

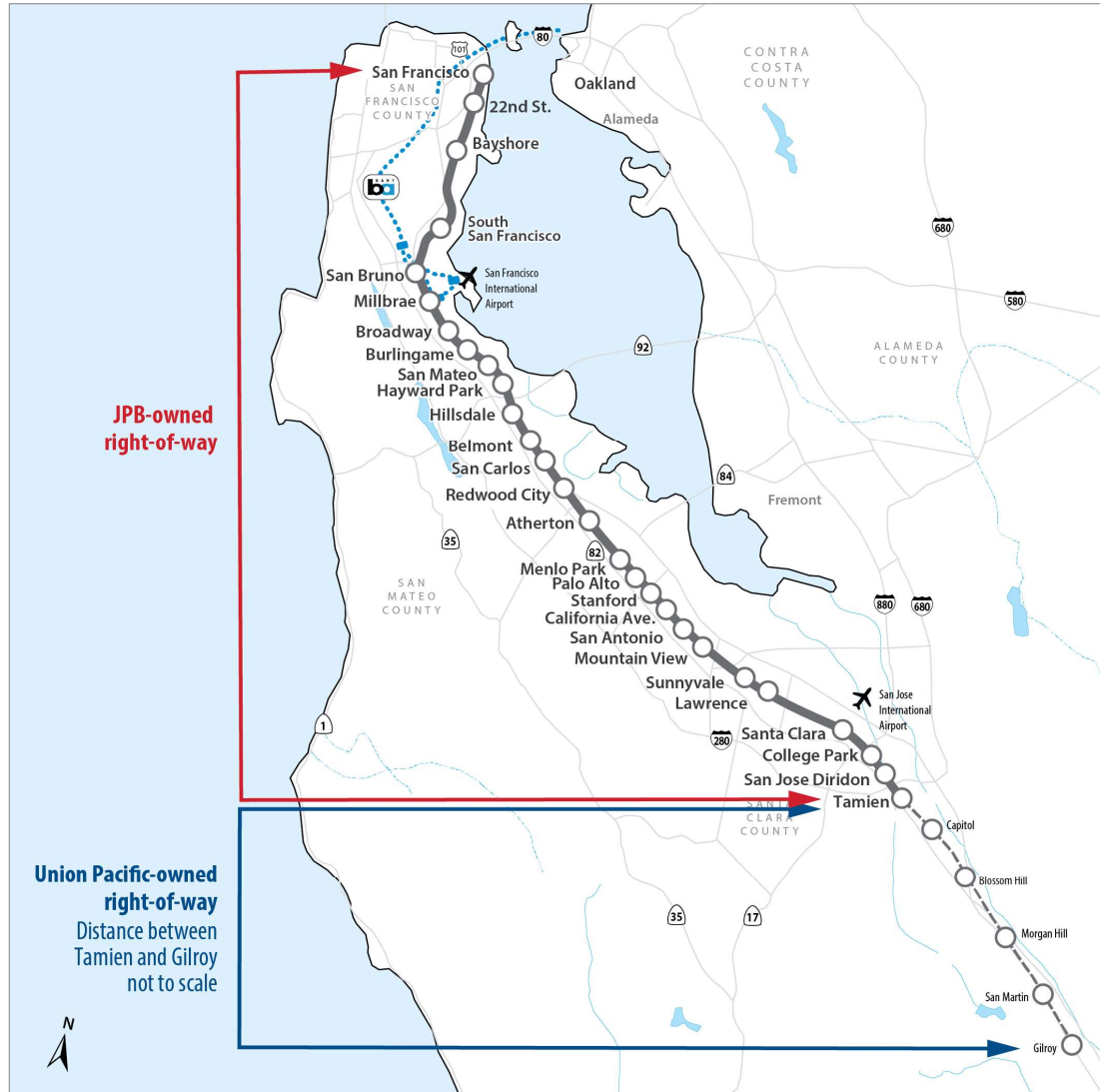
CALTRAIN ELECTRIFICATION UPDATE

Mountain View Community Meeting
January 23, 2020

AGENDA

- Caltrain System Overview
- Project Overview
- Mountain View Construction Activities
- Questions

CALTRAIN SYSTEM



- 32 Stations Gilroy to San Francisco
- 92 Weekday Trains
- At-Grade Crossings, Viaducts, and Bridges
- Intermodal Connections
- Bike Commuters

