit Division), East Boston, MA

Project Controls / Estimating Supervisor responsible for oversight of Mechanical & Electrical work on the project and Estimate & Schedule.

Toronto-York Spadina Subway Extension, Toronto Transit Commission -– Schulich Building Grouting, Toronto, Ontario
As Scheduler/Estimator responsible for preparation of a $13 million construction grouting estimate along with a three year schedule.

District of Columbia Water and Sewer Authority, Washington, DC
As Scheduler, reworked the 15 year construction schedule to achieve the client requested contract realignment packaging. Program valued at $1 billion.

MetroWest Water Supply Tunnel, Massachusetts Water Resources Authority, Metropolitan Boston, MA
Estimator (along with tunnel subconsultant), responsible for planning and scheduling. Served as Project Controls Engineer, providing staff supervision of the planning, scheduling, and cost (project tracking) estimates coordination for the final design of a 17-mile long underground redundant water supply tunnel system. The project included shafts, tunneling, surface facilities, and tie-ins with the adjacent aqueduct system. The construction was scheduled for seven years at an estimated total construction cost of $600 million. Project successfully met financial and schedule milestones.

Pressure Testing and Disinfections of MetroWest Water Supply Tunnel, Massachusetts Water Resources Authority, Various Communities, MA
Estimator & Scheduler/Project Controls. Provided oversight for this $3 million effort of the MetroWest Tunnel.

Central Artery/Ted Williams Tunnel Project, Massachusetts Highway Department (now MassDOT-Highway Division), Section Design Consultant (20A/B), Boston, MA
Project Controls Engineer including estimating oversight relating to the program-wide mechanical and electrical systems during the design and construction phases. Also provided estimating oversight for this project with a design fee valued at $85 million and a construction phase valued at $250 million.

Central Artery/Ted Williams Tunnel Project for the Section Design Consultant for System Controls (22A), Massachusetts Highway Department (now MassDOT-Highway Division), Boston, MA
Scheduler/Project Administrator responsible for integration of project controls, project administration, and financial operations. Accountable for all facets of administration, including client liaison, project review, monthly project reporting, project change notices, resource allocations, deliverable and correspondence control logs, and project library. Provided coordination for monthly labor and direct expense invoicing, project roster, and travel authorization. Also assisted with quality assurance. Project participants consisted of international, interstate, and local design teams. $15 million design fee.

Central Artery/Tunnel Contract 15A9, Massachusetts Highway Department, Boston (now MassDOT-Highway Division), MA
As Estimator, assisted the Project Engineer with a quantity estimate for a $50 million highway structure and final surface restoration project.

Employment History
Hatch Mott MacDonald (2009 - Present)
Jacobs Engineering Corporation (1993 - 2008)
Parsons Transportation/Main (1988 - 1993)
Battelle Memorial Institue (1985 - 1988)
Shaw/Stone & Webster Engineering (1980 - 1985)

Glenn Knapp, Chief Estimator

Career Profile

Mr. Knapp has more than 30 years experience in the design and construction industry, several of which have been spent in Senior Management roles. He is experienced in all facets of Estimating and Cost/Value Engineering and has lent his expertise to a variety of project types, particularly in the areas of Residential and Healthcare related projects.

Project Experience

- **Atlantic Yards/Relocation of LIRR VD Yard, Brooklyn, NY**
  Mr. Knapp served as Chief Estimator for the $200 million rail yard relocation and the construction of a temporary yard to allow for early construction of foundations for the New Jersey Nets new multi-purpose sports arena. The scope of work included new tracks, switches, traction power, signals and toilet servicing system. The work also entails the demolition and replacement of the Carlton Avenue Bridge to allow for necessary track realignments. Mr. Knapp prepared the estimates for various phases of the project, including the creation of temporary and permanent LIRR yards.
- **MTA Independent Engineering Consulting, New York, NY**
  Serving as Chief Estimator, Mr. Knapp applied his knowledge of Value Engineering and Comparative Cost Estimating to multiple projects for New York's Metropolitan Transportation Authority (MTA). He developed estimates for the Metro-North's Croton-Harmon Station, the interior refacing of four subway stations along Manhattan's East side, and the Long Island Railroad's Jamaica Station Interlocking and Improvement Project.
- **Dormitory Authority of the State of New York, Medgar Evers College, Brooklyn, NY**
  Mr. Knapp served as Chief Estimator for the new construction and renovation of student areas, cafeterias, libraries, student labs, lecture halls, site lighting and security, among their necessary MEP systems. He was tasked with the application of his experience and expertise to work closely with various construction professionals to develop accurate cost estimates for different aspects and phases of the project.
- **Alexandria Bay US/Canadian Border Crossing, Alexandria, NY**
  As Project Executive/ Chief Estimator, Mr. Knapp directed the designing and estimating of MEP systems upgrades. Contracted through the New York Office of General Services (OGS), this $200 million project called for Mr. Knapp's expert involvement in the oversight of the project's monies, coordination of invoices and maintaining communication with the client.
- **New York City Housing Authority, New York, NY**
  As Senior Estimator, Mr. Knapp worked under Mayor Guilliani performing

Education

AA, Business Management, Scranton University

Glenn Knapp, Chief Estimator

quality takeoffs of selected site structural, mechanical, and architectural blueprints. He met weekly with contractors to negotiate city expenditures and change orders on projects resulting in additional revenue for further city development.

- **United Nations Building, New York, NY**
  As Chief Estimator Mr. Knapp estimated drywall, rough carpentry and acoustical ceilings ranging from $1 million to $5 million to various offices in the United Nations.
- **Columbia Presbyterian Hospital, New York, NY**
  Serving as Chief Estimator, Mr. Knapp developed accurate cost budgets for the interior renovations to hospital rooms to include all the architectural, civil and MEP estimating, valued at $18 million.
- **Westchester County Airport, White Plains, NY**
  As Chief Estimator, Mr. Knapp set up cost budgets for the interior hanger and office renovations for Jet Blue to include all civil, architectural and MEP cost estimating for a total value of $15 million.
- **Jacobi Medical Center, Bronx, NY**
  As Chief Estimator and Project Manager, Mr. Knapp oversaw the implementation of the Hospital's rehabilitation project by providing on-target estimates and overseeing phase movements of the $100 million project.
- **Rikers Island, Rickers Island, NY**
  As Chief Estimator, Mr. Knapp set up all the cost budgets for the new $15 million dollar kitchen addition at Rikers Island. He negotiated all change orders to the satisfaction of the client and worked closely with the client to establish any cost changes and savings.
- **Newark International Airport, Newark, NY**
  As Chief Estimator, Mr. Knapp estimated various terminals and upgrades to include structural, civil, and architectural estimating in a timely manner. The total value of the project was $210 million.

Career Experience

Roy C. Knapp and Sons	11/1977 - 10/1989
V.B. Cross	10/1989 - 09/1994
H&P Building Company	09/1994 - 12/1995
New York City Housing Department	12/1995 - 01/1996
Savin Engineering	01/1996 - 10/1998
URS Corporation	10/1998 - 02/2001
Hazen and Sawyer Engineers PC	02/2001 - 03/2002
Fast Track Interiors	03/2002 - 02/2005
George A. Fuller Company	02/2005 - 06/2008
McKissack & McKissack	06/2008 - Present

John (Jake) C. Campbell

Vice President, Director of IT and Training
Senior Project Controls / Scheduling Manager

Mr. Campbell has over twenty years of diversified experience in the management and control of sophisticated construction projects. He has worked for Envision Consultants, Ltd. (Envision) for twelve years. His experience encompasses: Transportation – transit, highways, bridges and airports; Education - K-12, colleges and universities, and technical institutes; and General Building construction. His exceptional IT expertise is a valuable asset to clients when there is a project requirement to install, set-up, and implement state-of-the-art construction management software, networks, client interfaces, and web servers for multiple projects. He is also Certified Primavera Trainer (CPT) and consultant for all Oracle-Primavera project management software products and systems.

Jake's responsibilities include developing master schedules, detailed project schedules, cost and resource loaded schedules, and the review and approval of contractor schedules and monthly updates. In addition he reviews and approves budget cost estimates, progress payments, and cost at completion estimates. He also oversees cost control, change control, and document control activities, and participates in dispute resolution and claims analysis.

Project Experience

Envision Consultants Ltd., Mullica Hill, NJ

August 1997 - Present

Project Control and Scheduling Manager

Credentials

Education:

B.S., Construction Management
Drexel University, 1998
A.S., Business Administration
Bucks Co. Community College, 1994

Professional Registrations:

Certified Primavera Trainer (CPT) P3, P6, Contract Management

Computer Skills:

Primavera Project Planner (P3, P6, Web, Contractor); SureTrak; Expedition (Contract Management); MS Office; MS Project

Professional Affiliations:

Construction Management Association of America (CMAA)

John (Jake) C. Campbell

(Continued)

Jake utilizes his extensive information technology and construction management experience to assist Owners, Government Agencies, Municipalities, Construction Managers, General Contractors, and Subcontractors to plan, schedule, manage and control their construction projects. He is an expert in the implementation and use of Oracle-Primavera's scheduling software (P3 and P6), and document control software (Contract Management - formerly Expedition). Using his knowledge and expertise he effectively installs, implements, trains, develops, reviews, approves, and analyzes CPM schedules, and manages processes and methodologies for cost control and document control on construction projects. The following representative listing of *Transportation Industry Projects – Transit, Highways and Bridges, and Airports*:

- Charlotte Area Transit System (CATS) – South Corridor Light Rail System (Charlotte, NC)
- New Jersey Transit (NJTransit) – Portal Bridge Implementation
- New Jersey Turnpike Authority (NJTA) – Interchange 8
- New Jersey Turnpike Authority (NJTA) – Steel Gusset Plate Repairs
- Southeastern Pennsylvania Transportation Authority (SEPTA) – 69th Street Multi-Modal Substation
- Southeastern Pennsylvania Transportation Authority (SEPTA) – Automatic Train Control Project
- Southeastern Pennsylvania Transportation Authority (SEPTA) – Gwynedd Station
- Southeastern Pennsylvania Transportation Authority (SEPTA) – Railroad Operations Control Center
- Southeastern Pennsylvania Transportation Authority (SEPTA) – Stimulus Projects

SEPTA, Philadelphia, PA

June 1988 – July 1997

Resource Controller / Force Account Analyst

Organized and analyzed all data for Operating and Capital grant expenditures relevant to all projects. Reviewed and evaluated annual budget requests for Operating and Capital Budgets. Served as Line Maintenance back-up LAN Administrator. Supported the implementation of a new remote Citrix server during fiscal year 95. Provided Project Management support for Line Maintenance Operating and Capital project, including project supervision, equipment support, research and surveying project work zones, and documentation. Purchased all stock material for each Fiscal Year. Mr. Campbell worked on the Frankford Elevated Reconstruction Project for the Engineering/Construction Department.

Anthony L. Duca, PMP

(Continued)

Mr. Duca is a Senior Consultant and provides expert training, project controls and CPM scheduling services to clients for Envision Consultants, Ltd. (Envision). He has over eight years of specialized experience in the design, development, and delivery of advanced Primavera Project Management Software training services. Mr. Duca previously was a Training Consultant for Primavera Systems, Inc., the actual developer of the project management software.

Mr. Duca is also a certified Project Management Professional (PMP) and he applies his diverse skills to develop concise CPM Schedules that are tailored to meet the specific needs of each project. Mr. Duca's unique advanced level of expertise in working with the software abundantly qualifies him to perform detailed schedule, cost, resources and risk assessments and analyses.

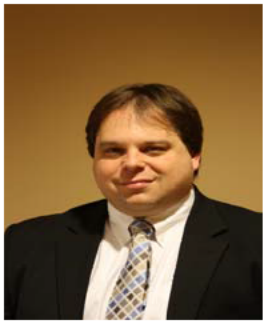
Mr. Duca's proficiencies in training, information technology, technical support, customer service, and project management, allows him the ability to install, implement, teach, and actually develop CPM schedules for complex construction projects.

Project Experience

Envision Consultants Ltd., Mullica Hill, NJ (2008 – Present)

Senior Consultant / Training and Project Controls

Mr. Duca's duties include the development of detailed project and construction CPM schedules, along with expert consulting and training services relative to the implementation and use of Primavera Project Management Software. His additional responsibilities include creating and delivering customized training courses according to the needs of each client, developing and delivering project management seminars, along with the implementing and administrating detailed construction schedules.



Credentials

Education:

Construction Management Certificate
NJIT, 2009
B.S., Education
West Chester University, 1994

Professional Registrations:

Project Management Professional (PMP)
Oracle Primavera Certified Trainer/Consultant

Computer Skills:

Primavera Project Planner (P3, P6, Web, Contractor);
SureTrak; Expedition (Contract Management);
MS Office; MS Project

Professional Affiliations:

Project Management Institute

Anthony L. Duca, PMP

(Continued)

Primavera Systems, Inc., Bala Cynwyd, PA (July 2002 – February 2008)

March 2004 – February 2008

Training Consultant

Mr. Duca provided training to customers and company personnel in the use of project management software including SureTrak, P3, P3e, P3e/c, TeamPlay, MyPrimavera, and Primavera Contractor both on-site and at customer sites. He consulted with customers to resolve specific issues or assist with the creation of project plans. Collaborated as a subject matter expert on the creation of new training manuals and web based training (WBT's). He negotiated with clients to identify training requirements and create custom courses to fit customer's desired specifications. He conducted Primavera Authorized 'Train the Trainer' boot camps, proctored Primavera Authorized Tests, provided support to Primavera Authorized Trainers and presented training seminars at the Primavera Annual Conference.

July 2002 – March 2004

Technical Support Representative

Mr. Duca accepted incoming calls from customers and Primavera Authorized Resellers, verified customer data and entitlement information in Onyx, and added and updated new or existing records according to system business rules. He created support incidents for all incoming technical support calls, including, but not limited to serial number, product, version of the product and brief description of each customer's issue.

