*ENVIRONMENTAL DECLARATION

(CALIFORNIA FISH AND GAME CODE SECTION 711.4)

LEAD AGENCY NAME AND ADDRESS	FOR COUNTY CLERK USE ONLY
Pamela Kwan, P.E. Metropolitan Transportation Commission 375 Beale Street, Suite 800 San Francisco, CA 94105	FILE NO: _____

CLASSIFICATION OF ENVIRONMENTAL DOCUMENT:

(PLEASE MARK ONLY ONE CLASSIFICATION)

1. NOTICE OF EXEMPTION / STATEMENT OF EXEMPTION

[ ] A - STATUTORILY OR CATEGORICALLY EXEMPT

$ 50.00 - COUNTY CLERK HANDLING FEE

2. NOTICE OF DETERMINATION (NOD)

[ ] A - NEGATIVE DECLARATION (OR MITIGATED NEG. DEC.)

$ 2,916.75 - STATE FILING FEE

$ 50.00 - COUNTY CLERK HANDLING FEE

[ ] B - ENVIRONMENTAL IMPACT REPORT (EIR)

$ 4,051.25 - STATE FILING FEE

$ 50.00 - COUNTY CLERK HANDLING FEE

3. OTHER: _____

*****A COPY OF THIS FORM MUST BE COMPLETED AND SUBMITTED WITH EACH COPY OF AN ENVIRONMENTAL DECLARATION BEING FILED WITH THE ALAMEDA COUNTY CLERK.*****

BY MAIL FILINGS:

PLEASE INCLUDE FIVE (5) COPIES OF ALL NECESSARY DOCUMENTS AND TWO (2) SELF-ADDRESSED ENVELOPES.

IN PERSON FILINGS:

PLEASE INCLUDE FIVE (5) COPIES OF ALL NECESSARY DOCUMENTS AND ONE (1) SELF-ADDRESSED ENVELOPES.

ALL APPLICABLE FEES MUST BE PAID AT THE TIME OF FILING.

FEES ARE EFFECTIVE JANUARY 1, 2024

MAKE CHECKS PAYABLE TO: ALAMEDA COUNTY CLERK

Notice of Exemption

To: Office of Planning and Research
P.O. Box 3044, Room 113
Sacramento, CA 95812-3044

County Clerk-Recorder's Office
County of Alameda
1106 Madison Street
Oakland, CA 94607

From: Metropolitan Transportation Commission
375 Beale Street, Suite 800
San Francisco, CA 94105

Project Title: Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension Project

Project Applicant: Metropolitan Transportation Commission

Project Location - Specific:
The proposed project extends along Interstate 580 (I-580) from Post Mile (PM) 43.2 to PM 46.9 (please refer to **Figure 1: Project Location**).

Project Location - City: Oakland **Project Location - County:** Alameda

Description of Nature, Purpose and Beneficiaries of Project:
The Bay Bridge Forward (BBF) I-580 Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project (Project) would increase person throughput and improve travel time for carpool and transit users on westbound I-580 approaching the San Francisco – Oakland Bay Bridge (SFOBB) by re-striping an existing general purpose (GP) lane to an HOV lane. Please refer to the Summary of Environmental Considerations (**Attachment A**) for further description of project components.

Name of Public Agency Approving Project: Metropolitan Transportation Commission

Name of Person or Agency Carrying Out Project: Metropolitan Transportation Commission

Exempt Status: (check one):

- ☐ Ministerial (Sec. 21080(b)(1); 15268);
- ☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- ☑ Categorical Exemption. State type and section number: Class 1, Class 2, and Class 4 (14 CCR 15300 et seq.)
- ☐ Statutory Exemptions. State code number:

Reasons why project is exempt:
The Project would include conversion of an existing GP lane to an HOV lane. Project work would occur within the existing interstate lane and freeway right-of-way. The Project would not create additional automobile lanes and involves no expansion of existing use. The Project would not add any additional lanes or pavement. The Project does not propose the removal of any healthy, mature, scenic trees. The Project would not have a significant effect on the environment. Please refer to **Attachment A** for further documentation on Project exemption.

Lead Agency
Contact Person: Pamela Kwan, P.E. **Area Code/Telephone/Extension:** (415) 778-5378

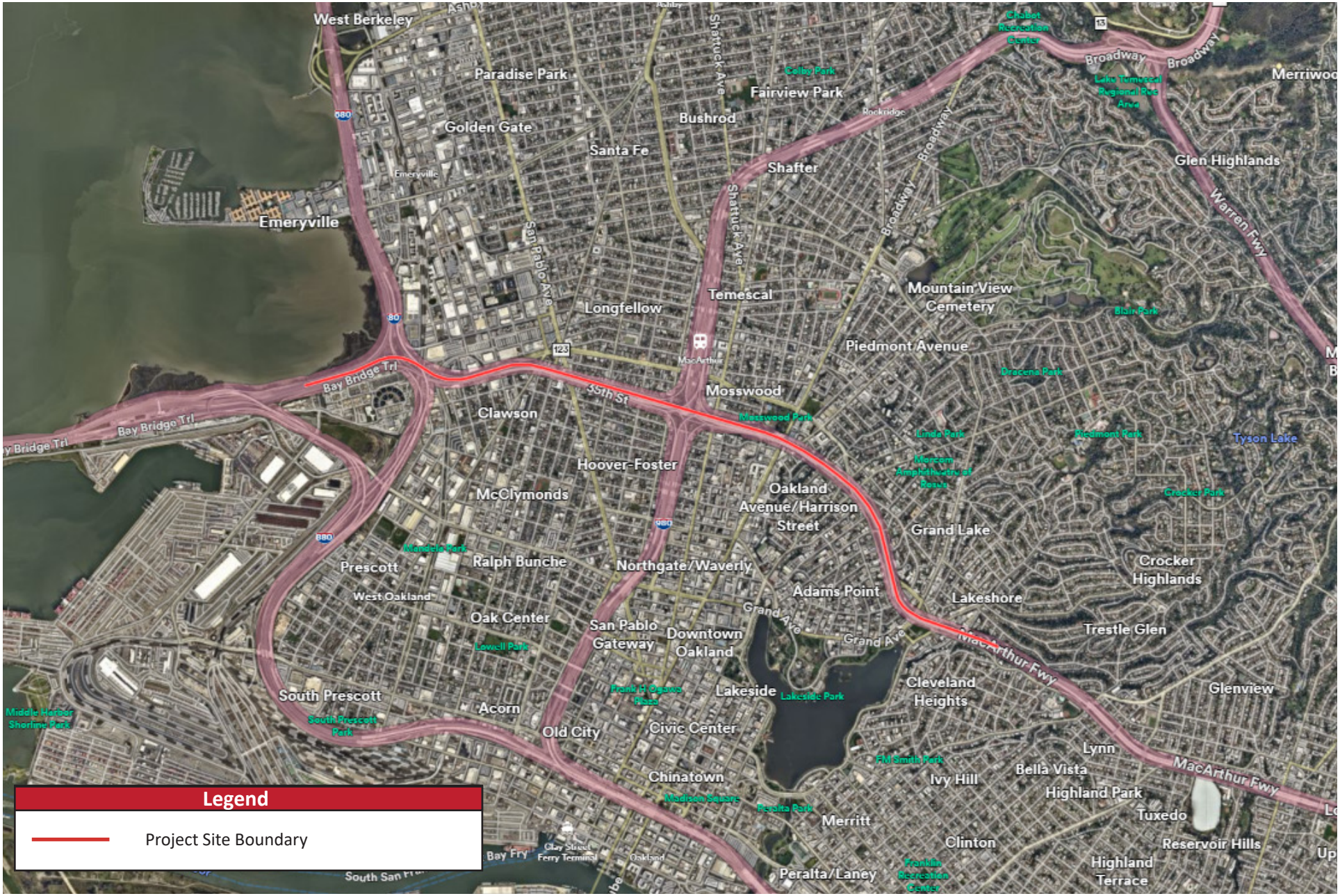
If filed by applicant:
1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? ☑ Yes ☐ No

Signature: DocuSigned by: Andrew Fremier 8584B49D6DE64E9... Date: 6/3/2024 Title: Executive Director

Signed by Lead Agency Signed by Applicant

Authority cited: Sections 21083, 21084, and 21110, Public Resources Code. Date Received for filing at OPR: _____
Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

Figure 1: Project Location



Source: Nearmap, 2024

Figure 1: Project Location

Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension
Categorical Exemption

Not to scale

Kimley»Horn

Attachment A: Summary of Environmental Considerations

Kimley»Horn

To:	Pamela Kwan, P.E., Capital Program Delivery, Metropolitan Transportation Commission
Project:	Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension Project
Date:	May 23, 2024
From:	Danae Hall, AICP, Environmental Lead, Kimley-Horn
Subject:	Summary of Environmental Considerations

INTRODUCTION

This project summary provides information regarding environmental considerations for the Bay Bridge Forward Interstate 580 (I-580) Westbound High Occupancy Vehicle Lane Extension Project (Project) located in Oakland, California. Based on an evaluation of the project, the project would qualify for a Class 1, a Class 2, and a Class 4 Categorical Exemption, as explained below. The project would occur within the existing freeway right-of-way, involving modification of lane striping to allow for HOV use of the existing general purpose (GP) lane and installation of associated signage. The project would not expand I-580 beyond the existing roadway section. The project would not have a significant effect on the environment.

PROJECT DESCRIPTION

The Project would increase person throughput and improve travel time for carpool and transit users on westbound I-580 approaching the Transbay/ San Francisco – Oakland Bay Bridge (SFOBB) by re-striping an existing GP lane to an HOV lane.

The purpose of the Project is to:

- Increase person throughput during peak hours.
- Improve travel time to support buses and high-occupancy vehicles.
- Encourage mode shift by providing travel time savings for HOV and transit users.

I-580 is one of Alameda County's key transportation routes, carrying over 200,000 vehicles per day in its most heavily used segments and serves as a primary conduit to the SFOBB. SFOBB is the most congested bridge in the San Francisco Bay Area, with the queues on I-580 WB approaching the SFOBB toll plaza bottleneck extending to the Interstate 980 (I-980)/State Route 24 (SR 24) Interchange (I-580 Post Mile 45.2) during the morning peak period from 6 A.M. to 10 A.M. These queues are exacerbated by the heavy weaving associated with lane changes prior to the I-80/I-580 junction. With the SFOBB traffic and population and employment around the San Francisco Bay Area anticipated to continue to grow, corridor improvements along I-580 are required to improve current and future travel conditions for the travelers who use the corridor.