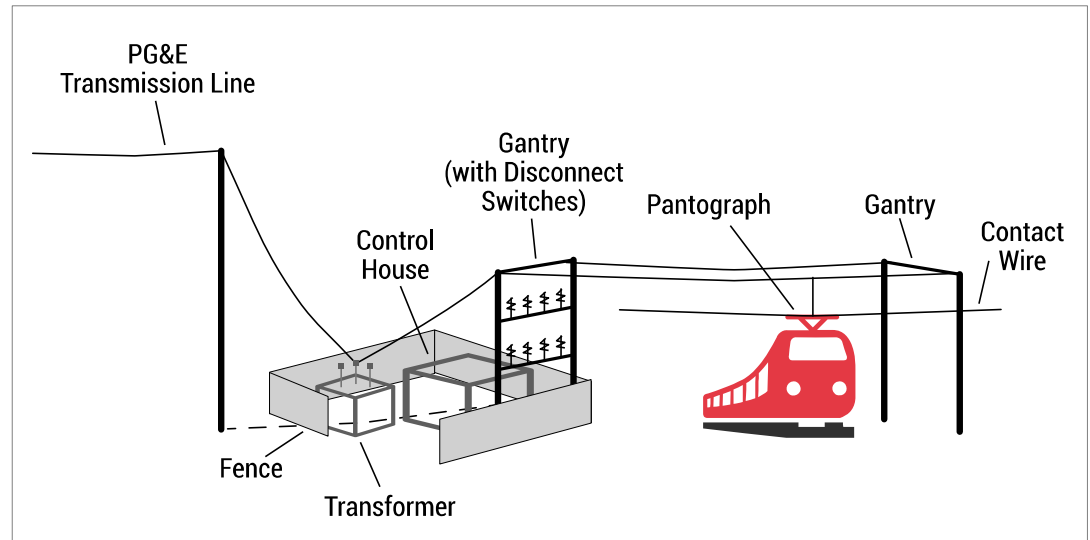
PROJECT DESCRIPTION

Project Area



- 51 miles
- San Francisco to San Jose (Tamien Station)

Project Elements



Electrification

- Overhead Contact System (OCS)
- Traction Power Facilities

Electric Trains*

- 19 7-car train sets
- 133 electric cars

*Includes 2018 State TIRCP Funding

PROJECT DESCRIPTION

Service Elements



Speed

- Up to 79 mph



Service Increase

- 6 trains / hour / direction
- More station stops / reduced travel time
- Restore Atherton & Broadway service



Mixed-fleet Service (interim period)