Yoh Support Services, AstraZeneca Pharmaceuticals, King of Prussia, PA (February 1999 – July 2002)

Help Desk Analyst to Installation Developer

CompUSA, Mount Laurel, NJ (September 1997 – February 1999)

Lead Computer Instructor / Computer Instructor

Keith Skilling, PE, PMP, PSP, Scheduler

Career Profile

Mr. Skilling has more than 28 years experience in the control of project cost and schedules on the design, construction and management of civil, infrastructure, transportation, and commercial projects valued between $35 million and $1.2 billion. He is skilled in developing and implementing project control systems and supervising cost/schedule engineers. His experience includes project and field cost reporting, trend analysis, change control, engineering and construction progress measurement, planning and scheduling, and resource optimization. He is experienced in one-on-one management of contractor claims, negotiation of dispute resolutions, and audits of field progress. He is competent in the creation and use of various spreadsheet and database programs, with particular emphasis on creating simple, user-friendly methods to effect the seamless transfer of data between project participants.

Project Experience

- **New York State Metropolitan Transportation Authority (MTA), New York, NY**
  Senior Project Controls Manager for the Program/Project Oversight for various MTA Agencies: Metro North Railroad, Long Island Railroad and Capital Construction. Responsibilities include: periodic site visits, attendance at project meetings; interviews with key agency personnel, consultants and contractors; review of project budgets and schedules; review of project documents; and preparation of various project monitoring reports for the MTA Capital Program Oversight Committee. Highlighted projects include: Centralized Train Control, Power Substations (MNR), Traction Power Supervisory Control and Data Acquisition (SCADA), Fiber Optic Communication Network, Audio Visual Paging System, Power Substations (LIRR).
- **Times Square Subway Station Renovation, New York, NY**
  Provided cost and schedule controls during design management phase of renovation of the subway station as part of the 42nd Street Development Project in New York City. Set up budgets and cost accounts which showed clearly the financial responsibilities of the different public and private sector participants to the project.
- **New Jersey Transit, Montclair Connection, Montclair, NJ**
  Project Controls Engineer for the upgrade and rerouting of an existing 6-mile commuter rail line. Established a method of incorporating the contractor's construction progress into the project master schedule in such a way that the contractor's data was not compromised. Reported on delays, possible problems arising from subsidiary critical paths, and budgets. Verified contractor's progress payments using earned value analysis. Prepared monthly project controls reports.

Education

BS, Civil Engineering, University of Edinburgh

Diploma in Construction Management , New York University

Keith Skilling, PE, PMP, PSP, Scheduler

- **Newark Airport Monorail, Newark, NJ**
  Project Controls Engineer for new inter-modal connection between the airport and the Northeast corridor of Amtrak/New Jersey Transit. A second part of the project was the upgrade and retrofit of the existing airport terminal monorail system. Provided field review of progress for multi-contractor operation and prepared weekly schedule updates to each showing the production rates required to meet an imposed client deadline.
- **Norfolk Light Rail, Norfolk, VA**
  Senior Project Controls Manager for 7.4 mile light rail project which extends from the Eastern Virginia Medical Center through downtown Norfolk along the I-264 corridor to Newtown Road within the city of Norfolk. The project includes the construction of eleven stations along the alignment with four park and ride locations that provide access to the system in major areas such as Norfolk State University, Harbor Park, City Hall, MacArthur Center, Tidewater Community College and the Sentara Norfolk General Hospital. When completed in 2010, the systems is expected to carry approximately 11,500 people per day.

Additional Qualifications

- Professional Engineer (PE), New York
- Project Management Professional (PMP), Project Management Institute
- Certificate in Construction Site Safety, New York Bldg. & Construction Industry
- Founder, Project Management division, New York P.C. Users Group
- Member, Project Management Institute
- Contributor to 2000 edition of the Project Management Book of Knowledge and WBS standard

Career Experience

Taylor Woodrow Intl.	1976 - 1978
Hani Vontracting Company	1978 - 1981
The Galbreth Company	1981 - 1987
AMEC Inc.	1987 - 1990
Urban Development Corporation	1991 - 1992
PriceWaterhouseCoopers	1993 - 1996
Park Terrace GDNS, Inc.	1996 - 1997
Hill International Inc.	1997 - 1998
Skanska Construction Company	1998
URS Corp.	1999 - 2003
New York University	2000
PACO Group	2003 - 2008
McKissack & McKissack	2008 - Present

Paul T. Giangreco, PE

Project Manager

Paul T. Giangreco has more than 30 years of project management and civil engineering experience, including expertise in contract dispute and claims resolution. Mr. Giangreco's project experience includes light rail transit, subways, and nuclear power plants. He is adept at communicating issues and ideas to senior management, funding and oversight agencies, and to other outside parties, including appearances at public hearings. He has presented seminars in automatic train supervision. Mr. Giangreco's specialized computer software skills include Primavera Expedition and Primavera P3.

The Port Authority of New York and New Jersey, Downtown Restoration Program, World Trace Center Reconstruction, New York, New York

Hill International is providing cost and scheduling support to the World Trade Center Reconstruction project. Serving as Cost Engineer in the Cost Management and Controls Unit, Mr. Giangreco is responsible for all cost-related issues on several major elements of the overall $8.5 billion construction. The elements of the overall program assigned to him include the Vehicular Security Center, Central Chiller Plant, Tour Bus Parking Facility (Phase II), West Basement Vehicle Access Facility, and selected sub-packages of the Transit Hub. His responsibilities include development, review, and reconciliation of in-house and external cost estimates; construction change order negotiation and review; budget and procurement tracking; and reporting of cost data to the funding agencies, including the Federal Transportation Administration.

Prior Experience:

Newark City Subway Accessibility Improvement Project, Newark Penn Station, New Jersey

Mr. Giangreco provided overall management of all aspects of the execution of this $8 million capital project which is restoring various historic elements of this 70 year old station while simultaneously adding four elevators and two escalators and while the station is in use. His responsibilities included project execution, pricing, scheduling, contract administration, quality assurance and safety. He also served as primary contact with the station owner, New Jersey Transit.

New Jersey Transit (NJT), Southern New Jersey Light Rail Transit System Project, Riverside, New Jersey

Serving as Construction Manager on a $440 million line connecting Camden to Trenton, Mr. Giangreco supervised project estimators and schedulers and drafted scopes of work for additional work orders initiated by the owners. He participated in weekly strategy sessions with NJT managers in advance of

Education:

M.S., Civil Engineering, Polytechnic University, New York, 1977

B.E., Civil Engineering, Cooper Union, New York, 1974

Registrations:
Professional Engineer, NY

Awards/Honors:
Heroism and Bravery in the Face of Extreme Danger. Received an award from the New York City Transit Authority for intervening in a robbery attempt of an ATM user in the World Trade Center Concourse. Apprehended the robber for arrest by police.

Seminars:
Automatic Train Supervision to New York City Transit's System, New York City Transit Authority, November 3, 1995, New York, New York, Chaired and Led Discussion of the project.

Employment History:
American Electric Power, 1974-1977

Stone and Webster Engineering Corporation, 1977-1985

Gibbs and Hill Inc., 1986-1987

NYC Transit Authority, 1987-2001

Burns and Roe Enterprises, 2001-2002

DMJM and Harris, 2002-2004

Volmar Construction Co., 2004-2006

Hill International, Inc., 2006-Present

change order negotiations with design/build firm, as well as biweekly project management team meetings among the major project stakeholders.

Engineering and Construction Firm, Various Projects, Oradell, New Jersey

Working in the firm's Infrastructure Division, Mr. Giangreco managed multi-discipline design efforts on client projects and task orders, including the ongoing Engineering Services Contract with New Jersey Transit. Mr. Giangreco was responsible for all aspects of project execution and profitability, including schedule adherence, man-hour expenditure rates, progress payments, and change order negotiation and execution. He also managed business development efforts to secure additional client design contracts and task orders and prepared responses to Request for Proposals on design/build efforts, specializing in builders of mass transit facilities.

New York City Transit Authority, Department of Capital Program Management, Various Projects, New York

Mr. Giangreco was responsible for the execution of major capital improvement projects with individual values up to $150 million. He managed a staff of 25 construction inspection professionals covering every aspect of contractor field activities through project execution. Projects supervised by Mr. Giangreco included structural rehabilitation of entire transit lines, station and signal modernization, bus depot construction and environmental projects, including underground storage tank projects and asbestos abatement. He was responsible for all aspects of project performance, supervised quality of construction, schedule maintenance and monitoring, budgetary control, safety, contractor and consultant progress and payments, field conditions and change orders, regulatory compliance, and coordination with in-house operations.

Pennsylvania Power and Light, Susquehanna Nuclear Station

Mr. Giangreco managed a multi-discipline site staff of 40 engineers and designers performing field design for the addition of an emergency diesel generator facility at Pennsylvania Power and Light's Susquehanna Nuclear Station.

Engineering Firm, Various Nuclear Power Plant Projects, Cherry Hill, New Jersey

Mr. Giangreco performed a variety of project management, contract administration and technical functions for two turnkey nuclear power plants. He developed a commodity-based method of tracking and reporting project percent complete and investigated and responded to client audit findings, including the development of corrective actions.

David H. Coffield, PE

Project Manager / Construction Manager / Project Engineer

David H. Coffield, a Professional Engineer, has more than 30 years of experience providing project oversight, program management, value engineering, construction management, claims resolution, and arbitration services on complex projects for public agencies, private owners, architect-engineers, design-builders and contractors. His experience includes convention center, performing arts, hotels and casino facilities; prison, school, hospital, laboratory and pharmaceutical facilities; airport, rail, bus highway and turnpike, parking garage and firehouse facilities; rolling stock manufacturing, nuclear and fossil fuel power plants, synthetic fuel, and lock and dam facilities; water/wastewater treatment; secure communications; light manufacturing; high-rise building renovation; and deep exploration drilling for geothermal energy, oil, and gas.

Recent and Relevant Experience

Various Project Assignments, Port Authority of New York and New Jersey.
Mr. Coffield provided project management consulting services for the Authority's 300-person Engineering Department, including:

- He developed a Department-wide upgrading of Value Engineering (VE) and cost estimating procedures, as well as other related technology initiatives to address the multiple stages of project design development. He led Hill's team which also performed cost estimating, VE workshops, and constructability and bidability reviews for several major projects, including a $90 million parking facility and monorail station expansion at Newark International Airport; and the $25 million Battery Park City Ferry Terminal. He was also the VE facilitator for a 50-person multi-agency peer review to reduce the schedule and budget for the $150 million AirTrain Terminal at Jamaica Station project linking the station with JFK International Airport.
- He supervised several Hill project managers providing services to upgrade the Port Authority's major bridge and aviation facilities, electronic toll collection operations, and its corporate maintenance management system.
- Following the September 11, 2001 attack on the World Trade Center, Mr. Coffield helped the Port Authority manage technical reviews to facilitate restoration of Port Authority Trans-Hudson (PATH) rail service to Lower Manhattan. He also helped facilitate multi-divisional feasibility reviews of alternative locations and designs for a new permanent PATH station and multi-modal transit hub in the World Trade Center area.

Education:

M.S. Civil Engineering - Construction Engineering Mgmt. Oregon State University 1978

B.S. General Engineering Oregon State University 1974

B.S. Geology Oregon State University 1974

Registrations:

LEED Accredited Professional

Professional Memberships

American Arbitration Association

Publications

"Value Engineering - A Guaranteed Investment " (American Society of Civil Engineers 1989)

Employment History:

Exploration Logging Inc. 1974-1975

Oregon State Board of Higher Education 1975-1977

Bechtel Power Corporation 1977-1979

MDC Systems Corporation 1979-1983

Contract Management Corporation 1983-1984

Hill International Inc. 1984-Present

U.S. Supreme Court (USSC) Modernization Project, Architect of the Capitol (AOC), Senior Consultant .

Hill International was selected as the Construction Manager. Mr. Coffield was brought into this project at approximately 25% complete to implement necessary improvements in the quality assurance and claims mitigation process, as the project had been impacted by extensive undisclosed abatement requirements, scope changes, and other existing conditions, which had delayed the project and challenged the project team. His involvement improved the QA/QC process, enhanced cooperation between the contractor and owner's representatives, and helped to get the project back on track.

Thomas Dudley School, Camden, New Jersey, New Jersey Schools Development Authority (NJSDA), (formerly NJSCC), Construction Manager.

Mr. Coffield serves as Construction Manager for this $21.6 million project for an 88,280 square foot, new 2-story elementary school with a full size gymnasium, cafeteria, and auditorium.

H.B. Wilson Elementary School, Camden, New Jersey, New Jersey School Development Authority (NJSDA), Project Manager.

Hill International was retained by the NJSDA to provide construction phase construction management services for this new $22 million school. Mr. Coffield provided site construction management consulting services to help the NJSDA resolve a number of environmental and differing site conditions challenges that were impacting the construction process.

Woodbridge Township Schools Program, Woodbridge Township School District, Woodbridge, New Jersey, Project Manager.

Hill International was retained as the construction manager for the 25 school construction projects under the Woodbridge Township Schools Program, which included 6 new additions and 19 renovation projects. Mr. Coffield implemented a quality assurance program in advance of inspection by the Township code officials. The quality assurance program also included five renovation projects, which included 2 middle schools and 3 elementary schools.

Frederick P. Rose Hall, Jazz at Lincoln Center, New York City Department of Design and Construction, Cultural Institutions Unit.

Mr. Coffield was Hill's Senior Project Manager for a multi-discipline team of consultants providing management oversight of scope/design, budget, costs and quality, and grant administration services as the Project Representative. The jazz facility is built within a specially isolated structural shell within the new $1.6 billion, 2.5 million square foot Time Warner twin tower complex of corporate offices, retail, restaurant, hotel, and condominium facilities at Columbus Circle.

New York State Psychiatric Institute, Dormitory Authority of the State of New York (DASNY), New York City, New York.

