

Memorandum

To: CHAIR AND COMMISSIONERS

CTC Meeting: March 5, 2013

Reference No.: 2.2a. (2)
Action

From: BIMLA G. RHINEHART
Executive Director

Subject: **NOTICE OF PREPARATION – ENVIRONMENTAL IMPACT REPORT FOR THE PENINSULA JOINT POWERS BOARD CALTRAIN PENINSULA CORRIDOR ELECTRIFICATION PROJECT**

ISSUE:

Should the Commission, as a Responsible Agency, provide comments in response to the Notice of Preparation (NOP) that an Environmental Impact Report (EIR) will be prepared for the Peninsula Joint Powers Board Caltrain Peninsula Corridor Electrification Project (Project)?

RECOMMENDATION:

Staff recommends that the Commission make no comments regarding the environmental issues to be addressed in the EIR. However, staff recommends that a letter be sent to the Peninsula Corridor Joint Powers Board (JPB) that states:

- The Commission has no comments with respect to the project's purpose and need, the alternatives to be studied, the impacts to be evaluated, and the evaluation methods used.
- The Commission recommends that in light of the previous environmental review conducted for this project and due to the environmental benefits of the proposed project to reduce noise, improve regional air quality and reduce regional greenhouse gas emissions, the JPB place as much reliance as practicable on the previous EIR to reduce project costs and ensure timely delivery of the electrification infrastructure and service.
- The Commission recommends that the JPB and its partners identify and secure the necessary funding to complete the project.
- If, in the future, funds or other actions under the purview of the Commission are anticipated, notification should be provided to the Commission as a Responsible Agency.

BACKGROUND:

The JPB is the designated lead agency overseeing the environmental review for this project. In 2004 a Draft EIR was completed for the project and in 2009 a final EIR was completed. The 2009 FEIR was not certified due to the need to resolve issues regarding joint planning for shared use of the Caltrain corridor for Caltrain service and for future high-speed rail (HSR) service. The purpose of

this NOP is to gain input into the scope and environmental information for the project due to changes in the existing conditions along the corridor since prior EIR analyses were conducted. The purpose of the NOP is also to update the environmental and cumulative analysis of blended service with HSR and existing tenant passenger and freight rail operators.

The proposed project consists of electrification of the Caltrain Peninsula Corridor, a total distance of approximately 51 miles, from its current northern terminus at the San Francisco Caltrain Station at Fourth and King Streets in the City of San Francisco to approximately 2 miles south of the Tamien Station in San Jose. The proposed project will install electrification infrastructure to convert Caltrain from diesel hauled units to Electric Multiple Units (EMU).

In addition to the proposed project, a No-Electrification (no project) alternative will also be considered. The lead agency has initially determined that the following topics will be included for evaluation in the DEIR: Aesthetics/Visual Resources, Air Quality, Biological Resources, Archaeological/Historic Resources, Energy, Geology and Soils, Greenhouse Gas Emissions and Climate Change, Electromagnetic Interference/Electromagnetic Fields, Hazardous Waste and Materials, Hydrology and Water Quality, Land Use and Planning, Noise and Vibration, Population and Housing, Public Services and Utilities, Safety, Socioeconomics and Environmental Justice, and Traffic and Circulation.

The environmental phase of the project is funded with a combination of Federal Transit Administration (FTA) and local funds. The entire project is estimated to cost approximately \$1.225 billion, of which approximately \$785 million will fund infrastructure costs and approximately \$440 million will fund rolling stock acquisition. The project will be financed through a combination of local, state, and federal sources.

Attachment:
Notice of Preparation



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January 31, 2013

Executive Director
California Transportation Commission
1120 "N" Street P. O. Box 942873
Sacramento, CA

Dear Bimla G. Rhinehart:

On behalf of the Peninsula Corridor Joint Powers Board (Caltrain), I would like to announce the release of a Notice of Preparation of an Environmental Impact Report for Caltrain's Peninsula Corridor Electrification Project, pursuant to the California Environmental Quality Act. The Notice is included with this letter.

The project would electrify the Peninsula Corridor from the San Francisco Caltrain Station at 4th and King to approximately 2 miles south of the Tamien Caltrain Station in San Jose, convert diesel-hauled to Electric Multiple Unit trains, and increase service up to six Caltrain trains per peak hour per direction by 2019.

