

Addendum 1

**ATTACHMENT A
Scope of Services
Revised April 22, 2011**

**ENGINEERING AND CONSTRUCTION MANAGEMENT SERVICES
RFQ XP8902-006**

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SCOPE OF SERVICES

1.0 Engineering/Construction Management

The Offeror shall perform all elements necessary to support and manage the requirements of the implementation of a design-build Contract as well as several projects planned to be awarded in design-bid-build process. The selected Offeror shall assist the Authority in the engineering oversight and construction oversight including inspection and close-out of the contracts awarded to support Phase 2 of the Light Rail Transit Project. Selected Offeror will provide the required staff, resources and expertise to effectively assist in the management of the Phase 2 Project. The tasks and activities to be performed under any resultant contract include, but are not limited to the following:

1.1 Resources

Ensure that the required staffing levels and requisite experience are available to the project. Assist the Authority in identifying and providing additional staffing that may be identified as Phase 2 evolves.

Ensure that the required functional support is available to address the elements described in this Scope of Services.

1.2 Progress Reporting

On a monthly basis, the Offeror shall provide written progress reports that summarize the activities performed during the period broken down by staff member:

- Summary of the work performed during the period
- Staff used to perform the work
- Deliverables provided
- Cost Data, which includes cost incurred during the period, costs to date, actual costs versus planned and forecasted costs for the upcoming three months and at completion

The Offeror's Executive Manager shall meet with the Authority's Chief Project Officer on a monthly basis to discuss the Offeror's performance in accomplishing the Scope of Work, the status of the project, additional staffing needs and anticipated functional support.

1.3 Meetings

The Offeror shall attend meetings to support the completion of Phase 2. The Offeror shall support the Authority or act on their behalf and provide any required documentation that at a minimum describes the meeting attendees, the items discussed, any associated

action items, the party responsible for completing the action and the date the action shall be completed.

1.4 Project Management Plan

Develop a Project Management Plan (PMP) that will be used to manage Phase 2. The PMP shall be comprehensive and include definitions of roles and responsibilities of all parties and the procedures and processes required to complete Phase 2 on schedule and budget. The PMP shall be distributed to all management personnel to foster and maintain a team approach in which each participant has the necessary information to integrate into the plan. The PMP shall be a living document; revised as necessary to adjust to the variables that will occur, but will be the foundation and the road map to deliver Phase 2.

The PMP shall include, but not be limited to, procedures for establishing and maintaining lines of authority, coordination and communication, schedule and cost control, reporting, document control and record keeping, tracking milestone deliverables, safety, public communications, value engineering, constructability reviews and quality assurance.

2.0 Project Control

The Offeror shall be responsible for providing the staffing and services necessary to assist in the management, tracking, estimating and forecasting Phase 2 budgets, costs and schedules in conjunction with Authority Staff.

2.1 Cost Control

The Offeror will assist in the managing and tracking of costs on Phase 2 and how these costs are trending in relation to the budget. The Offeror shall use the Authority's cost control system and report status on a monthly basis, including providing separate reports as required for Measure R projects, as well as FTA and ARRA funded projects, if applicable.

2.2 Schedules

The Offeror shall be responsible for evaluating baseline schedules submitted by the Authority's contractors. The Offeror shall evaluate monthly schedule progress reports submitted by the Authority's contractors for progress against the baseline schedule and compliance with the requirements of the contract. The Offeror shall submit written monthly reports summarizing the schedule evaluation. The Offeror shall also be responsible for creating and updating the Authority's Program/Master and control schedules.

The Offeror shall have extensive experience in the use of Primavera scheduling software products and the analysis of concurrent delays.

2.3 Risk Management

The Offeror shall develop and maintain a risk management tool that identifies, quantifies and tracks mitigation of Project risk elements.

2.4 Contract Administration

The Offeror shall be responsible for assisting in the management of the design-build and design-bid-build contracts issued by the Authority for Phase 2. The Offeror shall be responsible for ensuring the Authority contractors are executing the work in compliance with the contract.

The Offeror shall be responsible for assisting in the management of the Change Control/Change Order process, which includes an evaluation of the merit of each potential change order request, leading negotiations for merited change orders, leading presentations to the Authority's Change Control Board and processing change orders. The Offeror shall be responsible for using the Authority's project management and document control system that tracks the status of each change document. The Offeror will publish a monthly report that details requests for changes/potential change order requests submitted during the month, change orders executed during the month, summary of change orders issued to date, status of merited potential change order requests and an evaluation of the overall cost exposure as a result of executed change orders and merited potential change order requests.

In the event of a dispute, the Offeror shall assist the Authority's claim consultants and legal counsel in their efforts to resolve the dispute or support with claims submitted to the Disputes Review Board.

2.5 Real Estate

The Offeror may assist in the verification of property needed for part takes, as well as surveys, plat maps etc. to implement Phase 2. Offeror may be required to prepare title history as well as other documentation related to the parcels that are being acquired.

2.6 Estimating

The Offeror shall provide as needed design and construction estimating services to support implementation of Phase 2. This work includes providing independent cost estimates for the Phase 2 design and construction and development of cost estimates as a basis of negotiation for contract change orders. The Offeror shall participate in contract and change order negotiations.

