

Chapter 1. Introduction

The Capitol Corridor Joint Powers Authority (CCJPA), in coordination with regional transportation partner agencies, is proposing the South Bay Connect Project (also identified as “proposed Project”) to improve existing passenger rail service between Oakland and San Jose. The project would relocate Capitol Corridor Intercity Passenger Rail Service (Capitol Corridor) operations to the Union Pacific Railroad (UPRR) Coast Subdivision from the UPRR Niles Subdivision in Alameda County, California. This route relocation for passenger rail service would require alterations and improvements to the Coast Subdivision’s existing rail infrastructure, including expansion of track and modification of an existing park-and-ride at Ardenwood (a community located in Fremont, California) to include a full train station to be served by the Capitol Corridor. Alterations to sections of existing rail infrastructure on the Niles Subdivision would also be required where the Coast and Niles subdivisions intersect at the junction points at Elmhurst (in Oakland, California) and Newark, California. Since Capitol Corridor passenger service would no longer run north/south along the Niles Subdivision nor across the Centerville line, Capitol Corridor service at existing Hayward and Fremont-Centerville stations would be discontinued. This change would not affect other existing passenger rail services on the Niles and Oakland subdivisions. No Capitol Corridor service frequency changes are included in the proposed Project.

Capitol Corridor is an intercity passenger train system that provides a convenient alternative to traveling along the congested Interstate-80 (I-80), Interstate-680 (I-680), and Interstate-880 (I-880) freeways by operating fast, reliable and affordable intercity rail service within the Northern California Megaregion¹. Along its 170-mile rail corridor, Capitol Corridor operates 18 stations in eight Northern California counties: Placer, Sacramento, Yolo, Solano, Contra Costa, Alameda, San Francisco, and Santa Clara.

The South Bay Connect Project is a key element in CCJPA’s 2014 Vision Plan Update and 2016 Vision Implementation Plan, both of which call for relocating Capitol Corridor service from the Niles Subdivision to the Coast Subdivision between Oakland and Newark to provide a more direct, efficient, and operationally reliable route from Oakland to San Jose. Improvements to the rail network and operations between Oakland and San Jose are also both components of the 2018 California State Rail Plan, which calls for rerouting passenger rail service from the Niles Subdivision to the Coast Subdivision to facilitate faster travel times. The proposed Project is limited to rerouting of Capitol Corridor passenger service from the Niles Subdivision to the Coast Subdivision and does not include rerouting or changes in daily freight train operations along the Coast, Niles, or Oakland Subdivisions.

The proposed Project is subject to State environmental review requirements. CCJPA is the lead agency under the California Environmental Quality Act (CEQA) and has prepared this Environmental Impact Report (EIR) pursuant to CEQA (Public Resources Code [PRC] 21000 et seq.) and State of California CEQA Guidelines (14 California Code of Regulations [CCR], 15000 et seq.). The State lead

¹ The Northern California Megaregion is composed of 21 counties grouped into four regions: Bay Area, Sacramento Area, Northern San Joaquin Valley, and Monterey Bay Area.

agency is defined as the public agency that has the principal responsibility of approving a project that is subject to CEQA.

Federal regulatory agencies may use information contained within the CEQA EIR for subsequent National Environmental Policy Act (NEPA) clearance. Other anticipated agency permits and approvals associated with the proposed Project are described in Table 1.1 in subsection 1.3.

1.1 Project Background

The following subsections provide an overview of rail services in the San Francisco Bay Area (Bay Area) east of the San Francisco Bay, summaries of CCJPA's history and governance, general project location, and the evolution of the proposed Project.

1.1.1 Existing Passenger and Freight Regional Rail Services

1.1.1.1 Existing Rail Lines

CCJPA provides passenger services over the tracks owned by the Union Pacific Railroad System (UPRR). UPRR's primary business is goods movements; therefore, UPRR's freight train operations reflect market demands. UPRR operates 32,000 miles of track in 23 states and moves both domestic and international freight between the Bay Area and the rest of the nation. UPRR provides these freight services over its network of main-line track, branch lines, and local and industrial tracks. This network also connects a series of railyards, maintenance and other facilities located throughout the Bay Area and Northern California, which support their operations.