In order to fully evaluate all impacts of this project, property owners, residents, public agencies, and all interested parties are invited to provide input on the scope and content of the environmental information to be studied including suggested alternatives. Four public scoping meetings will be held in the following locations:

Caltrain Office

Auditorium, 1250 San Carlos Ave., San Carlos
Open House: 3pm-6pm, Wednesday, Feb. 27, 2013
Public Scoping Meeting: 6pm-8pm, Wednesday, Feb. 27, 2013

Santa Clara VTA Headquarters

Auditorium, 3331 North First St., San Jose
6pm-8pm, Tuesday, Mar. 5, 2013

Palo Alto City Hall

City Council Chambers, 250 Hamilton Ave.,
Palo Alto 6pm-8pm, Thursday, Feb. 28, 2013

San Francisco City Hall

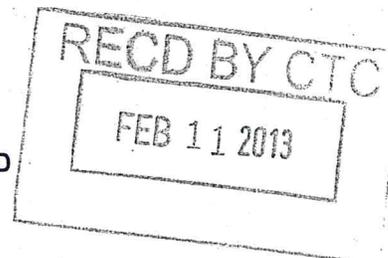
Board of Supervisors Chambers, 1 Dr
Carlton B Goodlett Pl., San Francisco
6pm-8pm, Thursday, Mar. 7, 2013

You may deliver your comments in writing to the address below (Attn: Stacy Cocke), or by email to electrification@caltrain.org, by 5pm on Monday, March 18, 2013.

Sincerely,

Marian Lee, Executive Officer, Caltrain Modernization Program

PENINSULA CORRIDOR JOINT POWERS BOARD
1250 San Carlos Ave.- P.O. Box 3006
San Carlos, CA 94070-1306 650.508.6269





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NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT (EIR)

DATE	January 31, 2013
TO	Agencies, Organizations, and Interested Parties
SUBJECT	Notice of Preparation of an Environmental Impact Report (EIR)
PROJECT TITLE	Peninsula Corridor Electrification Project

The Peninsula Corridor Joint Powers Board (JPB) intends to prepare an Environmental Impact Report (EIR), consistent with requirements under the California Environmental Quality Act (CEQA). The purpose of the EIR is to evaluate the environmental issues associated with the proposed improvements included in the Peninsula Corridor Electrification Project. The JPB will serve as the lead agency under CEQA for the EIR.

The purpose of this Notice of Preparation (NOP) is to notify agencies, organizations, and individuals that JPB plans to prepare the EIR and to request input on the scope of the environmental analysis to be performed. From public agencies, we are inviting comments on the scope and content of the environmental information that is germane to each agency's statutory responsibilities with regard to the proposed project. We are also requesting interested individuals' or organizations' views on the scope of the environmental document.

DATES

Written responses and comments on the scope of the Peninsula Corridor Electrification Project EIR will be accepted until 5 pm on March 18, 2013. Please send written comments to:

Peninsula Corridor Joint Powers Board (Caltrain)
 Attn: Stacy Cocke, Senior Planner
 1250 San Carlos Ave.
 P.O. Box 3006
 San Carlos, CA 94070-1306

Your comments may also be sent by email to electrification@caltrain.com. Please include the "Peninsula Corridor Electrification Project" in the subject heading. Public scoping meetings are scheduled in late February, at the times and dates listed below.

SCOPING MEETINGS

Four public scoping meetings will be held for the project at the following locations:

- Caltrain Office, 2nd Floor Auditorium, 1250 San Carlos Ave., San Carlos
 - Open House 3pm-6 pm, Wednesday, Feb. 27, 2013
 - Public Scoping Meeting 6pm-8 pm, Wednesday, Feb. 27, 2013
- Palo Alto City Hall, City Council Chambers, 250 Hamilton Ave., Palo Alto, 6pm-8pm, Thursday, Feb. 28, 2013
- Santa Clara Valley Transportation Authority Headquarters, Auditorium, 3331 N. First St., San Jose, 6pm-8pm, Tuesday, Mar. 5, 2013
- San Francisco City Hall, Board of Supervisors Chambers, -1 Dr. Carlton B. Goodlett Pl., San Francisco, 6pm-8pm, Thursday, Mar. 7, 2013

The scoping meetings will provide opportunities for the lead agency to explain the project and to give interested agencies, organizations and individuals additional opportunities to comment on the scope and content of the EIR.

