**Caltrain Modernization Program**

- ~$1.5 Billion Early Investment Program
  - CBOSS/PTC (2015)
  - Peninsula Corridor Electrification Project (2019)

- Caltrain/HSR Blended System

**Project History**

- Conceptual Design (2002)
- 35% design complete (2008)
- Final EA/EIR & Finding of No Significant Impact (FONSI)
- State clearance postponed
Policies

- JPB Strategic Plans
- 2012 CHSRA Business Plan*
- 2012 Regional 9-party Funding MOU
- 2013 JPB/CHSRA New Agreement
  - JPB lead agency for PCEP EIR
  - CHSRA lead agency for Blended System environmental evaluation


Delivery Milestones*

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<td>Stakeholder Outreach</td>
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<td>Establish Owner’s Team</td>
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<td>Environmental Clearance</td>
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<td>Procure/Select Contractor</td>
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<td>Design/ Manufacture/Build</td>
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*Schedule subject to change
PCEP DEIR

CEQA Requirements

- Identify environmental baseline
- Analyze direct, indirect and cumulative impacts
- Compare impacts to significance criteria
- Identify feasible mitigation for significant impacts
- Consider alternatives
- “Reasonable worst-case” assumptions as conservative approach
Project Purpose and Need

- Improve Caltrain system performance
- Increase service & ridership
- Increase revenue & reduce cost
- Reduce environmental impacts
- HSR compatible electrical infrastructure

Project Description

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<tr>
<th>Area</th>
<th>Project</th>
<th>Service*</th>
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</table>
| 51+ miles San Francisco to San Jose (Tamien Station) | Electrification:  
  - Overhead Contact System (OCS)  
  - Traction Power Facilities  
  Electric Multiple Units (EMUs) | Up to 79 mph  
  More service:  
  - 6 trains/per peak hour/per direction (12 trains per hour)  
  - Restore Atherton & Broadway service  
  Mixed diesel / EMU fleet  
  Cont. Caltrain diesel service to Gilroy  
  Cont. tenant service |
Visual Simulation

Right of Way Needs

• Most in Caltrain ROW

• Traction Power Facilities
  – 2 substations
  – Up to ~1.5 acres total

• OCS (Poles)
  – Based on 35% design
  – Just outside of the ROW
  – Up to ~1 acre
Electric Safety Zone Need

• Easement for safety
  – No trees within 10 ft. of OCS
  – No structures within 6 ft. of OCS

• Guidance
  – 25kV properties
  – Industry standards

• Up to ~18 acres along 51+ mile corridor

DEIR Structure

<table>
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<tr>
<th>DEIR</th>
<th>Environmental Clearance</th>
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<tbody>
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<td>Project Analysis (2020)</td>
<td>Yes</td>
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<tr>
<td>Cumulative Analysis (2040)</td>
<td>No</td>
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Key Regional Benefits

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<tr>
<th>Benefit</th>
<th>2020</th>
<th>2040</th>
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<tbody>
<tr>
<td>Total Ridership (Daily)</td>
<td>69,000</td>
<td>111,000</td>
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<td>(Downtown Extension)</td>
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<td>(All-EMU Fleet)</td>
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<td>Reduced Vehicle Miles Travelled (Daily)</td>
<td>235,000</td>
<td>619,000</td>
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<td>Reduced Air Pollution</td>
<td>56% to 84%</td>
<td>77% to 96%</td>
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<tr>
<td>Reduced Greenhouse Gases</td>
<td>68,000 Metric Tons of CO2 equivalent</td>
<td>177,000 Metric Tons of CO2 equivalent</td>
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Stakeholder Key Concerns

- Tree / Vegetation
- Overhead Contact System
- Noise
- Electromagnetic Fields/Interference
- Traffic
- Freight
Trees / Vegetation

- Along Caltrain ROW: ~19,000 trees/vegetation
- Worst-Case Impact
  - Removal of 2,200 trees/vegetation
  - Pruning of 3,600 trees/vegetation
- Mitigation Strategies
  - Avoidance
  - Minimization
  - Replacement Plan
  - Significant after mitigation (aesthetics)

Overhead Contact System

- Poles and Wires
  - Poles ~200 feet apart along rail corridor
  - Poles 30 to 50 feet tall
  - Wires between poles
- Project Impact
  - Changes in visual aesthetics along tracks and at Caltrain stations
- Mitigation Strategies
  - OCS design & treatments
  - Less than significant after mitigation (aesthetics)
Visual Simulation