The Institute is engaged in research programs including submolecular research, and the effects of drugs on living cells, genetics, and mental illness. Hill provided construction management services during the design and construction of the new 342,000-SF facility in Upper Manhattan which houses extensive research, patient care and student residency. During the construction phase, Mr. Coffield performed analyses of merit and costs associated with numerous design changes affecting the trade contractors, in order to maintain project momentum.

Key Staff

The HMM Team has assembled a project team that is composed of highly-qualified professionals who possess extensive project and program experience, strong leadership, and sound technical expertise. All of the proposed key staff have extensive program management, design, and/or construction-related experience for aviation, tunnels, bridges, terminals, marine, rail, and transit projects; managed large-scale transit projects encompassing multi-disciplinary engineering elements; and managed work similar in nature. In addition to the PANYNJ, this Team of key program management professionals has performed similar services to many of the nation's transit agencies. Each individual has a strong understanding of the various technical aspects of designing and constructing efficiently, while meeting the clients' project-specific requirements. The project staff will be managed from our Manhattan office located in Midtown. Additional resources are available from our vast resources of over 60 offices across North America, including Jersey City and Milburn, NJ. Our **Project Principal, Roland Ericsson** is committed to providing corporate support to the HMM Team. Roland will ensure that adequate resources are made available to meet technical and schedule requirements for the assignments. As Project Principal, Roland is responsible for overall quality assurance and contract compliance.

The HMM Team's key staff are individuals who are experienced in all aspects of planning, designing, and construction of transportation systems. Their significant experience of transit projects ensures the PANYNJ superior quality throughout all phases of the program. Additionally, our key staff is available immediately to work on any assignment, and have the technical expertise to quickly implement the necessary tracking systems to control the budget and schedule. The organizational chart shows the key staff and the following paragraph provides a brief synopsis of our key staff experience.

Program Manager, Mr. Bradford Townsend, PE, will ensure that all aspects of the project are smoothly integrated, that the project is on track in terms of budget, schedule, and quality deliverables, and that the team has the resources to get the job done. Mr. Townsend has led projects and programs that have exceeded the $100 million construction value, a few examples are highlighted below and the details are provided in his resume.

- **Transbay Transit Center, Transbay Joint Powers Authority, San Francisco, CA, $4.2B**
- **Taiwan High Speed Rail Project, Taiwan High Speed Rail Corporation, Taipei, Taiwan, $5.3B**
- **Hai Van Pass Tunnel Construction Project, Ministry of Transportation, Da Nang, Vietnam, $133M**

Project/Program Manager of Tunnels, Mr. Andy Thompson, PE. Mr. Thompson has extensive experience in the program/construction management, design management, and contract administration of underground facilities for water, wastewater, and transportation projects. He has project experience in a range of tunneling and shaft-sinking methods, including TBMs (hard rock, EPB and slurry), raise boring, drill, and blast and roadheader/mechanical excavation such as:

- **East Side Access Project, Metropolitan Transportation Authority Capital Construction, New York, NY, $7.3B**

Project/Program Manager of Rail Facilities, Mr. Frank Facciolo, PE. Mr. Facciolo has been senior manager and engineer for traditional designs, design-build (fast track projects), construction management, and on-call service contracts. He brings over 22 years of experience in infrastructure, transportation, and design-build related projects. Frank's experience ranges from planning through final design phases to construction support services and construction management projects. A few examples of projects in the $100 million area are:

- **Conceptual to Final Design for Hudson Line Station Rehabilitation, Metro-North Railroad, Westchester County, NY, $100M**
- **Yankee Stadium Station, MTA Metro-North, Bronx, NY, $100M**
- **Design-Build of Mother Clara Hale Bus Depot, Metropolitan Transportation Authority, New York City Transit, New York, NY, $220M**

Project/Program Manager of Marine, Mr. Erik Stromberg, PE. Mr. Stromberg is a Port industry leader with proven abilities in port authority and port industry leadership and management, program management, strategic and business planning, organizational development, and communication. His experiences with projects over $100M include:

- **Marine Terminal Capital Development Program for North Carolina State Ports Authority, Wilmington, NC $130M**
- **Cape Fear River Channel Capital Development Program for North Carolina State Ports Authority, Wilmington, NC, $440M**

Project/Program Manager of Terminals and Vertical Construction, Mr. James Mortimer, PE. James J. Mortimer, a Professional Engineer, has over 30 years of experience in the construction industry. Mr. Mortimer has served as vice president, project manager, program manager, and resident engineer managing projects, which have included correctional, educational, transportation, museums and zoos, theaters, healthcare, housing, and industrial facilities. He has extensive experience as a construction supervisor and is knowledgeable in the area of contract administration. His experiences with projects over $100M include;

- **World Trade Center Path Station Reconstruction, PA/NY&NJ, New York, New York, $12B**
- **Insurance and FEMA Claims – WTC Facilities, PANYNJ, New York, New York, $1B**

Project/Program Manager of Aviation, Mr. Andrew Linder, PE. Mr. Linder has over 28 years of diverse experience in aviation, site development, surface transportation, and security projects in the public and private sector. He has been involved with both domestic and international projects. His experience involves various aspects of program and project management, as well as the planning, design, and construction of multi-discipline transportation and infrastructure projects with construction values well above $100M.

- **Los Angeles International Airport (LAX), Los Angeles World Airports, Los Angeles, CA, $5.3B**
- **John F. Kennedy International Airport (JFK), JFKIAT LLC, Queens, NY, $800M**

SUPPORT STAFF

To complement our key staff extensive technical capabilities, HMM has a cadre of highly-skilled support professionals with a variety of experience to include programming, planning, design, pre-construction, construction, and post-construction services. Their impeccable credentials, previous transit-related expertise, and demonstrated technical ability to complete any task-specific requirement will further ensure PANYNJ a successful program. Additionally, our support staff either meets and/or exceeds the requirements of their assigned position. HMM's plan is to exceed all the expectations of quality, safety, cost, and schedule with our depth of support resources

We will bring this experience to the PANYNJ in support of the Project/Program Management Consultant Services contract. Thus, the composition of our team will guarantee the PANYNJ:

- Clear lines of communication and a single point-of-contact
- A unified team with clear defined roles operating under the direction of one key manager
- Appointment of skilled program management professionals assuring strong and consistent project direction
- A structure that permits flexibility in team responses to changing project demands, without losing sight of the overall goals
- Exceeding the M/DBE subcontracting goals

Additional engineering staff is identified on the organization chart, to fulfill Task Orders for studies, drafting and design, inspection services, cost estimating, scheduling, and construction support services. The HMM Team has also identified key staff to cover project controls, scheduling, and quality control.

Table C.3

Name	Title	Programs/Projects > $100M Construction Value
Bradford Townsend, PE	Program Manager	Transbay Transit Center, Transbay Joint Powers Authority, San Francisco, CA, $4.2B Taiwan High Speed Rail Project, Taiwan High Speed Rail Corporation, Taipei, Taiwan, $5.3B Hai Van Pass Tunnel Construction Project, Ministry of Transportation, Da Nang, Vietnam, $133M
Andrew Linder, PE	Project/Program Manager Aviation	Los Angeles International Airport (LAX), Los Angeles World Airports, Los Angeles, CA, $5.3B John F. Kennedy International Airport (JFK), JFKIAT LLC, Queens, NY, $800M
Andrew Thompson, PE	Project/Program Manager Tunnels, Bridges,	East Side Access Project, Metropolitan Transportation Authority Capital Construction, New York, NY, $7.3B
Erik Stromberg	Project/Program Manager Port Commerce	Marine Terminal Capital Development Program for North Carolina State Ports Authority, Wilmington, NC $130M Cape Fear River Channel Capital Development Program for North Carolina State Ports Authority, Wilmington, NC, $440M
Frank Facciolo, PE	Project/Program Manager Path	Conceptual to Final Design for Hudson Line Station Rehabilitation, Metro-North Railroad, Westchester County, NY, $100M Design-Build of Mother Clara Hale Bus Depot, Metropolitan Transportation Authority, New York City Transit, New York, NY, $220M Yankee Stadium Station, MTA Metro-North, Bronx, NY, $100M
James Mortimer, PE	Project/Program Manager WTC	World Trade Center Path Station Reconstruction, PA/NY&NJ, New York, New York, $12B Insurance and FEMA Claims – WTC Facilities, PANYNJ, New York, New York, $1B

Relevant Experience

Section D.

LAX Modernization Program

Location
Los Angeles, CA

Client
Los Angeles World Airports (LAWA)

Project Type
Airport Design

Services
Tunnel Engineering, Utility and Utility Relocation Design, hydrant fueling, Utility Plant Design, Taxiway, Taxilane, Apron Engineering, Airfield Lighting, Signage, PBB's

Duration
2008 – 2014

Construction Cost
$5 billion

Reference
Jake Adams
Airfield Element Manager
Los Angeles World Airports
[redacted]

Project Description

Los Angeles World Airports (LAWA) is reshaping LAX to meet the needs of the future. To meet this goal, the $5 billion LAX Modernization Program will increase passenger comfort, travel efficiency, safety and security for the current and projected flight capacity levels at the airport, and includes the design of the new Midfield Satellite Concourse (MSC) and the expansion of the international terminal (TBIT). The program aims to provide for unrestricted operations of future large aircraft to maximize the economic and environmental benefits of these technologies through reduced fuel consumption and decreased emissions. Key components of this expansion are providing contact gates for international carriers in time for the scheduled implementation of Group VI aircraft that include the A380, B787, and B747-8, as well as passenger, baggage and utility connector tunnel(s) between MSC and TBIT.

HMM Role

Hatch Mott MacDonald is the lead civil engineer for the Bradley West Development Program, and one of the prime consultants on LAWA's Engineering Services Team providing engineering design and planning services for taxiways, taxiway bridges, tunnels, aprons, and utility improvements for the new Midfield Satellite Concourse (MSC), the existing Tom Bradley International Terminal (TBIT) expansion, underground utilities and the central utility plant, and other related projects. As the prime consultant of LAWA's Engineering Services team, we are providing airfield and tunnel engineering, structural design of taxiway and service road bridges, utility and utility relocation design, hydrant fueling, utility plant design, people mover systems, and other specialty engineering services including civil, structural, mechanical, electrical, communications, security and other engineering-related design services, assistance during construction procurement, design assistance during construction, and other services including site surveys, environmental, geotechnical, archeological and other related services. All work is carefully integrated with all stakeholders through design partnering and configuration management. The overall project is schedule-driven and implemented by awarding a series of separate construction packages.

Highlights

- Four Group VI aircraft parking aprons totaling 330,000 sq. yards
- Connector pavements, bridges and extensions to tie into existing Taxiways D, E, and C
- Two 2,500 ft. taxiways connecting the north and south airfields
- Two 2,500 ft. taxi lanes servicing International Terminal and Mid Field Concourse
- Utility and Baggage Tunnel(s) between TBIT, and the new terminal processor
- Replacement of Central Terminal Area utility lines from the CUP to eight terminals
- Design of a new central utility plant (CUP) with connections to existing and new utilities
- Decommissioning, relocation of hangars, ARFF, Passenger Bus Terminal
- New apron fueling system for TBIT
- Design for eight bay Aircraft Rescue and Fire Fighting Facility

LAX Modernization Program – Tunnels

Location
Los Angeles, CA

Client
Los Angeles World Airports (LAWA)

Project Type
Airport Design - Tunnels

Services
Tunnels and Retaining Structures Engineering; Utility & Utility Relocation Design

Duration
2008 – 2014

Construction Cost
$5 billion

Reference
Jake Adams
Airfield Element Manager
Los Angeles World Airports
[redacted]

Project Description

Los Angeles International Airport (LAX) is being redeveloped to accommodate a greater number of larger aircraft, such as the A380 and B747-8. Los Angeles World Airports (LAWA) is investing $5 billion in a modernization program that will increase passenger comfort, travel efficiency, safety, and security for the current and projected flight capacity levels at the airport. Under an FAA-approved Airport Layout Plan, utilities are being rerouted by means of trenchless excavation ahead of a series of phased airfield infrastructure improvement projects: the Crossfield Taxiway Project (CFTP); the Tom Bradley International Terminal (TBIT) Reconfiguration Project; and the new Midfield Satellite Concourse (MSC).

Construction of the utility crossings includes steel casings installed through excavation methods such as guided auger boring, auger boring, and open-shield pipe jacking. Carrier pipes for power, communications, jet fuel, storm drains, fire water, and domestic water are subsequently installed into the various casings and grouted into place if required.

HMM Role

As one of the prime consultants on LAWA's engineering, planning and design services contract, Hatch Mott MacDonald is providing airside civil engineering design and construction support services which include tunnel engineering design and field inspection, surveying and subsurface investigations; airfield pavement engineering; structural design of taxiway and vehicle service road bridges, and utility plant and relocation design. Additional services include civil, structural, mechanical, electrical, communications, security, environmental, life safety considerations, and other engineering-related design services; bid phase services; design services during construction; and sustainability guidelines documentation.

Highlights

- Planning and preliminary design of tunnels ranging from 18 inches to 78 inches in diameter under the airfield for future baggage handling system and for utility distribution
- Four tunnels installed underneath the active TBIT building with foundation clearances as small as seven feet
- Six tunnels installed underneath active taxiways
- Guided auger boring, auger boring, and open-shield pipe jacking
- Shafts constructed by a variety of methods including soldier piles and steel sheets, wood lagging, and trench shields
- Phased construction to minimize impacts on airport operations, while maintaining tenant access along World Way West
- Design of all structures to the strictest California Code Seismic Criteria
- Obtaining permits from numerous governmental agencies

Transbay Transit Center Program

Location
San Francisco, CA

Client
Transbay Joint Powers Authority (TJPA)

Project Type
Rail Tunnel, Underground Station, Rail Yard Expansion

Services
Program Management
Project Controls

Duration
2004 – 2018

Construction Cost
$4.2 billion

Reference
Maria Ayerdi-Kaplan
Executive Director
Transbay Joint Power Authority
[redacted]

Project Description

The $4.2 billion Transbay Transit Center Program is a landmark transportation project for the San Francisco Bay Area. Housing nine bus and rail systems in one facility in downtown San Francisco, the new Transit Center will be the largest transit-integrating, intermodal center west of New York City.