Within the San Francisco Bay Area and east of the Bay, UPRR operates three mainline routes extending southward from its yard and facilities in Oakland (Figure 1-1). These routes are referred to as *subdivisions*. Multiple passenger rail services share these rail lines with freight services. The Niles Subdivision connects Oakland with the Niles District in Fremont and extends through Centerville to Newark (Figure 1-1). It also serves as the connection for all three subdivisions into the UPRR Oakland yard. The Oakland Subdivision branches from the Niles Subdivision in East Oakland and connects Oakland with Stockton through Niles Canyon, the Tri-Valley and Altamont Pass. Then the Oakland Subdivision crosses the Niles Subdivision in both Hayward and Fremont. The Coast Subdivision branches off the Niles Subdivision at Elmhurst, a junction located near the Oakland/San Leandro border, and connects Oakland with Newark and San Jose. The Coast Subdivision and the Niles Subdivision are connected by a portion of the Niles Subdivision extending between Newark and Niles Junction, referred to as the Centerville line.

The Dumbarton Rail Corridor is an east/west rail line that extends from Coast Subdivision at the junction at Newark across the San Francisco Bay to the Peninsula. San Mateo County Transit District (SamTrans) owns the Dumbarton Rail Corridor. There is currently no passenger rail service on the Dumbarton Rail Corridor, though new passenger service is currently being studied (San Mateo County Transit District, 2022).

1.1.1.2 Existing Rail Service

Passenger rail service within the Bay Area is primarily provided by Capitol Corridor (up to 14 trains daily), Altamont Corridor Express (ACE) (up to 8 trains weekly), and Amtrak Coast Starlight (up to 2 trains daily) (CCJPA, 2019; Figure 1-2).

The route for Capitol Corridor passenger trains between Oakland and San Jose currently operates over the Niles Subdivision to Niles Junction and then via the Centerville line (also part of the Niles Subdivision) to connect with the UPRR Coast Subdivision at Newark. Capitol Corridor trains then operate over the Coast Subdivision between Newark and the connection with Caltrain tracks near San Jose. (Note that this description is for CCJPA's southbound operation; CCJPA's northbound operation would be the reverse.) Capitol Corridor passenger trains currently must slow down substantially to take a wide turn west at Fremont onto the Centerville Line and another wide turn south at the Newark Junction onto the Coast Subdivision (Figure 1-2). There are currently no passenger rail stations along this segment of the Coast Subdivision.

In addition to CCJPA intercity passenger trains, UPRR hosts long-distance passenger trains operated by Amtrak on the Coast Subdivision between Oakland and San Jose and commuter trains operated by ACE between Stockton and Newark over the Oakland and Niles Subdivisions, then between Newark and San Jose on the Coast Subdivision.

Niles, Oakland and Coast Subdivisions are used by UPRR freight trains as well. UPRR's level of service and freight train volume varies based on market demands and other factors. The Niles Subdivision, between Niles Junction and Newark Junction, currently has the most heavily traveled rail lines in the Project area (approximately 6 to 7 freight trains per day). Regardless of the proposed Project, freight train length is currently projected to increase from approximately 10,060 feet in 2023 to approximately 11,270 feet in 2030 and up to 14,000 feet in 2040. The increase in freight train length is anticipated to increase wait times at railroad crossings from approximately 180 seconds (3 minutes) in 2023 to approximately 200 seconds in 2030 and up to approximately 240 seconds (4 minutes) in 2040 per event.

