

Work Plan No. A.06-01 15EJRRK DSDC for K-line (KTT-KMA) 34.5kV Cable Projects

Scope:

The Consultant shall provide the following scope of services:

Task 1: Project Management and Project Administration

The following tasks describe the scope of work required to manage and administer the project.

Subtask 1.1 - Management and Administration

The Consultant Project Manager will perform the following activities in support of the project:

- Supervise and coordinate workplan activities
- Workplan communications/meetings/record keeping
- Workplan progress reporting

The Consultant Project Manager will be responsible for making sure the Consultant's Design Team follows the Project Management Plan (PMP) and Quality Management Plan (QMP) established for this Contract for the purposes of documenting policies, procedures, and responsibilities throughout the life of the work plan.

It is anticipated that work plan administration will include the following items:

- Invoices and monthly progress reports
- Work progress reporting
- Highlight of significant issues requiring resolution
- Financial reporting/tracking

Subtask 1.2 - Document Control

Documents and electronic files, CAD drawings, transmittal forms, letters, correspondence, and other miscellaneous documents will be managed using ProjectWise, SharePoint and/or other appropriate formats.

Task 2: As-Needed Design Services During Construction

Consultant shall provide design services to support material procurement and construction via

reviews and responses to construction/procurement submittals and RFI's.

1. Submittals and RFI's will be originated by BART's field engineering team and responded to by the Consultant. It is assumed submittals will be responded to in 10 working days and RFI's will be responded to in 5 working days (1 calendar week) unless additional time is requested due to complexity of review required.
2. BART engineering will be responsible for approving all submittal and RFI responses generated by the Consultant before releasing responses to the field engineering team and BART maintenance forces for construction/installation. It will be the responsibility of the field engineering team to coordinate and obtain approvals from BART engineering.
3. Consultant will maintain an independent log of submittal and RFI documents, however it is the responsibility of BART's field engineering team to maintain complete records of all documents approved for use in the field.
4. Consultant will support weekly field meetings, focused construction meetings, and as-needed site visits in conjunction with BART field engineering and/or maintenance crews.
5. All required BART safety training, badging, and background checks are included in this workplan.

Task 3: As-Requested Design Revisions

Consultant will provide full design capabilities for design modifications based on differing or changing site conditions, issues with constructability, or preference of BART field engineering / maintenance forces. These efforts include potential global (project-wide) change requests, and more significant changes that may require revised signed and sealed engineering drawings, specifications, and/or calculations. These as-requested changes will be upon approval of the project manager and reviewed by BART engineering before being released to field engineering and BART maintenance forces.

It is assumed that changes will be a collaboration of all parties and may require additional site visits. Exact scope and delivery of design revisions shall be outlined in the requests from BART field engineering, BART maintenance, or BART engineering/management.

1. **Revise Drawings:** Consultant will revise the Issued for Construction Contract Drawings to reflect the agreed upon alternative design. Changes to affected sheets will be identified with clouds and revision numbers. Alternatively, Consultant will prepare new drawing sheets for the alternative details.
2. **Revise Specifications:** Consultant will revise the Issued for Construction Contract Specifications to reflect the agreed upon alternative design. Changes to the affected specification sections will be identified with change bars in the page margins.
3. Revised construction cost estimates can be prepared for change notices upon request by BART.
4. QA/QC verification is included for all deliverables.

Subtask 3.1 – K-Line Structures Plan and Calculation Updates

- a. Update K-Line designs between KTT and KMA to implement specific changes including

updates to split anchor ring and conduit hanger support details, installation spacing, and associated calculations based on revised actual phenolic conduit and cable weights as required.

Task 4: Record Drawing Preparation

Consultant shall prepare and submit As-Built record drawings in electronic CADD format and PE-stamped PDF to BART. This set of As-Built drawings shall include the coordination and inclusion of redline drawings developed by BART construction representatives. Redline drawings will be provided and any outside documents or exhibits such as RFIs, change orders, shop drawings or submittals will be made available as needed.

Clarifications / Exclusions

- a) This workplan is based on level-of-effort and BART’s project manager will direct HNTB activities given the extended construction duration and in absence of a detailed submittal list and construction schedule.
- b) This workplan will provide engineering support to review vendor submittals, coordinate with BART procurement team for ordering special materials, and will support engineering inspection to resolve RFIs including differing and unforeseen site conditions. This workplan will also include reviewing and advising on punch lists created and maintained by the construction management team.
- c) K-Line (KTT-KMA) design drawings have incorporated previous BART comments and changes and will be signed and sealed as part of this workplan.
- d) 40-hour RWP training and certification are excluded since all field work will be accompanied by RWP certified BART EIC and additional RWP certified staff.
- e) Record drawing preparation does not include detailed field inspection/measurements, civil ground survey / lidar, or other scanning, potholing, or testing.
- f) Civil Survey and Geotechnical support have been included for limited as-needed engineering support during construction such as geotechnical (settlement) monitoring or surveying for differing/changing site conditions.

Prime: HNTB-FMG JV

Subconsultant	Amount	DBE (Y/N)	SBE (Y/N)
Chaudhary & Associates, Inc.	\$ 56,670	Y	Y
ENGEO Incorporated	\$ 53,300	N	N
Structus, Inc.	\$ 46,086	Y	Y

Total Work Plan Value: \$ 474,046