Noise

• Project Noise
  – EMUs quieter than diesel locomotives
  – More trains result in more horn soundings*
  – TPF (Traction Power Facilities)

• Noise Study Results
  – 49 locations analyzed
  – Significant impact at one TPF in SSF (FTA thresholds)

• Mitigation Strategies
  – Design treatment
  – Less than significant after mitigation

* Note: Train horns required by federal law
Electromagnetic Fields/Electromagnetic Interference

• EMF: Physical field produced by electrically and magnetically charged objects
  – Generated from OCS, EMUs, and TPF
  – Less than Significant Impact

• EMI: Effect on equipment
  – Potential effects on sensitive electronic equipment
  – Design treatment mitigation
  – Less than significant after mitigation

Local Traffic

• Project Impacts*
  – More trains increase gate down time
  – EMUs decrease gate down time
  – More riders increase local traffic at stations
  – 82 intersections studied (21 impacted)

• Mitigation Strategies
  – Signal improvements
  – Local roadway improvements
  – Significant impact at 9 intersections after mitigation

*Note: CBOSS, which minimizes gate down time, is assumed to be in place before electrification.
Freight Rail

- Existing Tunnel and Bridge Constraints

- Project Evaluation
  - Vertical clearance impact from OCS
  - Constrained operating window from FRA waiver temporal separation requirement*

- No Project-Level Impact
  - Tunnel notching / track lowering mitigation
  - Existing freight can be accommodated

*Note: May not be needed if FRA rulemaking on Alternative Compliant Vehicle is put in place

Alternatives

- 51 Scoping Alternatives

- Screened Alternatives
  - Feasibility
  - Project purpose and need
  - Environmental effect

- Analyzed in DEIR
  - The No Project Alternative
  - Diesel Multiple Unit Alternative (public interest)
  - Dual-Mode Multiple Unit Alternative (public interest)
  - OCS Construction Alternative: Factory Train
Cumulative Analysis

• Project Contributions to Cumulative Impacts

• Cumulative Projects
  – Rail Projects in Caltrain Corridor
  – Other Transportation Projects
  – Local Development along Corridor

• Key Rail Projects
  – High Speed Rail (HSR) Blended Service
  – SF Downtown Extension and Transbay Transit Center
  – Tenant railroad service expansions
HSR Blended System

- Conceptual cumulative analysis only
- HSR service
  - 2 to 4 trains per peak hour/per direction
- Improvements
  - Stations (SJ, Millbrae, RWC (TBD), SF Transbay Transit Center)
  - System improvements, grade separations, passing tracks, maintenance yard

Key Cumulative Effects

- Beneficial Effects
  - Air Quality/Reduced GHG
  - Regional Traffic
- Potential Adverse Effects
  - Aesthetics/Land Use
  - Noise and Vibration
  - Local Traffic
  - Freight Rail
- Mitigation of Caltrain funding contribution on a fair-share basis / existing agreements
Next Steps

Key Milestones

- Notice of Preparation (1/31/13 – 3/18/13)
  - Circulated widely
  - 4 public meetings

- Develop DEIR (Mar 2013 – Feb 2014)
  - Reviewed comments
  - Surveys / technical analysis
  - Riders / community outreach
  - Agency coordination
  - Stakeholder/cities coordination
Key Milestones, Continued

DEIR Comment Period (2/28/14 – 4/29/14)
- Notice of Availability, circulated widely
- DEIR available website, libraries, clearinghouse
- 4 public meetings
- 60-day comment period (longer than required)

- Final EIR (Fall 2014)
- JPB Certification /Adoption (Winter 2014)

Public DEIR Meetings

Caltrain Office
1250 San Carlos Ave., San Carlos
Tuesday, March 18, 2014
Public Meeting: 6pm-8pm

San Jose Main Library
150 E San Fernando St, San Jose
Monday, April 7, 2014
Public Meeting: 6pm-8pm

Redwood City Library
1044 Middlefield Rd, Redwood City
Wednesday, April 2, 2014
Public Meeting: 6pm-8pm

UCSF Mission Bay
Genentech Hall Room N114
600 16th St, San Francisco
Wednesday, April 9, 2014
Public Meeting: 6pm-8pm
Comments on DEIR

- All substantive comments (oral/written) will be considered
- Substantive written comments will receive written responses in Final EIR
- Encourage stakeholders to attend public meetings
- Written comments can be submitted to:
  - Email: electrification@caltrain.com
  - Mail: Caltrain, Attn: Stacy Cocke, P.O. Box 3006
    San Carlos, CA 94070