- Continue Tenant Service
- ACE, Capitol Corridor, Amtrak, Freight

PROJECT BENEFITS



Improved Train Performance, Increased Service and Greater Capacity



Improved Regional Air Quality and Reduced Greenhouse Gas Emissions



Positive Economic Benefits for the Region

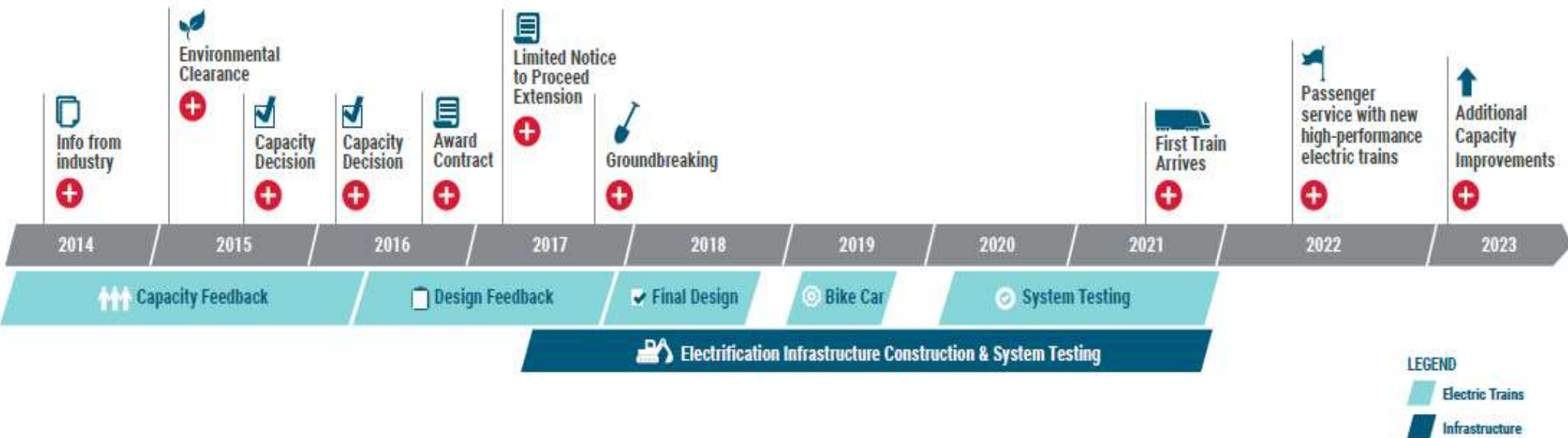


Reduced Engine Noise Emanating from Trains