PROJECT HISTORY

The proposed project is part of a program to modernize operation of the Caltrain rail corridor between San Jose and San Francisco. There is a lengthy history of planning for modernization of the Peninsula rail corridor. Modernization projects include the installation of an advanced signal system and the electrification of the rail line. The signal upgrade project (commonly referred to as CBOSS PTC or CBOSS), and corridor electrification are discussed below. Caltrain previously evaluated corridor electrification in a prior EIR, for which a draft was completed in 2004 and a final was completed in 2009. Caltrain did not certify the Final EIR due to the need for resolution of issues regarding joint planning for shared use of the Caltrain corridor for Caltrain service and for future high-speed rail (HSR) service.

Since 2009, Caltrain, the California High-Speed Rail Authority (CHSRA), the California Legislature, the Metropolitan Transportation Commission (MTC) and other parties have worked together to develop a vision of a “blended system” whereby both Caltrain and HSR would utilize the existing Caltrain Corridor on the San Francisco Peninsula. This vision for implementing blended service on the San Francisco Peninsula was included in the Revised 2012 Business Plan¹ that the CHSRA Board adopted in April 2012 for the California High-Speed Rail System.

Caltrain and the CHSRA are committed to advancing a blended system concept. This local vision was developed with stakeholders interested in the corridor. The blended system will remain substantially within the existing Caltrain right-of-way and accommodate future high-speed rail and modernized Caltrain service along the Peninsula corridor by primarily utilizing the existing track configuration on the Peninsula. The blended system will be primarily a two-track system shared by Caltrain, high-speed rail and existing tenant passenger and freight rail operators; however, as discussed below concerning cumulative analysis, a blended system may require passing tracks at certain locations in the Peninsula corridor.

Based on the blended system vision, the Caltrain Peninsula Corridor has been designated to receive an initial investment of Proposition 1A bond funds that would benefit Caltrain and its modernization program in the short term and HSR in the long run. Caltrain, CHSRA and seven other San Francisco Bay Area agencies (City and County of San Francisco, San Francisco County Transportation Authority, Transbay Joint Powers Authority, San Mateo County Transportation Authority, Santa Clara Valley Transportation Authority, City of San Jose, and the MTC) have approved a Memorandum of Understanding (MOU)² to pursue shared use of the corridor between San Jose and San Francisco to provide blended service of both Caltrain commuter rail service and HSR intercity service. The MOU includes agency and funding commitments toward making an initial investment of \$1.5 billion in the corridor for purchasing and installing an advanced signal system, electrifying the rail line from San Francisco to San Jose, and purchasing electrified rolling stock. The MOU also conceptually outlines potential additional improvements needed beyond the first incremental investment of \$1.5 billion to accommodate future high speed rail service in the corridor.

Corridor improvements identified in the MOU include the following:

- **Advanced Signal System (commonly referred to as CBOSS PTC or CBOSS):** Caltrain is presently in the design phase of this project. CBOSS stands for Communications Based Overlay Signal System and PTC stands for Positive Train Control. This project will increase the operating performance of the current signal system, improve the efficiency of grade crossing warning functions and automatically stop a train when there is violation of speed or route. This project, which includes implementation of safety improvements mandated by federal law, has already been cleared environmentally by Caltrain and is scheduled to be operational by 2015 as mandated by the Federal Railroad Administration (FRA).
- **Corridor Electrification:** Caltrain decided to prepare this new EIR for the corridor electrification due to the changes in existing conditions³ that have occurred along the corridor since the prior EIR analyses was conducted, to update the environmental analysis, and to update the cumulative analysis of blended service and other cumulative developments along the corridor. Completion of a new EIR will also allow public agencies, stakeholders, the public and decision-maker's the opportunity to review and comment on the project's environmental effects in light of current information and analyses. This project will provide environmental approval for operation of up to 6 Caltrain trains per peak hour per direction (an increase from 5 trains per peak hour per direction at present). Electrification can be analyzed as a separate project under CEQA because it has independent utility (providing Caltrain electrified service) and logical termini (station end points). Electrification of the rail line is scheduled to be operational by 2019.
- **Blended Service:** Caltrain, CHSRA, and the MOU partners have agreed on shared use of the Caltrain corridor for use of up to 6 Caltrain trains per peak hour per direction and up to 4 HSR trains per peak hour per direction. The operational feasibility of blended service has been studied, but this project is presently only at the conceptual planning phase. The potential addition of HSR service to this corridor will be subject of a separate environmental review process that will be undertaken subsequent to the environmental process for the Peninsula Corridor Electrification Project. Based on the current CHSRA 2012 Business Plan, blended service along the Corridor is scheduled to commence sometime between 2026 and 2029.