The program includes the design, construction and operation of a new 1 million-square-ft building composed of five interior levels and a 5.4-acre rooftop park. The design will reflect the program's sustainability goals of reducing energy consumption and carbon emissions and conserving water, making maximum use of passive measures such as daylighting and natural ventilation. The park atop the building will be designed as a recreational amenity that will also absorb pollutants, filter grey water, and provide habitat for local plants and wildlife. The Transit Center is expected to achieve a minimum LEED rating of Silver.

Dedicated bus ramps from the bus level of the Transit Center will connect to the San Francisco-Oakland Bay Bridge and an off-site bus storage facility. A pedestrian tunnel under city streets will provide direct access to the Bay Area Rapid Transit (BART) and Muni Metro systems. A temporary bus terminal will be built to serve commuters during construction of the Transit Center. The project is located within San Francisco's Transbay redevelopment area, which when complete will include 3,400 units of new housing, 1.2 million square ft of new office space, a hotel, and retail outlets. A critical component of the program is the Caltrain Downtown Extension (DTX)-a 1.3-mile below-grade rail extension that will bring Caltrain service into the lower level of the Transit Center. Comprising a combination of mined and cut-and-cover tunnels and open-cut construction, the DTX project includes a new subsurface station near Fourth and Townsend streets, modifications to the existing Fourth and King surface station, and improvements to the Caltrain yard. The DTX is being designed to accommodate the trains that will run on California's future high-speed rail system, which will connect San Francisco to Los Angeles in just over two and a half hours.

HMM Role

Hatch Mott MacDonald is a sub-consultant and the program manager for the design, construction, testing and start-up of the DTX. Specific duties include monitoring design consultant progress in terms of budget and schedule; overseeing design development; reviewing design deliverables; analyzing contract procurement methods; and developing deliverables including the project cost estimate, contract packaging strategy, and design criteria. HMM is also providing review of design submittals to ensure the structure, rail and systems interfaces between the two projects are properly coordinated.

Project Highlights

- Led a value management effort early during conceptual design that resulted in a $600 million reduction in cost from the developed locally preferred alternative estimate.
- Developed a contract packaging strategy that will maximize the number of potential bidders, provide the most efficient use of funds, and achieve the earliest completion date to begin revenue service.
- Validated that the DTX design concept meets the standards set by high-speed train networks worldwide.
- Obtained the California Public Utilities Commission's concurrence on the proposed vehicle clearance requirements, saving the program millions of dollars in project costs.

SMF Terminal Modernization Program, Phase III

Location
Sacramento, CA

Client
County of Sacramento

Project Type
Airport Landside Services

Services
Preliminary and Final Design for Airside and Landside Services including Civil, Structural, Electrical, and Mechanical Engineering; and construction support services

Duration
2006 – 2009

Construction Cost
$1.2 billion

Reference
Brent Kelley
Project Principal
Corgan Associates
[redacted]

Graphic courtesy of Corgan Associates

Project Description

Sacramento International Airport (SMF) is one of the busiest hubs in the Central Valley. The SMF Master Plan was the first phase of the future vision of the airport and the final draft was approved by the Sacramento County Board of Supervisors in February 2004.

The Terminal Modernization Program was the second phase of this planning effort. It was developed to identify preliminary facilities requirements, terminal complex alternatives, evaluation of those alternatives, and the selection of a preferred terminal development concept. The preferred design concept for the new Central Terminal B was approved by the Board of Supervisors in September 2006. The third phase was final design, which was completed in 2009.

Construction is currently underway and includes a new terminal, a bi-level road serving arrivals, departures and airport services, an Automated People Mover to carry passengers from the new terminal to a 23-gate concourse, and airside Ground Services Equipment with new Passenger Boarding Bridges. Selected construction began in 2008 with an initial estimated cost of $1.1 billion, and roadway and viaduct construction began in 2009.

Phasing/Staging: The new terminal complex will be constructed between existing Terminals A and B. During construction, access to existing terminals needs to be maintained. The access road to Terminal B is within the limits of construction, so a staged approach will be required. There will be a period where three terminals are open while airlines are transferring operations between terminals.

HMM Role

As civil consultant, HMM has executed the Design Development and Final Design Phases of the SMF Terminal Modernization Plan in the following role:

- APM structures and interface with APM procurement consultant
- Ancillary roadways (access and circulation roads)
- Terminal roadways - arrivals level and upper level departure structure, one half mile long
- Passenger boarding bridges and ramp services; HVAC, fuel, and water

Project Highlights

- HMM's portion of the project was on schedule and within design budget
- Extensive construction phasing to assure the airport functionality during construction
- Fast track design integrating cost reduction techniques to meet construction target dates
- Significant elevation differential between new terminal origination and new concourse destination for the APM guideway
- Airside requirements to integrate fully with existing facilities using new technologies
- System designed to highlight glass enclosed three level terminal facility

Sheppard Subway

Location
Toronto, Ontario, Canada

Client
Toronto Transit Commission (TTC)

Project Type
Rail Transit

Services
Overall project management, design, construction mgmt.

Duration
Sept 1991 – Mar 2009
Revenue Service – 2002

Construction Cost
$934 million

Reference
John Sepulis
General Manager
Toronta Transit Commission
[redacted]

Project Description

Part of the original $5 billion rapid transit expansion program involving seven new lines plus the expansion of the existing Wilson Yard, the Sheppard Subway was the only line approved for implementation. The new 6.4km subway line, located in a high density urban environment, runs from the existing Sheppard Station on the Yonge subway line to Don Mills Road. It consists of 3.9km of 5.2m internal diameter bored twin tunnels, 1.5km of cut-and-cover tunnels, five new cut-and-cover stations, complex traffic staging and associated utility relocations, and rail systems.

HMM Role

HMM, as a principal joint venture partner, was responsible for overall program management including funding, project controls, procurement and contract administration. HMM provided direction and guidance of the Environmental Assessment approvals; community consultation, liaison and outreach programs, design and construction management; third party, stakeholder and utility coordination; property and right-of-way; development of design standards and manuals as well as system standards; commissioning, start-up, safety certification and training; and design of systems elements (signaling, communication, power, track, fire/life safety systems). Scope of the finishing contract, post-opening involved developing as-built drawings and addressing any deficiencies.

Project Highlights

- Management, from environmental assessment through to construction, of in excess of 60 contract packages ranging up to $100m in construction value.
- Five cut-and-cover stations, 10 to 25 m deep, including an interchange station built over the existing operating subway.
- Enclosed subway bridge structure over a river valley.
- All construction had to be completed in existing built-up areas, requiring unique designs and construction methods to minimize the impacts on existing structures, infrastructure, traffic and local businesses.
- Structures designed to minimize impacts on existing utilities and traffic.
- Multi phase traffic diversions, maintaining existing six lanes of Yonge Street
- Major utility relocations
- Specifications and procurement for owner-purchased TBM's for the tunnels.
- Construction management of tunneling achieving on schedule on budget, on alignment tunnels with acceptable settlements.
- Stations included interfaces with commercial facilities and, in one case, a new multi story parking structure for a retail mall.
- Management of electrical, mechanical, trackwork, signaling, communication, traction power and other rail systems.
- Schedule, cost and construction management for all procurement and construction packages.

Spadina Subway Extension – Program Management

Location
Toronto/Vaughan, Ontario, Canada

Client
Toronto Transit Commission

Project Type
Rail Transit

Services
Program Management

Duration
2008 - 2015

Construction Cost
$2.63 billion

Reference
Andy Bertolo
TTC Chief Project Manager
[redacted]

Project Description

The Spadina Subway Extension is the largest transit expansion project to be undertaken by the TTC. Sponsored by three levels of government - Government of Canada, Province of Ontario and City of Toronto/York Region, the project is unique in that the TTC subway network will go beyond the City of Toronto limits for the first time and reach out to the neighbouring community in the Regional Municipality of York.

The existing Spadina Subway line will be extended by 8.6 km, including 6.7km of bored twin tunnels, and add six more stations, of which 2.4 km and two stations will be entirely in the Region of York. Another station will straddle the boundary between the two municipalities. Starting at the current Downsview terminal, the subway will progress north west through the York University campus, across Hwy 407 and end at Vaughan City Centre north of Hwy 7. The alignment crosses beneath several buildings, railway tracks, provincial highway and city arterial roads, major utilities, conservation areas and water courses.

HMM Role

HMM is working in an integrated team staffed by personnel from the Toronto Transit Commission, and is lead partner of the *Spadina Link Project Managers* (a joint venture of HMM, Delcan and MMM), and Stantec (Project Controls consultant). Reporting to the TTC's Chief Project Manager, the JV Team is managing the delivery of the design and construction of the project.

The Team is also performing the preliminary design of track and signals, traction power supply, communications and SCADA and the detailed design of the tunnel under separate contract.

Project Highlights

- Project funded by three levels of government.
- Very demanding design and construction schedule.
- Project to be delivered in six major construction contracts in the traditional design bid build delivery method:
  - Two tunnel contracts each incorporating a subway station
  - Four contracts for construction of the remaining four subway stations
- Several advance contracts for enabling works such as utilities relocations and road and creek diversions.
- Pre-purchase of concrete tunnel liner segments.
- Seven large design assignments for the tunnels and stations. Preliminary design and procurement for systems design , supply and installation of track, signals, electrification, communications and SCADA. Extensive consultation and liaison with internal and external stakeholders and approvals authorities.
- Permits and approvals from three levels of government, utility companies and public property owners.
- Property acquisition from public and private owners.

DRPT Program and Project Management

Location
Virginia

Client
Department of Rail and Public Transportation

Project Type
Program Management

Services
Conceptual and Preliminary Design, Planning, Program Management, Signal Design

Duration
Start date: 2007
End date: Unknown

Construction Cost
$N/A

Construction Completion Date
Ongoing

Project Description

Virginia's Department of Rail and Public Transportation (DRPT) reorganized itself to transition from a pure granting agency to a multi-disciplined program delivery organization. To provide the full range of services required, DRPT sought the expertise of a transportation consultant to supplement DRPT's in-house staff's capabilities.

HMM Role

As part of the Virginia Department of Rail and Public Transportation (DRPT) Program and Project Management Consultant Services, Hatch Mott MacDonald (HMM) has led the preliminary design efforts for the Lynchburg Virginia Kemper Street Station improvements and the Richmond Virginia Staples Mill Station improvements. These improvements include additional track for train storage, power, compressed air, potable water, sanity sewer connections, platforms, lighting, and crew facilities. We are overseeing the final design of these facilities as well as working with DRPT planning efforts for additional Amtrak improvements or new stations for several Virginia Cities as part of the comprehensive Virginia Rail Plan. This comprehensive Virginia Rail Plan includes intrastate Amtrak trains funded by the State of Virginia.

Highlights

Under the PPMC contract HMM has performed the following activities:

- Develop a Statewide Rail Plan
- Performed an evaluation of all the Shortline Railroads in Virginia
- Performed Preliminary Engineering for the Urban Crescent Corridor
- Updated the three major Grant program processes.
- Performed an EA to select the preferred High Speed Rail in Richmond area.
- Coordinated the activities of local governments with Amtrak and FRA
- Developed the program costs for a $757M inter-city passenger rail enhancement program
- Modeled operations on the I-95/I-64 Rail Corridor
- Project readiness review of the Dulles Metro Rail Extension Project
- Signal Design for 22 miles of branchline railroad
- Performed Preliminary Engineering for the Kemper Street (Lynchburg) and Staples Mill (Richmond) Amtrak Station Improvements
- Working with Amtrak for additional stations and improvements contained in the State Rail Plan

GO Transit Rail Improvement Program

Location
Toronto, ON

Client
GO Transit

Project Type
Rail / Transit

Services
Program Management

Duration
2003 - 2010

Construction Cost
$700 million

Project Description

GO Transit Rail Improvement Program (GO TRIP) is based on a tri-party agreement between the Federal and Provincial governments and GO Transit with the purpose of meeting GO Transit's current and future demand from the GTA communities along six of its seven rail corridors. GO TRIP involves track improvements, replacement and addition; rail / rail grade separations, rail / road crossing improvements; and associated signal and control work. The program is funded by three levels of government through the Canada Strategic Infrastructure Fund (CSIF) and is made up of:

- Lakeshore East expansion
- Lakeshore West expansion
- Bradford rail corridor extension to Barrie including grade separation at Snider
- Georgetown corridor improvements including West Toronto diamond
- Milton corridor improvements.
- Stouffville rail corridor improvement including Hagerman grade separation

HMM Role

Acres (now part of HMM) in joint a venture with two Toronto-based consulting firms were awarded this contract. The staff assigned to the project are now part of HMM. For this long-term contract, HMM is specifically responsible for overall program management services and working closely with GO Transit's staff. The JV team is responsible for developing an overall service implementation program based on identified needs, technical services including the development of alternative schemes and phasing to achieve program objectives, and overall project management and contract administration of consultant assignments for design of specific program components. Specific services include:

- Work and implementation plan and general program administration
- Development of program policies, procedures and standards
- Communication, information distribution and retrieval
- Program reporting, document control / retrieval, estimating, budgeting and cost control
- Program scope and change control; program scheduling
- Design and construction monitoring and oversight
- Risk assessment, value engineering and quality management
- Evaluation, negotiation and award of consulting and construction contracts
- Reporting detail to support ongoing financial commitments
- Close coordination with CN and / or CP Rail, owners of most of the corridors being improved

Project Highlights

"Project started by Acres staff prior to joining Hatch Mott MacDonald group of companies."

- Introduction of major design-build contracts to GO Transit procurement
- Managing interests of four levels of government: federal, provincial, municipal & regional
- Coordination of construction activities between railways (CN and CP Rail)
- Coordination of project funding among CSIF, Province and GO Transit
- Review of designs and construction methodologies to identification construction cost savings

Project Profiles

On the following pages we have provided in-depth project profiles that best exemplify our expertise and qualifications to meet the comprehensive challenges of the Authority's Project Management Services On-Call contract. In addition, for your convenience, we have tabulated the contact information below.

