AGENDA

- Caltrain System Overview
- Project Overview
- Electric Train Design
- San Jose Construction Activities
- Questions
CALTRAIN SYSTEM

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

RIDERSHIP

Average Daily Ridership

- 1998
- 2018
AT CAPACITY TODAY

Bi-directional commute with riders standing on trains going southbound and northbound

AGING FLEET

Locomotives

- Locomotives Past Retirement Date 2015-2017 (20 of 29)
- Locomotives Within Retirement Date (9 of 29)
CORRIDOR SUPPORTS GROWING ECONOMY

- The corridor is the #3 most congested area in the U.S.
- US 101 and Interstate 280 congested
- 75% Caltrain riders commute to work
- 60% are choice riders
- Organizations shown represent Caltrain Commuter Coalition (P3)

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

SERVICE BENEFITS

<table>
<thead>
<tr>
<th>Metric</th>
<th>Today</th>
<th>PCEP</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EXAMPLE: BABY BULLET TRAIN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retain 5-6 stops</td>
<td>60 min</td>
<td>45 min</td>
<td><strong>15 minute savings</strong></td>
</tr>
<tr>
<td>Retain SF to SJ 60 minutes</td>
<td>6</td>
<td>13</td>
<td><strong>7 more stops</strong></td>
</tr>
</tbody>
</table>

**EXAMPLE: REDWOOD CITY STATION**

<table>
<thead>
<tr>
<th>Train stops / peak hour</th>
<th>3</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2 more stops</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Note: Prototypical Train and Schedule
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
ELECTRIC TRAIN

- **2016** Capacity Board Decision (bike to seat ratio, onboard bathrooms, upper doors ‘not precluded’)
- **2017** Design Finalized with Additional Public Input (exterior design, seat colors, bike storage, ADA restroom)
- **2019** Virtual Reality 360 Tour

CONSTRUCTION PHASING

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

![Map of San Jose with marked locations](image)

### FIELD WORK PROGRESSION

<table>
<thead>
<tr>
<th>Work Completed</th>
<th>Work In Progress</th>
<th>Future Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Utility Survey</td>
<td>• Tree Pruning/Removal</td>
<td>• Pole Installation</td>
</tr>
<tr>
<td>• Geotechnical Investigations</td>
<td>• Potholing</td>
<td>• Wire Installation</td>
</tr>
<tr>
<td>• Disposal of Soil from Geotechnical Investigations</td>
<td>• Foundation Installation</td>
<td>• CEMOF Facilities Modifications</td>
</tr>
<tr>
<td>• Soil Resistivity Testing</td>
<td>• Traction Power Substation Construction</td>
<td></td>
</tr>
<tr>
<td>• Site Surveys</td>
<td>• Paralleling Station Construction</td>
<td></td>
</tr>
<tr>
<td>• Signal Cable Inspections</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### FUTURE CONSTRUCTION

**San Jose**

<table>
<thead>
<tr>
<th>Date</th>
<th>Work Activity</th>
<th>Expected Duration*</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Progress</td>
<td>Potholing</td>
<td>2-3 months</td>
</tr>
<tr>
<td>In Progress</td>
<td>Foundation Construction</td>
<td>4-5 months</td>
</tr>
<tr>
<td>Fall 2019</td>
<td>Pole Installation</td>
<td>3-4 months</td>
</tr>
<tr>
<td>Fall 2019</td>
<td>Wire Installation</td>
<td>3-4 months</td>
</tr>
<tr>
<td>In Progress</td>
<td>Traction Power Substation Construction</td>
<td>2-3 months</td>
</tr>
<tr>
<td>In Progress</td>
<td>Paralleling Station Construction</td>
<td>3-4 months</td>
</tr>
<tr>
<td>Spring 2019</td>
<td>CEMOF Facility Modifications</td>
<td>6-9 months</td>
</tr>
</tbody>
</table>

*Expected duration indicates first and last day of activity. Number of actual work days will be fewer.

### FOUNDATION CONSTRUCTION

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

POLE INFORMATION

- 3,000 Installed throughout Corridor
  - Approx. 460 poles in San Jose
- Pole Height: 30-50’
- Pole Spacing: ~180’ apart
Example of Poles Planned for Use in San Jose

POLE TYPES SAN JOSE

Single Track Cantilever  Two Track Cantilever  Center

POLE TYPES SAN JOSE

Portal  Headspan
POLE INSTALLATION

STRINGING WIRE
TRACTION POWER FACILITIES

- 10 Traction Power Facilities Installed throughout Corridor
  - 1 Traction Power Substation Installed in San Jose
  - 1 Paralleling Station in San Jose
  - Gantry structures up to 50'
- Provides electrical power to trains through the Overhead Contact System
- Unmanned station
- Day and weekend construction work
- Limited night work during construction

TRACTION POWER SUBSTATION LOCATION

[Map showing the location of the Traction Power Substation]
TRACTION POWER SUBSTATION

Example Traction Power Substation

CalMod.org

TRACTION POWER SUBSTATION

CalMod.org
PARALLELING STATION LOCATION

EXAMPLE PARALLELING STATIONS

Examples from Amtrak Northeast Corridor
Currently existing maintenance track (no new track)

TEST TRACK LOCATION

Test Track Information

- Approximately 1.5 miles of existing maintenance track (no new track)
- Located between Santa Clara Station and Caltrain CEMOF facility
- Foundations, poles and wires to be installed prior to electric train testing
- New Electric trains will be tested on track
- Testing to occur between late 2019 to Spring 2022
- Testing anticipated to be during daytime
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

• Subscribe to Weekly Updates
  – Visit www.calmod.org/get-involved
• Social Media
• Construction Outreach Office
• Additional Community Meetings
  • Pole Installation

WHAT’S NEXT

• Caltrain Business Plan
  – Caltrain2040.org
• High-Speed Rail Blended System
  – hsr.ca.gov
• Caltrain Downtown Extension
  – sftca.org/transbay-transit-center
• Diridon Concept Plan
  – DiridonSJ.org
CALMOD CONTACT INFORMATION

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800-660-4287 (Toll Free)

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