Figure 1-1. Project Location and Overview Map

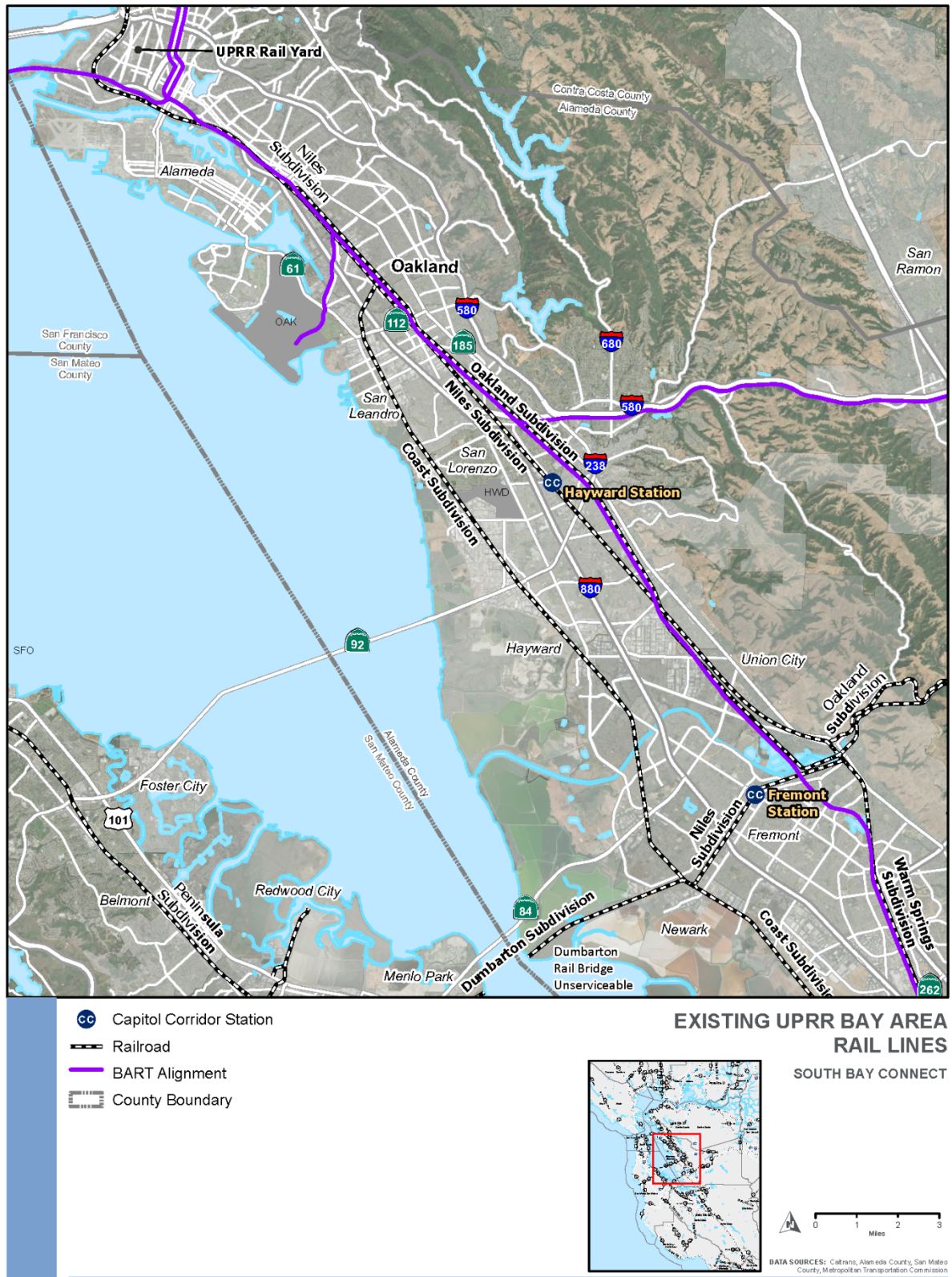
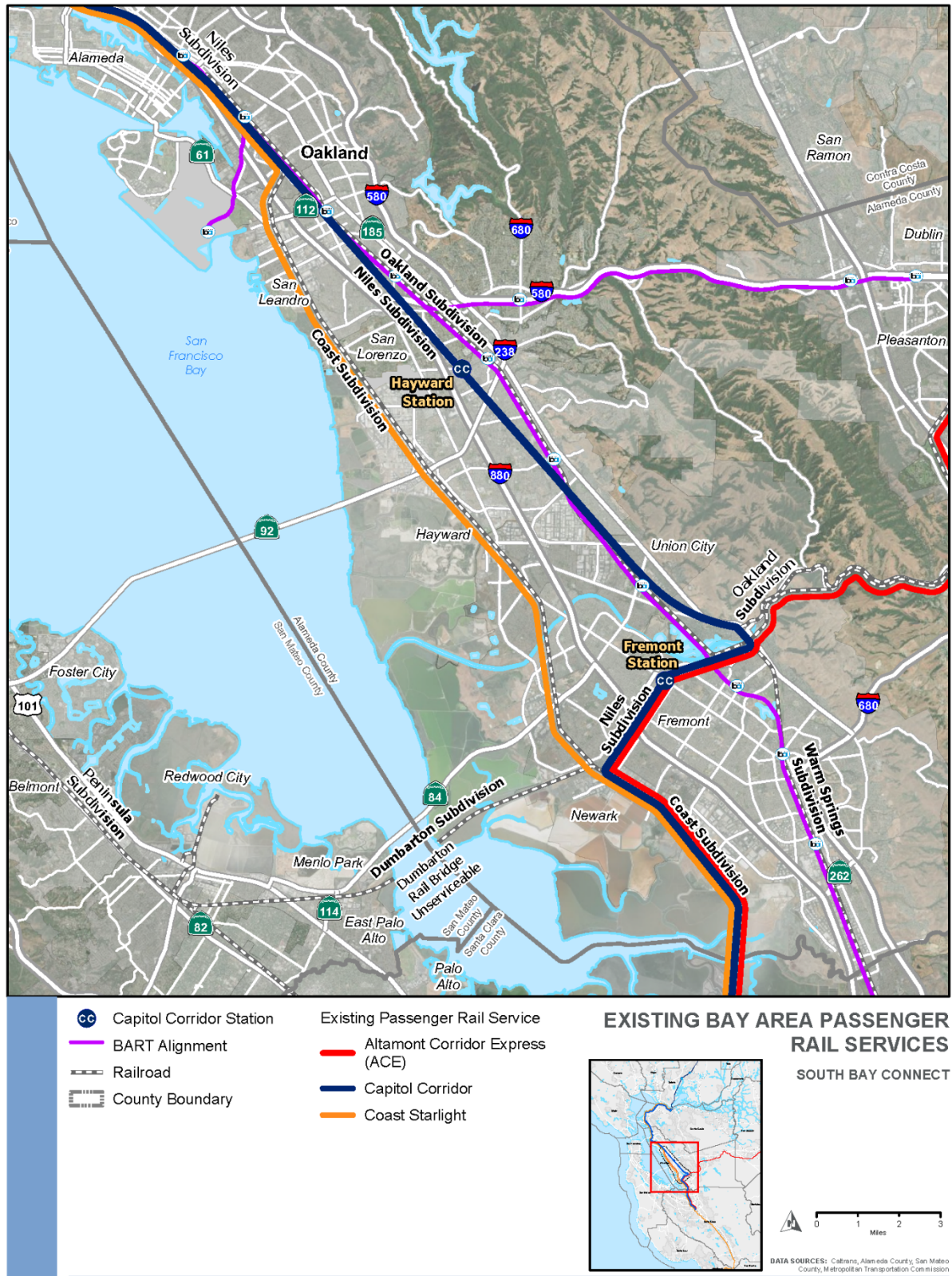