Solutions to reduce the congestion along I-580 WB approaching the SFOBB toll plaza are limited by constrained right-of-way. Currently, the congestion approaching the SFOBB toll plaza is a result of lane changes required for vehicles to enter I-80 EB and WB from I-580 WB since lane changes typically require drivers to slow down. These lane changes occur between the I-980/SR 24 Interchange (I-580 Post Mile 45.2) and the I-80 Interchange (I-580 Post Mile 46.2). Vehicles in the left lanes on I-580 WB need to cross from the left to right lanes to enter I-80 EB. Simultaneously, vehicles entering I-580 WB from I-980/SR 24 must cross from the right to the left lanes of I-580 to enter I-80 WB and SFOBB. The right-of-way is constrained to existing roadways that could not be expanded without demolition of surrounding uses in the dense urban setting or encroachment into the Bay Conservation and Development Commission's jurisdiction related to the San Francisco Bay Area. Solutions must focus on implementing travel demand management to increase person throughput, namely increased HOV use.

Figure 1 shows the location of the Project. The Project site extends from I-580 Post Mile 43.2 to I-580 Post Mile 46.9. The Project proposes to convert 2.3 miles of an existing general-purpose (GP) lane to an HOV lane. Signing and striping work would occur along the existing HOV lane between I-580 Post Mile 46.7 and I-580 Post Mile 46.9. The proposed HOV lane would extend from the beginning of the existing HOV lane for the San Francisco-Oakland Bay Bridge (SFOBB) Toll Plaza approach at the WB I-580/Interstate 80 (I-80) connector touch-down area (I-580 Post Mile 46.7) to just east of the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5). The Project limit extends further along I-580 WB from the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) to I-580 Post Mile 43.2 at the Lake Park Ave Overcrossing for the installation of advanced HOV lane signs and restriping. No HOV lane extension is proposed for this portion of the Project site.

ENVIRONMENTAL CONSIDERATIONS

Categorical exemptions are projects specifically excluded from CEQA consideration as defined by the State Legislature, delineated in 14 CCR 15300 et seq. 14 CCR 15300.2 gives Exceptions to the Categorical Exemptions. A project must clear these conditions to be eligible for a Categorical Exemption.

The Project is eligible for a Class 1, a Class 2, and a Class 4 Categorical Exemption, as explained below. Conditions are derived from 14 CCR 15301, 15302, 15304, and 15300.2.

The Class 1 "Existing Facilities" exemption from CEQA is intended to allow for the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use, and may be categorized as one of the projects described in 14 CCR 15301 (a)-(p).

- 14 CCR 15301(c) exempts existing highways and streets, sidewalks, gutters, bicycle and pedestrian trails, and similar facilities (this includes road grading for the purpose of public safety, and other alterations such as the addition of bicycle facilities, including but not limited to bicycle parking, bicycle-share facilities and bicycle lanes, transit improvements such as bus lanes, pedestrian crossings, street trees, and other similar alterations that do not create additional automobile lanes).The Project is consistent with the description in the exemption because the Project would include conversion of a GP lane to an HOV lane. The Project would not create additional automobile lanes and involves no expansion of existing use.

The Class 2 “Replacement or Reconstruction” exemption from CEQA is intended to allow for replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced. These may be categorized as one of the projects described in 14 CCR 15302 (a)-(i).

- 14 CCR 15302(c) exempts the replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity. The Project would include replacing the existing striping along the I-580 corridor for an HOV lane. The Project would not add any additional lanes or pavement. The HOV lane would substantially serve the same purpose and capacity as the existing lane. Therefore, the Project is consistent with the description in the exemption.

The Class 4 “Minor Alterations to Land” exemption from CEQA is intended to allow for alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes. These may be categorized as one of the projects described in 14 CCR 15304 (a)-(d).

- The Project is consistent with the requirements of the Class 4 exemption because the Project would include conversion of a GP lane to an HOV lane, a minor alteration of the existing land use. The Project does not propose the removal of any healthy, mature, scenic trees.

Exceptions to exemption from CEQA are described in 14 CCR 15300.2. The Project does not meet these exception criteria as described below.

- 14 CCR 15300.2(a). Location – “Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located - a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.”
    - As described above, the Project qualifies for a Class 4 “Minor Alterations to Land.” Exemption. Per the Natural Environmental Study - Minimal Impact (**Attachment B**) prepared for the Project, the Project site is not located within a sensitive environment. The Phase I Initial Site Assessment (**Attachment C**) prepared for the Project does identify hazardous waste sites within the Project area. However, the Project does not include any ground disturbance that would impact these hazardous sites as construction would occur within the existing elevated roadway and the sites are located in the surrounding areas or under overpasses. Therefore, the Project is not located within a particularly sensitive environment and this exception does not apply.

- 14 CCR 15300.2(b). Cumulative Impact – "All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant."

    - As evaluated and determined in the prepared Noise Technical Memorandum (**Attachment D**), Air Quality Conformity Analysis (**Attachment E**), and Water Quality Assessment Report (**Attachment F**), approval of the Project would not result in any significant effects relating to traffic, noise, air quality, or water quality, and would not contribute to a significant cumulative impact caused by successive projects of the same type, in the same place, over time. Therefore, this exception does not apply.

- 14 CCR 15300.2(c). Significant Effect – "A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances."

    - There are no unusual circumstances creating the possibility that the Project will have a significant effect on the environment pursuant to CEQA. The Project is not likely to lead to a measurable and substantial increase in vehicle miles traveled (VMT) as it is converting an existing GP lane to an HOV lane without adding any additional lane miles, which exempts the Project from VMT analysis. The proposed Project would be required to comply with standard conditions of approval designed to address construction-related impacts. For example, the Project will comply with Caltrans Standard Specification Section 14-8.02 and Caltrans Standard Specifications Section 14-9.02, which would minimize and/or avoid construction-period noise and air quality impacts; and Best Management Practices (BMPs) such as soil stabilization and sediment controls, implementation of wind erosion, tracking controls, non-stormwater and waste management, and material pollution to minimize water pollution related to routine construction activity. Therefore, this exception does not apply.

- 14 CCR 15300.2(d). Scenic Highways – "A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR."

    - A portion of I-580 within the Project limits is listed in the State Scenic Highway System as either eligible for designation or officially designated as a State Scenic Highway. The Project would include installation of new overhead signage. As disclosed in the Visual Impact Assessment Memorandum (**Attachment G**), the Project would not impact the existing scenic resources. Therefore, this exception does not apply.

- 14 CCR 15300.2 (e). Hazardous Waste Sites – "A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code."

- As disclosed in **Attachment C**, the Project limits contain 5 sites on a list of hazardous waste sites compiled pursuant to Section 65962.5 of the California Government Code. However, the Project does not include any ground disturbance that would impact these hazardous sites as construction would occur within the existing elevated roadway and the sites are located in the surrounding areas or under overpasses. Therefore, this exception does not apply.

- 14 CCR 15300.2 (f). Historical Resources – "A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource."

    - Per the Historic Property Survey Report and the Archaeological Survey Report (**Attachment H**) prepared for the Project, there are no historic resources eligible for listing in the National Register of Historic Places (NRHP) and one archaeological resource within the Project's Area of Potential Effect (APE). Pursuant to Section 106 PA Stipulation IX.A, Caltrans has determined a Finding of No Historic Properties Affected is appropriate for this undertaking because there are no historic properties within the APE. The archeological resource is a likely-ineligible historic-era deposit without a surface manifestation. The resource will not be affected by the Project since it was identified below the surface and there will be no subsurface impacts in that location. Therefore, this exception does not apply to the Project.

Attachment B: Natural Environmental Study - Minimal Impact

Natural Environment Study

(Minimal Impacts)

Interstate-580 Westbound High Occupancy Vehicle (HOV) Lane Extension Project

Alameda County, California

November 2023

STATE OF CALIFORNIA
Department of Transportation

Prepared By: Aurelie M Hening Digitally signed by Aurelie M Hening Date: 2024.01.19 11:55:38 -08'00' Date: 1/19/2024
Aurelie Hening, Biologist | Project Manager
(805) 886-9456
Sequoia Ecological Consulting, Inc
1342 Creekside Drive, Walnut Creek, CA 94596

Prepared By: Digitally signed by Danae Hall Date: 2024.01.19 11:49:23 -08'00' Date: 1/19/2024
Danae Hall, AICP
(408) 785-3523
Kimley-Horn
1300 Clay Street, Suite 325, Oakland, CA 94612

Recommended for Approval By: Sara Moss Digitally signed by Sara Moss Date: 2024.02.01 13:04:27 -08'00' Date: 02/01/2024
Sara Moss, Associate Environmental Planner (Natural Sciences)
(510) 570-6983
Office of Biological Sciences and Permits, Caltrans District 4

Approved By: Matthew Rechs Digitally signed by Matthew Rechs Date: 2024.02.01 17:15:25 -08'00' Date: 02/01/2024
Matthew Rechs, Senior Environmental Scientist, Branch Chief
(510) 507-8673
Office of Biological Sciences and Permits, Caltrans District 4

1 Introduction

The Metropolitan Transportation Commission (MTC), in cooperation with the California Department of Transportation (Caltrans) and the Alameda County Transportation Commission (Alameda CTC), proposes the Bay Bridge Forward (BBF) Interstate (I-) 580 Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project (Project). MTC is the Project sponsor and lead agency, The Project will convert 2.3 miles of existing general-purpose (GP) lane to an HOV lane along I-580 WB in the city of Oakland, Alameda County, California. The Project limits extend from postmile (PM) 46.9 to PM 43.2 along I-580. Vicinity maps of the Project location are provided in Appendix A.

I-580 is one of Alameda County's key transportation routes, carrying over 200,000 vehicles per day in its most heavily used segments and serves as a primary conduit to the Transbay/San Francisco – Oakland Bay Bridge (SFOBB) corridor. The SFOBB is the most congested bridge in the San Francisco Bay Area, with the queues on I-580 WB approaching the SFOBB toll plaza bottleneck extending to the I-980/State Route 24 (SR 24) Interchange (I-580 PM 45.2) during the morning peak period from 6 A.M. to 10 A.M.

This Natural Environment Study (Minimal Impact) has been developed in support of preparation of an Environmental Document in compliance with the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).

The Project footprint is the area of direct temporary and permanent impacts including staging and access areas and is approximately 33.56 acres. The biological study area (BSA) is the area studied for potential temporary, permanent, direct, indirect, and cumulative Project impacts. This includes the entire Project footprint, plus a 100-foot buffer to account for potential noise, light, dust, or visual impacts. The BSA is approximately 204.46 acres and will be discussed further in Chapter 2.1.

1.1 Project Purpose and Need

The purpose of the Project is to reconfigure I-580 to:

- Increase person throughput during peak hours.
- Improve travel time reliability to support buses and high-occupancy vehicles.
- Encourage mode shift by providing travel time savings for HOV and transit users.

