

Work Plan No A.02-01 15LK-120A Market St. Escalators - Technical Expert Support

Scope:

1.0 INTRODUCTION

Contract 15LK-120A, Market Street Escalators Renovation Project, includes the installation of 41 escalators (23 street escalators and 18 platform escalators) at the four downtown San Francisco stations including Embarcadero Station, Montgomery Street Station, Powell Street Station, and Civic Center Station. At this time, eleven escalators have been installed, four are in construction, and several more are in the fabrication or submittal phase. The construction Contract amount is approximately \$96 million. This Work Plan is to provide Technical Engineering, Inspection, Testing, and Commissioning services for the Market Street Escalators Renovation Project.

2.0 SERVICES TO BE PERFORMED BY CONSULTANT AND WORK BREAKDOWN STRUCTURE (WBS)

1.1. Technical Engineering, Inspection, Testing and Commissioning Services

- 1.1.1. Gannett Fleming's Vertical Transportation SME's will provide the following scope of services for the duration of the Work Plan:
- A. Technical expertise for the escalator design, participating in the quality inspection, testing, and commissioning of the escalators, with the exception of modifications to escalator trusses which are assumed to be the responsibility of the EOR's Structural Engineer.
 - 1. Gannett Fleming Vertical Transportation SME's will assist the EOR in resolving construction issues, reviewing submittals and responding to RFIs, with the exception of those related to elements of the construction specifically designed and reviewed by the EOR and their subconsultants, i.e. their Structural Engineers, Mechanical and Electrical Engineers.
 - 2. Gannett Fleming Vertical Transportation SME's will provide other Design Services During Construction (DSDC) of escalator design elements related to the Technical Specifications, specifically Division 14, and Vertical Transportation Drawings to the Engineer of Record and the Construction Management team.
 - B. Support the Engineer of Record, as needed, as the technical expert of the escalator safety code, escalator mechanical and control systems, equipment performance, and escalator maintenance. It is assumed that the EOR's Structural Engineer is responsible for all structural aspects of the escalators, including the escalator truss, escalator lower/upper/intermediate supports and building supporting structures.

- C. Attend Weekly Construction Progress Meetings
- D. Review periodic schedule updates.
- E. Submittal reviews including, but not limited to, Shop Drawings and product information, with the exception of the submittals pertaining to the Structural Analysis of Escalator Trusses and others where Gannett Fleming is not the Primary Reviewer.
 - 1. Responding to submittals no later than 28 calendar days after receipt of documentation.
- F. RFI responses
 - 1. Responding to RFIs within 4 calendar days after receipt of documentation.
- G. Change review and support with Drawing and Technical Specification changes;
- H. Perform Quality Assurance Inspections, once per month, on all escalators in construction at the time of the inspection.
 - 1. Provide Quality Assurance Inspection Reports, which will include Deficiencies identified for each escalator within 2 business days following the inspections.
- I. Perform Factory Acceptance Inspections of all controller and escalators manufactured at the Schindler Clinton North Carolina factory in accordance with the contract specifications.
 - 1. Provide Factory Acceptance Inspection Report within 14 calendar days after completion of factory inspection.
- J. Perform Commissioning of the Escalators prior to inspection by the Authority Having Jurisdiction. Commissioning includes: Pre-Functional and Functional Commissioning Inspections, Load and Sound Testing of Escalator.
 - 1. Provide Commissioning Deficiency List and Analysis of Load Testing Results within 2 business days after completion of Commissioning.
- K. Perform Punchlist Resolution Inspection concurrently with the Substantial Completion Inspection of each escalator.
- L. Assist with resolution of design/construction conflicts as encountered.
- M. Review Operation and Maintenance Manuals and training syllabus / materials.
 - 1. Responding to Operation and Maintenance Manuals and training syllabus / materials no later than 28 calendar days after receipt of documentation;
- N. Review Monthly Maintenance and Call-back Records, and other monthly reports with Contractor;
 - 1. Responding to Monthly Maintenance and Call-back Records, and other monthly reports no later than 28 calendar days after receipt of documentation
- O. Perform Quarterly Maintenance Audits of Escalators under maintenance.

- P. Perform Annual Code Inspection of Escalators concurrently with Annual Maintenance Audit.
 - Q. Review Monthly Invoicing with RE, including charges for billable services;
 - 1. Responding to Monthly Invoicing no later than 7 calendar days after receipt of documentation;
 - R. Participate in Semi-Annual Partnering Meetings.
- 1.1.2. Gannett Fleming's Vertical Transportation SME's will be travelling from our regional office in Phoenix, Arizona to BART facilities and also the Contractor's escalator factory. Limited travel is anticipated during the submittal review process but expected to increase during the escalator fabrication and installation period. It is expected that some travel cost savings / sharing will be achieved as trips are to be combined with support of other vertical transportation work as part of other Contracts.

2. Project Management

- 2.1 Gannett Fleming will perform the following project management tasks:
- Provide management of the Gannett Fleming team throughout this Work Plan's period of performance, including project setup, project budgeting, expenditure monitoring and control.
 - A hybrid kick-off meeting will be held to meet with BART stakeholders to confirm project understanding and key objectives for the project.
 - Prepare monthly billing reports and status reports for submission to BART.
 - Providing invoices on a monthly basis and in a timely manner.

Prime: GANNETT FLEMING

Subconsultants: None

Total Work Plan Value: \$ 2,103,825