

Work Plan: No. A.04-02 – Iron Horse Trail Project – Additional Work

Scope:

2 SCOPE OF SERVICES

The Scope of Services related to revisions to the work scope items includes the following:

2.1 PROJECT MANAGEMENT (WORK PERFORMED IN 2019, 2020, 2021 AND 2022)

The design effort and complexity of the project increased requiring additional design coordination and team meetings leading up to the 95% design submittal (2019).

Additional project management hours are included for oversight of parking lot removal work (2021) and the additional bid support task (2022).

The additional level of effort associated with this task is approximately 72 hours.

2.2 STRUCTURAL CALCULATIONS FOR LIGHT POLES (WORK PERFORMED IN 2019)

The previous work plan scope did not include structural calculations for the light poles and assumed that standard foundations from the BART BFS would be implemented. Structural calculations will be prepared to confirm the use of existing and new foundations for two different types of light poles and to confirm the foundation for the communications pole. Calculations will be prepared for:

- Use of 16-foot-high pedestrian scale lightweight light poles on new 12-foot BART BFS foundation
- Use of dual roadway and pedestrian scale lights on existing and new foundations
- Use of roadway scale lights on existing foundations
- Use of CCTV and emergency telephone on a new foundation

The additional level of effort associated with this task is approximately 40 hours.

2.3 LIGHTING MODEL (WORK PERFORMED IN 2019)

The previous work plan scope did not include services to conduct a lighting model. It was assumed the lighting model would be completed by a third party and allowing BART to direct WSP on the location and placement of the light poles. For efficiency, the District directed WSP to perform the lighting model to better coordinate with the related lighting/electrical design services.

The additional level of effort associated with this task is approximately 44 hours.

2.4 ADDED LIGHTING COMPLEXITY (WORK PERFORMED IN 2019)

The previous work plan included scope for pedestrian scale lighting. This was assumed to include one fixture type. During the design development the following additional lighting complexities were requested:

- Replacement of additional roadway scale lighting
- Replacement of roadway scale lights with a combined roadway and pedestrian scale light
- Replacement of two (2) additional fixture types in the underpass. This includes approx. 28 square roadway fixtures that were previously assumed to be Caltrans property and the replacement of 8 flood lights. The lighting design now includes replacement of three types of fixtures including the cylindrical cans, the square roadway lights, and the flood lights.
- One additional drawing for a new electrical pedestal to support the two sliding gate motors resulting from the selection of a two-piece sliding gate system (Drawing E323).
- The reduction in full-depth road replacement required the conduit routing in the 65% to be realigned. The conduit was re-routed to coincide with the revised limits of full depth roadway replacement and eliminate unnecessary disturbance to the busway.

The additional level of effort associated with this task is approximately 162 hours.

2.5 UPDATE EMERGENCY TELEPHONE AND CCTV EQUIPMENT (WORK WILL BE PERFORMED IN 2021)

The previous work plan included the design of two blue light, emergency telephone, and CCTV facilities. An example of the facility was provided from the Antioch Station that was used to inform the 95% Design. A more recent example was provided by the District from the Coliseum Station. Incorporating the updates to follow the Colosseum Station example would require the following additional activities:

- Update Communications CCTV pole, equipment and details per the Coliseum Station example (Drawing T705)
- Update specifications
- Additional QC for updated elements

The additional effort associated with this task is approximately 30 hours.

2.6 MISCELLANEOUS DESIGN ITEMS (WORK PERFORMED IN 2019)

As the project progressed into the 95% phase, there were a few design items that were requested by the District which were not originally in the work plan scope. These miscellaneous items include:

- One (1) Additional drawing for bollard removal detail (C531) (20 hours).
- Modify Three (3) drawings for additional pavement markings for the areas adjacent to the sliding gates (C191-C194, and C434) (4 hours).
- Underestimation of staging plans resulting from paving updates. This required one (1) additional stage construction drawing, and additional grading design complexity due to the additional constraints at the tie ins to the existing pavement, in the vicinity of the roll gates (26 hours).
- Additional staff hours at the weekly check in and drawing reviews from September 3, 2019 to November 5, 2019 (30 hours).

The additional level of effort associated with this task is approximately 80 hours.