PROJECT LOCATION

The proposed project is the electrification of the Caltrain Peninsula Corridor from its current northern terminus at the San Francisco Caltrain Station at Fourth and King Streets in the City of San Francisco to approximately 2 miles south of the Tamien Station in San Jose, a total distance of approximately 51 miles. The project location is shown in Figure 1. The project

¹ See: http://www.cahighspeedrail.ca.gov/Business_Plan_reports.aspx

² See: <http://www.caltrain.com/Assets/Caltrain+Modernization+Program/Documents/Bay+Area+HSR+Early+Investment+MOU+JPB+Board+Resolution+2012.pdf>

³ For example, there have been changed physical conditions in terms of existing development adjacent to the Caltrain ROW and stations, levels of traffic as well as changes in terms of adopted land use planning around stations.

location includes the entire JPB-owned right-of-way (ROW) along this 51-mile segment, additional ROW for new facilities and operational requirements and for any construction or access areas located outside the ROW. This project does not include electrifying the corridor south of Tamien, which is owned by the Union Pacific Railroad.

PURPOSE AND NEED FOR THE PROJECT

The primary purposes of the Peninsula Corridor Electrification Project are to provide electrical infrastructure that will be compatible with separate later use for blended service, improve train performance, and reduce long-term environmental impact by reducing noise, improving regional air quality and reducing greenhouse gas emissions. An electrified Caltrain system would better address Peninsula commuters' vision of an environmentally friendly, fast, reliable service. This also is expected to help accommodate increase system ridership through improved system operations.

The population of the Bay Area is increasing and, with it, traffic congestion. Commute traffic between major employment centers in San Francisco and along the San Francisco Peninsula is growing, and there has been a substantial increase in "reverse commute" trips from San Francisco to Peninsula and South Bay locations over the past decade. Off-peak travel between San Francisco and Peninsula and South Bay locations is also on the rise. Caltrain has experienced substantial increases in ridership as people seek alternate ways to meet these travel needs.

Electrification would modernize Caltrain and make it possible to increase service levels and it offers several advantages in comparison with existing diesel power use, and these benefits serve the primary purposes of the Peninsula Corridor Electrification Project, as follows:

- **Provide High-Speed Rail Compatible Electrical Infrastructure:** An electrified Caltrain system would set the stage for an expanded modern regional electric express service and for future blended HSR service. While this project will not include all infrastructure necessary to implement high-speed rail service in the corridor (such as HSR maintenance facilities, station platform improvements, or passing tracks), the electrical infrastructure (such as overhead wire systems) will be compatible for later blended service.
- **Improve Train Performance, Increase Ridership and Increase Service:** The project envisions the use of Electric Multiple Units (EMUs), which are self-propelled electric rail vehicles, can accelerate and decelerate at faster rates than diesel-powered trains, even with longer trains.⁴ With EMUs, Caltrain can run longer consists without degrading speeds, thus increasing peak-period capacity. Electrification performance allows increased peak service levels from the current 5 trains to 6 trains per peak hour per direction with existing trackage.

A substantial portion of a Caltrain trip is spent accelerating and decelerating between stations, given Caltrain's close-set station stops. For the same service profile of stops, electric trains can provide travel time reductions. Alternatively, due to the time savings, additional stops could be added without delaying existing total transit time from San Jose to San Francisco. Local service travel time savings and/or additional stops, in addition to the reduced trip times of the express trains, are expected to stimulate additional Caltrain ridership.