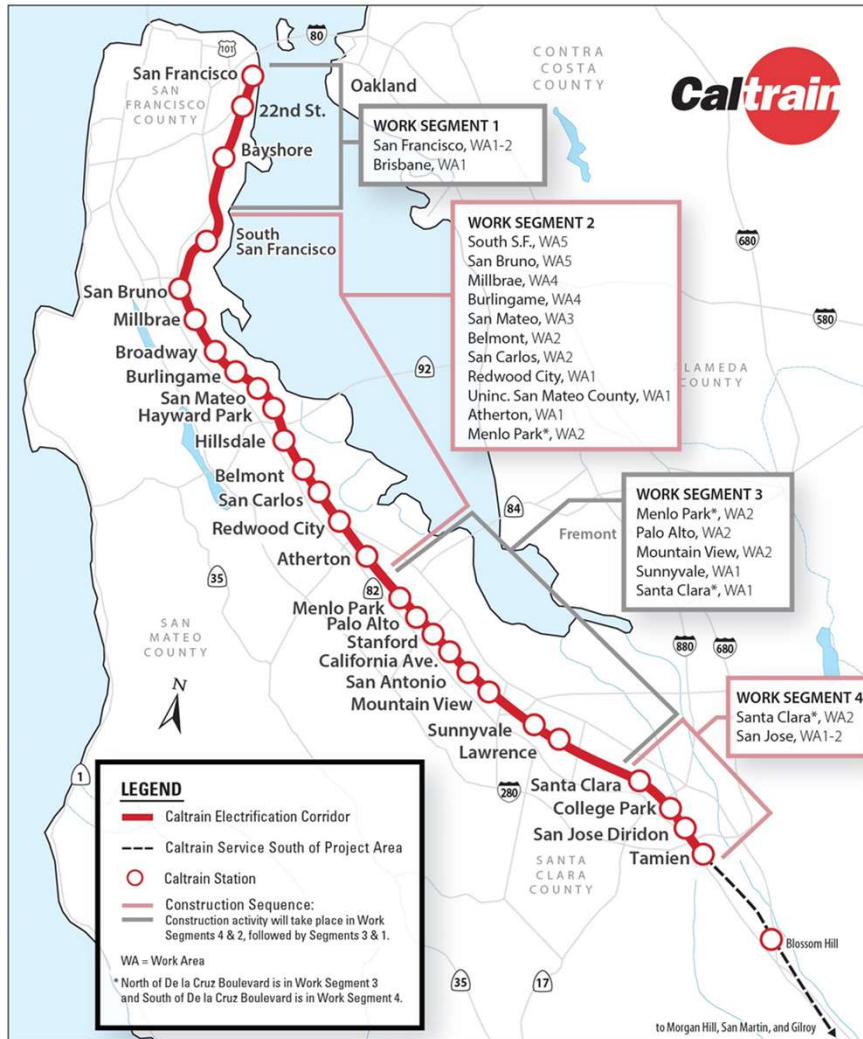
Increased Revenue and Reduced Fuel Cost

SCHEDULE

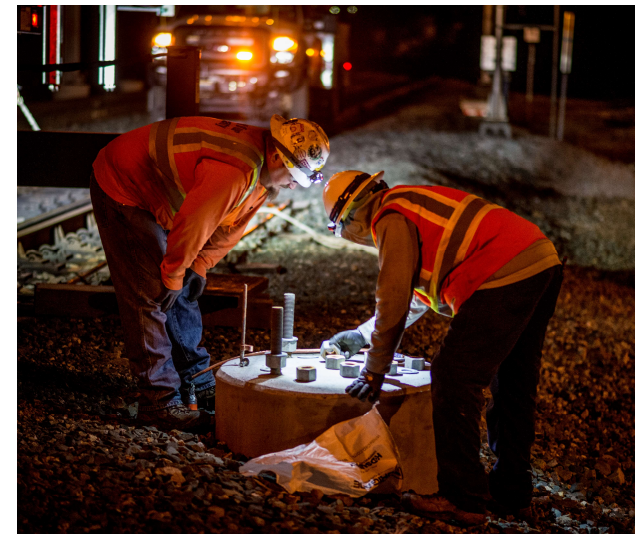


* Note: Schedule subject to change

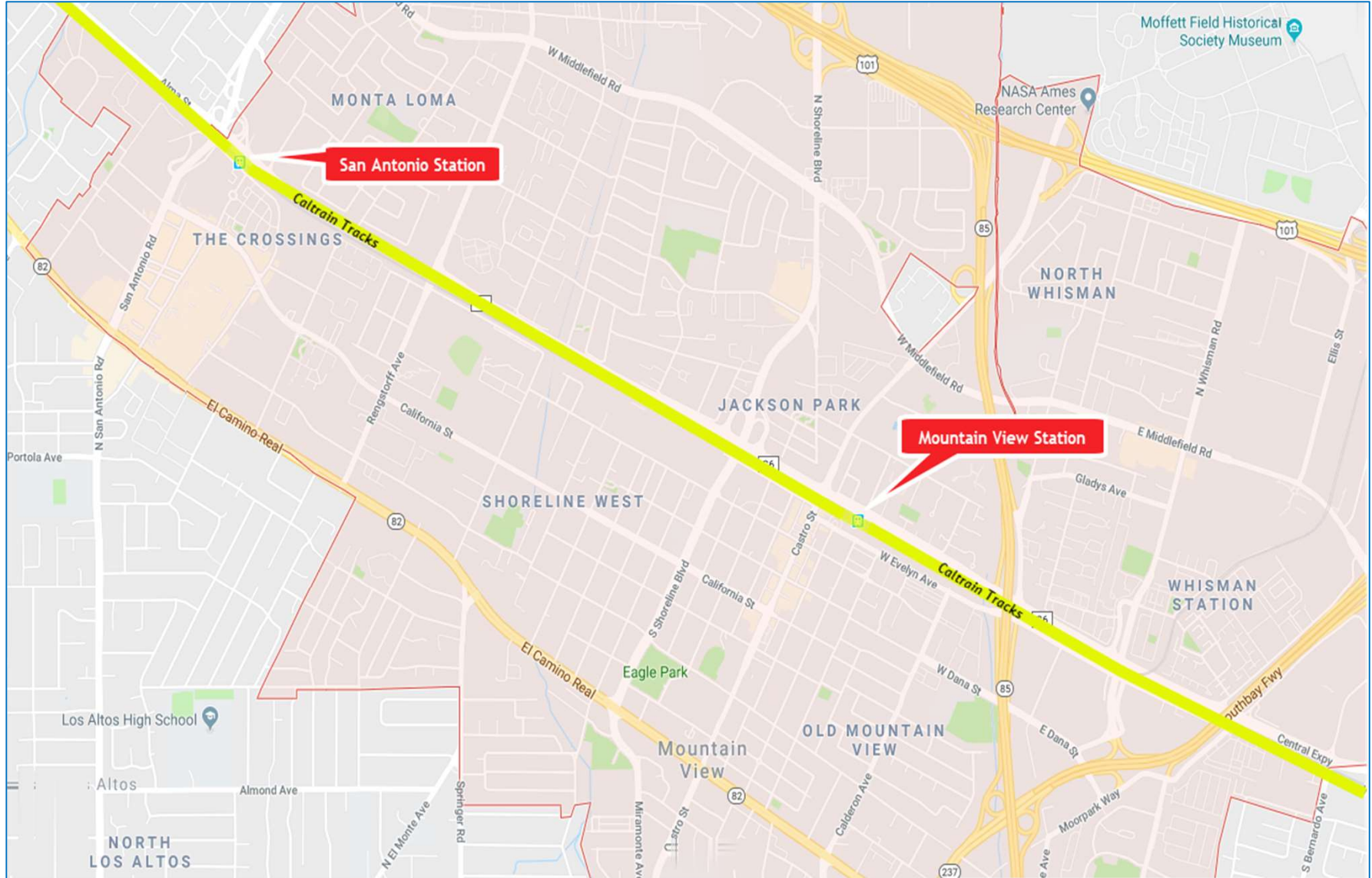
CONSTRUCTION PHASING



- 51 Miles Corridor
- 4 Work Segments
- 3,000 Poles
- 10 Traction Power Facilities



