

Work Plan No B.56-01 Engineering Root Cause Analysis Investigation of Transbay Tube Incident 2025

Scope:

The investigation will focus primarily on the 7-mile zone in and surrounding the TBT, from West Oakland to Powell Street stations including tunnels, substations, gap breaker stations, and track zone areas, where various revenue service impacting incidents had occurred. This investigation is a **comprehensive, independent root cause analysis (RCA)**, utilizing a proven, well-defined root cause analysis methodology to specifically determine the following:

- **Root Cause(s) of multiple, intermittent incidents that resulted in flashed insulators, blown insulators, damaged third rail, damaged direct fixation pads, damage to fleet D/E series cars, and right of way assets, during the period of August 2025 to October 2025.**
- **Root Cause(s) of multiple, intermittent incidents that involved D/E cars and TP Systems, but did not result in actual physical damage or consequential impacts to service during the period of August 2025 to October 2025**
- **Cause assessments to include individual and commonality assessment among the incidents, along with Contributing Cause, Underlying Cause, and Extent of Conditions**
- **Recommendations for corrective and preventative actions**

The investigation will review and assess the following in detail, but not limited to the following as part of the cause investigations:

- Review of recent incidents from August 2025 to October 2025, as well as any relevant historical data, records and documents related to these incidents, including maintenance tasks, project work and system changes / updates.
- Review of Traction Power system and equipment design, basis of design (including fault/risk analysis assumptions), performance and incident data: field configurations, associated logs, reports, including any subsystems or components and their response (power sources, power distribution, protective device settings, DC power supply and negative return, grounding, and power quality)

- Review of the D/E car design, fault/risk analysis assumptions, performance, and incident data: train cars, associated logs and reports, internal traction system design, and configurations, including internal traction motors, protection systems and devices to assess their potential contribution to the incidents (i.e. electrical loading and transients, conditions of the components, etc.)
- Review of applicable maintenance tasks (both corrective and preventative) and reports for TP and RS&S train car systems and equipment

Prime: Parsons

Subconsultant	Amount
3Vi	\$ 246,302
Turner Engineering Corporation	\$ 149,377
dss+	\$ 194,412
Jensen Hughes, Inc.	\$ 2,247
Hatch Associates Consultants, Inc.	\$ 154,865

Total Work Plan Value: \$ 1,498,963