Project Name	Client Name	Contact	Phone Number
World Trade Center PATH Reconstruction (Phase I)	PANYNJ Engineering Department	Achille Niro Former Assistant Chief Engineer	[redacted] (Now with AECOM)
World Trade Center Reconstruction (Phase II)	PANYNJ WTC Construction	Carla Bonacci Deputy Director	212.435.5532
No. 7 Subway Line Extension	MTA	Paul Matthews, PE Construction Manager	[redacted]
Philadelphia International Airport Program Management	City of Philadelphia, Department of Commerce, Division of Aviation	Edward Anastasi Deputy Director of Business and Finance	[redacted]
MTA Capital Improvement Program	MTA	Michael Jew-Geralds Assistant Director Office of Construction Oversight	[redacted]
Project Management Oversight Services	U.S. Federal Transit Administration	Steve Asatoorian FTA Contracting Officer's Technical Representative	[redacted]
City Hall Renovations	New York City Department of Design and Construction	Sergio Silveira, RA Assistant Commissioner	[redacted]
Jet Blue Terminal, JFK Airport	JFK Airport PANYNJ Engineering Department	Emanuel A. Ciminiello Assistant Resident Engineer	7[redacted]
	OTG at JFK T5 Venture, LLC	Christopher Reed Vice President	[redacted]
Schomburg Center for Research in Black Culture	New York City Department of Design and Construction	Michael Nastasi Program Director	[redacted]
El Museo del Barrio	New York City Department of Design and Construction	Ieva Vanags Project Director	[redacted]
Bronx County Hall of Justice	Dormitory Authority of the State of New York	James Hall Project Manager	[redacted]
Museum of the City of New York	New York City Department of Design and Construction	Patricia Zedalis Coordinator/Project Manager	[redacted]
Alexander Hamilton U.S. Custom House	United States General Services Administration	Dorothy DaLoia	[redacted]
Weeksville Heritage Center	New York City Department of Design and Construction	Michael Nastasi Program Director	[redacted]

Design of Priority Repairs to the NJ Approach Ramps to the GWB (NY Office Project)

We developed repair plans for Priority and Routine items that were identified in the 2005 Biennial inspection report for three bridge structures that are located on the New Jersey side of the GWB. Work involved 100% hands-on inspection of the superstructure and substructure at Lemoine and Center Avenues, and the PIP Bridge to verify all priority and routine repair items noted on the previous inspection report. We prepared design details for concrete deck and pier spall repairs as well as steel repairs for deteriorated stringers. Design details and specifications were based on current AASHTO and PA standards. We prepared contract drawings, specifications, and cost estimates.

Location
New York & New Jersey

Client
Port Authority of NY & NJ

Client Contact
Dave Taliahani
(973) 792-4755

Construction Cost
N/A

Completion Date
2006

Goethals Bridge Seismic Assessment (NY Office Project)

Location
Staten Island, NY

Client
Port Authority of NY and NJ

Client Contact
Bernard Yostpille
(973) 792-4545

Construction Cost
N/A

Completion Date
2004

TranSystems was retained to perform a comprehensive seismic assessment of the main truss spans of the Goethals Bridge. The assessment evaluated and exposed inherent seismic vulnerabilities in the truss span superstructure and substructure/foundation components based on the two level seismic hazard approach adopted by the NYCDOT. Detailed 3-D finite element models were constructed. Dynamic modal updating was used to tune the models based on bridge vibration measurements obtained as a part of the project. State-of-the-art analytical methods will use the calibrated 3-D models and calculated local geotechnical parameters to provide valid structural response information to the simulated earthquake loadings. Both elastic (response spectrum) and inelastic (push-over) analysis was performed. Different seismic retrofit strategies were compared based on cost, effectiveness, and constructibility Thirty percent conceptual plans were developed for the preferred retrofit scheme.

Waterfront Structural Engineering Services
New Jersey Marine Terminal–Elizabeth, New Jersey

Location
Elizabeth, New Jersey

Client/Owner
The Port Authority of New York and New Jersey

Services
Waterfront Engineering
Structural Engineering

Contract Period
2009-2010

Construction Cost
N/A

Reference
The Port Authority of New York & New Jersey
3 Gateway Center, 3rd Floor
Newark, New Jersey 07102
Mr. Yu Shing Wong
(973) 972-4541

Project Description

McLaren provided the waterfront structural engineering services necessary to inspect, evaluate, design and prepare contract drawings and construction cost estimates for priority repairs for the following:

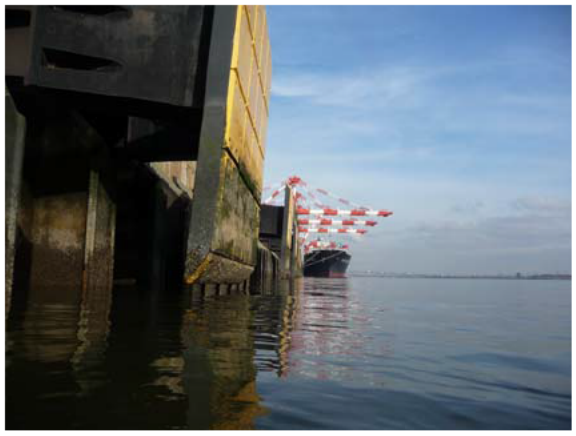
- NJMT Port Newark Berths 3 to 25 (Odd)
- NJMT Port Newark Berths 2 to 36 (Even)
- Elizabeth PAMT Berths 50 to 86 (Even)
- Elizabeth PAMT Berths 88 to 98 (Even) & Turntable
- NJMT AMT Berths 1 &2, Conc. Mooring Dolphins & Timber Walkways

McLaren is intimately familiar with all of these sites from previous successful work, streamlining our inspection and design effort on this project.

McLaren's Role

Work included the inspection, design, preparation of construction documents and specifications, preparation of construction cost estimates, and construction administration services for the rehabilitation of the project sites. Inspections performed by McLaren were planned to accommodate the port's berthing schedule.

The project objective was to restore each of the berths to a level of quality, safety, durability, and reliability that meet the PANYNJ needs, requirements, and preferences. Developing cost effective solutions was key to this objective.



Management Approach

Section E.

Introduction

Hatch Mott MacDonald (HMM) is an employee owned multi-disciplinary A/E and PM/CM firm with a North American staff of more than 1,900 in 60 offices nationwide. **The roots of HMM date back more than 107 years and currently provide a worldwide pool of over 22,000 employees to draw upon.** HMM is a leading North American consulting engineering firm with a century of worldwide experience. HMM has designed and managed some of the world's most prominent projects. Proud of our role in major ventures across North America, we provide comprehensive engineering services in all areas of aviation, rail, transportation, tunnels, water, wastewater, environmental, parks and recreation, pipeline, and utility markets. HMM has performed, or is currently performing Project/Program Management Service agreements on a national, regional, and a local basis for clients across North America. **Projects/Programs under its United States umbrella include projects and programs at JFK, LGA, LAX, EWR, SWF, Pittsburgh, Buffalo, and Washington International Airports.** Under its employee owned parent companies of Hatch from Canada and Mott MacDonald (MM) Group from the United Kingdom, **HMM has performed, or is currently, performing Project/Program Management Service agreements on an international level for clients such as Sydney International Authority, British Airport Authority, Hong Kong Check Lap Kok, Athens Airport, and Dubai UAE.**

Our project/program management approach consistently delivers sound, simple, and practical solutions involving high-level coordination, design and construction expertise, and sensitivity to all important issues through effective utilization of materials and resources. When implementing a program or project, we apply a proactive approach to planning and risk management, including coordinating numerous interfaces, anticipating potential delays, and finding cost-effective, flexible, and timely solutions from programming, planning, and costing through operations and systems commissioning and start-up.

We view effective partnering as an important element of project success. Establishing an effective relationship at the outset with all parties, to maximize their participation and cooperation for each project is important. Everyone's thorough understanding of a project plan and its challenges will greatly assist project implementation. Successful working relationships developed in the early project phases will lay the groundwork for efficient issue resolution and improved community support in subsequent phases of the project.

Team

The HMM Team brings to the PANYNJ:

- Successful performance on similar contracts with transit authorities for project/program on-call contracts
- Demonstrated ability to offer innovative project management concepts for value analysis
- Specialized experience and technical expertise in program, project management, and design to oversee design and construction

Hill International, Inc.

Hill International, Inc. (Hill) is a leading international construction consulting firm that provides program and project management, construction management, cost engineering and estimating, quality assurance, inspection, scheduling, claims analysis, innovative dispute resolution, and staff augmentation services to clients involved in major construction projects worldwide. They have successfully managed more than 5,000 projects with a total construction value over $250 billion, and they are **the largest pure construction management firm in the country.** Hill is also an international leader in construction claims management, considered to be **the largest**

construction claims firm in the world. Founded in 1976 as a multi-disciplined management consulting firm that helps construction participants minimize risks, Hill has developed a reputation for their innovative approaches to preventing and resolving construction schedule and cost overruns. Hill has helped their clients resolve more than 25,000 claims and disputes valued at more than $100 billion.

TranSystems

TranSystems is an ENR top 15 Transportation firm with over 1,350 personnel in 45 offices. They have a strong local presence with over 50 structural engineers and have been working with the PANY&NJ for over 25 years. Their bridge experience and expertise places them as one of the top 15 bridge design firms nationwide. Their NY office performs work for both local clients and for other offices around the country on bridge design projects. They are currently working with their Chicago Office on the $50 Million UPRR Bypass Relocation checking design drawings and calculations and the Texas office designing 6 braided ramp bridges and a 2 mile long viaduct as part of the $900 million North Tarrant Expressway Corridor Design/Build project.

Locally, their NY and NJ offices are working on, or have recently completed several notable bridge replacement and sign structure design projects including:

- PANY&NJ GWB NJ Bridges Joint Replacement & Concrete Repairs (In construction)
- NYSDOT Design of 8 Bridges (in Final Design)
- NYSDOT Design of 48 Sign Structures (in construction)
- NYSDOT Rehabilitation of Seven Nassau Expressway Bridges (in Construction)
- TBTA Verrazano Narrows Bridge Steel Repairs (in Construction)
- TBTA Verrazano Narrows Bridge Ramp H Bearing and Concrete Repairs (in Final Design)
- NYCDOT / Kiewit Design Build Replacement of Mill Basin Bridge (Completed 2006)
- NJ Passaic County Osborn Terrace Bridge Replacement (Completed 2004)
- NJ Centre Bridge Stockton Toll Bridge (Completed 2006)

McLaren Engineering Group

Founded in 1977, McLaren Engineering Group has a 33-year history of providing multidiscipline consulting engineering services to clients worldwide. McLaren Engineering Group is a respected and renowned firm that features multiple engineering divisions, staffed with over 120 employees in five offices nationwide. They have successfully completed over 8,000 projects, a figure that encompasses inspection, design, and management for many different project types. Their efforts have taken them to hundreds of locations across the United States, as well as around the globe, from Cancun to Macau.

As its legacy builds, McLaren has grown into a company that offers a set of engineering services that few other firms provide. With experts in numerous engineering disciplines, they blend staff resources to address a project's specific range of design requirements. This ability leads to better management, cost efficiencies, and a more elegant, technically sound solution.

McKissack & McKissack

McKissack is the oldest minority-owned professional design and construction firm in the United States. A family-owned business for more than 100 years, McKissack has been a leader in planning, design, and construction of more than 6,000 projects, proudly upholding the standards of excellence established by its forefathers. McKissack

provides a wide range of construction related services for a variety of government agencies, municipalities and private institutions, and attributes its longevity and success to the talented, service-oriented professionals that comprise the McKissack organization. McKissack's business strategy has always been to build long-term client relationships. And, over the past 100 years, the firm has attracted and retained hundreds of clients by providing them with superior service and value. McKissack takes pride in the thousands of projects they have successfully completed over the years, and enjoys undertaking new challenges within the construction industry that require innovative, yet practical, cost effective solutions. Their values of teamwork, quality, and commitment have, and will always be, the key to their continued growth and success.

Envision Consultants, Ltd.

Envision Consultants, Ltd. is an established woman owned business headquartered in New Jersey. The firm provides professional project and construction management services to parties engaged in the construction industry encompassing owners, government agencies, municipalities, developers, design professionals (architects and engineers), construction managers, contractors, subcontractors, manufacturers, and suppliers. With close to two decades of dedicated service to the construction industry, our commitment to client satisfaction has resulted in the successful completion of diversified construction projects on highways and bridges, transit systems, educational institutions, as well as commercial and industrial facilities throughout the United States. Envision's corporate philosophy is to focus on their clients' specific needs and objectives with tailored project and construction management support services required to manage complex projects. This is accomplished with expert knowledge and experience, and technical expertise in the implementation of state-of-the-art project management and control systems. Envision has been engaged on projects throughout the nation and oversees the implementation of effective project management and control systems.

PROJECT/PROGRAM MANAGEMENT CONSULTANT CORE DUTIES THROUGHOUT ALL PHASES OF A TASK

Project Management Approach

Objectives

Call-In Project Management or Program Management assignments according to Tasks A, B, C, and D identified in the description of consultant tasks will be initiated by PANYNJ through a request for proposal directed to the HMM's Program Manager. The HMM Team will then respond with input from the appropriate team members and will provide a proposal with fee that will be submitted to PANYNJ. A Project/Program Leader and Lead Engineers with support from other team members will be identified for each Project or Program based on the technical requirements, project or program assignments, and schedule commitments.

To assure a fast response to PANYNJ, we propose to develop a two-staged approach for individual call-in project or program assignments. The first stage will be to prepare a generic Project Plan of Work (PPW) that acts as an umbrella work plan. As follow up specific call-in assignments are received, HMM will prepare the second stage project-specific PPW document.