I-580 is one of Alameda County's key transportation routes, carrying over 200,000 vehicles per day in its most heavily used segments and serves as a primary conduit to the Transbay/ San Francisco – Oakland Bay Bridge (SFOBB) corridor. SFOBB is the most congested bridge in the San Francisco Bay Area, with the queues on I-580 WB approaching the SFOBB toll plaza bottleneck extending to the Interstate 980 (I-980)/State Route 24 (SR 24) Interchange (I-580 PM 45.2) during the morning peak period from 6 A.M. to 10 A.M. These queues are exacerbated by the heavy weaving associated with lane changes prior to the I-80/I-580 junction. With the SFOBB traffic and population and employment around the San Francisco Bay Area anticipated to continue to grow, corridor

improvements along I-580 are required to improve current and future travel conditions for the travelers who use the corridor.

Solutions to reduce the congestion along I-580 WB approaching the SFOBB toll plaza are limited by constrained right-of-way. Currently, the congestion approaching the SFOBB toll plaza is a result of lane changes required for vehicles to enter I-80 eastbound (EB) and WB from I-580 WB since lane changes typically require drivers to slow down to avoid crashes. These lane changes occur between the I-980/SR 24 Interchange (I-580 PM 45.2) and the I-80 Interchange (I-580 PM 46.2). Vehicles in the left lanes on I-580 WB need to cross from the left to right lanes to enter I-80 EB. Simultaneously, vehicles entering I-580 WB from I-980/SR 24 must cross from the right to the left lanes of I-580 to enter I-80 WB and SFOBB. The right-of-way is constrained to existing roadways that could not be expanded without demolition of surrounding uses in the dense urban setting or encroachment into the jurisdictional San Francisco Bay area. Solutions must focus on implementing travel demand management to increase person throughput, namely increased HOV use..

1.2 Project Description

The BBF I-580 WB HOV Lane Extension Project (Project) is located in the City of Oakland within Alameda County, California. The MTC is the Project sponsor, implementing agency, and lead agency. Project partners include the California Department of Transportation and the Alameda County Transportation Commission.

The Project site extends from I-580 PM 43.2 to I-580 PM 46.9. The Project proposes to convert 2.3 miles of an existing GP lane to an HOV lane. Signing and striping work would occur along the existing HOV lane between I-580 PM 46.7 and I-580 PM 46.9. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 PM 46.7) to approximately the Broadway-Richmond Boulevard Undercrossing (I-580 PM 44.5). The Project limit extends further along I-580 WB from the Broadway-Richmond Boulevard Undercrossing (I-580 PM 44.5) to I-580 PM 43.2 at the Lake Park Ave Overcrossing for the installation of advanced HOV lane signs and restriping. No HOV lane extension is proposed for this portion of the Project site.

GP Lane conversion to an HOV lane would entail the removal of current striping, application of new striping, and installation of signs. The proposed HOV lane would be an HOV 3+. The HOV lane would be separated from the remaining GP lanes by a combination of dashed white striping (continuous access) and a single solid white stripe (access discouraged). The proposed HOV lane would operate during the same hours as the existing facility between 5:00 A.M and 10:00 A.M. and 3:00 P.M. and 7:00 P.M. Monday through Friday. All project work would occur within the current freeway roadway width and right-of-way.

Approximately four roadside signs indicating the HOV lane restrictions and HOV lane operating hours would be installed on existing overhead sign poles and concrete barriers up to 1 mile in advance of the beginning of the proposed HOV lane. Three new overhead sign structures would be installed, two east of the Lakeshore Park Undercrossing (I-580 PM 43.5) and one near the Broadway-Richmond Boulevard Undercrossing (I-580 PM

44.5), to support one sign each. Approximately ten additional roadside signs would be installed along the HOV lane on existing concrete barriers, overhead sign poles, and lighting poles and new wood posts.

Project construction includes: grinding existing pavement to a depth of no more than 1/8-inch to remove existing striping, application of new striping to the road surface, repairing potholes on asphalt surface, construction of three new overhead sign structures and foundations, and the installation of new roadside signs on existing concrete bridge rails, concrete median barriers, overhead sign poles, and lighting poles and new wood posts. Grinding the road surface would not impact the ground below the road. Construction of the new overhead sign structures would require excavation to a maximum depth of 40 feet below ground surface to construct structure foundations. Dewatering may be required to construct structure foundations. Installation of new signs on existing bridge rails or poles would not require excavation. Existing concrete median barriers to have new roadside signs installed on them would be replaced per the current Caltrans standards by the Project. Installation of new roadside signs on new wood posts would require excavation to a maximum depth of three to four feet below ground surface for sign foundations. Equipment anticipated to be used for Project construction includes but is not limited to: cement mixer, crane truck, concrete saw, concrete breaker, pile driver, drilling auger, asphalt patch truck, dump trucks, and sweeper.

Project construction would require closure of the I-580 median for the duration of construction. Temporary nighttime lane closures on I-580 WB and I-580 EB would also be required in addition to median closure. The left-most lane of I-580 WB and I-580 EB would be intermittently closed during the nighttime hours for approximately six months for construction of concrete barriers and overhead sign structure foundations. For installation of overhead sign structures and roadside signs, application of striping, and repairing potholes, the WB lanes of I-580 would be intermittently closed with at least one lane open during nighttime hours for approximately one week. Temporary lane restriping may be required where overhead sign structures would be installed if the median is insufficient to accommodate pile driving equipment for the duration of pile driving activities. Construction is anticipated to begin in winter 2024 and last for approximately six months..

1.3 Avoidance and Minimization Measures

The following section provides a list of proposed AMMs and PFs. AMMs are implemented to avoid, minimize, or mitigate potential adverse environmental effects which are otherwise ‘not significant’ under CEQA definitions. PFs are standard measures implemented during all Caltrans projects. The following AMM and PFs will avoid impacts on natural resources:

PF-BIO-1 Work Window for Nesting Birds: Vegetation removal and clearing and grubbing activities will be conducted during the non-nesting season, from October 1st to January 31st.

PF-BIO-2 Preconstruction Surveys: If vegetation removal or clearing and grubbing must occur during nesting the bird season (February 1 to September 30), preconstruction surveys for nesting birds will be conducted by the Department Biologist no more than 72 hours prior to construction.

PF-BIO-3 Non-Work Buffer: If an active nest is discovered within work area, a non-disturbance buffer will be established at a distance sufficient to minimize disturbance based on nest location, topography, cover, species' sensitivity to disturbance, and intensity/type of potential disturbance.

PF-BIO-4 Restoration and Weed Control: After construction is complete, the contractor will restore disturbed topographical contours to preconstruction conditions. The contractor will contain and remove noxious invasives and associated plant material, and obtain all permits, licenses, and certifications for proper disposal. Noxious invasives are defined as plants that displace native species, hybridize with native species, alter biological communities, or alter ecosystem processes. Noxious invasives are categorized using the California Invasive Plant Council (Cal-IPC) ranking system – from Limited to High concern – to aid in prioritizing management. The contractor will replant disturbed areas with fast-growing native grasses or a native erosion control seed mixture.

PF-BIO-5 Water Quality Best Management Practices (BMP): The Project will: Implement mandatory BMPs defined in the Caltrans Construction Site (BMP) Manual Follow specifications provided in Section 13 of the Caltrans Standard Specifications Comply with the Caltrans National Pollutant Discharge Elimination System general permit and statewide Storm Water Waste Discharge Requirements.

PF-BIO-6 Prohibition of Monofilament Erosion Control. To prevent wildlife from being entangled, trapped, or injured, erosion control materials with plastic monofilament netting must not be used within the BSA.

PF-BIO-7 Pet Restriction: Construction personnel will not bring pets to the construction site.

PF-BIO-8 Firearms Restriction: Firearms will be prohibited from the construction site except for those carried by authorized security personal or law enforcement.

PF-BIO-9 Night Lighting: Artificial lighting will be directed away from vegetated areas and only directed at areas where active construction is occurring. If lighting cannot be directed away from vegetated areas, shielding will be implemented to avoid spillover.

PF-BIO-10 Entrapment: To prevent entrapment of wildlife during construction, all excavated, steep-walled holes or trenches more than six inches deep will be covered at close of each working day with plywood or similar materials. Before holes or trenches are filled, they will be thoroughly inspected for trapped animals. Prior to delivery on site, all open-ended pipes or similar structures will be sealed or capped and remained capped or sealed until they are installed and operational.

PF-BIO-11 Staging: Staging and access areas will be confined to previously disturbed areas that will be cleared by the Department Biologist.

PF-BIO-12 Major Tides: During periods of forecast extreme high (i.e., king) tides, all construction activities would temporarily cease within 50 feet of suitable refugia habitat for salt marsh harvest mice, California black rail, and California Ridgway's rail. Extreme tides may also occur during weather events (e.g., storms or high winds) that coincide with

average high tide events, and those combined phenomena can push water into normally dry zones. An extreme high tide to be an event greater than 6.5 feet. As a result, impacts to refugia habitat from construction activities should be examined and construction activities ceased when tidal events with high tide peaks of greater than 6.5 feet relative to mean lower low water (MLLW) line. Work also should not occur during the three hours before and after the predicted high tide event. Refugia habitat is defined as high marsh or adjacent transitional areas, including ruderal sites, which are not expected to be inundated during the extreme tidal event. A temporary halt to construction activities would allow individual animals the opportunity to move into refugia habitat without disturbance from construction activities.

2 Studies Required

This chapter summarizes the findings of the BSA (Appendix A: Figures 5 and 6). The purpose of this chapter is to document biological resources in and within three miles of the BSA, to evaluate the potential of habitats to support special-status plant and wildlife species and to identify any adverse effects from the Project on biological resources.

2.1 Literature Search

Prior to the initiation of the field survey, Sequoia Ecological Consulting, Inc. (Sequoia) performed a desktop review of available literature to identify special-status plants, animals, and habitats reported to occur in the vicinity of the BSA. This included a 3-mile search of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; CDFW 2023a); and a review 9 United States Geological Survey (USGS) 7.5-minute quadrangle (quad) search of the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California (CNPS 2023); the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system (USFWS 2023a and 2023b); the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service species list (NMFS 2023), the CalFish species list (CalFish 2023), the USFWS National Wetlands Inventory (NWI; USFWS 2023c); and the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (2023). Available aerial photography and relevant literature on listed species with potential to occur was also included in this review.

2.2 Survey Methods

Sequoia biologist, Aurelie Hening, conducted a biological survey of the BSA on January 26, 2022 and Sequoia senior biologist, Dan Muratore, conducted a biological survey of the BSA on October 4, 2022. However, both surveys were performed on foot and by vehicle, outside of the blooming periods for the target listed plant species, which should be considered a constraint. Areas that were not safe for pedestrian surveys were surveyed using 10X42 binoculars from multiple vantage points throughout the BSA. Reconnaissance habitat assessment surveys of the BSA were performed to assess general and dominant vegetation types, aquatic resources, suitable habitat for special-status species, and species present.

