Overview

- Project Scope
- Location
- Construction Contract
- Challenges
- Unanticipated Site Conditions
- Status and Next Steps
Project Scope

- Remove and replace three existing 112-year old highway bridges over the Caltrain tracks at the following locations:
  - 22nd Street
  - 23rd Street
  - Paul Avenue

- Provide temporary support for existing utilities on the bridges.

- Maintain revenue service during construction.

Location
Existing Bridges

22nd Street

23rd Street

Paul Avenue

Construction Contract

- Contract Awarded: December 2014
- Contract Amount: $8.4 million
- Construction Start: March 2015
- Anticipated completion: April 2017
Challenges

- Existing bridges supported multiple utilities.
- Proximity of construction work to existing tracks and 22nd St. Station.
- Extensive detours of pedestrian and vehicular traffic required to perform construction work.

Existing Utilities Supported by Bridges

22nd Street Bridge

Utility Lines Supported on Existing Structure
Temporary Utility Support

Temporary Utility Support Erection

Temporary Utility Support

Transfer of Existing Utilities to Temporary Utility Support

Temporary Utility Support in Place
Proximity to Tracks

Drilled Pile Installation

Proximity to Tracks

Limits Contractor’s Operations
Unanticipated Site Conditions

- Existing bridge conditions differed from what was expected, resulting in increased demolition effort.

- Differing subsurface conditions increased effort for pile installation.

- Unexpected hazardous materials required special handling and off haul of material.

- Differing site conditions for utilities required additional utility modifications.
Bridge Demolition

Existing concrete deck thicker than expected

Longer duration to remove concrete deck

Modified removal method resulted in longer demolition duration

Flammable unknown substance altered removal methods
Pile Installation

Subsurface conditions more difficult than expected

Resulted in extended installation duration

Hazardous Material

Serpentine with Elevated Levels of Naturally Occurring Asbestos

Special Stockpiling of Material for Appropriate Disposal
Existing Configuration of Utilities

Design modifications made to properly connect to existing utilities

Status and Next Steps

- 23rd Street Bridge was completed in April 2016
- Paul Ave. Bridge to be completed by Fall 2016
- 22nd Street Bridge to be completed by Spring 2017
Questions?