The PPW is an internal HMM project management document that outlines general procedures, CAD standards according to client requirements, software requirements, and communication channels to be used for typical call-in assignments. The document will also identify the proposed project management elements detailed later. The PPW will serve as a reference for all team members and will allow HMM responding swiftly to specific call-in assignments. This document will be submitted to PANYNJ for concurrence prior to implementation. The PPW will be updated and customized with specific requirements for each task as they are identified.

Project Management Process

Identification of Goals

Prior to the start of any awarded call-in task assignment, the designated HMM Program Manager, together with the relevant Project Manager and PANYNJ representatives, will determine the goals of the assignment by verifying the scope, deliverables, critical success factors, and quality control procedures. We find that this is beneficial to our clients, in order to provide the services expected and to avoid any misunderstandings of approach and deliverables later in the process.

HMM will prepare a detailed task proposal of which includes the schedule outlined below and resources to be assigned. Work on the assignment will commence once PANYNJ has reviewed and approved the task proposal. The agreed upon proposal will become part of the PPW.

HMM Quality Policy

- To meet or exceed our clients expectations
- Innovation
- Scope, schedule, and cost
- Communication
- Accuracy
- Environment, Health, and Safety
- Continuous improvement

Project Team Coordination

A critical component of a successful project is to ensure that all project participants' work to the same plan. Once the Task assignment goals have been identified and agreed to, an integrated preliminary work schedule will be prepared taking into account any specific requirements and milestones identified by PANYNJ.

Assignments may be broken down into a number of discrete areas allowing prioritization or work effort and ensuring the right personnel are assigned the correct roles. The schedule will include periods for PANYNJ's review and approval process. Regular meetings will monitor progress and corrective action will be taken when necessary to maintain the schedule. HMM utilizes a "no surprises" philosophy, including continuous registration of risk, and will keep PANYNJ informed of the status of any assignment given to us to enable PANYNJ to maintain ultimate control of the decision making process.

Coordination of Project activities with the Authority

PANYNJ's active involvement is a key element to successful completion of the inspection tasks, and their participation in task forces, over-the-shoulder reviews, and regular quality meetings will allow HMM immediately responding to PANYNJ requests and meeting their expectations the first time.

Environmental Health & Safety

Safety is an integral part of HMM's corporate culture. We have integrated safety into our project management and quality program. The Quality, Environment, and Safety program guides our management of every project. Our frequency and severity rates are among the lowest in the country, attesting to the quality of our safety program and the attitude of our top management in placing safety as the first priority on every project. All HMM personnel that are planned to be assigned to this project will receive appropriate PANYNJ safety training as may be required and necessary. HMM employees will attend safety certification courses to comply with

HMM Safety Culture

- Zero safety incidents expected
- Incidents prevented by good planning
- Environment, Health, and Safety Plan developed up front
- Utilize existing HMM safety systems for site working
- Continuously monitor safety and make improvements.

PANYNJ safety training requirements prior to the start of the field activities.

The management of Environment Health and Safety (EHS) issues within HMM and for our clients is a key management concern. HMM aspires to be a leader in achieving the highest attainable standards in both the occupational and natural environments. We will prepare a project Environmental Health & Safety Plan for the contract. HMM already has in-place a safety system of works for site working. This existing system addresses the safety issues and provides instructions for workers to follow if and when they are presented with hazardous site conditions. The existing systems of works will include a risk assessment for each of the hazards likely to be encountered and make recommendations for the appropriate risk reduction measures needed to work in a safe environment.

Quality Assurance/Control

Project management and quality management are synonymous terms to HMM. Our project management approach will follow our corporate policies and procedures developed under our ISO 9001:2008 certified Quality Environment and Safety (QES) System. This enhances the project team's performance by establishing guidelines for project management that will assure a quality product is delivered on time and within budget. Through a PPW HMM will tailor its existing ISO 9001:2008 compliant procedures to incorporate applicable PANYNJ standards. Any subconsultants used will be required to adhere to these procedures so that the overall project quality will not be compromised.

Deliverables will be reviewed at intervals identified in the PPW and prior to each submission to assure quality, accuracy, and completeness. Deliverables will be signed by the Project Manager and 'checked' copy records will be maintained in our project's QA/AC files. Independent QA project auditors will audit the project assignments for compliance with HMM's internal quality system and the project specific standards. Non-conformances are highlighted for corrective action and appropriate "next steps" identified and implemented to address any performance issues resulting from a trend analysis. This provides internal verification of compliance with our QES System and will assure the quality and integrity of the inspection process.

Project Plan of Work (PPW)

For each assignment, HMM will produce a specific PPW that is a key part of HMM's project control and quality management system. The PPW, which is a project level procedure and quality plan, will assist in assuring quality by providing the baseline to track for scope, cost, schedule, and procedural elements. This document will be updated during the course of the project to incorporate any scope, budget, and schedule changes.

Once the scope of the assignment has been identified and HMM's task proposal approved, a detailed PPW that reflects the assignment's size and complexity will be prepared by the project team. The aim of the PPW is to ensure that all project participants have a clear understanding of the assignment goals. It will include a detailed, deliverable-based breakdown of the scope of

The Project Plan of Work (PPW) will:

- Describe the roles and responsibilities of all project staff
- Define lines of communications within the project organization and with the client
- Outline the working relationship between project staff and the client
- Reference the standards and procedures to be utilized in performing the project
- Describe budget and schedule limitations, deliverables, and all other information necessary in the performance of the project
- Address the distribution of documents to ensure that staff receive information essential to the work performed
- Include our QA/QC Program Manual delineating our quality assurance/quality control procedures

work (including any assumptions, user requirements, agencies, and other pertinent criteria), the task schedule, and the resource schedule.

Establishing this clear definition of the project will enable HMM to best utilize the skills of its staff and identify if any additional resources external to HMM may be required.

The PPW will function as the assignment specific quality control document and will identify the quality control procedures to be performed as well as the schedule for quality reviews.

In addition, the PPW will define procedures for project preparation, software requirements, communication channels, engineering deliverables, monthly invoices, contract documents, cost estimates, incorporation of review comments, scope of work, standard drawing templates, and CAD standards. In general, these will comply with PANYNJ "Guidelines for Implementing Call-in Consultant Contracts" and will become a part of our PPW to assure compliance with the Authority's requirements. The PPW can be updated and customized with specific requirements as they are identified.

HMM Project Controls

HMM's standard internal Project Management and Project Cost accounting systems, used on all HMM projects, will be utilized to monitor and control overall contract and individual assignment costs as well as project schedules. Rigorous oversight of cost, schedules, and scope objectives for an assignment will be undertaken throughout the duration of each project.

HMM Document Controls

Document control is an integral part of management control process. It involves the storage, retrieval, reproduction, and distribution of those documents that reflect the current approved configuration of the system. Also included are correspondence controls tasks. To ensure consistency and in support of total quality management the HMM Team will implement standard file indexing in accordance with PANYNJ requirements to help reduce the cost effort and delays associated with logging and filing.

Schedule Control

HMM will use Oracle-Primavera project management software to prepare and monitor the approved assignment schedule. Regular updates as required by PANYNJ will be issued to indicate adherence to assignment targets and also provide early warning of activities that may not meet their due date thereby enabling resource, budget, and scope decisions to be made. The master project schedule will serve as the primary management tool for planning, scheduling, coordinating and controlling of the PANYNJ projects. The master project schedule consists of numerous activities that will be summarized using the Work Breakdown Schedule (WBS).The master project schedule changes in complexity over the typical basic phases of a PANYNJ Project. These phases include planning; preliminary engineering; final design; right-of-way acquisition; bid and award process; construction; commissioning and testing; and start-up. Each phase will present different project management challenges and is typically controlled by the work of different staff members.

Cost Control

HMM controls project budgets using Project Management Desktop (PMD) and Financial Systems (FiFi) software. PMD and FiFi software are used to track and control each project's staff hours and costs on a weekly basis. This tracking of time and expenses forms the basis for our project engineering control system as well as our project accounting/invoice system. Time and expense costs charged to a project are updated weekly and are available to our project managers the Monday after the previous week's close. Our QES System requires budget and cost

reviews between the project manager and senior management on a monthly basis at a minimum (more frequently if necessary), as required by the nature of an individual assignment.

Project Coordination

Project Coordination will be led by our Program Manager, Bradford Townsend, PE and will include: A kick-off meeting to be held with all project team members, including any subconsultants and representatives from PANYNJ; day-to-day coordination with PANYNJ representative; project control meetings will be held with PANYNJ representatives as needed to review schedules, budgets, needs, inspection, and reporting activities; list of all action items for the next meeting will be prepared and distributed in a timely fashion; periodic internal HMM working meetings will be held to discuss technical issues, work progress, coordination, progress of subconsultants, anticipated problems; subconsultant control will be accomplished on a day-to-day basis, as necessary, with periodical review meetings; and the schedule of progress will depend on the specific area of involvement of each subconsultant.

Project Reports will be submitted on a monthly basis the first week of each month, outlining the status of key issues as well as our performance relative to our contract. Meetings and reports will monitor our team's performance and emphasize proactive measures to address any issues.

The HMM Team will be required to report its costs to date, percentage completed, and estimated hours to complete by task. This approach will allow continuous monitoring of the budget for each task and provide adequate time if corrective action is required.

Communication

Clear, concise, and documented communications are critical to the successful completion of any project. Internal communications, including subconsultants, will be the responsibility of our Project Manager or the project engineers of the specific disciplines in the project. External communications with PANYNJ will be the responsibility of our project manager who will serve as the central focal point of all communications and coordination between the client and our QA/QC panel.

Risk

All construction work whether new-build or remediation and repair carries a certain level of risk. HMM's experience has proven that procedures must be in place to identify and manage risks and hazards. PANYNJ identifies the facility to be inspected to the remediation phase, assuming that the advice to PANYNJ is appropriate and based on documented management. HMM uses the process of a risk register. Within any part of the process, risk is identified, assigned a qualitative impact in terms of likelihood, effects of impact, mitigation measures, and final level of risk if mitigation is taken. Other factors such as cost, schedule, or if action was taken to change a level of risk, can also be added. The purpose of the register is to make people aware of the risk associated with a given solution. Once identified, it can be addressed.

Rates

Section F.

Name	Title	Hourly Rate*
Hatch Mott MacDonald		
Bradford Townsend, PE	Program Manager	$95.48
Roland Ericsson	Principal-In-Charge	$88.21
Andrew Linder, PE	Project/Program Manager – Aviation	$78.47
Andy Thompson, CEng	Project/Program Manager – Tunnels, Bridges, Terminals	$82.82
Erik Stromberg	Project/Program Manager – Port Commerce	$72.50
Frank Facciolo, PE	Project/Program Manager – PATH	$84.33
Nishant Nayan, PhD	Quality Assurance	$46.32
Curtis Wright, PE	Project Manager – Aviation	$92.39
Kin Chow, PE	Project Manager – Aviation	$89.41
John Recco III, PE	Project Manager – Aviation	$65.64
James Armstrong, PE	Project Manager – Aviation	$67.99
Zhengi Cai, PE	Project Manager – Tunnels, Bridges, Terminals	$80.81
Ron Klinczar, PE	Project Manager – Tunnels, Bridges, Terminals	$66.90
Marco Levoyer, PE	Project Manager – Tunnels, Bridges, Terminals	$79.42
Michael Loehr, PE	Project Manager – PATH	$83.90
Darryl Brogan, PE	Project Manager – PATH	$84.92
Richard Buck, PE	Project Manager – PATH	$68.53
Harry Jarnagan, PE	Scheduling & Estimating	$93.99
Robert Nosal	Estimating	$54.03
Hill International		
James Palmer, PE	Executive Committee	$135.58
Amber Rose France, PE	Project/Program Manager – Tunnels, Bridges, Terminals	$55.29
John Lehman, PE	Project Manager – Path	$76.44
Frank Colucci	Project Manager – Path	$82.69
George Duda	Project Manager – Path	$72.60
James Mortimer, PE	Project Manager – WTC	$86.54
Jose Diaz, PE	Project Manager – WTC	$84.62
Gurcharan Chopra	Project Manager – WTC	$66.36
Edward Fox	Project Manager – WTC	$65.87
David Coffield, PE	Support Services – Environmental/LEED/Sustainability/ Value Engineering	$77.72
Edward F. Nicholson, PE	Project Manager – Path	$85.00
Michael J. Brothers	Project Manager – Aviation	$80.77
Karen Mohlenbrok, PE, PMP, LEED AP	Project Manager – Aviation	$69.71
Paul T. Giangreco, PE	Support Services – Project Controls	$64.42
TranSystems		
Steven M. Tafuro	Executive Committee	$114.70
George Brosius, PE	Project/Program Manager – Tunnels, Bridges, Terminals	$59.59
Michael Chelednik, AIA	Project/Program Manager – Tunnels, Bridges, Terminals	$96.16

Gary Matz, PE	Project Manager – Path	$100.97
Frank Miller, PE	Project Manager – Path	$105.77
McLaren Engineering Group		
Malcolm McLaren, PE	Executive Committee	$165.00
Jim Green, PE	Project/Program Manager – Port Commerce	$43.41
Brian Moody, PE	Project/Program Manager – Port Commerce	$42.57
Matt Daniels, PE	Project/Program Manager – Port Commerce	$40.00
Chris Mase, PE	Project/Program Manager – Port Commerce	$34.00
Todd Manson	Project/Program Manager – Port Commerce	$28.92
McKissack & McKissack		
Mark Cosmedy, PE	Project/Program Manager – Tunnels, Bridges, Terminals	$71.31
Robert McDermott	Project Manager – Path	$84.87
Keith Skilling, PE	Support Services – Project Controls	$66.50
Glenn Knapp	Support Services – Project Controls	$59.42
Envision Consultants, Ltd.		
John Campbell	Support Services – Project Controls	$65.00
Anthony Duca, PMP	Support Services – Project Controls	$47.95

*Rates have been escalated to midpoint of contract

M/WBE Participation

Section G.