The Offeror shall provide the expertise needed to manage and process Time and Material (T&M) change orders. The Offeror shall be responsible for confirming the Authority's contractors are following the contractual process for T&M change orders, and will coordinate with the appropriate technical staff to confirm that the resources being used are consistent with the requirements of the work.

2.6 Project Controls System and Software

Exposition Metro Line Construction Authority (the Authority) has deployed a Program Management Information System (PMIS) to facilitate program-wide project tracking, administration and management reporting. The system utilizes Oracle/Primavera software that has been configured to support the program-wide reporting requirements of the Authority and LA Metro.

- a. Project administration, document control, cost and change management is managed using Oracle/Primavera Contract Management 13. The licenses will be deployed on the Authority's PMIS system, and may only be used by the PM/CM firm on the Authority's system until the completion of the project. The licenses to support their proposed team shall be provided by the Consultant and will be included in overhead.
- b. Project scheduling is managed using Oracle/Primavera P6 version 7 scheduling format. The Authority has purchased 1 ePPM license for use by the project scheduler. The licenses will be deployed on the Authority's PMIS system, and may only be used by the PM/CM firm on the Authority's system until the completion of the project. Any additional Oracle/Primavera ePPM software licenses needed to support the proposed schedule management team shall be provided by the Consultant and will be included in overhead.
- c. In some instances, project collaboration, document submittals and schedule updates may be done through Oracle/Primavera ePPM (P6 web version 7) or a specific custom data entry screen into the LA Metro PMIS system. The licenses will be deployed on the LA Metro's PMIS system, and may only be used by the PM/CM firm on the Authority's system until the completion of the project. The Consultant should include the cost of Oracle/Primavera ePPM software licenses and annual maintenance fees to support their proposed schedule management team's work in LA Metro's systems in their overhead.
- d. The system also utilizes Sharepoint for saving all documentation in an electronic format. Each Project or Construction Management firm should include the cost of Sharepoint licenses needed to support their project team in their overhead. The licenses will be registered to the Authority and will become the property of the Authority at the completion of the project.

3.0 Engineering

The Offeror shall provide the staffing and expertise needed to support the management, development and review of the engineering documents needed to construct Phase 2. To complete this task, the Offeror shall have expertise in the following fields:

1. Highway and street design especially as it relates to understanding the requirements of the City of Los Angeles, City of Santa Monica and Caltrans

2. Traffic Engineering especially as it relates to understanding the requirements for traffic signal systems, signing and striping, and street lighting in the Cities of Los Angeles and Santa Monica.
3. Grade crossing protection systems and familiarity with the requirements of the California Public Utilities Commission (CPUC) and Metro
4. Structural engineering with an emphasis on familiarity of Caltrans and Metro bridge and structural design standards and requirements
5. Architectural and landscaping requirements for light rail stations and corridor urban design features
6. Mechanical and electrical for light rail stations
7. Trackwork design and track alignment
8. Drainage for both the light rail guideway and streets
9. Light rail Overhead Catenary Systems (OCS), traction power, train control, communications and fare collection
10. Light rail maintenance facilities

3.1 Engineering Management

The Offeror shall be responsible for assisting in the management of the design activities of the Authority's Phase 2 contractors. This work shall include, but is not limited to:

- Managing the design progress of the engineering contractors
- Managing compliance with the contract documents, which include the certified FEIR and MCA/MOU's with Third Parties
- Managing compliance with outside jurisdictional requirements
- Review, comment and accept design milestone submittals
- Assist with the Requests for Information (RFI)
- Managing Compliance with Metro Rail design standards
- Attend meetings with the Authority

3.2 Engineering Support

The Offeror shall develop preliminary and conceptual engineering, and Plans Specifications and Estimates (PS&E) as needed to support the completion of Phase 2. Offeror will provide its own software licenses such as Bentley Microstation and In-Road as well as other working tools such as estimating software manuals and publications. Such software programs and other materials must be compatible with the Authority and Metro systems such as Bentley Microstation and In-Road.

3.3 Third Party Coordination

The Offeror shall assist the Authority contractors with coordination with third parties. This Offeror shall have a strong understanding of the requirements of third party stakeholders on Phase 2. The primary stakeholders include:

- City of Los Angeles
- City of Santa Monica
- Caltrans
- Metro
- Los Angeles Department of Water and Power (LADWP)
- Southern California Gas (SCG)

- Southern California Edison (SCE)
- Los Angeles County Flood Control

The Offeror shall schedule and attend regular meetings with the primary stakeholders. The Offeror must have a thorough understanding of the third party approval processes and will be responsible for managing third party submittal reviews.

The Offeror will also be responsible for managing third party utility relocations and must understand and manage the process and schedule for these relocations. The Offeror will develop a management system and report monthly to the Authority on the status of each third party relocation required for Phase 2.

The Offeror shall assist the Authority as required in the development of third party agreements and will manage compliance with the terms of these agreements.

The Offeror shall manage the third party work authorization process. This work includes negotiating annual work plans, managing conformance to the work plans and processing invoices.

Offeror shall also track betterments and back charges that may be pursued against third parties.

3.4 Geotechnical Support

The Offeror shall provide the expertise necessary to evaluate Authority contractor geotechnical reports and recommendations. The Offeror shall coordinate Authority geotechnical findings with affected local jurisdictions. The Offeror shall monitor the field activities of the Authority's contractors as needed.

The Offeror shall provide additional geotechnical recommendations as requested by the Authority. This work may include additional field explorations, geotechnical reports and recommendations.