MOUNTAIN VIEW



FIELD WORK PROGRESSION

Work Completed	<ul style="list-style-type: none">• Utility Survey• Geotechnical Investigations• Disposal of Soil from Geotechnical Investigations• Soil Resistivity Testing• Site Surveys• Signal Cable Inspections
Work In Progress	<ul style="list-style-type: none">• Tree Pruning/Removal• Potholing• Foundation Installation
Future Work	<ul style="list-style-type: none">• Pole Installation• Wire Installation• Bridge Barrier Installation

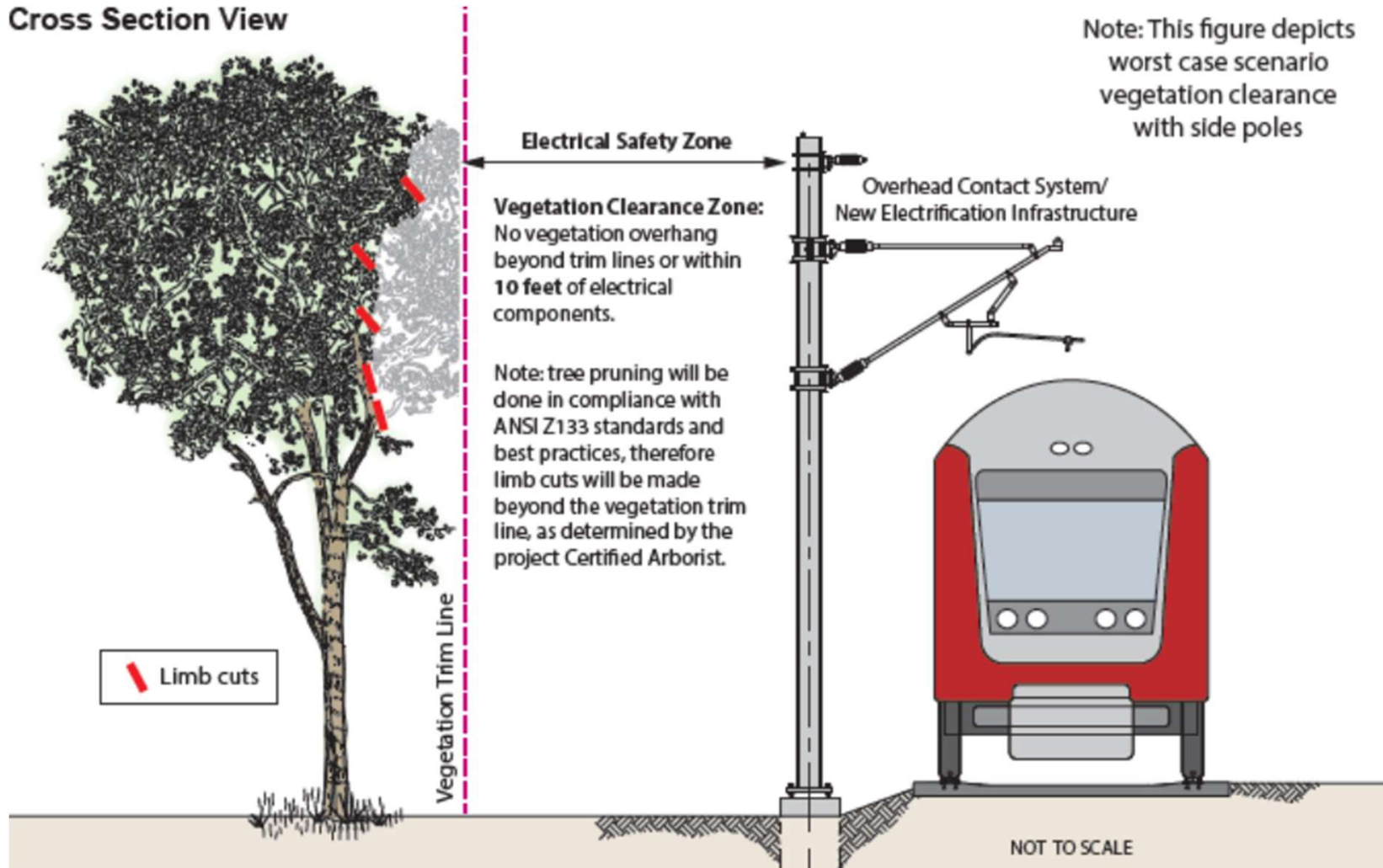
FUTURE CONSTRUCTION

Mountain View

Date	Work Activity	Expected Completion*
In Progress	Tree Pruning/Removal	Spring 2020
In Progress	Potholing	Spring 2020
In Progress	Foundation Installation	Spring 2020
February 2020	Pole Installation	Fall 2020
Spring 2020	Wire Installation	Fall 2020
Early 2020	Bridge Barrier Installation	Summer 2020