Figure 1-2. Existing Bay Area Passenger Rail Services



1.1.2 Capitol Corridor Joint Powers Authority

Capitol Corridor operations is funded by the State through the California Department of Transportation (Caltrans) Division of Rail and Mass Transportation (DRMT), and capital projects may be funded by different sources of public grant programs. The proposed Project is partially funded by a 2018 Transit and Intercity Rail Capital Program (TIRCP) grant from CalSTA.

California Department of Transportation (Caltrans) managed the route from its inception in 1991 to 1997. In 1998, the route's management and administration responsibilities were transferred to the CCJPA to provide more local control. CCJPA makes decisions on the service level of Capitol Corridor, capital improvements along the route, and passenger amenities aboard the trains. CCJPA is a partnership among the six local transit agencies in the eight-county service area which shares the administration and management of the Capitol Corridor. CCJPA is governed by a Board that consists of two representatives from each of the eight counties in the Capitol Corridor: Placer, Sacramento, Yolo, Solano, Contra Costa, San Francisco, Alameda, and Santa Clara. These counties are represented by:

- Placer County Transportation Planning Agency;
- Sacramento Regional Transit District;
- San Francisco Bay Area Rapid Transit District (BART);
- Santa Clara Valley Transportation Authority;
- Solano Transportation Authority; and
- Yolo County Transportation District.

CCJPA has a contract with BART for day-to-day management and staff support. It has also contracted with Amtrak to operate and maintain the rolling stock (locomotives and passenger cars); however, Caltrans retains ownership of the rolling stock.

Capitol Corridor services are developed with input from riders, private and public sector stakeholders, and the partners who help deliver Capitol Corridor service—Amtrak, UPRR, Caltrans, and the various agencies and communities that make up the Capitol Corridor. CCJPA is also supported by the two metropolitan planning organizations in the Capitol Corridor—the Metropolitan Transportation Commission and the Sacramento Area Council of Governments.