4.0 Environmental Services

4.1 Environmental Management

The Offeror shall provide the services necessary to manage conformance with the mitigations required as part of the certified Phase 2 Final Environmental Impact Report (FEIR). The Offeror shall provide a quarterly report that will identify the status of the completion of each mitigation.

The Offeror shall oversee the process of contaminated and hazardous material identification. The Offeror shall oversee the development of any necessary Environmental Site Assessments (Phases I and II) reports required for Phase 2 and will coordinate the results with the required regulatory agencies. The offeror shall manage the removal of any contaminated or hazardous material and will coordinate this removal with the required regulatory agencies.

4.2 Environmental Services

The Offeror shall provide, as needed by the Authority, Archeological and Paleontology support to oversee field compliance with the FEIR.

The Offeror shall provide noise and vibration field monitoring as needed by the Authority, to confirm conformance with construction thresholds established by the Phase 2 project and the FEIR. The Offeror shall provide a nightly summary of the readings and report on a weekly basis the results of the Authority contractor field activities.

4.3 Supplemental Environmental Documents

The Offeror shall assist the Authority with any additional environmental documentation that may be required during the implementation of Phase 2. It is anticipated these additional environmental services may include preparation of:

- Categorical Exemptions
- Environmental Addendums
- Supplemental Environmental Impact Reports
- Environmental Impact Memorandums to File

The Offeror shall provide all services necessary to produce these documents in conformance with the requirements of the California Environmental Quality Act (CEQA). The work includes the technical analysis necessary to complete the reports, assistance with any required noticing of the documents, support at any required public or community meetings, responses to comments and support in any required filing of environmental documents.

5.0 Construction Management

The Offeror shall provide the expertise necessary to assist in the management and oversight of the construction activities of Phase 2.

5.1 Construction Oversight/Inspection

The Offeror shall assist in the oversight of the field activities of the design-build contractor and inspect the field activities of the design-bid-build contractors. It is anticipated this work will include:

- Conformance of the work with the contract requirements
- Conformance of the work with the design documents
- Coordinate oversight of third party inspections
- Coordinate field activity with main office activities
- Monitor the progress of the contractor's field activities
- Attend weekly construction meetings
- Prepare weekly construction progress reports
- Confirm work in place requested as part of the contractor's monthly invoice
- Coordinate work with affected communities and businesses
- Coordinate and verify the activities of self performed third party utility relocations

- Coordinate the work of other contractor's performing work in the Phase 2 area
- Manage the development and completion of as-built drawings
- Assist in the development of contractor punch list items and manage their completion
- Assist in confirming attainment of Substantial Completion
- Assist in Phase 2 closeout, which includes completion of all punch list items, monitoring contractor required landscape startup and maintenance, and possession of all required contractor warranties

5.2 Quality Assurance

The Offeror shall provide a Quality Audit program to statistically measure contractor compliance with the contract requirements. The Offeror shall prepare a program for Authority approval that will describe how the Offeror shall identify those elements of work for audit, the requirements that will be used as part of the audit, how nonconformance's will be identified and tracked to closure, monthly reporting requirements and how the Offeror will integrate the program into the contractor's activities.

6.0 System Startup

The Offeror shall assist the Authority in managing the development, implementation and completion of the design-build contractor's startup activities. This work shall include, but not limited to:

- Oversee development and accept the contractor's Integrated Testing Plan (ITP)
- Oversee development and accept the contractor's System Safety Certification Plan (SSCP)
- Oversee the development and accept the Contractor's System Startup Plan (SSP)
- Coordination with Metro
- Coordination with the CPUC, Fire Life Safety and other affected regulatory agencies
- Oversee contractor compliance with the ITP, SSCP and SSP
- Manage contractor compliance with the startup schedule
- Assist contractor with scheduling of Metro operated light rail vehicles
- Coordination with Metro Pre-Revenue operations

The Offeror shall identify any other requirements of the system startup.

7.0 Other Services as Required

The Offeror shall assist the Authority on an as needed basis with additional services that may arise during the implementation and completion of Phase 2. The Offeror is encouraged to identify any additional services they anticipate as part of the delivery of Phase 2.

8.0 Resources

8.1 Executive Manager (Overhead)

The Offeror shall have an Executive Manager assigned to Phase 2 who will be responsible for managing the Offeror's performance on the contract. The Executive Manager will be responsible for:

- Negotiating the contract on behalf of the Offeror
- Providing staff with the requisite technical expertise to perform the scope of services
- Ensuring that staff committed to Phase 2 are available for the times and durations committed to
- Oversee performance of the Offeror's team
- Oversee sub-consultant assignments and performance
- Manage the Offeror's budget and schedule
- Negotiate fiscal year task orders
- Negotiate any required contract amendments

8.2 On-Site Support Staff

The Offeror shall provide on-site support staff. The on-site support staff will work in the Authority and/or the Contractor's offices as part of an integrated team. The Offeror shall identify the following on-site staff positions and shall commit them for the hours identified. Key staff are identified with an asterisk.

8.2.1 Director of Engineering (Full-Time)*

The Director of Engineering reports to the Authority's Project Director **and shall be responsible for managing the activities necessary to successfully complete the Engineering scope of services identified in Section 3.0.**

The Director of Engineering shall manage the project team staff identified in the organization chart and any other staff required to support completion of the engineering scope of work, The Director of Engineering shall be a Registered Professional Engineer with experience developing and leading light rail design. LRT design-build experience is highly desirable.