TREE PRUNING AND REPLACEMENT

Cross Section View



Note: This figure depicts worst case scenario vegetation clearance with side poles

Electrical Safety Zone

Vegetation Clearance Zone:
No vegetation overhang beyond trim lines or within 10 feet of electrical components.

Note: tree pruning will be done in compliance with ANSI Z133 standards and best practices, therefore limb cuts will be made beyond the vegetation trim line, as determined by the project Certified Arborist.

Overhead Contact System/
New Electrification Infrastructure

Limb cuts

Vegetation Trim Line

NOT TO SCALE

TREE PRUNING AND REPLACEMENT PLAN

Mountain View

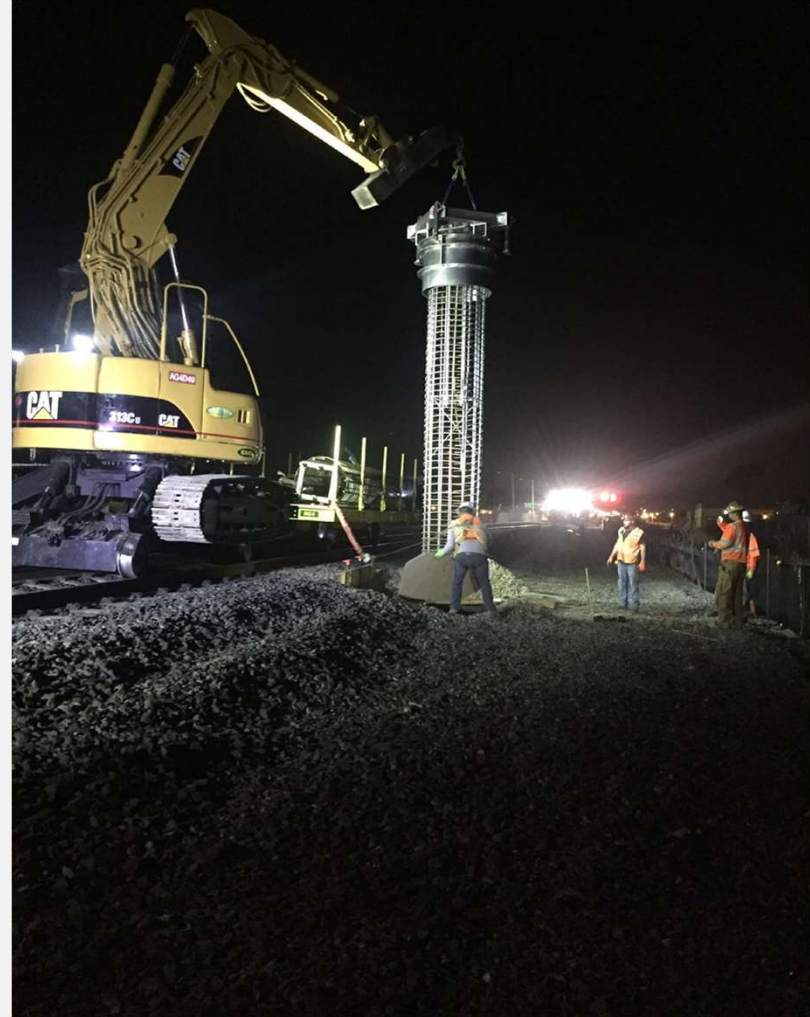
City of Mountain View			
	Caltrain Right of Way	Public Property	Private Property
Trees Removed	11	72	0
Trees Pruned >25%	33	22	0
Trees Pruned <25%	143	83	23

172 Trees will be replaced per the Mountain View Tree Replacement Plan

FOUNDATION CONSTRUCTION

- Excavation
- Rebar and Anchor Installation
- Electrical Grounding
- Concrete Fill