Section G: M/WBE Participation

We feel we have assembled a best in class team to address the RFP requirements and to meet the defined goals of this RFP. Hatch Mott MacDonald is joined by Hill International, TranSystems, McLaren Engineering Group, McKissack & McKissack (W/MBE), and Envision Consultants, Ltd. (W/DBE) for this proposal. HMM is fully committed to both the spirit and to the detail of using Women and Minority Businesses on our projects. HMM has successfully met contract-required WBE and MBE goals on previous contracts with state and local agencies by maintaining flexibility in assigning work tasks to suitably qualified (W/MBE) subcontractors.

List of Firm's Affiliates

Section H.

Name, Address, and EIN of Affilates or Subsidiaries:

Hatch Mott MacDonald Group, Inc. (DE 2001)
27 Bleeker Street, Millburn, NJ 07041
EIN: 22-378761

Hatch Mott MacDonald NY, Inc.
f/k/a BAC Killam Inc. (NY 1910)
27 Bleeker Street
Millburn, NJ 07041
EIN: [redacted]
SIC Code: 8117

Hatch Mott MacDonald Ltd.
(Ontario, Canada 1996)
2800 Speakman Drive
Mississauga, Ontario L5K 2RZ

Hatch Mott MacDonald T&T, Inc.
f/k/a Hatch Mott MacDonald, Inc. (DE 1972)
21 Bleeker Street
Millburn, NJ 07041-1008
EIN: [redacted]

Hatch Mott MacDonald Massachusetts, LLC
f/k/a Mott MacDonald Inc. (MA 1988)
27 Bleeker Street
Millburn, NJ 07041
EIN: [redacted]

Hatch Mott MacDonald Michigan, LLC
27 Bleeker Street
Millburn, NJ 07041

Hatch Mott MacDonald Holdings
f/k/a Hatch Mott MacDonald Group Inc.
(DE 2001)
27 Bleeker Street
Millburn, NJ 07041
EIN: [redacted]

Killam Group Inc.
f/k/a Randers Killam Group Inc. (DE 1997)
27 Bleeker Street
Millburn, NJ 07041
EIN: [redacted]

Hatch Mott MacDonald Florida, LLC
f/k/a CarlanKillam Consulting Group, Inc.
(FL 1970)
5111 North 12th Avenue
Pensacola, FL 32513
EIN: [redacted]

Hatch Mott MacDonald Alabama, LLC
f/k/a/ CarlanKillam Consulting Group of Alabama,
Inc. (AL 1986)
5111 North 12th Avenue
Pensacola, FL 32513
EIN: [redacted]

Hatch Mott MacDonald I&E, LLC
f/k/a Elson T. Killam Associates, Inc.
(NJ 1957)
27 Bleeker St.
Millburn, NJ 07041
EIN: [redacted]

Duncan, Lagnese and Associates, LLC
(PA 1962)
d/d/a Hatch Mott MacDonald I&E, Inc.
Gateway View Plaza
1600 West Carson Street
Pittsburgh, PA 15219
EIN: [redacted]

Hatch Mott MacDonald Operating Svcs, LLC
f/k/a Killam Management and Operational
Services, Inc. (NJ 1990)
27 Bleeker Street
Millburn, NJ 07041
EIN: [redacted]

Hatch Mott MacDonald I&E, LLC (A Delaware
Corporation)
f/k/a Killam Associates, New England Inc.
(DE 1988)
27 Bleeker St.
Millburn, NJ 07041
EIN: [redacted]

Firm's Affiliates

Business Name	EIN	Principal Office Address
Hill International, Inc.	[redacted]	**303 Lippincott Centre, Marlton, NJ 08053**
Abu Dhabi Branch (registered in Abu Dhabi)	N/A	Suite 1601, 16th Floor, Butti Al Otaiba Building, Sheikh Khalifa Street, Abu Dhabi, UAE
Qatar Branch (registered in Qatar)	N/A	Al Jaber Tower, 4th Floor, Unit 4, Museum Road, Old Salata, PO Box 21835 Doha, Qatar
Trinidad Branch (registered in Trinidad)		Abercromby Court, 86 Abercromby Street, Port of Spain, Trinidad W.I.
6204902 Canada Inc.	[redacted]	3660 Hurontario Street 6th Floor, Mississauga, Ontario, L5B3C4, Canada
Asia/Pacific Hill International Holding PTE Ltd.	[redacted]	33 West Coast Rise, Singapore 127476 -- Tel: 856-810-6200 -- Fax: 856-810-0404
Philippines Branch	N/A	
Beijing Hill International Construction Consulting Company Limited		Unit 17, 17F PingAn International Financial Center Tower B, No. 1-3, XinYuan South Road, Chaoyang District, Beijing 100027, China Tel: +86-10-5829 1808 Fax: +86-10-5829 1999
Berger Hill Limited (JV Company)		Palazzo Pietro Stiges', 90, Strait Street, Valletta VLT 1436, Malta
Qatar Branch	N/A	
Egypt Branch	N/A	
Boyken International, Inc.		400 Northridge Road, Suite 1200, Atlanta, Georgia 30350
Gerencia International de Proyectos, SA de C.V.		Avenida Nichupte, 19, Supermanzana 19, Manzana 2, Plaza Galerias Infinity 1a, of. 107, Cancun, Quintana Roo, Mexico, Cp. 775500
Gerens Hill International, SA	[redacted]	8 Jose Echegaray Street, Building 3, 1a, Las Rozas (Madrid)
Hill Construction Management Ltd.	[redacted]	Bulevar Mihajla Pupina str No. 1OV/423, 11070 Novi Beograd-- Tel:
Hill Fenton Development, Ltd. (JV Company)		30 DeCastro Street, Road Town, Tortola, British Virgin Islands
Hill International (Algeria)		
Hill International (Anatolia) Ltd.	[redacted]	closed 5/15/09 Documents must be kept 5 years
Hill International (Australia) Pty Limited *(p/k/a Knowles Australia Pty Limited)*	[redacted]	Suite 101 Level 1, 2 Bligh Street, Sydney NSW 2000 Australia -- Tel: +00 612-9222-1799 -- Fax: +00 612-9222-1788
Hill International (Azerbaijan) Limited	[redacted]	Baker & McKenzie - CIS Limited, 96, Nizami Street, The Landmark Building, Baku AZ1010, Azerbaijan (Job site): 78 Parliament Ave, Baku, Azebaijan
Hill International (Belarus) Ltd (on hold)		
Hill International (Bucharest) SRL	[redacted]	Bucharest, district 1, 17-19 Dr. Iacob Felix, 3rd Floor, Romania -- Tel: +40-21-319-5248 -- Fax: +40-21-319-5268 Contact: Costas Gravanis
Hill International (Deutschland) GmbH *(p/k/a James R Knowles (Deutschland) GmbH)*	[redacted]	Prinzregentenstr. 20-22, D-80538 Munich, Germany
Dusseldorf Branch	N/A	Zweigniederlassung,, Dusseldorf 40213, Geschaftsanschrift Graf Adof Platz 15, D 40213, Dusseldorf Contact: Thomas Hans-Hofbauer
Hill International (Egypt)		39 Beirut Street, Heliopolis 11341, Cairo, Egypt -- Tel: 856-810-6200 -- Fax: 856-810-0404
Hill International (Egypt) Ltd.	[redacted]	303 Lippincott Centre, Marlton, NJ 08053
Hill International (Georgia) Ltd.	[redacted]	Bucharest, district 1, 17-19 Dr. Iacob Felix, 3rd Floor, Romania -- Tel: +40-21-319-5259 -- Fax: +40-21-319-5279 Contact: Costas Gravanis
Hill International (Hellas), S A.	[redacted]	62 Kifissias Avenue, 151 25 Maroussi, Athens, Greece -- Tel: +30-210-610-5171 -- Fax: +30-210-610-5172
Hill International (Hong Kong) Ltd. *(p/k/a Hill International (HK) Limited* *p/k/a Pickavance Consulting Limited)*	[redacted]	2401 Wing on Centre, 111 Connaught Road, Central, Hong Kong -- Tel: +852-2542-2818 -- Fax: +852-2541-4648
Japan Branch	N/A	2401 Wing on Centre, 111 Connaught Road, Central, Hong Kong -- Tel: +852-2542-2818 -- Fax: +852-2541-4648
Hill International (Kazakhstan) (on hold)		
Hill International (Kuwait) Ltd.	[redacted]	Palazzo Pietro Stiges, 90 Strait Street, Valletta VLT 1463, Malta
Hill International (Libya) Ltd.	[redacted]	Palazzo Pietro Stiges, 90 Strait Street, Valletta VLT1463, Malta -- Tel: 856-810-6200 -- Fax: 856-810-0404
Registration in Libya	[redacted]	Ben Ghazi, Garyounis District, Building No. 126, Flat No. 7
Hill International (Middle East) Ltd.	[redacted]	303 Lippincott Centre, Marlton, NJ 08053
Malta : Mind and Management moved to Malta eff 12/5/2008 and the company registered as an Overseas Company in Malta		Palazzo Pietro Stiges, 90 Strait Street, Valletta VLT 1463, Malta
Bahrain Branch	N/A	Al-Rossais Tower, 9th Floor, Bldg 283, Road No. 1704, Area 317, Office 93, Diplomatic Area, PO Box 21034, Manama, Kingdom of Bahrain
Dubai Branch	N/A	Sultan Business Centre, Offices 501, Plot number 11 , Oud Metha Road Dubai (Sec Cert. 7 Mar 08) Contact: Rick Brown and Samantha Sogolo
Kuwait Branch	N/A	c/o System Development and Project Management, PO Box 13385 Kifan, 71954, Kuwait Contact: Rick Brown and Samantha Sogolo
Morocco Branch	N/A	Contact: Rick Brown and Samantha Sogolo
Saudi Arabia Branch	N/A	Bin Homran Centre, Tahliya Street, Suite 410-A, Medina Road, Jeddah, Kingdom of Saudi Arabia Contact: Rick Brown and Samantha Sogolo
Hill International (Morocco) s.a r.l.	[redacted]	219, BD. Zerktouni, Residence El Bardai, Casablanca, Morocco

Business Name	EIN	Principal Office Address
Hill International (North Africa) Ltd.	[redacted]	City Stars, Star Capital 8, 6th floor, Office No. 62, El Forsan St Nasr City, Cairo, Egypt -- Tel:+202 24801900 Fax: +202 24801903
Hill International (Puerto Rico), Inc.	[redacted]	303 Lippincott Centre, Marlton, NJ 08053 -- Tel: 856-810-6200 -- Fax: 856-810-0404
Hill International (Syria) LLC		establishing
Hill International (Syria) Ltd.	[redacted]	"Palazzo Pietro Stiges", 90 Strait Street, Valletta VLT1463, Malta
Hill International (UK) Ltd.	[redacted]	1 London Bridge, London, SE1 9BG -- Tel: +44-20-7089-7020 -- Fax: +44-20-7089-7030
Romania Branch	N/A	Municipiul Bucuresti, Sector 1, B-DUL Nicolae Titulescu, Nr. 1, Bl.A7, Sc.4, Et.1, Ap.96
Hill International Development (II) Ltd.		303 Lippincott Centre, Marlton, NJ 08053
Hill International Development Ltd.		303 Lippincott Centre, Marlton, NJ 08053
Hill International Holdings Ltd	[redacted]	Palazzo Pietro Stiges, 90 Strait Street, Valletta VLT 1463, Malta
Hill International Hospitality (Americas) Ltd.		303 Lippincott Center, Marlton, NJ 08053
Hill International Malaysia Sdn Bhd (p/k/a James R. Knowles (M) Sdn Bhd)	[redacted]	Level 7, Unit 7, Block 3B, Plaza Sentral, Jalan Stesen Sentral 5, Kuala Lumpur Sentral, 50470 Kuala Lumpur -- Tel: +603-2274-0917 -- Fax: +603-2274-0918
Hill International Petrol (Egypt) Ltd. (JV Company)		39 Beirut Street, Floor 10, Heliopolis, Cairo Contact: Sarah Hussenein
Hill International Project Management (India) Private Limited		
Hill International Real Estate, LLC	[redacted]	303 Lippincott Centre, Marlton, NJ 08053
Hill International Real Estate Partners, LP	[redacted]	303 Lippincott Centre, Marlton, NJ 08053
Hill International Rijeka d.o o.	[redacted]	Rijeka, Nikole, Tesle 9, Croatia -- Tel: 856-810-6200 -- Fax: 856-810-0404
Hill International S A.	N/A	41 Boulevard Prince Henri L 1724 Luxembourg -- Tel: 011-352-46-83-83 -- Fax: 011-352-46-84-84
Greek Branch (registered in Greece)	N/A	62 Kifissias Avenue, Maroussi,Athens 151 25, Greece
Latvia Branch (registered in Latvia)	N/A	13-36 Dzirnavu Street, Riga, LV-1010
Romania Branch	N/A	Municipiul Bucuresti, Sector 1, B-DUL Nicolae Titulescu, Nr. 1, Bl.A7, Sc.4, Et.1, Ap.96
Hill International Sp zo.o(p/k/a Euromost Polska)	[redacted]	Atrium Plaza, Jana Pawla II 29, 00-867 Warsaw, Poland Tel: +48 22 58 13 777 Fax: +48 22 58 13 778
Hill International Services Ltd.	[redacted]	30 DeCastro Street, Road Town, Tortola, BVI -- Tel: 856-810-6200 -- Fax: 856-810-0404
Hill International Vietnam Co. Limited		Temporary: 7th Floor, Building B2, Vinh Trung Plaza, Bing Trung Ward, Danang City, SR of Vietnam
Hill Jianke Project Management (Shanghai) Co. Ltd. (JV Company)		Room No. 208, Unit F, Building 5, No. 7 Xiushan Road, Chongming Industrial Park, Chongming County, Shanghai, Ching
Hill Redwood Development Corp.	[redacted]	303 Lippincott Centre, Marlton, NJ 08053 also c/o ZAC Management Group LLC, 101 West Avenue, Suite 300, Jenkintown, PA 19046
Hill Redwood Development, Ltd (JV Company)	[redacted]	30 de Castro Street, Road Town, Tortola, British Virgin Islands
Hill TMG International (JV Company)		36 Mosadak Street, Al-Doki, Giza
I M Petroleum Services Ltd.		30 de Castro Street, Road Town, Tortola, British Virgin Islands
James R. Knowles (Australian Holdings) Pty Limited	[redacted]	Suite 101 Level 1, 2 Bligh Street, Sydney NSW 2000 Australia -- Tel: +00 613 9699 5124 -- Fax: +00 61 3 9699 5104 Contact: Anna Empy
James R. Knowles (Egypt) Limited	[redacted]	119 Misr Helwan Agricultural Road, Maadi, Cairo, Flat 42, Egypt -- Tel: +20-2-525-4115 -- Fax: +20-2-525-4118
James R. Knowles (Holdings) Limited	[redacted]	Vistorm House, 3200 Daresbury Park, Daresbury, Warrington, Cheshire WA4 4BU -- Tel: +44-1928-756500 -- Fax: +44-1928-756501
James R. Knowles (Hong Kong) Limited	[redacted]	2401 Wing on Centre, 111 Connaught Road, Central, Hong Kong -- Tel: +852-2542-2818 -- Fax: +852-2541-4648
James R. Knowles (Middle East) Limited	[redacted]	
James R. Knowles (NSW) Pty Limited	[redacted]	Suite 101 Level 1, 2 Bligh Street, Sydney NSW 2000 Australia -- Tel: +00 613 9699 5124 -- Fax: +00 61 3 9699 5104
James R. Knowles (Overseas) Limited	[redacted]	
James R. Knowles (Thailand) Ltd.	[redacted]	
James R. Knowles (Worldwide) Limited	[redacted]	Vistorm House, 3200 Daresbury Park, Daresbury, Warrington, Cheshire WA4 4BU -- Tel: +44-1928-756500 -- Fax: +44-1928-756501
James R. Knowles Global Limited	[redacted]	Vistorm House, 3200 Daresbury Park, Daresbury, Warrington, Cheshire WA4 4BU -- Tel: +44-1928-756500 -- Fax: +44-1928-756501
John Shreeves and Partners Limited		1 London Bridge, SE 1, 9BG, London EC1M 5RR -- Tel: +44-20-7596-0000 -- Fax: +44-20-7596-0100
John Shreeves Holdings Limited		1 London Bridge, SE 1, 9BG, London EC1M 5RR -- Tel: +44-20-7596-0000 -- Fax: +44-20-7596-0100
KJM & Associates, Ltd.	[redacted]	500 108th Avenue NW, Suite 1000, Bellevue, WA 98004 -- Tel: 425-451-3881 -- Fax: 425-454-8965
Knowles Consultancy Services Inc.	[redacted]	15999 Hurontario Street, Suite 106, Mississauga, Ontario L5G451 Canada -- Tel: 905-804-1958 -- Fax: 905-804-9327
Knowles Director Inc.		Ajeltake Road, Ajeltak Island, Majuro, Marshall Islands MH96960 -- Tel: 856-810-6200 -- Fax: 856-810-0404
Knowles Hill Pty Limited *(p/k/a Knowles Lawyers Pty Limited)*	[redacted]	