8.2.2 Project Engineers (Two Full-Time)*

The Project Engineers will be assigned to appropriate segments of the Project and will report to the Director of Engineering. The Project Engineers shall be responsible for managing, coordinating and resolving issues in the Cities of Los Angeles and Santa Monica. The Project Engineers shall be responsible for overseeing the development of the design-build contractor's civil design and to evaluate that the design meets the design standards of the affected jurisdictions. The Project Engineers shall also evaluate each design

package prior to submittal to ensure the advancement of the design documents is consistent with the level of submittal.

The Project Engineers shall be Registered Professional Engineers in California and have demonstrated experience working with the City of Los Angeles and Santa Monica with a strong working knowledge of City requirements and criteria.

- 8.2.3 **Systems Engineer (Part-Time)***
The Systems Engineer shall report to the Director of Engineering and shall be responsible for systems design management, coordination and oversight. The Systems Engineer shall have a demonstrated experience with LRT system requirements for OCS, Traction Power, Train Control and Communications. Experience with Metro systems design criteria and LRT design-build is desirable.
- 8.2.4 **Third Party Utility Engineer (Full-Time)***
The Third Party Utility Engineer reports to the Director of Engineering and will be responsible for the management, coordination and oversight of the design build contractor's utility design. The Third Party Utility Engineer shall have demonstrated experience in the design of wet utilities, which include storm drains, sewers, water lines and utility protection. The Third Party Utility engineer shall also have experience in duct bank and conduit routing design. The Utility Engineer should understand the requirements of the City of Los Angeles, County of Los Angeles and City of Santa Monica.
- 8.2.5 **Traffic Engineer (Full-Time)***
The Traffic Engineer will report to the Director of Engineering and shall be responsible for the management, coordination and oversight of the traffic system design. The Traffic Engineer shall have demonstrated experience in the design and implementation of traffic signals, signing and striping, Automated Traffic Management Systems and traffic modeling. The Traffic Engineer shall be familiar with the requirements of the City of Los Angeles Department of Transportation and the City of Santa Monica.
- 8.2.6 **Structures Engineer (Full Time)***
The Structures Engineer reports to the Director of Engineering **and shall be responsible for structural design management, coordination and oversight.** The Structures Engineer shall have demonstrated experience with LRT bridges, cut and cover tunnels, retained earth structures, utility protections and parking structures. The Structures Engineer shall be familiar with the requirements of Caltrans, Metro, City of Los Angeles, County of Los Angeles and City of Santa Monica.
- 8.2.7 **Assistant Engineer**
Assistant Engineer reports to the Structures Engineer.

8.2.8 ~~Project Engineers (Two Full-Time)*~~

~~The Project Engineers will be assigned to appropriate segments of the Project and will report to the Director of Engineering.~~

8.2.9 ~~Systems Engineer* (Full-Time)*~~

~~The Systems Engineer shall report to the Director of Engineering.~~

8.2.10 Maintenance Facility Manager (Full Time)*

The Maintenance Facility Manager reports to the Authority's Maintenance Facility Director and shall be responsible for overseeing the Maintenance Facility Preliminary and Final Design contractor. The Maintenance Facility Manager shall have demonstrated knowledge of the functional requirements of a LRT maintenance facility which includes LRV circulation, facilities and equipment, placement of storage tracks and integration of a maintenance facility into the fabric of the community. An understanding of Metro maintenance requirements is desirable.

8.2.11 Third Party Liaison

The Third Party Liaison reports to the Director of Engineering and shall be responsible for managing the interface with third parties on the project. The Third Party Liaison shall be responsible for tracking third party reviews, third party design activities, conformance with Master Cooperative Agreements, assisting the Authority's Third Party Administrator with negotiating annual work plans and managing the status of third party relocations. The Third Party Liaison will be responsible for managing the activities of Metro, Caltrans, City of Los Angeles, County of Los Angeles, City of Santa Monica, Los Angeles Department of Water and Power, and other affected third party stakeholders.

The Third Party Liaison should have an understanding of the processes of key project third party stakeholders.

8.2.12 Bikeway Facility Project Engineer (Part-Time)

The Bikeway Facility Project Engineer reports to the Director of Engineering and is responsible for managing the design and construction of the Bikeway Facility project, which is federally funded. This will include close coordination with the mainline Design-Build team.

8.2.13 Venice Aerial Project Engineer (Part-Time)*

The Venice Aerial Project Engineer reports to the Director of Engineering and will be responsible for managing the final design and construction of the aerial structure project. This will include close coordination with the mainline Design-Build Team and the Culver City station contractor. **Also, this position will involve managing the development of contract documents for bid and the selection process.**

The Venice Aerial Project Engineer shall have demonstrated experience managing final design and construction of Caltrans bridges and roadways. LRT experience and familiarity with the requirements of the City of Los Angeles are desirable.

8.2.14 Quality Assurance Manager (Full-Time)*

The Quality Assurance Manager reports to the Authority's Project Director and shall be responsible for Quality Assurance.