FOUNDATION INSTALLATION



POLE INFORMATION

- 3,000 Installed throughout Corridor
 - Approx. 186 poles in Mountain View
- Pole Height: 30-50'
- Pole Spacing: ~180' apart

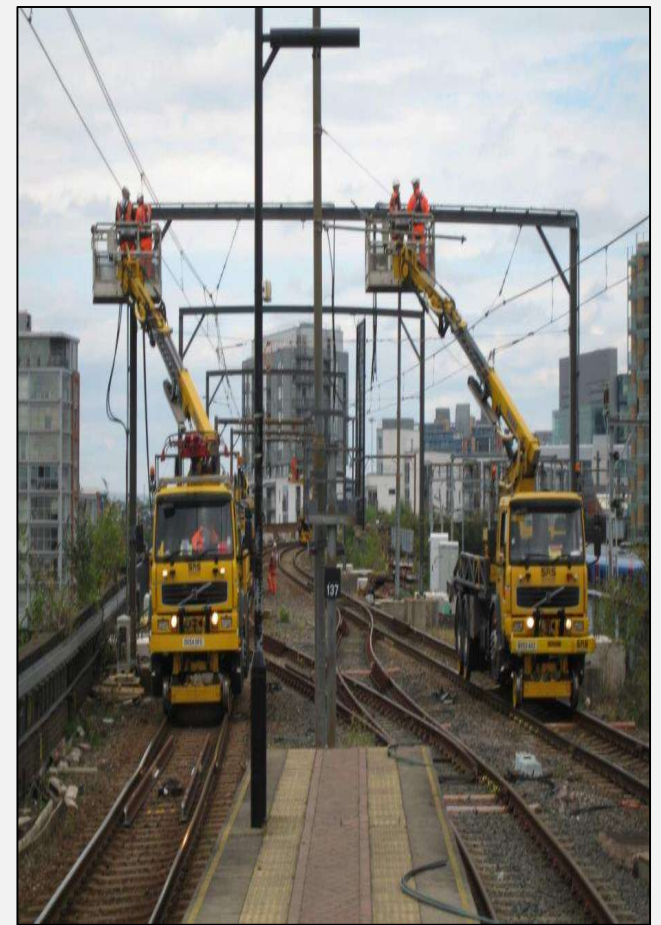
POLE TYPES MOUNTAIN VIEW



Single Track Cantilever



Two Track Cantilever

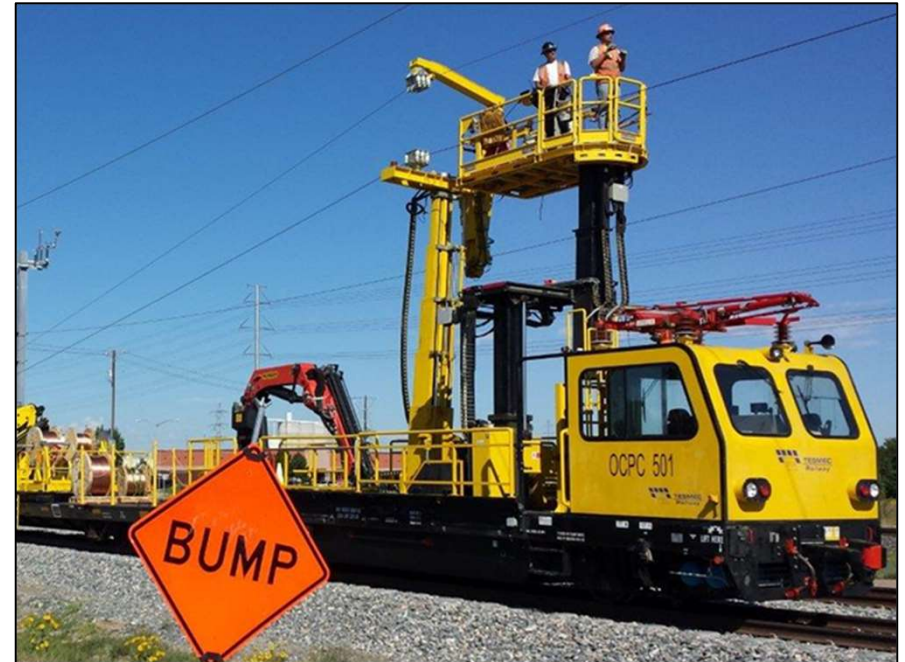


Portal

POLE INSTALLATION



STRINGING WIRE



BRIDGE BARRIERS

- Ensure the safety of pedestrians and electrical infrastructure
- Will be installed at:
 - San Antonio Road
 - Shoreline Boulevard
 - Stevens Creek Pedestrian Bridge
 - Whisman Road