2.3 Regulatory Requirements

2.3.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) provides protection for federally listed endangered and threatened species and their habitats. A Project may obtain permission to take federally listed species in one of two ways: a Section 10 Habitat Conservation Plan (HCP) issued to a non-federal entity, or a Section 7 Biological Opinion from the USFWS and/or the National Oceanic and Atmospheric Administration (NOAA) issued to another federal agency that funds or permits an action (e.g., USACE). Under either Section of the FESA, adverse impacts to protected species are avoided, minimized, and mitigated. Both cases require consultation with the USFWS and/or NMFS, which ultimately issues a Biological Opinion determining whether the federally listed species may be incidentally taken pursuant to the proposed action and authorizing incidental take.

Section 7 of FESA requires that federal agencies develop a conservation program for listed species (FESA 7(a)(a)) and that they avoid actions that will jeopardize the continued existence of the species or result in the destruction or adverse modification of the species' designated critical habitat (FESA 7(a)(2)). FESA Section 9 prohibits all persons and agencies from take of threatened and endangered species (though the prohibition on taking listed plants only applies to plants taken from "areas under Federal jurisdiction" or plants taken "in knowing violation of any law or regulation of any State or in the course of any violation of a State criminal trespass law"). Those who violate this mandate face civil and criminal penalties, including civil fines of up to $25,000 per violation, as well as criminal penalties of up to $50,000 and imprisonment for one year. Section 10 of FESA regulates a wide range of activities affecting fish and wildlife designated as endangered or threatened and the habitats on which they rely. Section 10 prohibits activities affecting these protected fish and wildlife species and their habitats unless authorized by a permit from USFWS or NMFS. These permits may include incidental take permits, enhancement of survival permits, or recovery and interstate commerce permits. HCPs under Section 10(a)(1)(B) provide for partnerships with non-federal parties to conserve the ecosystems upon which listed species depend.

HCPs are required as part of an application for an incidental take permit under Section 10. They describe the anticipated effects of the proposed take, how those impacts will be minimized or mitigated, and how the HCP will be funded.

2.3.2 Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (MBTA) (16 USC §703–711), as administered by the USFWS, makes it unlawful to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export at any time, or in any manner, any migratory bird, or any part, nest, or egg of any such bird." This includes direct and indirect acts, except for harassment and habitat modification, which are not included unless they result in direct loss of birds, nests, or eggs.

2.3.3 Bald and Golden Eagle Protection Act of 1940

The Bald and Golden Eagle Protection Act (BGEPA; 16 USC. 668-668c) prohibits anyone from taking, possessing, or transporting a bald eagle (*Haliaeetus leucocephalus*) or golden eagle (*Aquila chrysaetos*), or the parts, nests, or eggs of such birds without prior authorization. This includes inactive nests as well as active nests. Take means to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb. Activities that directly or indirectly lead to take are prohibited without a permit.

2.3.4 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act establishes guidelines to assist the Regional Fishery Management Councils and the Secretary of Commerce in the description and identification of Essential Fish Habitat (EFH) in fishery management plans, the identification of adverse effects to EFH, and the identification of actions required to conserve and enhance EFH. This Act requires the National Marine Fisheries Service to protect EFH for those fish species regulated under the federal Fisheries Management Plan. The National Marine Fisheries Service requires any federal agencies to consult with NMFS on all actions that could adversely impact EFH.

2.3.5 Clean Water Act

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 404: Gives the U.S. Army Corps of Engineers (USACE) jurisdiction over fill materials in essentially all water bodies, including wetlands. All federal agencies are to avoid impacts to wetlands whenever there is a practicable alternative. Section 404 established a permit program administered by USACE regulating the discharge of dredged or fill material into waters of the U.S. (including wetlands).

Section 401: Requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. must obtain a state certification that the discharge complies with other provisions of the CWA. The State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCBs) administer the certification program in California. The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

2.3.6 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act expands the enforcement authority of the SWRCB and is becoming more prominent on Projects involving impacts to isolated WSC (non-404/401 waters). The RWQCB regulates WSC impacts with a Construction General Permit, State General Waste Discharge Order, or Waste Discharge Requirements, depending on the characteristics of the waterway and the level of impact.

2.3.7 Executive Order 11990 – Protection of Wetlands

Established a national policy to avoid adverse impacts on wetlands whenever there is a

practicable alternative. The U.S. Department of Transportation (DOT) promulgated DOT Order 5660.1A in 1978 to comply with this direction. On federally funded projects, impacts on wetlands must be identified. Alternatives that avoid wetlands must be considered. If wetland impacts cannot be avoided, then all practicable measures to minimize harm must be included. This must be documented in a specific Wetlands Only Practicable Alternative Finding. Additional requirement is to provide early public involvement in projects affecting wetlands. The Federal Highway Administration (FHWA) provides technical assistance and reviews environmental documents for compliance.

2.3.8 Executive Order 13112 – Invasive Species

On February 3, 1999, Executive Order (EO) 13112 was signed requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." FHWA guidance issued August 10, 1999 directs the use of the state’s invasive species list, maintained by the Invasive Species Council of California, to define the invasive plants that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed Project.

Under the EO, federal agencies cannot authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless all reasonable measures to minimize risk of harm have been analyzed and considered.

2.3.9 California Environmental Quality Act

CEQA requires public agencies in California to analyze and disclose potential environmental impacts associated with a proposed discretionary Project that the agency will carry out, fund, or approve. Any significant impact must be mitigated to the extent feasible, below the threshold of significance.

2.3.10 California Fish and Game Code

2.3.10.1 Sections 1600-1616: Lake or Streambed Alteration Agreement

The CDFW regulates activities within watercourses, lakes, and in-stream reservoirs pursuant to Sections 1600-1616. Under Section 1602 of the California Fish and Game Code (CFGC)—often referred to as the Lake or Streambed Alteration Agreement (LSAA)—the CDFW regulates activities that would alter the flow or change or use any material from the bed, channel, or bank of any perennial, intermittent, or ephemeral river, stream, or lake. Each of these activities requires a Section 1602 permit. Section 1602 requires the CDFW to be notified of any activity that might affect lakes and streams. It also identifies the process through which an applicant can come to an agreement with the state regarding the protection of these resources, both during and following construction.

2.3.10.2 Sections 1900-1913: Native Plant Protection Act

The Native Plant Protection Act includes measures to preserve, protect, and enhance rare

and endangered native plants. The list of native plants afforded protection pursuant to the Native Plant Protection Act includes those listed as rare and endangered under the California ESA (CESA). The Native Plant Protection Act provides limitations that no person would import into the State—or take, possess, or sell within the State—any rare or endangered native plant, except in compliance with provisions of the Native Plant Protection Act. Where individual landowners have been notified by the CDFW that rare or native plants are growing on their land, the landowners are required to notify the CDFW at least 10 days in advance of changing land uses to allow the CDFW to salvage any rare or endangered native plant material.

2.3.10.3 Sections 2080-2081: California Endangered Species Act

The CDFW is responsible for administering the CESA. Section 2080 of the California Fish and Wildlife Code prohibits take of any species that the Fish and Wildlife Commission determines to be an endangered species or a threatened species. However, CESA does allow for take that is incidental to otherwise lawful development projects. Sections 2081(b) and (c) of CESA allow the CDFW to issue an incidental take permit for a state listed threatened and endangered species only if specific criteria are met (i.e., the effects of the authorized take are minimized and fully mitigated). The measures required to meet this obligation shall be roughly proportional in extent to the impact of the authorized taking on the species. Where various measures are available to meet this obligation, the measures required shall maintain the applicant's objectives to the greatest extent possible. All required measures shall be capable of successful implementation.

2.3.10.4 Sections 2800-2835: Natural Community Conservation Plant Act

The Natural Community Conservation Planning Act of 1991, as amended in 2003 (CFGC Sections 2800–2835) established the Natural Community Conservation Planning (NCCP) program for the protection and perpetuation of the State’s biological diversity. The CDFW established the program in order to conserve natural communities at the ecosystem level while accommodating compatible land use. An NCCP identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. The CDFW provides support, direction, and guidance to participants in order to ensure that NCCPs are consistent with the CESA.

2.3.10.5 Section 3500: Nesting Birds

CFGC Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by the CFGC or any regulation made pursuant thereto. CFGC Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA. These regulations could require that elements of a Project (specifically vegetation removal or construction near nest trees) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds will not be disturbed, which may be subject to approval by the CDFW and/or the USFWS.

2.3.10.6 Sections 3500, 4700, 5050, and 5500: Fully Protected Species, Species of Special Concern, and Non-Game Mammals

The classification of “fully protected” was the CDFW’s initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. CFGC sections (birds at 3503 and 3511, mammals at 4150 and 4700, amphibians and reptiles at 5050, and fish at 5515) dealing with “fully protected” species state that these species “may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species;” however, take may be authorized for necessary scientific research.

California Species of Special Concern are defined as animals not listed under the CESA or FESA. These species are of concern to CDFW because of rapid decline in populations that could result in listing or because they historically occurred in low numbers and known threats to their continued existence are present. This designation is intended to result in special consideration for these animals by CDFW, Project proponents, consultants, among others, and is also intended to encourage collection of additional information on these species and risks to their persistence. Although these species are afforded no special legal status, they are provided special consideration under the CEQA during Project review.

Sections 4150-4155 of the CFGC protects non-game mammals, including bats. Section 4150 states “A mammal occurring naturally in California that is not a game mammal, fully protected mammal, or furbearing mammal is a nongame mammal. Non-game mammals that may be taken or possessed are primarily those that cause crop or property damage. Bats are classified as a non-game mammal and are protected under the CFGC.

2.3.11 Alameda County Tree Protection Ordinance

The Alameda County Tree Ordinance requires that an encroachment permit (Site Specific Permit) be obtained to plant, prune or remove any tree or install any associated facilities (e.g., irrigation, root barriers, etc.) in a County right of way. Such right of ways generally include the (usually paved) vehicular traveled way including parking lanes, curb and gutter, planting strips, and sidewalks. The right of way may extend beyond the sidewalk in some areas and includes any land reserved for use by the County or any other public entity. A tree is defined as any woody perennial plant characterized by having a single trunk or multi-trunk structure at least ten feet high and having a major trunk that is at least two inches in diameter taken at breast height (DBH) taken at 4.5 feet from the ground. It shall also include those plants generally designated as trees and any trees that have been planted as replacement trees under the County Tree Ordinance or any trees planted by the County.

Any property owner and/or resident wishing to plant, transplant, move, separate, trim, prune, cut above or below the ground, disrupt, alter or do surgery upon any public tree located on county right of way must obtain a permit from the Alameda County Public Works Agency or his or her designee prior to beginning the proposed activity or work.

3 Environmental Setting

3.1 Description of the Existing Biological and Physical Conditions

3.1.1 Study Area

The BSA for the Project is defined as a 100-foot buffer surrounding the Project's footprint, or direct construction area. This includes potential temporary, permanent, direct, indirect, and cumulative effects from the Project. Direct Project impacts occur at the same time and place, while indirect impacts that are reasonably foreseeable but occur at a different time or place Cumulative impacts are incremental and a combination or interaction of past, present, and future impacts.