8.2.15 Construction Manager (Full Time)*

The Construction Manager reports to the Chief Project Officer and shall be responsible for Construction Management. The Construction Manager shall manage staff and the contractors to insure the project scope as awarded is built in full conformance with the plans, specifications, schedule and budget. The Construction Manager shall be responsible for the oversight of the Authority's construction contractor's work, managing the activities of the field staff and coordinating third party inspections. The Construction Manager shall perform day-to-day contract administration including assisting the Authority's Project Management Director in bid analysis and award, coordinating pre-construction conferences, review of contractor's initial construction schedule, schedule of values, submittals, and generally respond to contractor's questions regarding contract administration. Plans, organizes, directs, coordinates, and reports the project management activities of the project team.

The Construction Manager shall have demonstrated experience overseeing large scale DB LRT transit construction projects. Experience working on Metro, Caltrans, City of Los Angeles and City of Santa Monica projects is desirable.

8.2.16 ~~Office Engineer~~

~~The Office Engineer reports to the Deputy Construction manager (Authority Staff position) and will be located in the field office.~~

8.2.17 Resident Engineers (Part-Time)*

The Resident Engineers shall report to the Authority's Deputy Construction Manager. The Resident Engineer shall be responsible for Construction Oversight/Inspection, which includes civil improvements, utilities, architectural, structural, systems and the maintenance facility.

8.2.18 Senior Scheduler (Full-Time)*

The Senior Scheduler reports to the Director of Project Management and shall be responsible for schedule analysis, negotiation of time impacts, and recovery schedules. **The Scheduler shall have demonstrated experience in construction scheduling on large public works projects and other closely related experience. The Scheduler should be proficiency in project management scheduling software: Primavera Project Planner (P3) and Primavera 5.0 or 6.0 and in cost loading, resource loading, global changes, and filtering and report layouts.**

8.2.19 Estimator*

The Estimator reports to the Director of Project Management and will be responsible for reviewing and tracking all proposed cost changes.

8.2.20 Change Control Manager*

The Change Control Manager shall report to the Director of Project Management and shall be responsible for managing the change process and determining merit as well as tracking change order requests, notices of change, change orders and modifications.

8.2.21 Contracts Manager (Full-Time)*

The Contracts Manager shall report to the Director of Project Management and shall be responsible for managing the Authority's design-build and design-bid-build contracts. These responsibilities include administering the contracts, interpreting contract provisions, ensuring the contractors are complying with the terms of the contract. In addition, the Contracts Manager will manage the change process which includes determining merit as well as tracking change order requests, notices of change, change orders and modifications.

8.2.22 Contract Compliance Manager (Full-Time)*

The Contract Compliance Manager reports to the Chief Operating Officer and is responsible for working with the Authority's compliance consultant to ensure that the contractors and consultants are in compliance with all labor requirements, PLA requirements, and Small Business Enterprise requirements.

8.3 Additional On-Site Support

In addition to the positions identified above, the following support positions are anticipated:

Assistant Structural Engineer

Inspectors:

Structures

Maintenance Facility

Segment 1 & 2 (3 positions Inspector, Nighttime Inspector and Jr. Inspector)

Segment 3 (3 positions Inspector, Nighttime Inspector and Jr. Inspector)

Office Engineer

Quality Auditors

Estimator

8.4 Other Support Services (Resource Pool)

In addition to the on-site positions, the Offeror shall provide additional support services (Resource Pool) necessary to complete the scope of services. This will include the resources necessary to assist with design reviews, environmental services and System Startup. The Offeror may be required to provide well-qualified support in the following areas on as needed basis.

Project Administration and Functional Support:

Legal
Labor/SBE/Construction Careers/PLA Compliance
Human Resources
Risk management
Art

Project Management Support

Project Management Information Systems
Claims
Dispute Resolution Board (DRB)
Contract Administration

Engineering Support

Track work
Communications
Streetwork
ATMS
Photo Enforcement
Architectural
OCS
Train Control

