

***Project Delivery
Roles and Responsibilities***

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III. PROJECT DELIVERY

1.0 ROLES

The roles listed herein are limited to those directly involved with the project delivery process in the Engineering Department (ED) and only those from other departments with which ED employees directly interface. These roles are inherently complementary and all involved are committed to achieve common Port Authority of New York & New Jersey goals including, but not limited to, delivering quality professional services within scope and budget and in a timely manner.

1.1 DESIGN DIVISION (DD)

- ❑ **Functional Staff/Consultants**—Prepares deliverables at the direction of the Task Leader (TL) according to established standards including, but not limited to, the latest version of the Port Authority of New York & New Jersey CAD (Computer-Aided Design) Standards Manual.
- ❑ **Engineer/Architect Task Leader**—Prepares the proposal and executes his/her individual discipline's effort within the approved scope, schedule, and budget. The discipline TL must coordinate with and support the project team, including consultants.
- ❑ **Lead Engineer/Architect (LE/A)**—Is assigned by the DD lead discipline for a project. The LE/A leads the design effort for all ED divisions through Stages I, II, and III. During Stage IV, the LE/A supports the construction effort for the Resident Engineer (RE). (See Stage IV [Timeline](#)) The LE/A is the primary contact person for the Line Department. The LE/A oversees functional coordination and the overall ED budget and schedule of the project. The LE/A is the immediate supervisor of his/her own discipline TL.
- ❑ **Agreement Manager (AM)**—An individual selected by the Functional Chief's Office to manage call-in agreements for a particular project, facility, or the entire unit. Referred to as the "Agreement Project Manager" in the standard consultant contract.
- ❑ **Principal Engineer/Architect**—Immediate supervisor of the LE/A and/or TL. Ensures quality of effort according to established standards and processes. Helps resolve inter- and intra-disciplinary issues.
- ❑ **Resource Manager**—Assigns the TL and/or LE/A as applicable, typically the Functional Assistant Chief in conjunction with the Principal Engineer/Architect.
- ❑ **Functional Chief/Assistant Chief**—Immediate supervisor of the Principal Engineer/Architect. Ensures quality of effort and helps resolve inter- and intra-disciplinary issues.
- ❑ **Manager of Design (MD)**—In order to provide for a consistent format for proposals to the Line Departments, the MD reviews project proposals for completeness and reasonableness prior to submission to the Project Manager (PM). The MD reports to the Deputy Director Engineering/Design. He/she can also serve as a point of contact for DD to the Line Department relative to proposals. The MD will perform a similar function for the preparation of Request for Proposals (RFPs). The MD is the Chief Engineer's duly authorized representative for RFP agreements.
- ❑ **Assistant Chief Engineer/Design (ACED)**—In charge of all design services and immediate supervisor of the Functional Chiefs and the MD.



1.2 ENGINEERING MANAGEMENT SERVICES (EMS)

1.2.1 ESTIMATING UNIT

- **Estimator/Senior Estimator**—Reviews all construction cost estimates at each project stage, including review of construction addenda and other contract changes. Monitors trends in costs and maintains database of current unit prices. Acts as a resource for all designers in need of estimating assistance.
- **Chief Estimator**—Manages the Estimating Unit. Ensures consistent estimating procedures and guidelines for ED. Investigates and recommends estimating tools and software. Monitors estimating performance of ED and acts as a resource for the Port Authority of New York & New Jersey in estimating matters.

1.2.2 ENGINEERING PROJECT DELIVERY SUPPORT

- **Contract Manager Specialist**— Receives and distributes all construction contract submittals/shop drawings and PACC signed mylar drawings using Primavera Contract Manager. Coordinates the review process with CMD, DD and the consultant team. Attends pre-construction meetings and prepares status reports and presentations.
- **Contract Manager Administrator**—Implements and administers the Primavera Contract Manager System. Develops submittal guidelines, provides user support and training, and creates reports and presentations.
- **Project Control Specialist**—Provides project control services: Prepares detail design schedules, evaluates project performance, analyzes schedule delays, trends, and engineering milestones. Prepares critical path analysis and schedule risk analysis, and provides training for Primavera scheduling software. Develops ED project controls and scheduling guidelines, and prepares project control reports and presentations.
- **Project Control Engineer**—Analyzes project schedule, cost information and develops ED performance metric reports. Prepares project control reports and presentations, and provides application support/training for the Project Delivery Performance System.

