BART Agreement Number: 6M8145　　　　　　　　**Approval Date: 06/06/22**

Work Plan No. B.03-03 – Noise Measurement Services

Scope:

This proposal includes a scope of work over the duration encompassing February 2022 through December 2022. The workplan includes continuation of the onboard and wayside noise measurements that ATS Consulting and Cross-Spectrum Acoustics Inc. (CSA) have been performing at regular intervals; working with BART engineers, ARM, and other BART consultants to address the rail corrugation problem at BART; and the continued development of ATS-OnTrack, which is the web-based application used to store and display acoustical measurement results.

Key features of OnTrack are:

- *Improved Database:* An updated database that is available to BART engineers and consultants. The database incorporates features that facilitate investigation of trends by BART staff and consultants.

- *Graphics Tool:* OnTrack includes a graphics utility for generating a wide variety of graphic displays of data. These graphics allow BART staff and consultants to quickly assess data and trends.

- *Stacked Spectrograms:* Comparisons of the acoustic spectrogram (heat map) plots from multiple measurements at a single location. The location of interest is selected with the mouse and then the user will be able to select which measurements to include in the stacked spectrogram plots. In addition, the user can zoom in or out and adjust the length of track that is included in the stacked spectrogram displays.

- *Historic Onboard Data:* All of the onboard noise measurements performed since 2015 have been uploaded into the new database and are available through the OnTrack application. All the measurement data are now available in the BART-OnTrack database.

- *Rail Grinding Priority List:* The rail grinding priority list is developed after each system-wide measurement. The lists from previous measurements will be available to allow tracking areas that are added or removed from the list. A display of multiple rail grinding priority lists will be included in OnTrack. The approach for displaying the recommended grinding priorities may be modified based on comments from BART staff. The grinding priority list is shared with ARM so they can display the recommended grinding locations in their applications (ARMapp) along with the locations where grinding has been performed.

Prime: Jacobs

Subconsultant	Amount	DBE (Y/N)	SBE (Y/N)
Cross-Spectrum Acoustics	$ 314,545	Y	Y

Total Work Plan Value: $ 326,545