The BSA includes the direct construction area and the land adjacent to the Project, including access and staging areas. The BSA primarily consist of paved surfaces, ruderal vegetation, and disturbed barren ground. Temporary impacts are defined as impacts that will be restored to pre-project conditions within one year of the Project's completion. These temporary impacts include Project-related activities that do not result in permanent alteration or conversion of existing features. These temporary impacts include work occurring on gravel shoulders and/or impervious surfaces and staging activities occurring on shoulders and within medians. Permanent impacts are defined as impacts that result in the permanent alteration or conversion of an area/feature. These permanent impacts include conversion of a gravel shoulder to paved roadway or placement of a concrete barrier or sign post.

3.1.2 Physical Conditions

The BSA is located in San Francisco Bay Area in California. The elevation ranges from 13 to 144 feet above sea level. The topography is moderately flat with stretches of bends and curves along the roads. The climate in the vicinity of the BSA is consistent with the Mediterranean climate of the San Francisco Bay Area, which typically features hot, dry summers and relatively cool, wet winters.

The BSA is within a disturbed habitat on Urban land- Clear lake complex, Urban land-Tierra complex, Urban land-Danville complex, and Urban land (Soil Survey 2023; Figure 7). The BSA includes a waterway, Glen Echo Creek, that runs underground through a concrete culvert beneath I-580. This tributary, classified as an intermittent subsystem of a riverine system by the NWI (Figure 8), flows south towards Lake Merritt which connects into the San Francisco Bay.

3.1.3 Biological Conditions

The BSA is dominated by ruderal (weedy) vegetation. The Project is located along existing paved roadway and includes a small, vegetated section at the easternmost end of the BSA (Figures 1, 2, and 3; Appendix H). The areas adjacent to the interstate are mainly comprised of bare ground, ornamental trees, and non-native grasses and forbs.

The BSA is comprised of heavily human-influenced habitats associated with roadways and public infrastructure. Land use within the BSA includes a heavily trafficked interstate

maintained by Caltrans. Due to the presence of heavy vehicular traffic and regular maintenance, the BSA is consistently exposed to noise, light, dust, and vehicular emissions. Consequently, no quality native habitats occur within the BSA.

3.1.4 Habitat Connectivity

The BSA does not provide habitat connectivity as it lacks native habitat and is primarily composed of paved roadways and small areas of ruderal (weedy) vegetation.

3.2 Regional Species, Sensitive Habitats, and Natural Communities of Concern

Special-status plant and wildlife species have been given recognition by state and/or federal agencies due to a perceived or documented decline in the species' population size or geographic range. Certain vegetation types or habitats are considered to have special-status because they have limited distribution or the potential to support special-status plant and wildlife species. For the purposes of this document, Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC), Bird of Conservation Concern (BCC); State Endangered (SE); State Threatened (ST); Fully Protected (SFP); State Rare (SR); State Species of Special Concern (SSC); California Native Plant Society (CNPS) Rare Plant Ranks 1-3 were reviewed, due to their eligibility under state and/or federal endangered species acts. For each species, a site analysis was performed to determine species presence, potential and habitat suitability (Appendix C).

Results of the of the CNPS, CNDDB (Appendices B and C), IPaC (Appendix E), NMFS (Appendix F), and CalFish databases (Appendix G) indicate, 26 special-status plant species, 23 special-status wildlife species, and eight special-status fish species have potential to occur within three miles of the BSA or within the USGS 7.5-minute quadrangle of Oakland West and Oakland East and eight surrounding quadrangles. Of these, per review of CNDDB data (Appendix C), 20 special-status plant species and 23 special-status animal species have been recorded within three miles of the BSA.

4 Results: Biological Resources, Discussion of Impacts, and Mitigation

4.1 Habitats and Natural Communities of Special Concern

The BSA does not occur within any federally-designated (USFWS/NMFS) critical habitat or state-designated (CDFW) sensitive natural communities, or other special-status habitats (USFWS 2023a; NMFS 2023; CDFW 2023a).

4.1.1 Discussion of Natural Community "Northern Coastal Salt Marsh"

According to CNDDB, one sensitive natural community—northern coastal salt marsh—occurs within three miles of the BSA (Figure 5). Northern coastal salt marsh is a highly productive plant community dominated by herbaceous, suffrutescent (subshrubby), salt-tolerant hydrophytes (water plants), typically forming a dense mat of vegetation up to three feet in height. Common species found within this sensitive vegetation community are pickleweed (*Salicornia virginica*), California cordgrass (*Spartina foliosa*), alkali heath

(*Frankenia salina*), salt grass (*Distichlis spicata*), California dodder (*Cuscuta californica*), marsh jaumea (*Jaumea carnosa*), sea lavender (*Limonium californicum*), and marsh gumplant (*Grindelia stricta* var. *angustifolia*). However, this sensitive natural community does not occur within the BSA and will not be impacted by work associated with the Project. Therefore, no proposed avoidance and minimization measures are suggested.

4.1.1.2 Survey Results

Sequoia biologist, Aurelie Hening, conducted a biological survey of the BSA on January 26, 2022, and Sequoia senior biologist, Dan Muratore, conducted a biological survey of the BSA on October 4, 2022. Survey results indicated that no sensitive natural communities occur within the BSA.

4.1.1.3 Project Impacts

No sensitive natural communities were observed within the BSA during 2022 surveys. Northern coastal salt marsh sensitive natural community within 3 miles of the BSA will not be impacted by work associated with the Project.

The only vegetation community that may be directly affected within the Project footprint is ruderal. Vegetation classifications of plant communities were derived from the criteria and definitions of Holland (1986) and Sawyer et al. (2009). All plants observed within this community are non-native and well-adapted to disturbance, including wild oat (*Avena* spp.), ripgut brome (*Bromus diandrus*), bristly ox-tongue (*Helminthotheca echioides*), and scattered ornamental, landscape shrubs and trees.

The Project will potentially have a low impact on present ruderal vegetative communities with minimal vegetation removal and ground disturbance, but no impact to sensitive vegetation communities is anticipated from the Project. Therefore, no proposed avoidance and minimization measures are suggested.

4.2 Special-Status Plant Species

4.2.1 Discussion of Plant Species

Review of CNPS, CNDDB, and USFWS (Appendix B, D, and E) yielded 26 special-status plant species known to occur within Alameda County. USFWS IPaC (Appendix D) identified three federally endangered plant species—California seablite, Presidio clarkia (*Clarkia franciscana*), and robust spineflower, and two federally threatened plant species—Santa Cruz tarplant and pallid manzanita (*Arctostaphylos pallida*)—to have potential to occur within the vicinity of the BSA. Special-status plant species and their habitat requirements, regulatory status, and potential for occurrence within the BSA are described in Appendix B. Effects determination for all federally listed species are detailed in Appendix D. Of those 26 special-status plant species, 20 species have been known to occur within three miles of the BSA, according to CNDDB (Appendix B).

4.2.2 Survey Results

No special-status plants were detected within the BSA during the biological reconnaissance surveys on January 26, 2022 and October 4, 2022. The BSA has been

previously disturbed and is subject to regular disturbance from vehicular traffic and no suitable sensitive habitat occurs in the BSA. Survey results indicated a lack of suitable habitat and substrate for special-status plant species within the BSA; therefore, special-status plants are not expected to occur on site.

4.2.3 Project Impacts

According to the CNDDB, twenty special-status plant species occurred within three miles of the BSA. These species' habitat requirements include freshwater, brackish, or salt marshes, and valley and foothill grasslands, within clay and serpentine soils. These habitat types do not occur in the BSA. The BSA occurs within known soil types that are urban and consequently disturbed. Thus, special- status plant species that require these habitat and substrate types have no potential to occur in the BSA, and the Project is not anticipated to impact rare or special-status plant species. Therefore, no proposed avoidance and minimization measures are suggested.

4.3 Special-Status Animal Species

4.3.1 Discussion of Animal Species

A review of the CNDDB, USFWS, and NMFS species lists (Appendix D, E, and F) yielded 23 special-status wildlife species, including one crustacean species and two insect species known to occur within Alameda County. Special-status animal species and their habitat requirements, regulatory status, and potential for occurrence within the BSA are detailed within Appendix C. Effects determination for all federally listed species are detailed in Appendix D. Of these 23 special-status animal species, 13 are listed as state or federally threatened and/or endangered or candidate species and occur within a 3-mile radius of the BSA (Appendix C; Figure 6). 10 other species that are ranked as special-status species (CDFW Fully Protected or Species of Special Concern) are known to occur within a 3-mile radius of the BSA (Appendix C).

4.3.2 Survey Results

No special-status animals were detected within the BSA during the biological reconnaissance surveys on January 26, 2022, and October 4, 2022. The BSA is subject to high levels of disturbance due to vehicular traffic. Survey results indicated a lack of suitable habitat for special-status animal species within the BSA; therefore, special-status animals are not expected to occur on site.

4.3.3 Project Impacts

According to the CNDDB, twenty-three special-status plant species occurred within three miles of the BSA. These species' habitat requirements include marsh habitat and aquatic features. These habitat types do not occur in the BSA. Thus, special- status animal species that require these habitat and substrate types have no potential to occur in the BSA, and the Project is not anticipated to impact rare or special-status animal species. Therefore, no proposed avoidance and minimization measures are suggested.

4.4 Special-Status Fish Species

4.4.1 Discussion of Fish Species

A review of the CNDDB, USFWS, NMFS, and CalFish species lists (Appendix C, E, F, and G, respectively) yielded eight special-status fish species known to occur in Alameda County. Five of these species are anadromous and have little to no potential to occur in the vicinity of the BSA, including state and federally endangered Chinook salmon – Sacramento River winter-run evolutionarily significant unit (ESU) (*Oncorhynchus tshawytscha*), and state and federally threatened Central Valley spring-run ESU (O. tshawytscha), federally threatened steelhead – Central California Coast distinct population segment (DPS) (*O. mykiss*), steelhead – Central Valley DPS (*O. mykiss*), and federally threatened green sturgeon – southern DPS (*Acipenser medirostis*). The other three non-anadromous fish species include the state threatened longfin smelt (*Spirinchus thaleichthys*), federally endangered tidewater goby (*Eucyclogobius newberryi*), and federally threatened and state endangered Delta smelt (*Hypomesus transpacificus*). The habitat requirements, regulatory status, and potential for occurrence of each special-status species within the BSA are detailed within Appendix C. Effects determinations for all federally listed wildlife species are detailed in Appendix D.

Two fish species—longfin smelt and tidewater goby—have been documented to occur within three miles of the BSA. CNDDB occurrences of these two species were documented in the San Francisco Bay, within Lake Merritt in Oakland and Aquatic Park in Berkely, respectively. The waterway within the BSA, Glen Echo Creek, a tributary to Lake Merritt runs in a concrete culvert underground. Glen Echo Creek crosses underneath the BSA on the eastern end along Richmond Boulevard. This tributary has not been assessed for fish passage (CDFW 2023c); and has a low potential for occurrence of special-status fish species.