BRIDGE BARRIERS



Screen Mesh

Polycarbonate Panel



WHISMAN ROAD



CITY OF MOUNTAIN VIEW
WHISMAN ROAD OVERCROSSING BARRIERS
BRIDGE NO 37C0122

PERSPECTIVE VIEW LOOKING EAST
SHOWING GALVANIZED FINISH POLES AND MESH

CONSTRUCTION INFORMATION

- Work will occur during day and night
- Some 24-hour weekend work
- Crews will utilize acoustical barrier blankets and position lights away from homes
- Dedicated hotline for construction complaints

PUBLIC OUTREACH

CALTRAIN MODERNIZATION PROGRAM
Test Pile Construction Activities

DAY TIME WORK
08/28/17 - 09/1/17

ANTICIPATED WORK HOURS
7:00 a.m. - 5:00 p.m.

CREWS CONDUCTING WORK IN YOUR AREA TO INSTALL AND TEST FOUNDATION PILES

During the week of August 28, Caltrain electrification crews will be working in your area to construct one test pile foundation for integrity testing. The piles will be installed within the Caltrain right-of-way.

Crews will be conducting the work over a two day period between Monday, August 28 and Friday, September 1, between the hours of 7 a.m. and 5 p.m. Crews will return at a later date to test the integrity of the installed piles.

Main construction activities include:

- Survey and layout of proposed pile test location
- Trucks and equipment working near Caltrain right of way
- Drill holes for placement of test piles
- Pour concrete and install rebar
- Backfill holes to cover work areas

We apologize for any inconvenience this may cause. The field team will work as quietly as possible. Thank you for your patience and understanding as we deliver these critical benefits to our communities.

Please visit our website at www.caltrain.com/PCEPconstruction to sign-up for weekly construction updates.

We appreciate your patience during construction.



Doorhanger

CALTRAIN ELECTRIFICATION PROJECT
STATUS UPDATE | January 2018

MILESTONES



Please keep in mind that testing and construction will overlap as each Segment will be tested individually, prior to final system testing. -Subject to change.

KEY REGIONAL BENEFITS 2040

GREENHOUSE GASES (ANNUAL)	176,000 METRIC TONS CO ₂	CO ₂
DIESEL TO ELECTRIC FUEL COSTS	LOWER	
TRAFFIC CONGESTION	619,000 VEHICLE MILES	
	21% INCREASE	DAILY RIDERSHIP
	\$2.5 BILLION	ECONOMIC BENEFITS
	MORE SERVICE	MORE FREQUENT & FASTER TRIPS

FOR MORE INFORMATION

- www.calmod.org
- 650.399.9659
- Para traducción llámala al 1.800.660.4287
- 4287 1.800.660.4287
- 4287 1.800.660.4287
- Project Outreach Office: 9:00a.m. to 5:00p.m., 2121 S. El Camino Real, Bldg A, Ste A-100, San Mateo, CA 94403



Factsheet

CALTRAIN MODERNIZATION

- IMPROVING CONVENIENCE**
An electrified system means the trains can run more frequently and more efficiently.
- INCREASING CAPACITY**
CalMod upgrades give us room to grow, initially increasing capacity by over 30%.
- BOOSTING ECONOMIES**
CalMod will also provide economic benefits, including creating nearly 10,000 jobs across the country.
- ADVANCING SUSTAINABILITY**
Replacing old diesel trains with new electric trains will reduce GHG and improve air quality.

These are just a few examples of how Caltrain and the CalMod program are innovating to better serve the Bay Area. Learn more at CalMod.org and stay in touch with us on social media!



Postcard



Public Meeting

PUBLIC OUTREACH

- Subscribe to Weekly Updates
 - Visit www.calmod.org/get-involved
- Social Media
- Construction Outreach Office


WHAT'S NEXT


- Caltrain Business Plan
 - Caltrain2040.org
- High-Speed Rail Blended System
 - hsr.ca.gov
- Caltrain Downtown Extension
 - sfcta.org/transbay-transit-center
- Diridon Concept Plan
 - DiridonSJ.org

CALMOD CONTACT INFORMATION

WEEKLY UPDATES  CalMod.org/get-involved

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