1.1.3 Project Location Overview

The proposed Project is located in Alameda County primarily along the Coast Subdivision between the Capitol Corridor Oakland Coliseum Station in the city of Oakland to the north, and the junction at Newark (in the city of Newark) to the south. The proposed Project also includes work on the Niles Subdivision where it intersects the Coast Subdivision at its north and south ends. Proceeding from north to south, the proposed Project passes through the cities/communities of Oakland, San Leandro, Hayward, Union City, Fremont, and Newark (Figure 1-1).

The area surrounding the proposed Project is primarily suburban in character with varied land uses and types of development. The Coast Subdivision and Niles Subdivision tracks are highly constrained by the existing built environment. The rail corridors travel through heavy and light

industrial uses, factories and storage areas, commercial uses, low, medium, and high-density residential uses, recreational uses, and areas of designated open space.

1.1.4 Development of the Proposed Project

The South Bay Connect Project was initially identified in the Capitol Corridor Vision Plan (CCJPA 2014), refined in the Capitol Corridor Vision Implementation Plan (CCJPA 2016), and defined and evaluated in the Capitol Corridor South Bay Connect Project Definition Report (CCJPA 2019). The Vision Plan documents and Project Definition Report are CCJPA's ongoing blueprint to continue improving passenger rail operational efficiency and reliability, implement regional rail services, build or enhance passenger rail stations, extend Intercity Passenger Rail (IPR) service, and develop integrated service plans compatible with the planned California High Speed Rail (CAHSR), other existing passenger rail services, and various key transit connections.

The proposed Project is also listed as a project development goal in the California State Rail Plan. The State Rail Plan (SRP) defines Caltrans' vision as:

"The status quo is not an option. California's economic, environmental, and equity goals demand a fully integrated, zero-emission, modern passenger and freight rail network that safely and reliably delivers more service to more destinations more often and attracts significant demand away from highway and air travel." (Caltrans 2023)

To achieve this, Caltrans coordinates and collaborates with multiple rail agencies, including those that are integral to the proposed Project. The SRP references *Key Connections* and *Project Development Goals* necessary for the timely success of the project (Caltrans 2023).

The proposed Project would advance CCJPA and Caltrans core objectives by improving reliability and reducing travel time between Oakland and San Jose. As well, the CAHSR Business Plan identifies the urgency to increase passenger usage in the Auburn to San Jose Capitol Corridor because the corridor will serve as a major feeder/distributor for northern California to the CAHSR system (CAHSR 2014).

In addition to the mobility benefits created by the proposed Project, the improvements in track infrastructure, including existing road crossings, bridges, and signaling, as well as the addition of a new train station that supports convenient transbay transit connections, would enhance operational efficiency and service reliability, reduce overall passenger travel time, and support regional integration of multimodal transportation systems.

As noted above, the proposed Project does not include increases in the number of daily Capitol Corridor passenger trains or frequency of service to San Jose and would not affect freight rail service, nor the number of ACE and Amtrak trains operated. It is also important to note that, since UPRR owns the rights of way (ROW) and controls operations for the three subdivisions, CCJPA's final project must also be acceptable to UPRR.

1.2 Project Goals and Objectives

The proposed Project's overlying goal is to improve Northern California's transportation mobility and enhance Capitol Corridor's operational efficiency and reliability. The proposed Project would accomplish this by using a more direct passenger rail route, reducing rail travel time between

Oakland and San Jose, and by facilitating more auto-competitive travel times for IPR trips throughout Northern California. In addition, South Bay Connect also creates the opportunity for new connections to Transbay inter-modal transit services and destinations on the San Francisco Peninsula.

To better understand the necessity of the Project, consider the current Capitol Corridor train routing: a southbound Capitol Corridor train would currently travel indirectly between Oakland and San Jose on the Niles Subdivision (Figure 1-2), which follows a circuitous route along the base of the Mission Hills south from Hayward, then turns westward at Niles, passing through Fremont and Centerville, before turning south at Newark on the Coast Subdivision. Typically, 6 to 7 freight trains per day use the portion of the Niles Subdivision between the junction at Niles and the junction at Newark, which is the most heavily traveled portion of the lines in the Project study area. This higher usage by freight trains, coupled with passenger services, increases the risk of delays to both freight and passenger rail services along this segment.

CEQA requires that an EIR contain a “statement of the objectives sought by the proposed project.” Under CEQA, “[a] clearly written statement of objectives will help the Lead Agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations. The statement of objectives should include the underlying purpose of the project” (CEQA Guidelines Section 15124[b]).