4.4.2 Survey Results

No special-status fish were detected within the BSA during the biological reconnaissance surveys on January 26, 2022 and October 4, 2022. No special-status fish species were observed during the surveys. Survey results indicated a lack of suitable habitat, no special-status fish species are expected to occur within on site.

4.4.3 Project Impacts

No special-status fish species or suitable habitat was observed within the BSA during 2022 surveys. The aquatic feature present in the BSA lack a suitable hydroperiod to support listed fish species. Therefore, no proposed avoidance and minimization measures are suggested.

4.5 Waterways and Aquatic Features

4.5.1 Discussion of Waterways and Aquatic Features

The BSA includes a waterway, Glen Echo Creek, that runs underground through a concrete culvert beneath I-580. This tributary, classified as an intermittent subsystem of a riverine system by the NWI (Figure 8), flows south towards Lake Merritt which connects

into the San Francisco Bay.

4.5.2 Survey Results

Biological reconnaissance surveys were conducted on January 26, 2022 and October 4, 2022. Glen Echo Creek, a tributary to Lake Merritt runs in a concrete culvert underground through the BSA was not observed during these surveys.

4.5.3 Project Impacts

A seasonal tributary, Glen Echo Creek, occurs within the BSA; however, this feature occurs within a concrete culvert beneath the BSA. There are no anticipated direct or indirect impacts to this waterway as a result of Project-related activities with the full implementation of AMMs and PFs, as detailed in Section 1.3. Thus, resource agency permitting for impacts to waterways or aquatic features is not an anticipated requirement for the Project.

5 Conclusions and Regulatory Determination

5.1 Federal Endangered Species Act Consultation Summary

A total of twenty-one federally listed species were analyzed for effects determinations for the Project following a desktop review of the USFWS, NMFS, and CalFish species lists. None of these species are expected to occur within the BSA, as it lacks the physical and biological features needed to support these plant and animal species. Thus, it is determined that no effect to federally listed species or their habitat will occur as a result of Project-related activities.

5.2 Magnuson-Stevens Fishery Conservation and Management Act Consultation Summary

Since there are no surface water features within the BSA, and the culverted waterway—Glen Echo Creek—beneath the BSA will not be impacted, the Project will not affect EFH.

5.3 Wetlands and Other Waters Consultation Summary

Since there are no surface water features within the BSA, and the culverted waterway—Glen Echo Creek—beneath the BSA will not be impacted, the Project will not affect jurisdictional waters of the State/United States. Implementation of the above construction measures is expected to further prevent impacts to sensitive resources as a result of the Project. Changes to the scope of this Project may trigger the need for additional field reviews, analysis, and permits.

There are no anticipated impacts to aquatic resources related to the Project with full implementation of AMMs/PFs. Accordingly, acquisition of regulatory agency authorizations pursuant to CWA Sections 401/404 or CFGC Section 1600 is not required.

5.4 Invasive Species

The Project has limited potential to spread invasive plant species as it occurs along

impervious surfaces and gravel shoulders associated with I-580. Implementation of avoidance and minimization efforts described in Chapter 1 above would reduce the introduction and spread of invasive plant species to or from the Project area. Therefore, the Project is not expected to result in an increase of invasive plant species within and/or adjacent to Project boundaries.

5.5 California Endangered Species Act Consultation Summary

A total of twenty-four state listed species were analyzed for effects determinations for the Project following a desktop review of the USFWS, NMFS, and CalFish species lists. None of these species are expected to occur within the BSA, as it lacks the physical and biological features needed to support these plant and animal species. Thus, it is determined that no effect to state listed species will occur as a result of Project-related activities.

5.6 Other Protected or Managed Biological Resources

5.6.1 Nesting Birds

Habitat that supports nesting for birds protected under the MBTA and CFGC occurs throughout the BSA. Avoidance and minimization efforts described in Chapter 1 above will be implemented to avoid impacts to nesting birds.

5.6.2 Trees

The Project will avoid damage to and/or removal of trees; therefore, it is determined that no effect to trees will occur as a result of Project-related activities.

6 References

California Department of Fish and Wildlife (CDFW). 2023a. California Natural Diversity Database (RareFind 5, Version 5.2.14). Electronic database. Sacramento, CA.

_____2023b. California Interagency Wildlife Task Group. CWHR version 9.0 personal computer program. Sacramento, CA.

_____2023c. Passage Assessment Database (PAD), September 2023 Version.

CalFish (California Fish Website), University of California, Davis – Agriculture and Natural Resources. 2020. Fish Species by Location. Website: http://calfish.ucdavis.edu/location/. Accessed September 2023.

California Native Plant Society (CNPS). 2023. Online Inventory of Rare and Endangered Plants of California (online edition, version 7). Website: http://www.cnps.web.aplus.net/cgi-bin/inv/inventory.cgi. Accessed September 2023.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Game. Unpublished report.

National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS). 2023. Official ESA lists of endangered and threatened species and critical habitat in proposed location. Accessed September 2023.

Sawyer, J. and T. Keeler-Wolf and J.M Evens. 2009. A Manual of California Vegetation (Second Edition). California Native Plant Society, Sacramento.

Natural Resource Conservation Service (NRCS). 2023. Web Soil Survey. Website: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed September 2023.

U.S. Fish & Wildlife Service (USFWS). 2023a. Information for Planning and Consultation. List of threatened and endangered species that may occur in your proposed Project location, and/or may be affected by your proposed Project. Sacramento, CA, Sacramento Fish and Wildlife Office. Website: https://ecos.fws.gov/ipac. Accessed September 2023.

