

Work Plan A.14-01 GTFS Pathways Development Technical Support

Scope:

1. **Develop Pathways Extensions** which includes support from Fehr & Peers senior data science/database staff in coordination with BART to facilitate the integration of asset management data into the workflow for generating GTFS-pathways data. This includes aspects from the BART-approved scope:
 - a. *The extension attributes which BART has been exploring, will be coded into the appropriate Pathways stops.txt and pathways.txt files for each station as well as the original three pilot stations. Table 1 [in the scope of work] should be used as guidance for developing (in coordination with BART) a final set of attributes to be incorporated into the updated files.*
 - b. *The consultant will advise on the development of the data flow; the asset management aspects and related decisions are the responsibility of BART staff.*
 - c. *The development of databases or addition of such assets into existing BART databases will be completed by BART staff.*
 - d. *The project team is investigating incorporation of indoor positioning systems into the GTFS Pathways development. Under BART's direction, the consultant may be required to redirect hours from GTFS Pathways files development or signage database support to support data collection/validation of indoor positioning system data or other related tasks. Final Pathways files/station quantities will be adjusted accordingly.*
2. **Code Stations** is the bulk of the effort relying on planner-level staff to complete additional station fieldwork, identify assets in support of extensions to the Pathways specification (related to Task 1), and to code each station into the database following the procedures Fehr & Peers and BART have been co-developing. This phase of the work assumes the coding of up to six stations per month to complete the scope by December 2025. As station packages (assumed to be 2-3 at a time) are completed, they would be submitted to BART for review, and so the workflow would involve Fehr & Peers concurrently working on new coding for 2-3 stations at a time and revising a similar number of stations on a rolling basis. Fehr & Peers will engage additional planning staff to follow the development procedure under the direction of the original project staff, and conduct internal QAQC before submission to BART. This task includes the following elements of the BART-approved scope:
 - a. *The consultant will continue to develop and extend the GTFS Pathways files for up to thirty-three (33) BART stations. BART will identify series of stations in small subgroups of stations (approximately 3-6) at a time.*

- b. The consultant will draft the core attributes for GTFS Pathways for the additional stations, following procedures co-developed with the consultant and BART staff in the initial three pilot stations*
 - c. Items to be coded in pathways that are not already included in an existing GIS layer will be drafted by the consultant staff through: site visits, station interior imagery provided by BART, and other resources such as PDF diagrams.*
 - d. As the additional stations are developed, the consultant will continue to update the Pathways Development Procedures documentation as appropriate.*
 - e. There may be need to revisit stations that have already been completed to make updates as the procedural document is amended.*
- 3. Signage Database Support** includes supporting BART with additional data collection at 10 or more stations (up to the same 33 stations in Task 2) and coordination with BART on the development of a signage database. This task will require some further direction from BART staff and is assumed to ramp up within a month or so after kick-off. Ideally it would coordinate station site visits with efforts needed for Tasks 1 and 2, which can be set during the initial kick-off.

Prime: Fehr and Peers

Subconsultants: None

Total Work Plan Value: \$ 249,838