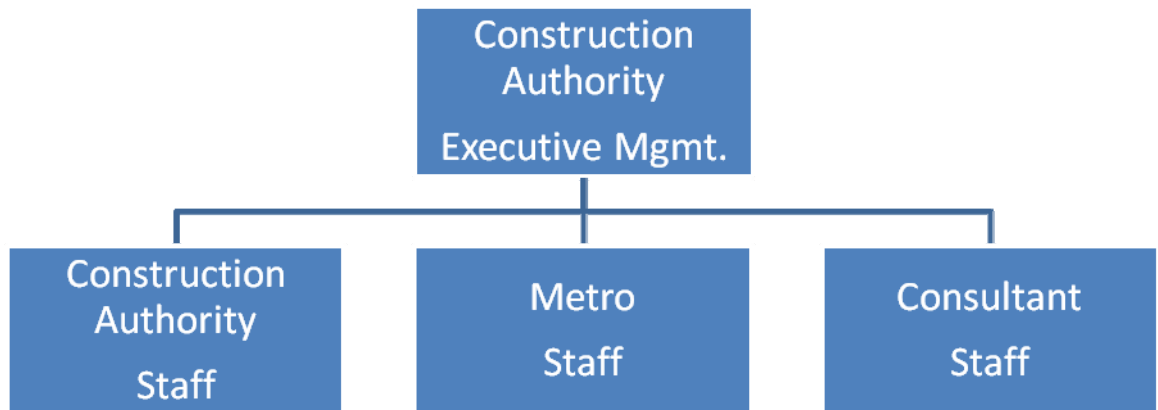
Design Quality Auditing

Construction Management

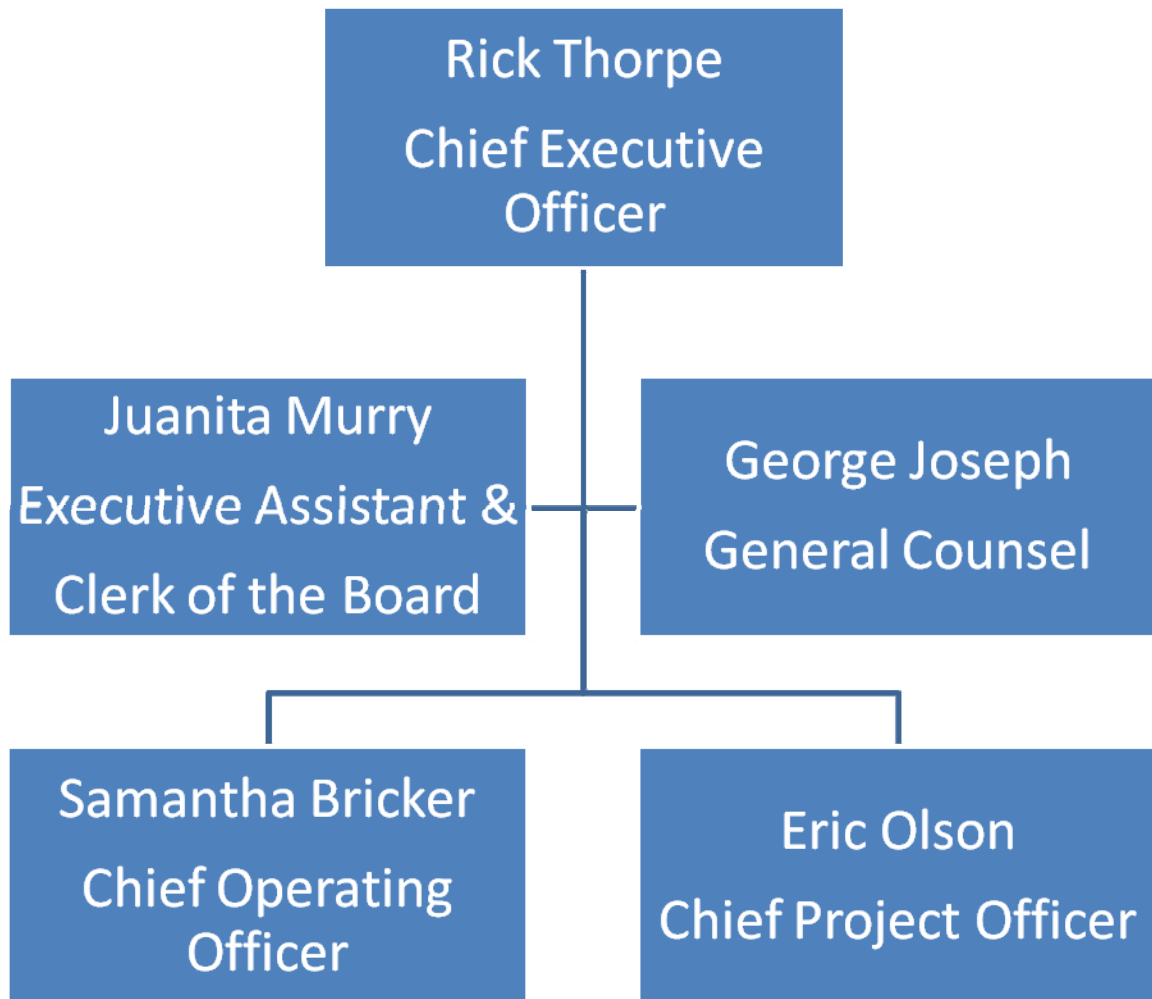
OCS Inspector
Train Control & Communications Inspector
Trackwork Inspector
Utilities Inspector

Note: On following Organizational Charts FTE denotes full-time **throughout the duration of the Contract**; PTE **shall be assigned full-time or part-time for a portion of the duration of the Contract.**