- **Increase Revenue and Reduce Cost:** Anticipated increased ridership will increase fare revenues and conversion from diesel to electricity will reduce fuel costs. These efforts will substantially reduce but not eliminate the need for financial subsidy.
- **Reduce Environmental Impact by reducing noise emanating from Trains:** Noise emanating from the passage of electrified train sets is measurably less when compared with diesel operations. With the increases in peak and off-peak Caltrain service that are either underway or planned for implementation during the next decades, electrification becomes an important consideration for reducing noise of train passbys and maintaining Peninsula quality of life. Train horns will continue to be sounded at grade crossings, consistent with FRA and California Public Utilities Commission (CPUC) safety regulations, whether or not electrification is pursued.
- **Reduce Environmental Impact by improving regional air quality and reducing greenhouse gas emissions.** Electric operations would produce substantial reductions in corridor air pollution emissions when compared with diesel locomotives, even when the indirect emissions from electrical power generation are included in the analysis. In addition, the increased ridership allowed by the project would reduce automobile usage, thereby resulting in additional air quality benefits. Electrically powered trains are also more energy efficient than diesel-electric trains. Reduced energy use also translates into reduced air emissions. Reductions in air pollutant emissions represent long-term health benefits for Caltrain riders, and residents and employees along the Caltrain corridor. In addition, reduction of greenhouse gas emissions with electrification versus diesel operations will help California to meet its goals under AB 32, the 2006 Global Warming Solutions Act as well as post-2020 state greenhouse gas emission reductions goals.

⁴ The number of vehicles assembled together into a train is referred to as a train "consist."

PROJECT DESCRIPTION

The Peninsula Corridor Electrification Project consists of converting Caltrain from diesel-hauled to EMU trains for service between the Fourth and King Street Station in San Francisco and the Tamien Station in San Jose. Operating speed will be up to 79mph, which is what it is today.

In 2019 service between San Jose and San Francisco would utilize a mixed fleet of EMU's and diesel locomotives. After 2019, diesel locomotives will be replaced with EMUs over time as they reach the end of their service life.⁵ Caltrain's diesel-powered locomotive service would continue to be used to provide service between the San Jose Diridon Station and Gilroy.⁶ Fleet requirements under the proposed Project are presented in Table 1 (this data may be updated during further development of the project description as necessary).

TABLE 1: PRELIMINARY FLEET REQUIREMENTS PENINSULA CORRIDOR ELECTRIFICATION PROJECT				
Year	Diesel Locomotives	EMUs	Trailer Cars	Total Passenger Vehicles
<i>Year 2019¹ (Six trains per peak hour / direction)</i>	11	96	60	167
<i>¹ The majority of vehicles will be replaced in 2019 as they reach their design life. Additional vehicles would be replaced after 2019 as they reach their design life. Source: PCJPB, 2013.</i>				

The level of Caltrain operations and therefore fleet requirements under the Peninsula Corridor Electrification Project would be six trains per peak hour per direction from Tamien Station in San Jose to San Francisco, with a mixed EMU and diesel locomotive fleet. Caltrain service will also include six diesel-powered trains per day in the San Jose to Gilroy segment, by 2019.

The project would require the installation of 130 to 140 single-track miles of overhead contact system (OCS) for the distribution of electrical power to the new electric rolling stock. The OCS would be powered from a 25 kilovolt (kV), 60 Hertz (Hz), single-phase, alternating current (AC) supply system consisting of traction power supply (TPS) substations, one switching station and paralleling stations. These facilities are described in more detail in the following pages. Figure 2 shows the general location of potential TPS substation, switching station and paralleling stations.

Overhead Contact System. An alternating current (AC) overhead catenary system (OCS) would be employed. For heavy-haul commuter rail systems, such as that operated by Caltrain, the voltage of choice today throughout Europe and the rest of the world is 25 kV at commercial frequencies (50 to 60 Hz), and this is the voltage proposed for the Project.

This power supply and distribution system and voltage are compatible with the requirements of HSR and will accommodate future development of HSR in the Caltrain corridor. Furthermore, the OCS conductors and traction power equipment will be sized and located based on a computerized analysis of traction power load flow requirements using the probable maximum capacity of the Peninsula Corridor alignment including Caltrain and HSR.

Clearances for maintenance and operation of the OCS will be designed to allow for existing freight railroad and tenant passenger rail clearances and operations. Normal design clearances would be provided in all open areas. Special designs may be employed in close clearance tunnels or under bridges in order to provide sufficient clearances to freights and diesel passenger trains.

The particular type of OCS support on a given segment is dependent upon the track segment's exact configuration (e.g., number of tracks) and other site-specific requirements and constraints.