1.2.3 ENGINEERING INFORMATION

1.2.3.1 ELECTRONIC DOCUMENT CENTER (EDOC)

- **EDoC Contract Application Specialist/EDoc Supervisor**—Provides a secure environment for the electronic storage and exchange of critical documents and drawings. Coordinates with Contract Engineer and LEA in resolution of issues with design drawings and electronic drawings. Oversees the day-to-day operation of the Electronic Document Center.

1.2.3.2 ENGINEERING DEPARTMENT RECORDS CENTER

- **Principal Records Management Specialist**—Responsible for receiving, processing, storing, retrieving, and destruction of all archived ED documents and drawings in accordance with the Port Authority of New York & New Jersey retention policy.

1.2.4 CONTRACTS UNIT

- **Contract Engineer**—Responsible for generating the contract book based on contract information developed with the LE/A and PM and for providing overall bidability review and coordination of the contract drawings and technical specifications. He/she is the point of



contact for bidders during bid period, answers questions, and prepares addenda as required to clarify and correct the documents.

- ❑ **Assistant Chief Contract Engineer**—Assigns CEs as requested for projects in Stage III design. Provides guidance and review of contract documents during design development and bid period. He /she assists in resolution of issues as required.
- ❑ **Contract Desk**

1.2.5 CAD SUPPORT DESK

- ❑ **CAD Manager**—Implements and supports CAD within ED. This includes the installation and support of all Autodesk applications, as well as the development and oversight of Port Authority of New York & New Jersey CAD standards.
- ❑ **CAD Specialist**—Provides day-to-day support for Autodesk applications used by ED staff. Monitors adherence to the CAD Standards Manual and delivery of contract sets for electronic review distribution and electronic bid distribution.

1.2.6 OPERATIONS ANALYSIS

Develops budget, status, and performance reports with ED staff. Acts as liaison between ED and the Line Department Project Control for the preparation of reports used by ED to ensure that divisional budgets, expenditures, and forecasts are managed appropriately.

1.2.7 ENGINEERING APPLICATIONS UNIT

Provides system support, development, and maintenance of the Electronic Review Distribution System. Develops and maintains the Contract Management System for the production of contract books. Liaises with the Contracts Unit and the contract review team, resolving system-related issues.

- ❑ **Engineering Website Developer**—Coordinates and manages the implementation of websites for the use of exchanging design and construction drawings and documents. Provides training and guidance for end users.

1.2.8 FINANCIAL SERVICES UNIT (FSU)

Responsible for processing consultant payments for ED.

1.2.9 ASSISTANT DIRECTOR, ENGINEERING MANAGEMENT SERVICES (EMS)

Responsible for providing contract development, estimating review, CAD management, and budget and cost reporting services to ED. Manages engineering applications, systems, and documents for ED.

1.3 CONSTRUCTION MANAGEMENT DIVISION (CMD)

1.3.1 CONSTRUCTION UNIT

- ❑ **Engineer/Inspector**—Any representative of the RE acting within the scope of his/her vested authority.
- ❑ **Office Engineer**—Reports to the RE and manages all contract administration functions.
- ❑ **Resident Engineer**—Leads the construction effort for all ED divisions during Stage IV. The RE is the primary contact person with the Line Department. He/she oversees the construction schedule and the overall ED budget with the assistance of the LE/A. The Resident Engineer's Office (REO) performs inspections and monitors the contractor's activities to ensure that the required equipment, material, and methods of construction are in compliance with the



contract drawings and specifications. He/she records the progress of the construction contractor and submits progress reports.

- ❑ **Engineer of Construction**—The Engineer of Construction is a representative of the Chief Engineer and the Assistant Chief Engineer/Construction. There is an Engineer of Construction for each Line Department.
- ❑ **Assistant Chief Engineer/Construction**—Manager of CMD.
- ❑ **Change Order Control Desk**—Processes, files and distributes all Change Orders from a central location at the CMD Main Office. Performs internal controls for assuring proper authorizing signatures of same.
- ❑ **Contractor**—The firm with which the Port Authority of New York & New Jersey has entered into a contract. Also called the General Contractor (GC) or the prime contractor.
- ❑ **Subcontractor**—Anyone who performs work (other than or in addition to the furnishing of materials, plant, or equipment) at or about the construction site, directly or indirectly, for or on behalf of the contractor (and whether or not in privity of contract with the contractor) and shall not include vendors or suppliers.
- ❑ **Vendor/Supplier**—Any person who furnished merely his/her own personal labor, his/her own services, or who performs work that consists only of the operation of construction equipment of which he/she is the lessor.