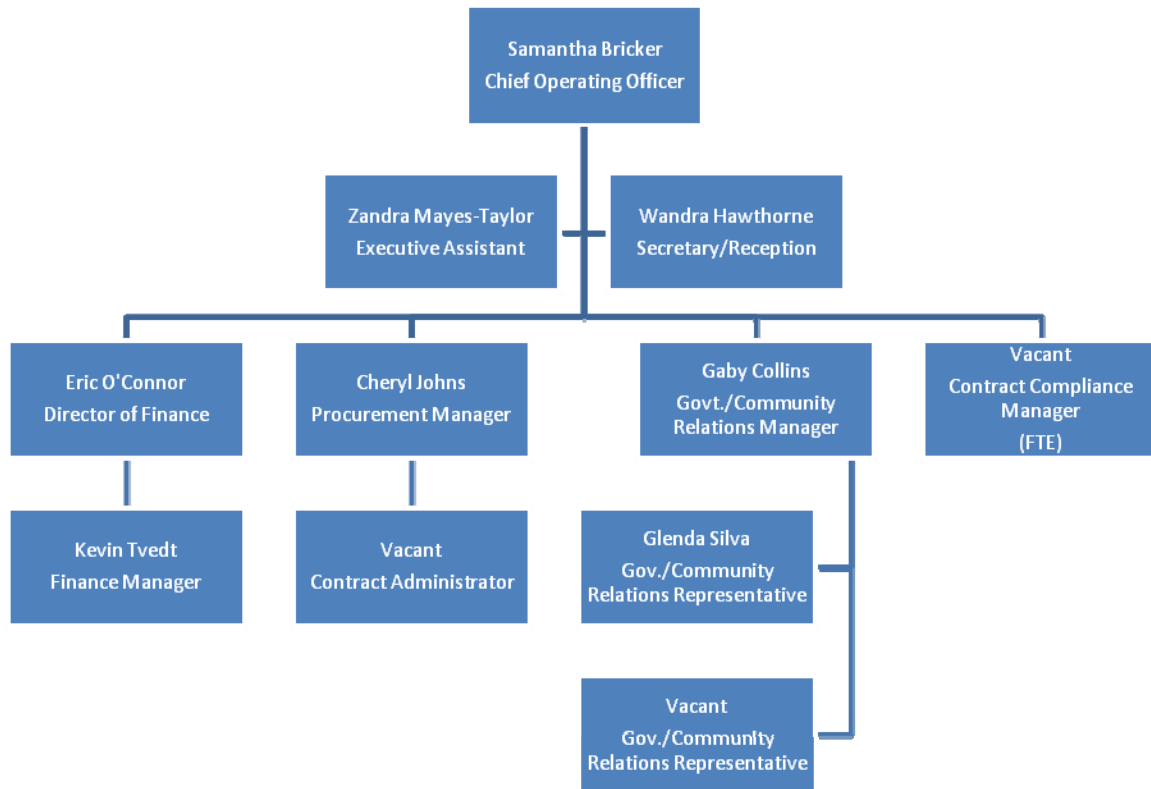
9.0 Expo Phase 2 – Organization Chart



Phase 2 - Executive Management



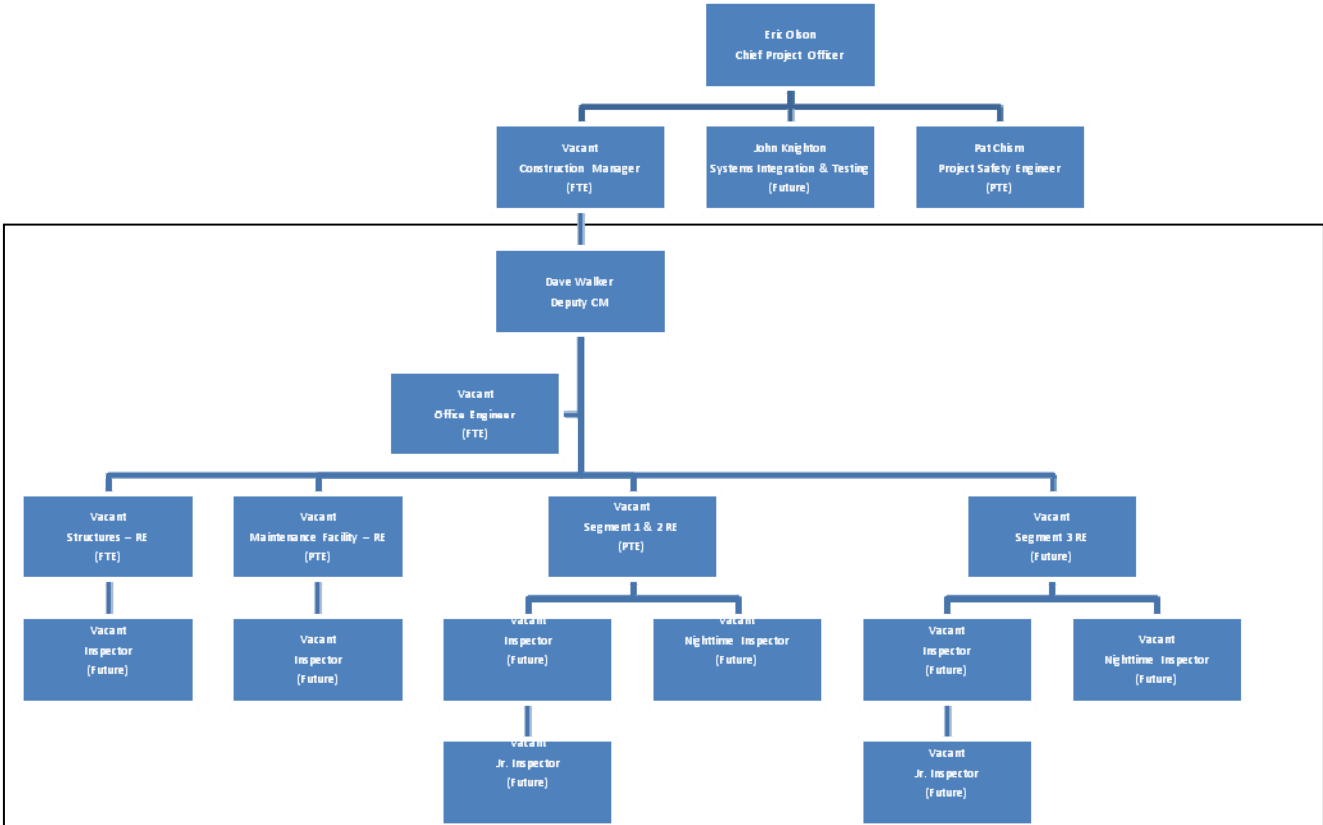
Phase 2 - Project Administration



Project Administration & Functional Support (as needed)