_____2023b. Critical Habitat Portal. Website: http://ecos.fws.gov/crithab. Accessed September 2023.

_____2023c. National Wetlands Inventory. Website: https://www.fws.gov/wetlands/. Accessed September 2023.

7 Appendices

APPENDIX A. Figures

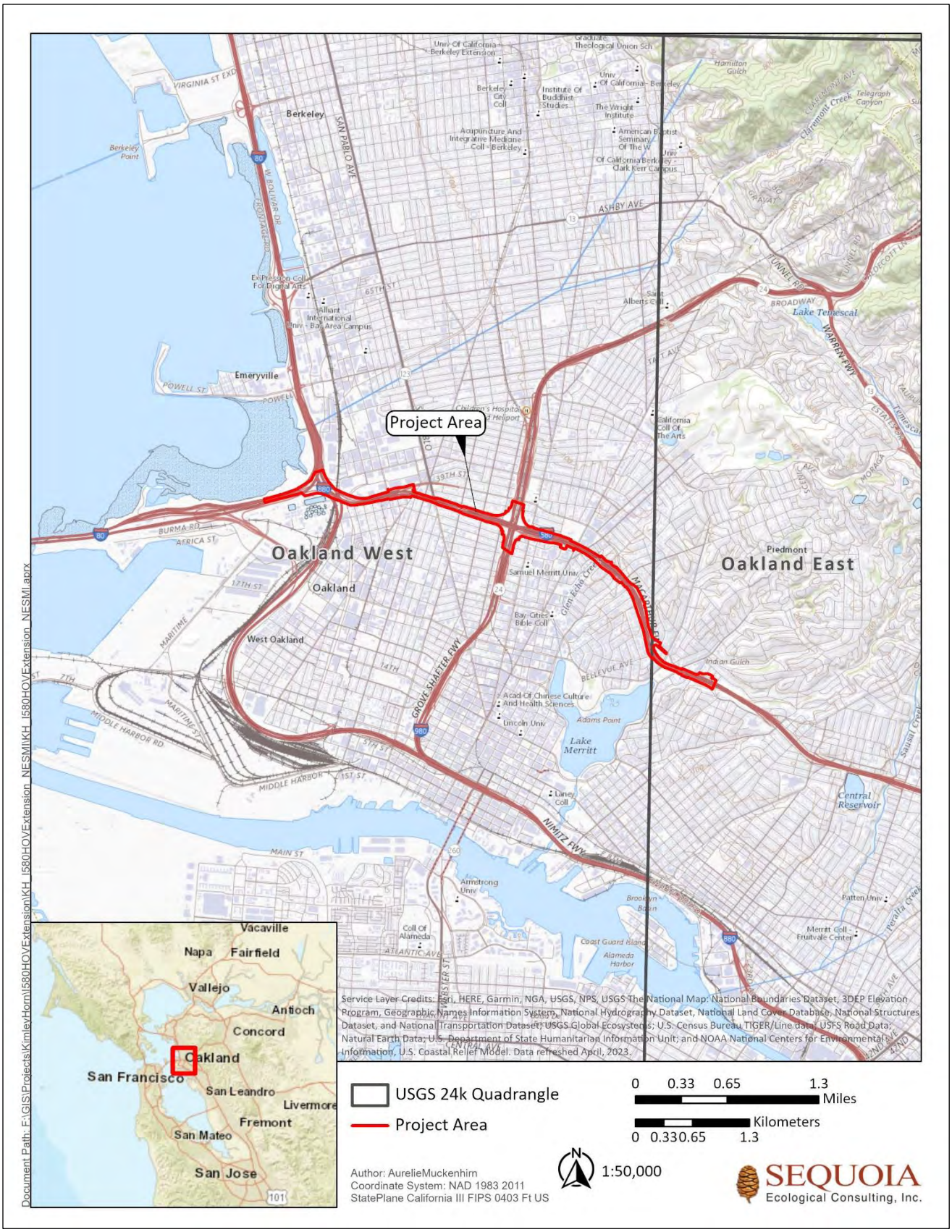


Figure 1. Regional Map of the BBF I-580 WB HOV Lane Extension Project

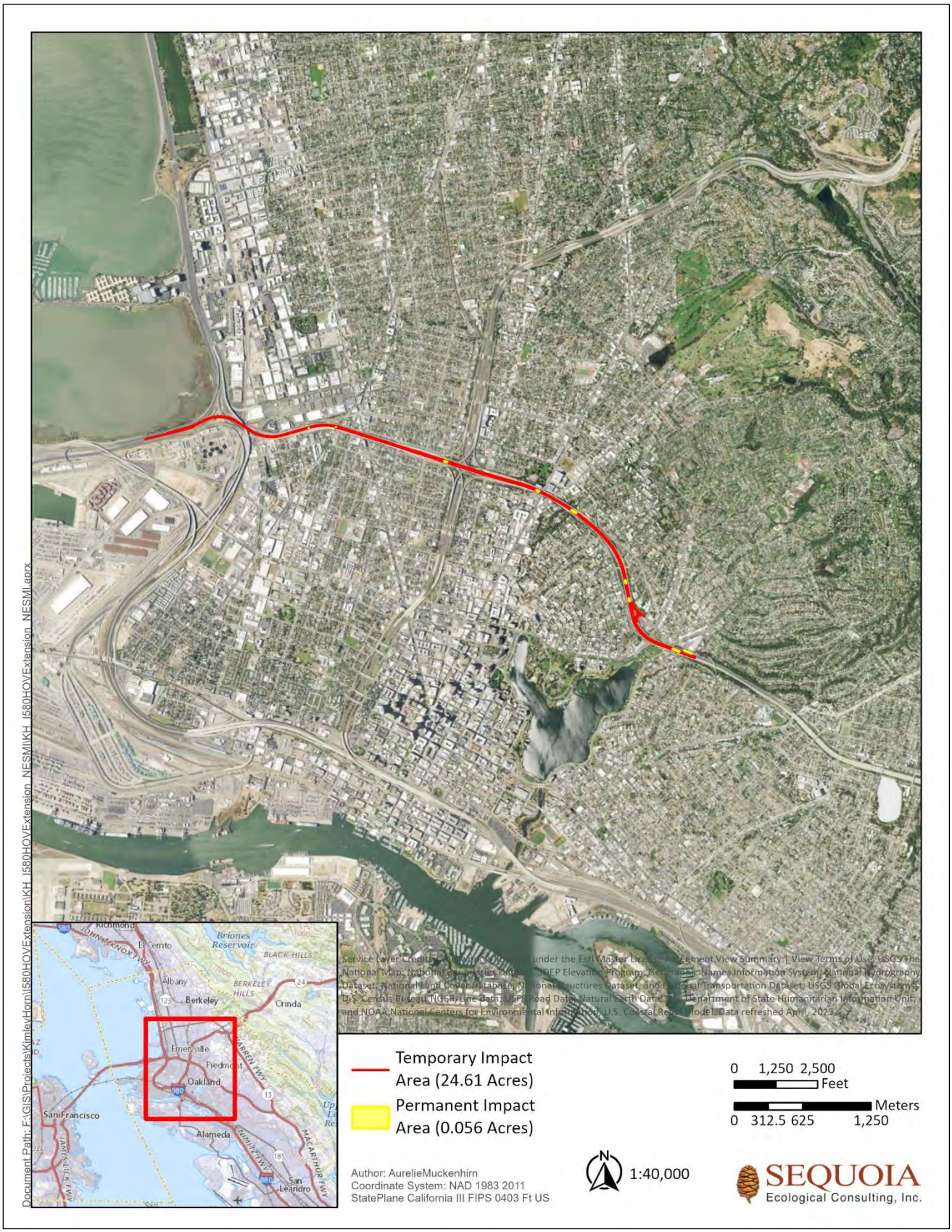


Figure 2. Vicinity Map of the BBF I-580 WB HOV Lane Extension Project

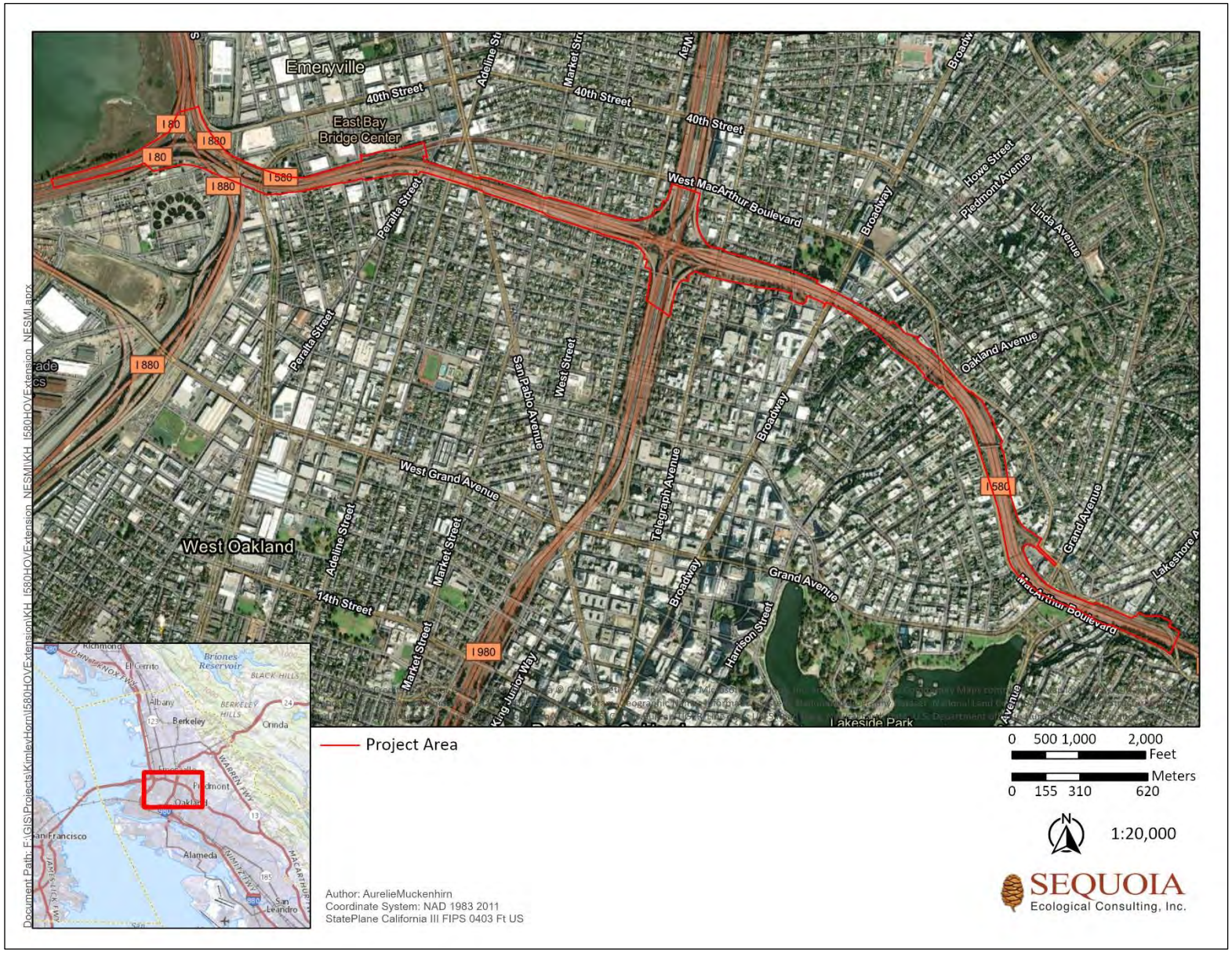


Figure 3. Aerial View of the BBF I-580 WB HOV Lane Extension Project Site

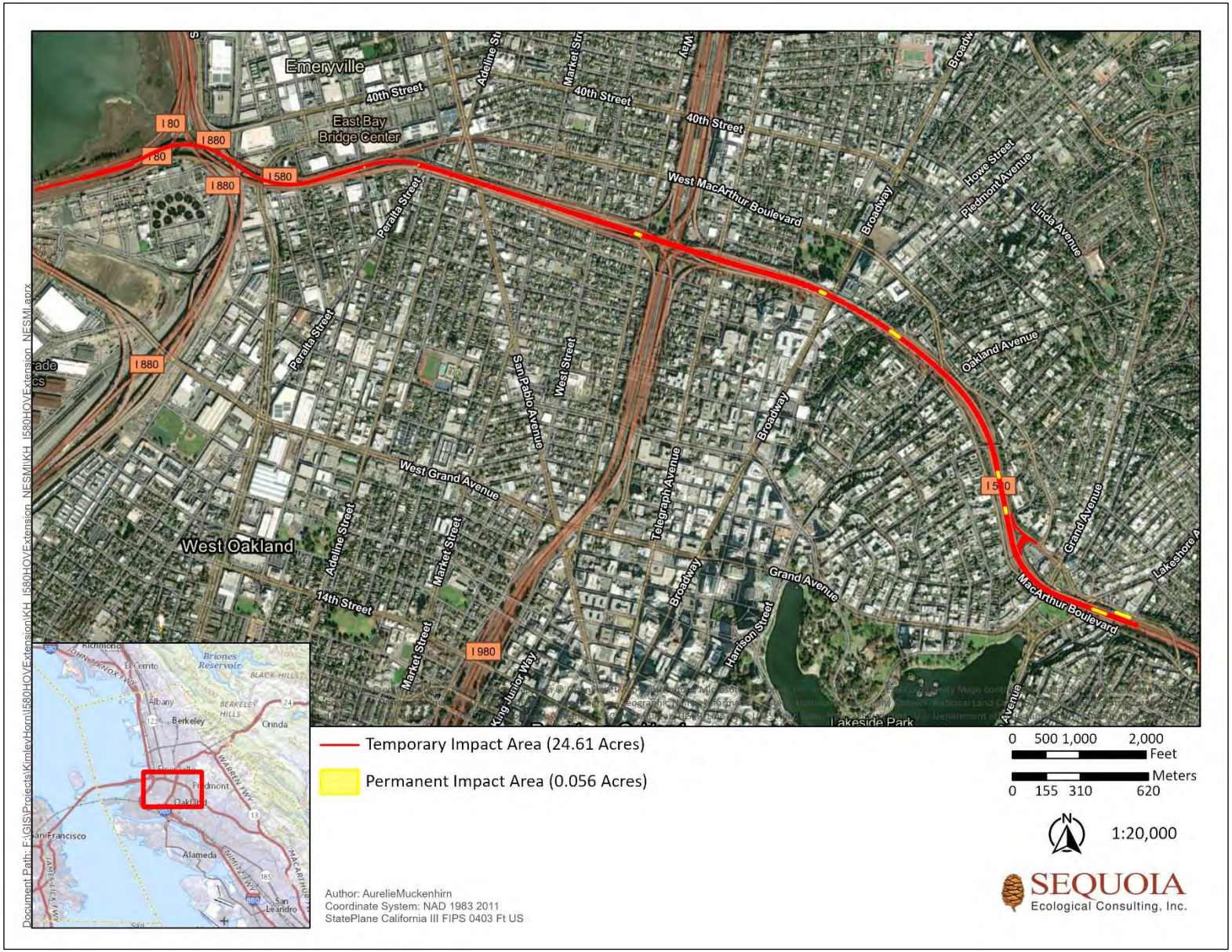


Figure 4. Temporary and Permanent Impact Areas for the BBF I-580 WB HOV Lane Extension Project