1.3.2 MATERIALS ENGINEERING UNIT (MEU)

The MEU includes Construction Materials Inspection and Testing, Environmental Testing and Hazardous Waste Handling, Geotechnical Testing and Inspection, Project Support Material Development and Submittals, Mechanical and Electrical Equipment Inspection, and Metallurgical Inspection and Testing. (See [MED Support](#))

- ❑ **Engineer/Inspector/Technician**—Reports directly to the Supervising Engineer or a superior and performs sampling, testing, and inspection of construction materials for condition surveys or conformance to contract requirements.
- ❑ **Office Engineer**—Assigns technicians and inspectors to job sites or remote locations to perform sampling, inspection, or testing of construction materials in Stage IV. Point of contact for RE when requesting inspection services.
- ❑ **Task Leader**—The day-to-day point of contact for a particular scope of work for all contract stages. Prepares the proposal outlining the MEU budget. Represents MEU at kick-off and proposal meetings. Performs contract reviews and coordinates condition surveys performed by MEU. May perform focused condition assessments of elements to determine present conditions as an LE/A. Monitors MEU expenditures for all stages of work and contract submittal response times.
- ❑ **Supervising Engineer Chemical/Environmental Testing Services**—Supervises the collection and testing of samples acquired from various environmental matrices in support of remedial activities, permit requirements, hazardous and non-hazardous waste characterization, and contamination identification/delineation. Performs chemical analysis on various construction materials for contract compliance.
- ❑ **Supervising Engineer Inspection and Physical Testing**—Supervisor of field and laboratory personnel performing daily sampling, inspection, and testing of construction materials. Assigns staff to perform condition surveys.
- ❑ **Supervising Engineer Contract Support**—Direct supervisor of the MEU TLs.
- ❑ **Chief of Materials Engineering**—Manager of MEU.



1.3.3 CENTRAL SURVEY GROUP (CSG)

Responsible for surveying and mapping activities at Port Authority of New York & New Jersey facilities for planning, design, construction, dredging, and property acquisition.

- ❑ **CAD Specialist**—Develops survey-related engineering drawings in accordance with the CAD Standards Manual. Archives drawings and provides support for field crews in data collection, point management, and computations.
- ❑ **CAD Supervisor**—Supervises staff that create survey drawings/tabulations such as topographic, boundary, accident investigation, data reports, volume quantities, and subsurface utility databases.
- ❑ **Chief-of-Party**—Directly responsible for the collection of survey data through the use of surveying instruments and data collectors.
- ❑ **Facility Survey Supervisor**—Supervises the daily surveying activities at Port Authority of New York & New Jersey facilities.
- ❑ **Subsurface Utility Manager**—Supervises the subsurface utility mapping programs at Port Authority of New York & New Jersey facilities. Coordinates New York and New Jersey “one-call” utility notifications.
- ❑ **Project Manager**—Prepares technical specifications for surveys, assigns staff, prepares task estimates, performs quality controls, and maintains schedules. Supervises both Port Authority of New York & New Jersey and consultant staff.
- ❑ **Supervisor, CSG**—Manages the daily activities of the unit including topographic, construction, hydrographic, boundary, photogrammetric, structural deformation surveys, subsurface utility mapping, and associated CAD staff. Point of contact from CSG for the LE/A.

1.3.4 CONTRACT ADMINISTRATION UNIT

- ❑ **Engineer of Construction for Administration and Office Personnel**—Processes contractor payment applications, Post Award Contract Changes (PACCs), net cost conversion and letter agreements, requests for increases in authorization and subcontractor approval requests; provides assistance for reports and construction claims analysis; monitors the Port Authority of New York & New Jersey Minority and Women’s Business Enterprises (M/WBE) Program; conforms change orders; and maintains a contractor/subcontractor database, alert list, and WinTrak software. (See [Construction Management Division Guidelines](#).)

1.3.5 ENVIRONMENTAL FIELD OPERATIONS

- ❑ **Manager Environmental Field Operations and Field Supervisors**—Provides assistance to the environmental TL (see [Section 2.3.C](#)).

1.4 QUALITY ASSURANCE DIVISION (QAD)

1.4.1 DESIGN STANDARDS UNIT (DSU)

- ❑ **Technical Staff**—Audits the design documents for his/her related discipline and provides comments to ensure design is code compliant.
- ❑ **Principal Architect**—Point of contact with DD for QAD’s audit function. Supervises the audit process and provides DD a compiled list of comments on non-compliance, if any.
- ❑ **Manager, DSU**—Ensures established guidelines and procedures for audits are followed.