Power would be supplied to the OCS at each of the traction power facilities, either by means of non-insulated aerial connections or by insulated underground connections. Power would be delivered to the OCS usually through a pole-mounted

⁵ This project only includes funding for EMUs representing approximately 75% of the operational fleet between San Jose and San Francisco. Funding for replacement of the remainder of the diesel fleet between San Jose and San Francisco would have to come from future funding sources. It is expected that 100% of the San Jose to San Francisco fleet would be EMUs between 2026 and 2029, as the fleet would need to be fully electrified to operate in a blended service environment with HSR.

⁶ This project only includes electrification to a point approximately 2 miles south of Tamien Station. The Union Pacific Corridor south of this point will not be electrified by this project.

disconnect switch, which permits energization or de-energization of a particular section of the OCS conductors. The overhead electrical system would include an integrated bonding and grounding system to protect the public during all system operations.

The OCS poles nominally need to be approximately 10 feet from the centerline of the railway tracks. In addition, there needs to be clearance of vegetation within approximately 10 feet of the OCS poles and catenary system for electrical safety. In most cases, the OCS poles will be placed within the Caltrain ROW. In certain locations, there may be insufficient clearance from the railway track centerlines and Caltrain may need to acquire ROW for placement of poles and wires. Trimming or removal of trees will be required along the tracks and electrical facilities where they would otherwise pose a maintenance or safety concern including areas within 10 feet of OCS poles (areas within 20 feet of the railway track centerlines). Where electrical clearance is necessary outside the Caltrain ROW, Caltrain will need to obtain an electrical safety easement from property owners.

Auto-Transformer Power Feed Arrangement. The auto-transformer power feed system arrangement reduces the need for substations and would require the installation of only two supply substations spaced 36 miles apart. In addition, there would be one switching station and seven paralleling stations at a spacing of approximately 5 miles. The paralleling stations provide additional power support to the power distribution system and permit increased spacing of the primary substations. In addition to reducing the number of substations – and thereby minimizing the introduction of new, large equipment installations into the corridor – another advantage of the auto-transformer feed arrangement for implementation along the Caltrain corridor is its potential to reduce electromagnetic fields (EMF) and electromagnetic interference (EMI) because it includes two parallel aerial feeders, one on each side of the alignment. The currents in the parallel feeders flow in the opposite direction to that in the main catenary conductors, and this reduces the EMF/EMI effects created by current flow in the OCS.

Traction power facilities are likely to require new right-of-way (in some locations) and connections to the utility high-voltage transmission network. Alternate sites will be considered for the two substation facilities. Sites for intermediate paralleling and switching station facilities have been identified. These facilities do not require connection to the utility high-voltage system, or such large tracts. Final site selection will be coordinated with local authorities. Figure 2 shows the proposed general locations for potential traction power facilities.

Substations, Switching Station, and Paralleling Stations. The two substations would each include two 60MVA (million Volt-amperes) oil-filled transformers that will step down the power utility supplied voltage of 115kV to the 2 x 25 kV distribution voltage for the OCS. The source power utility would be requested to provide two incoming feeds, which would tap two phases of each three-phase transmission line. The substation compound would include circuit breakers and switching equipment that would feed power from the high-voltage lines to each line section of track. The lineside equipment would be designed to provide alternate switching arrangements in the event of a substation equipment outage. A substation compound would typically be approximately 150 feet by 200 feet in size.

At approximately the midpoint between substations, a switching station would be installed. At the switching station a phase break would be required to ensure the power supplies from each substation is isolated from each other in order to avoid a fault condition. In addition, switching would be installed to provide operating flexibility during equipment outages. In between the substations and the switching station, paralleling stations would be installed to maintain the autotransformer system and system operating voltages. The switching station would be equipped with two 10-MVA oil-filled auto-transformer units and the paralleling stations with either one or two 10-MVA oil-filled auto-transformer units. These facilities would contain a variety of circuit breakers and switching equipment but would be typically as shown in the proposed location drawings above. Switching station compound dimensions are typically 80 feet wide by 160 feet long; paralleling station compound dimensions are typically 40 feet wide by 80 feet long.

Overbridge Protection Structures. In addition to the electrical facilities themselves, electrification of the corridor would require the construction or enhancement of overbridge protection barriers on 47 roadway bridges across the Caltrain alignment. These barriers are necessary to prohibit access to the rail corridor and prevent objects from being thrown off the bridges in a manner that would damage or interfere with the electrical facilities. Fifteen of the existing bridges already have such barriers on both the north and south bridge face, six bridges have a barrier on only one bridge face, and 26 have no overbridge protection barriers. Overbridge protection barriers would be 6.5 feet high above sidewalk or pavement level, and placed along the parapet of the bridge at least 10 feet from the closest energized conductors crossing underneath. The existing barriers will be enhanced to meet these requirements.