2.7 ADDITIONAL RIGHT-OF-WAY (ROW) SUPPORT (WORK PERFORMED IN 2020)

The previous work plan included ROW services from Cinquini & Passarino but did not include time for engineering support. The development of the ROW work required additional WSP support time for the following activities:

- Attend meetings both in person and virtually
- Review of ROW drawings
- Develop an easement offset line from the retaining wall
- Review, sign and stamp the drawings

The additional level of effort associated with this task is approximately 44 hours.

2.8 REMOVAL OF PARKING LOT PROJECT FROM IHT PLAN & SPECS (WORK WILL BE PERFORMED IN 2021)

BART has requested that the Parking Lot Project (done by PGH Wong) be removed from this combined set, as it was previously planned to be issued as one construction contract. The Parking Lot project will now be performed by in-house BART forces, necessitating the need to remove any references to that project in the current IHT design plans, specifications and estimates. The 95% design set will be updated to remove reference to the parking lot work; no other comments are anticipated to be incorporated from the previously submitted 95% design.

- Review of all 182 drawings and 74 specifications to identify references to the Parking Lot project.
- Edit 21 drawings to remove any references to the Parking Lot project
- Update 3 index of drawings sheets and renumber entire plan set (182) drawings
- Review 31 BART reference drawings and modify "X outs" accordingly
- Update 3 specifications sections accordingly and edit the cover sheet/introduction
- Repackage, QC, and submit a set of updated 95% design plans and specs

The additional level of effort associated with this task is approximately 88 hours.

2.9 ADDITIONAL BID SUPPORT TASK (WORK WILL BE PERFORMED IN 2022)

The current work plan did not include bid support services. This task includes providing support during the bidding period, preparing a PowerPoint presentation for the pre-bid meeting, attending the pre-bid meeting, and answering RFIs from potential bidders. This task does not include any drawings or specifications updates as a result of bidder inquiries or RFIs. The assumed duration of bid support is 2 months and the level of support assumed for this task includes:

- Attend two meetings with BART in preparation for bid support
- Prepare PowerPoint Presentation for pre-bid meeting
- Attend one pre-bid meeting with potential bidders
- Respond up to 10 RFIs from potential bidders

The additional level of effort associated with this task is approximately 60 hours.

2.10 ESCALATION FOR ORIGINAL COST TO COMPLETE (WORK WILL BE PERFORMED IN 2021 AND 2022)

The original cost to complete for the 100% and IFB efforts were planned to be performed in 2018. With the delay to the project as a result of various unforeseen circumstances, the 100% design efforts will be

performed in 2021, while the IFB efforts will likely be performed in 2022 per the schedule shown below. As a result, we are seeking for BART to cover the escalation costs of the original estimate for these tasks at a rate of 3.5% escalation for 2019 and 2020. Per direction from BART, the escalation was reduced to 3.0% for year 2021 and 2022.

The original budget for WSP for the 100% design in 2018 dollars was \$24,520.79. Escalated to 2021 dollars the budget required will be \$27,055.30, a difference of 2,534.51

The original budget for WSP for IFB in 2018 dollars was \$18,606.14. Escalated to 2022 dollars the budget required will be \$21,145.18, a difference of \$2,539.04

The total escalation from the original budget to complete the design work amounts to \$5,073.55 inclusive of overhead and profit. No additional hours are included with this task. Note that the attached Form 60 shows the escalation included as a separate task line 2.10 excluding overhead and profit because the form automatically calculates overhead and profit.

2.11 COMPLIANCE WITH BART DESIGN REVIEW CHECKLIST AND COMPLETION OF PRELIMINARY HAZARDS ANALYSIS

The Design Checklist is a tool BART developed to help standardize expectations for design deliverables between BART and consultants. WSP will complete the design review checklist at the 95% and 100% design submittal milestones and submit the completed checklist to BART with the respective submittals.

WSP will meet with BART PM and System Safety to obtain guidance on Hazards Analysis. WSP will prepare a preliminary hazards analysis and circulate with the 95% design submittal. WSP will participate in a subsequent meeting with stakeholders to review the analysis and gather input on any additional hazards to include for the 100% design.

The additional level of effort associated with this task is approximately 92 hours.

Prime: WSP

Subconsultant: None

Total Work Plan Value: \$ 129,000