1.4.2 CONSTRUCTION STANDARDS UNIT (CSU)

- ❑ **Construction Engineer/Auditor**—Attends acceptance inspections on all Port Authority of New York & New Jersey contracts to perform construction audits. Audits field records and prepares a report to recommend a Permit to Occupy or Use and a Certificate of Completion for every Port Authority of New York & New Jersey contract.
- ❑ **Senior Engineer for CSU/QAD**—Supervises staff of Construction Engineers/Auditors to ensure open items, including non-conforming reports, are resolved for the recommendation to issue a Permit to Occupy or Use and a Certificate of Completion.
- ❑ **Supervising Engineer**—Ensures that the vertical transportation systems, boilers, refrigeration systems, and fire protection systems are capable of operating as designed before occupancy or use.
- ❑ **Manager, CSU**—Issues Temporary Permits to Occupy or Use on an as-needed basis when requested by the facility. Issues a Permit to Occupy or Use and a Certificate of Completion for the Chief Engineer's signature.

1.4.3 FACILITY CONDITION SURVEYS UNIT (FCSU)

- ❑ **Functional Staff**—Performs condition surveys of structures to determine structural deficiencies. Coordinates with the Lead Engineer to develop a condition survey report with repair recommendations for all deficiencies found and categorizes deficiencies as priority or routine recommendations.
- ❑ **Lead Engineer**—Transmits the condition survey report to the Line Department. The Lead Engineer assigns a number and recommends completion date to all priority repairs that are considered State of Good Repair items.
- ❑ **Manager, FCSU**—Ensures quality of effort according to established standards and processes. Provides assistance to resolve inter- and intra-disciplinary issues.

1.4.4 ASSISTANT CHIEF ENGINEER/QUALITY ASSURANCE

Manager of QAD.

1.5 LINE DEPARTMENT

- ❑ **Line Department Planning Representative (LDPR)**—Along with the Program Manager, initiates projects. May attend kick-off meeting to explain need and origin of project, as well as intended functional scope.
- ❑ **Project Control Specialist (PCS)**—Inputs, monitors, and issues reports from Primavision software to PM and LE/A.
- ❑ **Project Manager**—Administers overall project controls and project delivery. He/she interfaces with the facility, ED, other departments, and outside entities. The PM is responsible for obtaining permits and approvals necessary to legally begin construction.
- ❑ **Program Manager**—Responsible for the delivery of multiple projects within a specific area/program or facility.
- ❑ **Program Director**—Responsible for the delivery of all assigned projects for a specific program.



1.6 PROCUREMENT DEPARTMENT

1.6.1 CONTRACT DESK

Manages solicitation of bidders as well as the internal and external construction contract document distribution process with the CE of ED.

1.7 OPERATIONS SERVICES DEPARTMENT

1.7.1 PRINT SHOP

Duplicates and distributes large volume deliverables.



2.0 RESPONSIBILITIES

2.1 INITIATION AND PLANNING

- A. The Line Department will be the “gatekeeper” controlling which design projects go forward and when. The Line Department should consider state of good repair (SGR) and asset improvement (AI) recommendations made by ED.
- B. A list of projects for the upcoming year (updated every quarter) will be provided by the Line Department to ED for resource planning. Charge codes and Project Identification (PID) numbers will be available from the Line Department at the start of the project. This list will also be provided to the CAD Support Group to keep folder structures up-to-date on the CAD server.
- C. The Line Departments are responsible for Pre-Stage I planning. Line Departments may, at their option, retain ED for planning studies, Pre-Stage I efforts, and functional scope development. This request may be made through the MD or other ED managerial staff as long as all parties are kept informed. When requested, ED will provide assistance to the Line Departments when refining functional project scope.
- D. The Line Department will provide a project definition statement outlining the overall functional scope, schedule, and budget information to ED.
- E. The FCSU of QAD performs periodic and immediate inspections in order to issue reports on conditions of all existing structures with recommendations for remedial repairs. The unit authorizes the use of the “Immediate Repairs Contractor” to alleviate immediate or operational sensitive problems.
- F. The CMD Environmental Field Operations Unit, in cooperation with MEU, conducts surveys and site assessments for lead, asbestos, contaminated soil, and other hazardous materials.