For two-track segments, the length of the overbridge protection barrier would be about 35 to 40 feet long. For three- and four-track segments, the overbridge protection barrier would be from 65 to 80 feet long. Overbridge protection barriers may be constructed from a variety of materials, including timber, sheet metal, small mesh wire fabric, and concrete or other solid material.

Right of Way Needs. Based on the current system design, there would be a need for acquisition of approximately 1 acre of new right of way for traction power facilities. Caltrain is presently examining the design for project facilities and the amount of right of way may be more or less than 1 acre. As noted above, additional right of way may be needed for location of some OCS poles and wires and electrical safety clearance easements will need to be acquired where clearance of vegetation needs to occur outside the current Caltrain ROW.

PROJECT FINANCING AND FUNDING

The project is estimated to cost approximately \$1.225 billion of which approximately \$785 million is for infrastructure costs and the remaining \$440 million is for rolling stock. The project will be financed through a combination of local, state, and federal sources. Based on the 9-party MOU, the breakdown of funding is as follows:

FUNDING SOURCES	MILLIONS (\$, YEAR OF EXPENDITURE)
State Prop 1A ⁷ , Prop 1B ⁸	\$620
JPB	\$121
Regional (Bay Area Air Quality Management District, Tolls)	\$ 31
Federal (Federal Transit Administration - FTA) ⁹	\$453
Total	\$1,225

Other funding sources may be substituted for these sources if available. The project cost estimate and funding plan are being updated to reflect current designs and assumptions. The updated cost estimate and funding plan will be included in the Draft EIR.

PROJECT SCHEDULE

Although no decision has been made on contract procurement type, the preliminary schedule presented below assumes a "Design Bid Build" procurement process. Please note that this schedule is preliminary and subject to change.

The preliminary project schedule (subject to change) is as follows:

- Environmental/Design/Permitting: 1-2 years
- Construction: 3-4 years
- Testing: 1-2 years

The goal for electric revenue service is 2019. Project Delivery schedule has not been finalized yet.

POTENTIAL ENVIRONMENTAL EFFECTS

The lead agency has initially determined that the following topics will be included for evaluation in the EIR: Aesthetic/ Visual, Air Quality, Biological Resources, Archaeological-Historic Resources, Energy, Geology and Soils, Greenhouse Gas Emissions and Climate Change, Electromagnetic Interference/ Electromagnetic Fields (EMI/EMF), Hazardous Waste and Materials, Hydrology and Water Quality, Land Use and Planning (including parks and recreation), Noise and Vibration, Population and Housing, Public Services and Utilities, Safety, Socioeconomics and Environmental Justice, and Traffic and Circulation. The EIR will consider both temporary construction-period and permanent impacts.

⁷ Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century of 2008.

⁸ The Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006.

⁹ FTA has already completed an Environmental Assessment (EA) under the National Environmental Policy Act in 2009 for electrification of the Peninsula Corridor and issued a Finding of No Significant Impact (FONSI).

The EIR will also include a cumulative Impact analysis of the impacts of the Peninsula Corridor Electrification Project in combination with other planned railway projects in the corridor including blended service (up to 4 HSR trains per peak hour per direction). The cumulative analysis of blended service will include two scenarios: 1) up to 2 HSR trains per peak hour per direction in addition to 6 Caltrain trains per peak hour per direction (so-called “6-2” scenario); and 2) up to 4 HSR trains per peak hour per direction in addition to 6 Caltrain trains per peak hour per direction (so-called “6-4” scenario). Both blended service scenarios may require station improvements at HSR stops (such as the Millbrae Station), grade crossing improvements and maintenance facilities; only the “6-4” scenario would require additional passing tracks at certain locations. The HSR improvements will be reviewed at a conceptual level only as the project design of blended service will not be completed until after this environmental process is complete. Operational speeds up to 110 mph may be considered in the cumulative analysis.

