

BART Agreement Number: 6M8176

Approval Date: 11/16/2021

Work Plan No.: A.09-01 - Transbay Corridor Core Capacity Program
Quality Management

Scope:

2.0 SCOPE OF SERVICES (Including special quality assurance requirements)

As requested by BART, the CONSULTANT's subconsultant will continue to provide a full-time Core Capacity Quality Assurance Manager for 40 hours/week. The Core Capacity Quality Assurance Manager will be located at 2150 Webster Street, 2nd Floor, Oakland, CA unless otherwise directed by the District. The Core Capacity Quality Assurance Manager will report to BART's Senior Quality Manager through the M&E organization and the Rail Acceptance Officer on the Core Capacity Program. The Core Capacity Quality Assurance Manager will continue to manage the execution of his duties through a team of Senior Quality Assurance Officers. The scope of duties for which the Core Capacity Quality Manager will be responsible includes the following:

2.1 GENERAL

- a) Monitor adherence of the Core Capacity quality program to BART's Quality Management System
- b) Update the Core Capacity Quality Management Plan and Procedures, as required
- c) Monitor implementation of the Core Capacity Quality Management Plan across participating divisions of BART including Design and Construction and Operations
- d) Review contract documents to confirm quality requirements are included
- e) Review process control for estimating, scheduling, and change control
- f) Participate in program and project element meetings and lead discussion of quality related items

Additional duties may include helping with: (a) project schedule reviews, (b) budget and cash-flow analysis, (c) contractor invoice reviews, (d) development of regular progress reports, (e) preparing for regular meetings with the PMOC, FTA, Caltrans, and other external agencies to

assist in the management and delivery of capital projects in phases of planning, engineering design or construction.

2.2 QUALITY ASSURANCE OVERSIGHT/REVIEW OF DESIGN

Quality Assurance Oversight/Review will be performed at conceptual design, preliminary design, intermediate design, pre-final design, and final design. Oversight/Review may also consist of reviewing and coordinating the finalization of the contract documents consisting of specifications and drawings. The Core Capacity Quality Assurance Manager will continue (with his/her staff) to review and monitor the design consultant team's QA/QC procedures and activity for the following:

- a) Design Control
- b) Design interfaces and design confirmation
- c) Software quality assurance and control
- d) Configuration control during design and construction related services
- e) Corrective and preventive action plan
- f) Maintaining of quality records
- g) Deliverables and document control
- h) Monitoring of design consultant schedules, budgets, internal audits
- i) Monitoring compliance with procedures established in the BART Design Scoping Documents and Design Deliverables Guidelines

2.3 QUALITY ASSURANCE OVERSIGHT/REVIEW OF SPECIFICATIONS

The Core Capacity Quality Assurance Manager shall continue (with his/her staff) to review, research, develop, standardize, and augment the QA/QC requirements to be compliant with FTA, State, and Local guidelines. The tasks shall include the following:

- a) Review existing QA/QC and testing requirements specified in contract specifications
- b) Create performance related and result-oriented hold points for effective monitoring of the quality assurance specified per individual contract sections

2.4 QUALITY ASSURANCE OVERSIGHT/REVIEW OF PROCUREMENTS

The Core Capacity Quality Assurance Manager will continue (with his/her staff) to review, and monitor quality assurance and quality control plans, procedures, and activity of the following:

- a) Equipment manufacturers, vendors, and their subcontractors
- b) In-plant, on-site inspections of manufacturers/fabricators quality records
- c) Reviewing tests and monitoring compliance with contract specifications
- d) Quality review of equipment design and fabrication
- e) Control of O&M manuals, As-builts, and configuration management
- f) Review of contract training requirements

- g) Monitor coordination of the BART procurement activity

2.5 QUALITY ASSURANCE OVERSIGHT/REVIEW OF CONSTRUCTION

The Core Capacity Quality Assurance Manager will continue (with his/her staff) to provide support for the following:

- a) Review and implement QA/QC requirements in contract specifications
- b) Review and approve the Contractors QA/QC program plan. (CQC Plan)
- c) Monitor implementation of approved CQC Plan by the Contractor and subcontractors
- d) Review, inspect, and monitor Contractor's inspection and test plan, incoming material inspection data, product identification and traceability, equipment calibration records, document control, records of non-conforming products and corrective/preventive action, sub-contractor records, and internal audit reports
- e) Monitor project specific quality control measures and data records maintained by BART inspectors
- f) Monitor inspection oversight and co-ordinate with third party oversight (FTA I PMOC)
- g) Monitor testing, training, commissioning, and turnover
- h) Monitor recording and maintenance of as-built drawings, data, and quality records

2.6 QUALITY ASSURANCE OVERSIGHT/REVIEW OF START UP & COMMISSIONING

The Core Capacity Quality Assurance Manager will continue (with his/her staff) to monitor the procurement, installation, testing, commissioning and turnover of the furnished equipment, operating systems, and support systems. They will monitor adherence and compliance with specified requirements which include the following:

- a) Review of specifications and critical interfaces
- b) Monitor conformance with procedures established per Systems Start Up Plan submittals
- c) Implement and monitor QA/QC program requirements throughout start up and commissioning
- d) Monitor recording and maintenance of as-built drawings, data, and quality records
- e) Monitor project specific quality control measures and data records maintained by BART inspectors

2.7 VERIFICATION AND MONITORING OF TEST EQUIPMENT

The Core Capacity Quality Assurance Manager will continue (with his/her staff) to monitor contractor procedures included in the following:

- a) Status of the test equipment utilized in performing the tests and measurements. Monitoring conformance with national standards for accuracy and to demonstrate the conformance of work to specified requirements
- b) Calibration records for the accuracy of the test and measuring equipment and relevant records

2.8 DOCUMENT CONTROL

The Core Capacity Quality Assurance Manager will continue support (with his/her staff) for establishing and monitoring the following:

- a) Develop the formats for the quality records needed for procedural and instructional compliance with documentation
- b) Procedures for maintaining control of project documents comprised of specifications, drawings, project records, audits, surveillances, inspection and test reports. Updates to project documents will also follow change control procedures.
- c) Develop procedures to maintain QA/QC records and quick retrievability

2.9 AUDITS

The Core Capacity Quality Assurance Manager will continue (with his/her staff) to conduct quality audits to monitor QA/QC compliance of the following:

- a) Design consultant's QA/QC program and compliance with Core Capacity QMP requirements
- b) Resident Engineers compliance with the procedures per Resident Engineers Manual
- c) Design Build Oversight Manager's compliance with procedures per the Design-Build Oversight Manual
- d) Testing records and other data conducted by Contractor and/or Inspection agency
- e) Document Control policies and procedures
- f) QA/QC Plan compliance by Contractors, subcontractors, manufacturers, fabricators, vendors and their suppliers

2.10 QUALITY ASSURANCE AND QUALITY CONTROL TRAINING

The Core Capacity Quality Assurance Manager will continue (with his/her staff) to assist in the establishment and maintenance of procedures for identifying training needs and provide quality training to personnel performing activities on the Transbay Corridor Core Capacity Program (TCCCP).

2.11 EMERGENCY SERVICES

There may be instances when BART requires the CONSULTANT to provide emergency response times for a given project or task assignment. Therefore, the CONSULTANT may be required to provide these services within 24 hours of notification or as otherwise directed by BART.

Prime: PGH Wong Engineering, Inc.

Subconsultant	Amount	DBE (Y/N)	SBE (Y/N)
Quality Engineering, Inc (QEI)	\$2,119,773	Y	Y

Work Plan Value: \$2,290,354