Accordingly, the objectives of the proposed Project are:

- Reduce passenger rail travel time between Oakland and San Jose, and throughout the megaregion, to increase ridership on transit, ease congestion on the Bay Area’s stressed roadways, and reduce lengthy auto commutes.
- Advance a Project that is consistent with current and projected freight and passenger operational needs and timeframes for existing operators and owners, with no change to existing freight operations.
- Diversify and enhance rail network integration by reducing duplicative capital investments and differentiating Capitol Corridor’s intercity rail service from commuter rail and other transit services, including BART’s extension to San Jose.
- Support economic vitality by permitting enhanced rail movement and the preservation of freight rail capacity in the Northern California market through the reduction of conflicts between freight rail operations and passenger rail service.
- Improve service between megaregional markets by enhancing connections between high demand destinations, overcoming existing geographic service gaps between job centers and affordable housing projects on the San Francisco Peninsula and along the Capitol Corridor route.
- Promote environmental sustainability by lowering greenhouse gas (GHG) emissions through a reduction in auto traffic via mode change from auto to transit.

1.3 Environmental Permits and Approvals

In addition to CCJPA certifying the final EIR and approving the proposed Project, other federal and local agency decisions are needed for the Project to be constructed and operated. Table 1.1 lists the

potential federal, State, and regional environmental permits and approvals that could be needed to implement the Project; this may include an agency's review and approval of final design plans.

CCJPA would work with the State and local resource agencies to determine which regulatory permits and approvals would be required to implement the proposed Project, based on whether project implementation could affect resources under the jurisdiction of said agencies. If there is a nexus causing a permit or approval to be required from a specific agency, CCJPA would then prepare agreements to facilitate environmental permitting during final design and construction. These agreements would identify CCJPA's responsibilities in meeting the permitting requirements of these agencies, as shown in Table 1.1.

If federal permits, consultations, and/or approvals are determined to be necessary because of proposed Project implementation, a federal Lead Agency under NEPA would be identified. This federal Lead Agency would initiate a separate NEPA process and determine how to meet federal regulatory compliance requirements.

Table 1.1. Environmental Permits and Approval Considerations

Agency	Permit/Approval/Clearance	Relevance/Trigger
<i>Federal</i>		
U.S. Army Corps of Engineers (USACE)	Clean Water Act Compliance	Permanent or temporary placement and/or removal of material in waters of the U.S., including wetlands; all requests to modify, alter, or occupy any USACE-constructed public works project (e.g., levees).
	Rivers and Harbors Act of 1899 Compliance	Construction of a structure in or over any navigable water of the U.S.
U.S. Advisory Council on Historic Preservation via the California State Historic Preservation Office	Section 106 Consultation (National Historic Preservation Act of 1966); Concurrence on adequacy of identification effort, National Register of Historic Places eligibility determinations, and Finding of Effect	Aligned with federal permits and consultations and a required element for all federal actions.
U.S. Fish and Wildlife Service	Federal Endangered Species Act Compliance	Presence of federally listed plant and wildlife species and critical habitat within the impact area if unable to avoid during construction.

Table 1.1. Environmental Permits and Approval Considerations

Agency	Permit/Approval/Clearance	Relevance/Trigger
National Marine Fisheries Service	Federal Endangered Species Act Compliance	Presence of federally listed aquatic species and critical habitat within the impact area if unable to avoid during construction.
U.S. Coast Guard (USCG)	Section 9 Bridge Construction Permit (General Bridge Act of 1946)	Construction of a structure in or over any navigable water of the United States requires approval of USCG (bridge replacements).
<i>State</i>		
California Department of Fish and Wildlife	California Endangered Species Act Permits (Incidental Take Permit, Consistency Determination)	Presence of State-listed plant and wildlife species and critical habitat within the impact area if unable to avoid during construction.
	Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement	Permanent or temporary impacts to a river, stream, or lake from activities that would divert or obstruct natural flows, change bed, bank, or channel, use material from, or deposit material into.
Caltrans	Encroachment Permit	Permanent or temporary placement of encroachments within, under, or over the State highway ROW.
California Public Utilities Commission	Approval	Construction and operation of railroad crossings of public roads and for construction of new transmission lines and substations.
California State Lands Commission	Easement	Permanent or temporary crossing of State sovereign lands.
Native American Tribes	Tribal consultation per Assembly Bill (AB) 52	Tribal consultation, aligned with the CEQA process.