- Misc. Counsel
- Labor/SBE/Construction Careers/PLA Compliance
- HR
- Real Estate
- Risk Management
- Art

Phase 2 - Construction Management

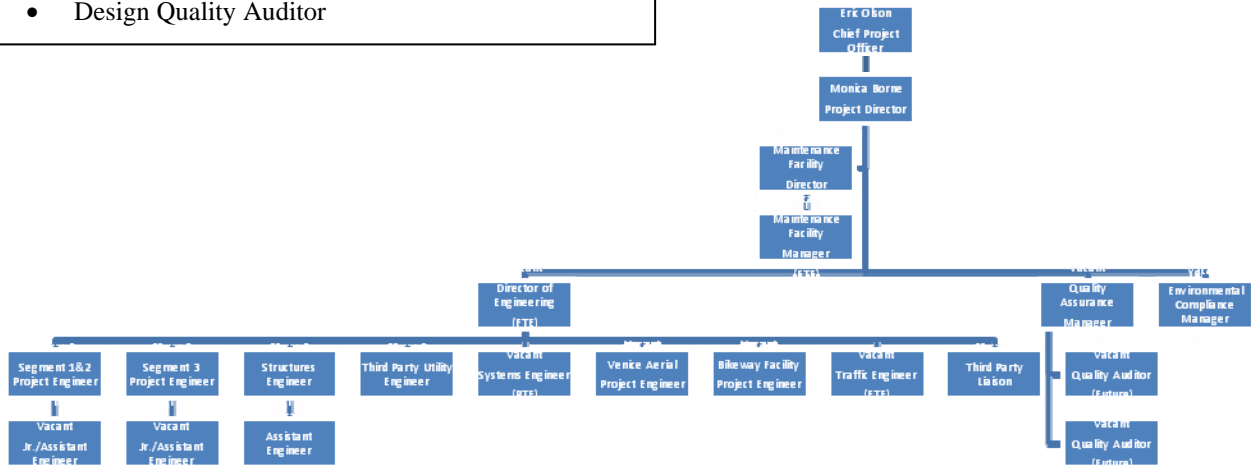


- OCS Inspector
- Train Control & Communications Inspector
- Trackwork Inspector
- Utilities Inspector

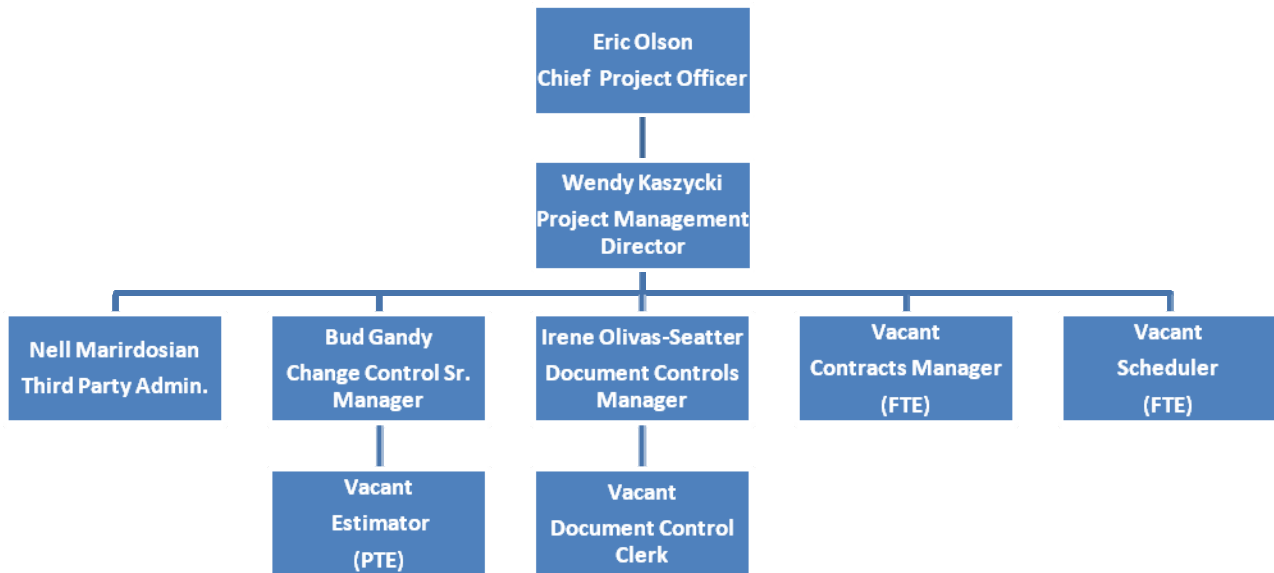
Phase 2 - Engineering Management

Engineering Support (as needed)

- Trackwork Engr.
- Comm. Engr.
- Streetwork Engr.
- ATMS
- Photo Enforcement
- Architectural
- OCS Engineer
- Train Control Engr.
- Design Quality Auditor



Phase 2 - Project Management



Project Management Support

- Project Management Information System (PMIS)
- Claims
- Dispute Resolution Board (DRB)
- Contract Administration