2.2 DESIGN IMPLEMENTATION

- A. ED will decide whether designs will be performed in-house or by outside consultants. For large multidiscipline RFPs, the Line Department will be involved in the selection process including membership on the selection panel.
- B. Engineering design services (Stages I through III) for the Port Authority of New York & New Jersey will be led by the LE/A assigned from DD. The LE/A will coordinate the design work of the various disciplines/units, coordinate the preparation of the construction cost estimate, ensure that work is done within scope and schedule, ensure staff design costs are within budget, and be the point of contact for the Line Department.
- C. The design team will be a partnership of all ED units including QAD, MEU, CMD, EMS, as well as non-ED units, as needed for the preparation of design products. All ED units will be invited by the Line Department to attend the project kick-off meeting, chaired by the PM, to identify anticipated involvement. Typically, the LE/A will be chosen from the project’s dominant design discipline by consensus among the Principals, e.g., architects for buildings, civil engineers for highways, etc. Subsequently, all ED units will be invited by the LE/A to attend a proposal meeting to develop a comprehensive proposal to submit to the Line Department.
- D. Estimated staff costs for all engineering units, including those for CMD and MEU, will be collected by the LE/A and the Project Task Card will be forwarded to the PM for any particular stage of any particular project. The intention is for ED proposals to reflect the



entire ED budget. Project team members, including their consultants, will be obligated to stay within the Line Department-approved budgets and schedules. A PCS from the Line Department will post project reporting data.

- E. The LE/A will coordinate the preparation of the Stage I, II, and III construction cost estimates with all DD disciplines, the PM, and the EMS Estimating Unit. The PM identifies sources of soft costs if not already included in the estimate. The Estimating Unit reviews estimates with individual discipline leaders, the LE/A, and the PM. The LE/A prepares the cost summary sheet using the on-line Engineering Estimating System. The LE/A, PM, and the Estimating Unit will sign the comprehensive construction cost estimate for Stages I, II, and III. (See [Engineering Management Services Guidelines](#).)
- F. The LE/A will be responsible for the compilation and submission of milestone deliverables to the PM and ensuring that they are posted electronically.
- G. The CMD Environmental Field Operations Unit, in cooperation with MEU, provides assistance to the environmental TL and LE/A for contract review and/or preparation of design criteria and specification for regulatory compliance.
- H. The Contracts Unit, as part of EMS, coordinates with and provides support for the design team. The Contracts Unit will also coordinate with other departments, such as the Line Department, Law, Procurement, Treasury (Risk Management), and Real Estate (Small Business Programs), for receipt of input during contract development. The Line Department will be copied on correspondence between the Contracts Unit and other departments.
- I. The DSU of QAD audits design documents prepared by DD and its consultants for code compliance. Any code variance or engineered solutions to establish code equivalencies, if required, is to be justified by DD, concurred by QAD, and approved by the Chief Engineer. QAD is responsible to obtain concurrence from the New York City (NYC) Department of Buildings (DOB) for any code variance in projects in NYC. (See [Design Division Guidelines](#).)
- J. EDoC, as part of EMS, will provide electronic document scanning, storage, archiving, and retrieval support services to ED. EDoC will also provide website development services to support the electronic exchange of documents and drawings.
- K. The CAD Support Group archives contract drawings at all milestones and manages the electronic review process. Drawings are made available to EDoC so that EDoC can begin the electronic review process, as required. (See [Engineering Management Services Guidelines](#).)

2.3 CONSTRUCTION IMPLEMENTATION

- A. The RE will lead ED and is the primary contact person for the Line Department in Stage IV. DD and MEU will provide Stage IV support, including submittal reviews, answering Requests for Information (RFIs), site visits, etc. DCSs will log Stage IV submittals into the Expedition system and will distribute submittals to reviewers. The LE/A for design will be the primary contact for the RE to communicate with DD and will assist the LE/A of construction in the tracking of the DD Stage IV costs. CMD will consult with the design LE/A, if necessary, to identify appropriate individuals to receive distribution materials.
- B. The CSU of QAD performs construction audits and attends acceptance inspections and tests on new construction projects to issue a Permit to Occupy or Use and a Certificate of Completion on every Port Authority of New York & New Jersey contract. CSU also attends code-required inspections and tests for completed systems to ensure that the



equipment is capable of operating as designed before occupancy or use. The unit also issues Temporary Permits, upon facility request, when work is substantially completed.

- C. The CMD Environmental Field Operations Unit, in cooperation with MEU, performs testing, inspections, and coordination to comply with applicable environmental regulations. The unit administers call-in consultant agreements and maintains a database of applicable documents. (See [Construction Management Guidelines](#).)