Table 1.1. Environmental Permits and Approval Considerations

Agency	Permit/Approval/Clearance	Relevance/Trigger
<i>Regional and Local</i>		
Regional Water Quality Control Boards	Clean Water Act Section 401 Water Quality Certification	Delegated federal authority to assess permanent or temporary placement and/or removal of material in waters of the U.S. or State, including wetlands.
	Clean Water Act Section 402 National Pollutant Discharge Elimination System (NPDES) Water Discharge Permit; Spill Prevention, Control, and Countermeasure (SPCC) Plan (part of Section 402 process)	Delegated federal authority to assess discharge of any pollutant or combination of pollutants from a point source to surface waters that are deemed Waters of the U.S.
	Dewatering Permit (Order No. 98-67)	Discharge of water from dewatering activities.
	Stormwater Construction and Operation Permit	Extent of land disturbance exceeding thresholds.
San Francisco Bay Conservation and Development Commission	Coastal Zone Management Act Compliance	Delegated federal authority to assess all federal activities for consistency with approved State coastal management program.
	McAteer-Petris Act Compliance	Permit required for activities within the San Francisco Bay and shoreline band.
San Francisco Bay Area Air Quality Control Board	Clean Air Act (CAA) Compliance	Delegated federal authority to evaluate compliance with CAA standards.
Alameda County and Various Cities	Local permits	Aligned with local permits and consultations for encroachments and construction activities.

1.4 Document Organization

This Draft EIR is organized in the chapters and appendices listed below:

- Chapter 1, *Introduction*, provides the proposed Project history, CCJPA goals and objectives for the Project, and anticipated permits and approvals.
- Chapter 2, *Project Alternatives*, describes the proposed Project and No Project features, and summarizes other Project alternatives that were considered but eliminated from detailed consideration.
- Chapter 3, *Existing Conditions, Environmental Impacts, and Mitigation Measures*, presents current conditions and analyzes environmental impacts that could result from Project implementation, organized in the following order:
 - 3.1, Introduction.
 - 3.2, Aesthetics.
 - 3.3, Agriculture
 - 3.4, Air Quality.
 - 3.5, Biological Resources.
 - 3.6, Cultural Resources.
 - 3.7, Energy.
 - 3.8, Geology, Soils, and Paleontological Resources.
 - 3.9, Greenhouse Gas Emissions.
 - 3.10, Hazards and Hazardous Materials.
 - 3.11, Hydrology and Water Quality.
 - 3.12, Land Use and Planning.
 - 3.13, Mineral Resources.
 - 3.14, Noise and Vibration.
 - 3.15, Population and Housing.
 - 3.16, Public Services.
 - 3.17, Recreation.
 - 3.18, Transportation.
 - 3.19, Tribal Cultural Resources.
 - 3.20, Utilities and Service Systems.
 - 3.21, Wildfire.

- Chapter 4, *Sea Level Rise*, addresses the potential for Project impacts and Project features that would result in sea level rise resiliency.
- Chapter 5, *Other CEQA Considerations*, addresses growth-inducing impacts, environmental justice and other findings required under CEQA.
- Chapter 6, *Public Outreach and Agency Consultation*, summarizes the engagement of agencies and stakeholders, and the scoping process for the Project.
- Chapter 7, *List of Preparers*, lists the individuals who contributed to the content and preparation of the EIR.
- Chapter 8, *References*, shows a complete list of references from the EIR, sorted by chapter/section. References specific to a chapter or individual resource area are also included at end of each corresponding chapter or section.
 - Appendix A Project Alternatives
 - Appendix B Air Quality
 - Appendix C Biological Resources
 - Appendix D Cultural Resources
 - Appendix E Hazards and Hazardous Materials
 - Appendix F Hydrology and Water Quality
 - Appendix G Noise and Vibration
 - Appendix H Public Services and Transportation Analysis
 - Appendix I Cumulative Utilities Analysis
 - Appendix J Sea Level Rise
 - Appendix K Other CEQA Considerations Environmental Justice Impacts
 - Appendix L Outreach and Agency Consultation

1.5 References Cited

Association of Environmental Professionals. 2023. *California Environmental Quality Act Statute and Guidelines*. Available: www.CalifAEP.org. Accessed: January 14, 2024.

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