Business Name	EIN	Principal Office Address
Knowles Limited	[redacted]	
Knowles North America Holdings Inc.	[redacted]	3660 Hurontario Street, 6th Floor, Mississauga, Ontario L5B3C4
Knowles Secretary Inc.		Ajeltake Road, Ajeltak Island, Majuro, Marshall Islands MH96960 -- Tel: 856-810-6200 -- Fax: 856-810-0404
KRJ Consulting Limited *(p/k/a James R Knowles Limited)*	[redacted]	Vistorm House, 3200 Daresbury Park, Daresbury, Warrington, Cheshire WA4 4BU -- Tel: +44-1928-756500 -- Fax: +44-1928-756501
Makan Hill International Ltd. (JV Company)		Pending: Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands
Mediterranean Leisure (Egypt) Ltd.		30 de Castro Street, Wickhams Cay 1, Road Town, Tortola, British Virgin Islands
PCI Group, LLC	[redacted]	10801 West Charleston, Suite 650, Las Vegas, NV 89135 Tel: 702-515-7490 Fax: 702-515-7491
SIA Hill International Baltic	[redacted]	Elizabetes str.15-1 Riga, Latvia LV-1010 -- Tel: 856-810-6200 -- Fax: 856-810-0404
Singapore Hill International Pte Limited *(p/k/a James R. Knowles (Singapore) Pte Ltd)*	[redacted]	331 North Bridge Road, #12 01/02, Odeon Towers, Singapore 188720 -- Tel: +00 65 6338 2455 -- Fax: +00 65 6339 8568
Stanley Baker Hill (Iraq), Inc. (JV Company)		303 Lippincott Centre, Marlton, NJ 08053 -- Tel: 856-810-6200 -- Fax: 856-810-0404
Stanley Baker Hill, LLC (JV Company)	[redacted]	225 Iowa Avenue, Muscatine, IA -- Tel: 563-264-6204 -- Fax: 563-264-6658
Transportation Construction Services, Inc.	[redacted]	303 Lippincott Centre, Marlton, NJ 08053 -- Tel: 856-810-6200 -- Fax: 856-810-0404
Yeil Hill International CM Ltd. (JV Company)		Lotte Kwanak Tower, room 402, 395-67 Shindaebang-dong, Dongjak-gu, Seoul, Korea 156-711 Tel: 82-2-849-5660 Fax: 82-2-849-5661

Complete List of Firm's Affiliates

McKissack & McKissack is affiliated as a Joint Venture partner with the following firms:

Robins & Morton/McKissack
Federal ID No. [redacted]

Hunter Roberts/McKissack
Federal ID No. [redacted]

Turner/McKissack
Federal ID No. [redacted]

Skanska/McKissack
Federal ID No. [redacted]

Driscoll/McKissack ll
Federal ID No. [redacted]

McKissack + Delcan Joint Venture
Federal ID No. [redacted]

M.G. McLaren, P.C. doing business as **McLaren Engineering Group** presents the following affiliates:

- ***Highland Equipment.*** Certain equipment that we use in the performance of our services is rented from this affiliate. Their full name and address is as follows:

  Highland Equipment Rental
  P.O. Box 60
  West Nyack, NY 10994

- ***LandMetrics Engineering and Surveying PC,*** a subsidiary specializing in land surveys and related consulting. LandMetrics provides specialized surveys and design support that few surveyors can offer because it also has the full support of a large engineering firm.

  LandMetrics Engineering and Surveying PC
  100 Snake Hill Road
  West Nyack, NY 10994

The following are affiliates of TranSystems Corporation:

TranSystems Corporation of Alabama
TranSystems Corporation of Arkansas
TranSystems Corporation of Colorado
TranSystems Corporation of Connecticut
TranSystems Corporation Consultants of Florida
TranSystems Corporation of Idaho, P.A.
TranSystems Corporation of Illinois
TranSystems Corporation of Iowa
TranSystems Corporation of Maine
TranSystems Corporation of Maryland
TranSystems Corporation of Massachusetts
TranSystems Corporation of Michigan
TranSystems Corporation of Mississippi, P. A.
TranSystems Corporation Consultants of Montana
TranSystems Corporation of Nevada
TranSystems Corporation Architect of New Jersey
TranSystems Architect & Engineer, P.C. (New York)
Lichtenstein Consulting Engineers, P.C. (New York)
TranSystems Corporation of North Carolina, P. C.
TranSystems Corporation Consultants of North Dakota, P.C.
TranSystems Corporation of Ohio
TranSystems Corporation of Oklahoma
TranSystems Corporation Architects of Oregon
dba TranSystems Corporation Architecture of Oregon
TranSystems Corporation Consultants of Pennsylvania
TranSystems Corporation of Rhode Island
TranSystems Corporation of the District of Columbia, P.C.
TranSystems Corporation Environmental Services Group, Inc. (No Stock Issued)
TranSystems Acquisition Corporation No. 1 (No Stock Issued)
TranSystems Acquisition Corporation No. 2 (No Stock Issued)

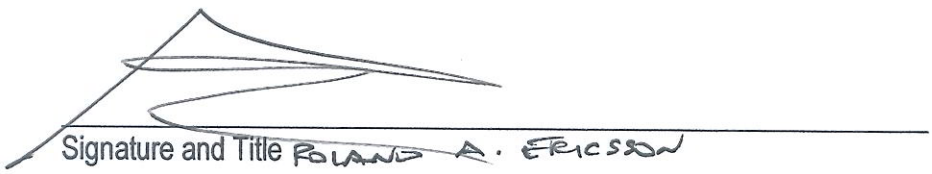
Conflict of Interest Disclaimer

Section I.

Conflict of Interest

Hatch Mott MacDonald or any employee of Hatch Mott MacDonald does not have any financial relationships that might create a conflict of interest or the appearance of a conflict of interest in contracting with or representing the Port Authority of New York & New Jersey.

Hatch Mott MacDonald does not anticipate any present or future conflicts of interest.



Signature and Title ROLAND A. ERICSSON
VICE PRESIDENT

Conflict of Interest

Envision Consultants, Ltd. or any employee of Envision Consultants, Ltd. does not have any financial relationships that might create a conflict of interest or the appearance of a conflict of interest in contracting with or representing the Port Authority of New York & New Jersey.

Envision Consultants, Ltd. does not anticipate any present or future conflicts of interest.

Victoria Makrogiannis, President

Signature and Title

Conflict of Interest

Hill International, Inc. project personnel do not have any conflict of interest that would preclude us from performing the services required under this contract without the appearance of any impropriety.

Statement of Conflict of Interest

McKissack & McKissack hereby certifies that neither the firm nor its employees have any material, personal, financial, or fiduciary interest with The Port Authority of New York & New Jersey (The Authority) or to any offer under consideration by this Request for Proposal (RFP). McKissack & McKissack further certifies that it has no relationship with or bias toward any offer or that would prevent The Authority from evaluating any other proposal solely on its merits. Furthermore, McKissack & McKissack agrees to notify the procurement official in charge of RFP No. 22388, if at any time during the evaluation process it's financial or fiduciary relationship to The Authority changes.

McLaren ENGINEERING GROUP

bridge, highway & rail engineering
entertainment engineering
subaqueous investigation
civil & site engineering
structural design
marine facilities
geotechnics
surveying
forensics

October 14, 2010

Port Authority of New York & New Jersey
One Madison Avenue
New York, NY 10010

Attn: Tim Volonakis/Manager-Procurement Department

Re: RFP for Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013, and 2014; RFP #22388; MEG File No. 110480

No Conflict of Interest Statement

Dear Mr. Volonakis:

McLaren Engineering Group is not aware of any Conflicts of Interest nor do we foresee any potential Conflicts of Interest should we be awarded this contract.

Very truly yours,

The Office of
McLaren Engineering Group
M. G. McLAREN, P.C.

William J. McCarthy, III
Director of Business Development

WJM/jmh
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Rhode Island• South Carolina• Tennessee•Texas•Trinidad & Tobago• Utah • Vermont • Virginia • Washington •West Virginia • Wisconsin

M. G. McLAREN, P.C.
100 Snake Hill Road
West Nyack, New York 10994
Phone (845) 353-6400
Fax (845) 353-6509
e-mail: mgmclaren@mgmclaren.com
On the web: www.mgmclaren.com

Conflict of Interest

Neither TranSystems, nor any employee, agent, or subcontractor proposed to provide services related to the performance of PANYNJ RFP 212388 are aware of any conflicts of interest with the Authority for providing such services.

No Exceptions Statement

Section J.

Standard Agreement

Hatch Mott MacDonald does not have any exceptions to the Standard Agreement.

Standard Agreement

Envision Consultants, Ltd. does not have any exceptions to the Standard Agreement.

Standard Agreement

Hill International, Inc. agrees with the form of contract and all its terms and conditions.

Exceptions to the Standard Agreement

McKissack & McKissack agrees with The Port Authority of New York and New Jersey's Standard Agreement and its terms and conditions as outlined in RFP No. 22388.

McLaren ENGINEERING GROUP

bridge, highway & rail engineering
entertainment engineering
subaqueous investigation
civil & site engineering
structural design
marine facilities
geotechnics
surveying
forensics

October 14, 2010

Port Authority of New York & New Jersey
One Madison Avenue
New York, NY 10010

Attn: Tim Volonakis/Manager-Procurement Department

Re: RFP for Performance of Expert Professional Project Management Services as Requested on a "Call-In" Basis During 2011, 2012, 2013, and 2014; RFP #22388; MEG File No. 110480

Specific Exceptions Letter

Dear Mr. Volonakis:

McLaren Engineering Group has performed a cursory review of the contract terms and conditions and at this time have no exceptions based on the said review.

Very truly yours,

The Office of
McLaren Engineering Group
M. G. McLAREN, P.C.

William J. McCarthy, III
Director of Business Development

WJM/sms
P:\Proj110\110480\1. Prop Tech Info\RFP Response\Proposal\Info Prepared for Hatch Mott MacDonald\NO EXCEPTIONS letter.doc

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Nebraska • Nevada • New Hampshire • New Jersey• New York • North Carolina • Ohio • Oklahoma • Oregon • Pennsylvania
Rhode Island• South Carolina• Tennessee•Texas•Trinidad & Tobago• Utah • Vermont • Virginia • Washington •West Virginia • Wisconsin

M. G. McLAREN, P.C.
100 Snake Hill Road
West Nyack, New York 10994
Phone (845) 353-6400
Fax (845) 353-6509
e-mail: mgmclaren@mgmclaren.com
On the web: www.mgmclaren.com

TranSystems agrees to provide services related to the performance of RFP 22388 in agreement with the form of the contract and its terms and conditions.

Hatch Mott MacDonald

475 Park Avenue South ~ 10th Floor ~ New York, NY 10016