The cumulative analysis will also take into consideration of the cumulative effects of this project in combination with the Downtown Extension of rail service from the Fourth and King Station to the new Transbay Transit Center in San Francisco, the Dumbarton Rail Corridor Project, improvements to the Altamont Corridor Express service and improvements to the Capitol Corridor service, as well as other transportation improvements included in MTC’s Regional Transportation Plan and land use plans and projects in the various cities along the Caltrain corridor including transit-oriented development around Caltrain stations. As noted above, the cumulative analysis of blended service will be at a conceptual level using a combination of quantitative and qualitative analysis corresponding to the level of information available about blended service at this time.

Caltrain is seeking comments from agencies, stakeholders and the public regarding the environmental effects to be analyzed in the EIR.

ALTERNATIVES

As required by CEQA, the EIR will consider a reasonable range of alternatives in addition to the proposed project. At a minimum, the following two alternatives will be evaluated in detail the EIR: the No-Electrification (No-Project) Alternative and the Peninsula Corridor Electrification Project Alternative (Proposed Project).

Caltrain is seeking comments from agencies, stakeholders and the public regarding feasible alternatives for evaluation in the EIR. After consideration of input from project scoping and development of environmental analysis of the proposed project, Caltrain will consider the need for analysis of additional alternatives. Only alternatives that are feasible, meet the project purpose and need, and reduce one or more significant environmental impacts of the proposed project will be analyzed in detail. Alternatives that are infeasible, that do not meet the project purpose and need, or that do not reduce one or more significant environmental impacts of the proposed project will be discussed in the EIR but will not be analyzed in detail as allowed by the requirements of CEQA.

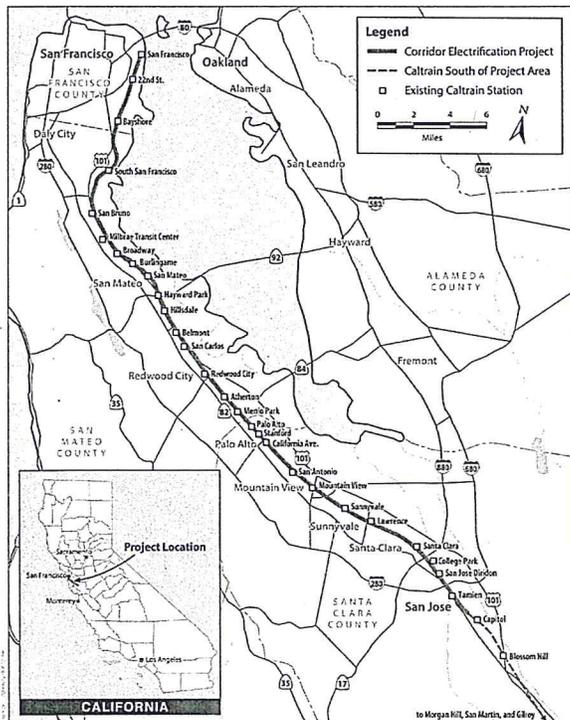


Figure 1
Project Location
Corridor Electrification Project

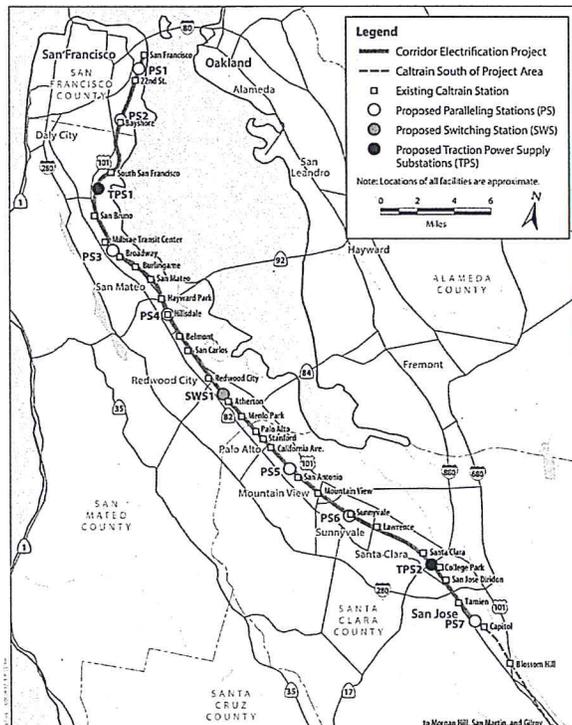


Figure 2
Traction Power Supply Facility Locations
Corridor Electrification Project