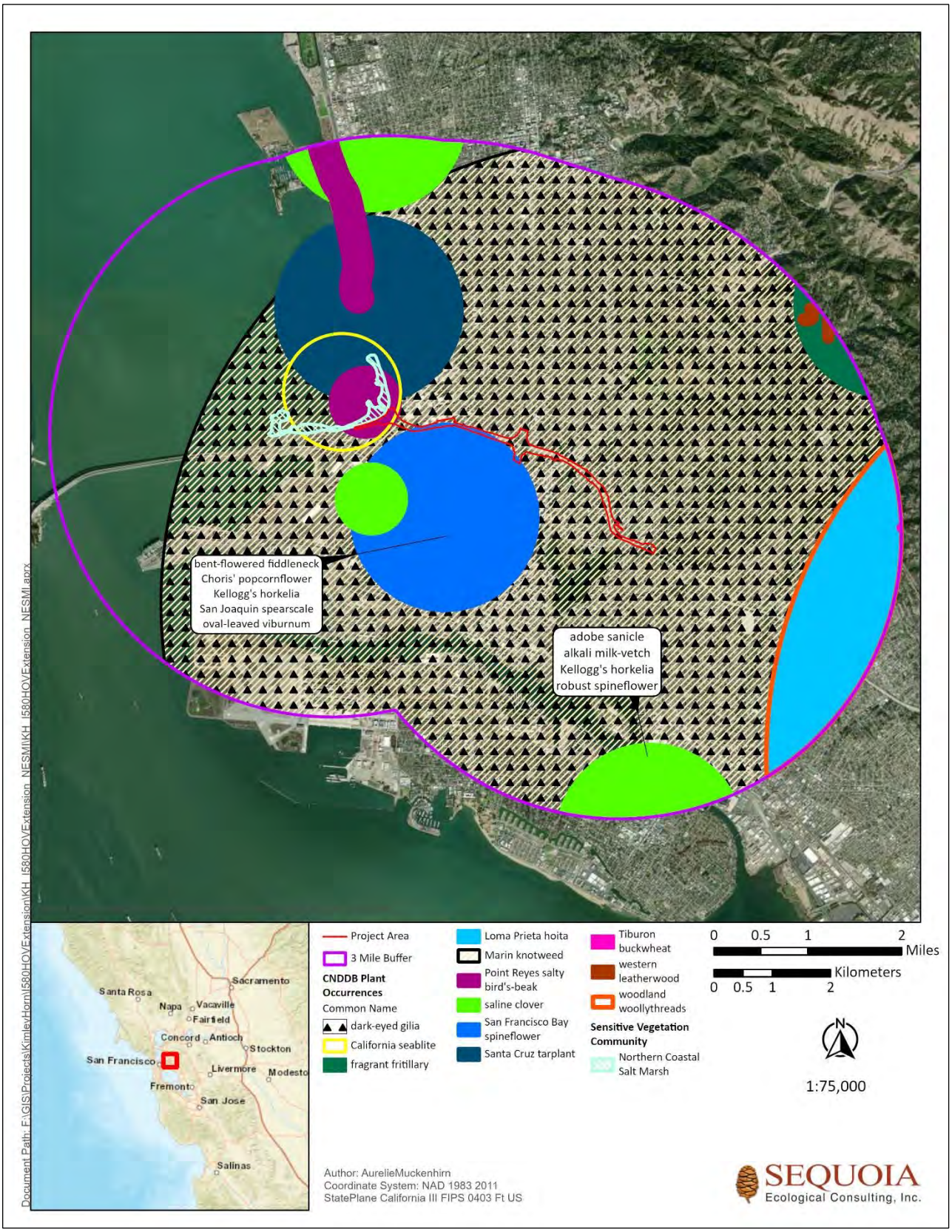


Figure 5. CNDDB Plant Occurrences Within three miles of the Project Site, Note That Overlapping Plant Occurrences Have Been Annotated on the Map

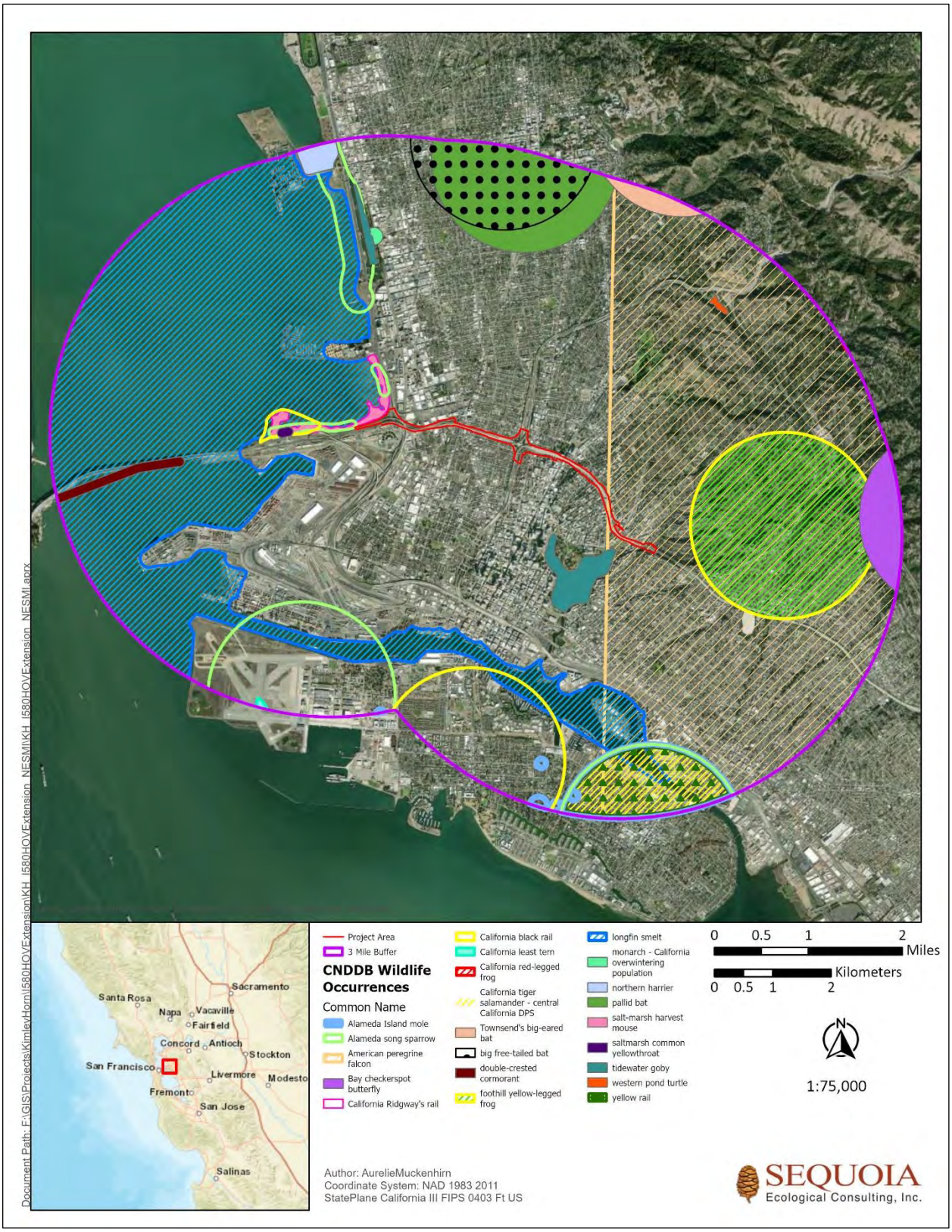


Figure 6. CNDDB Animal Occurrences Within three miles of the Project Site

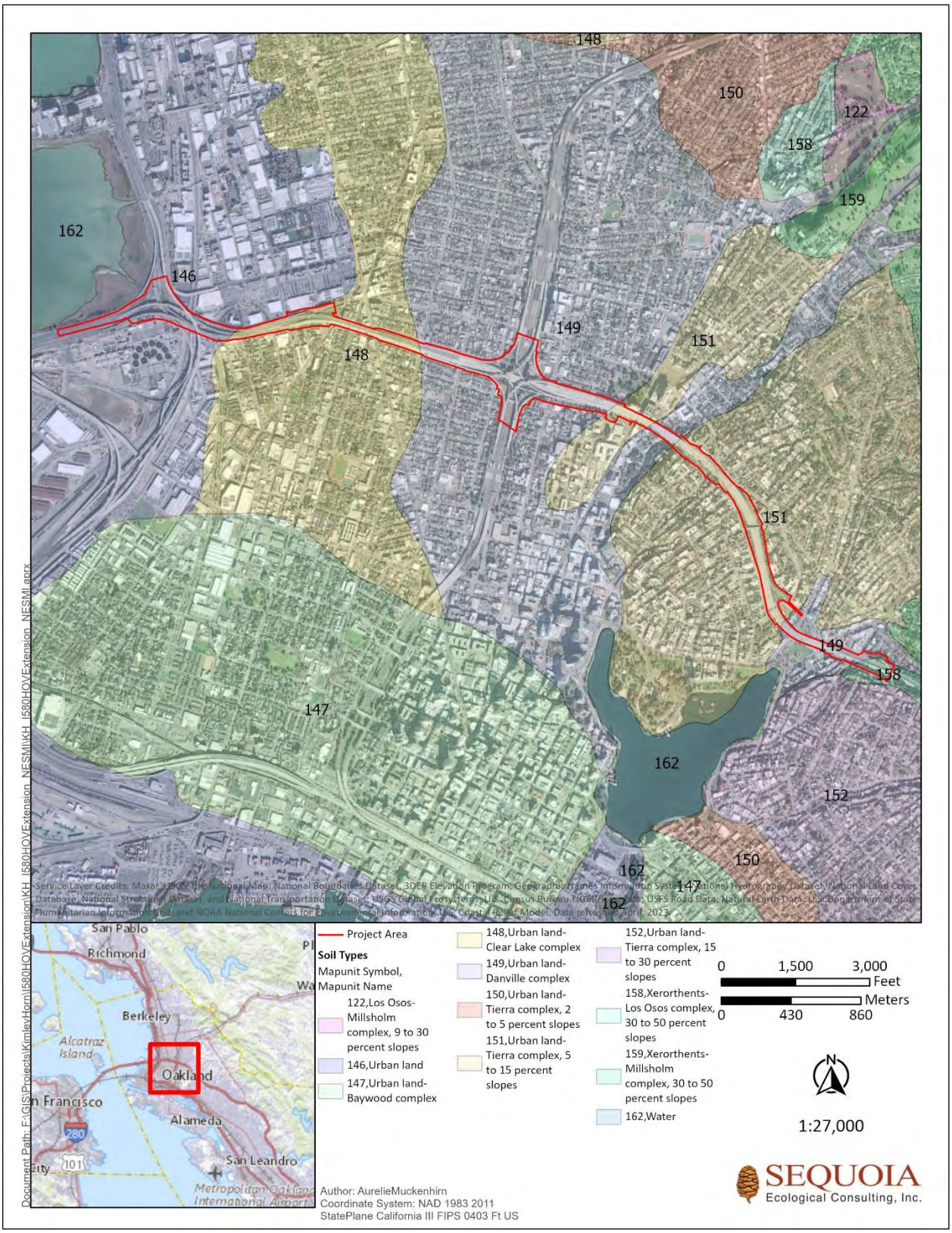


Figure 7. Soil Types Found Within and in the Vicinity of the Project Site

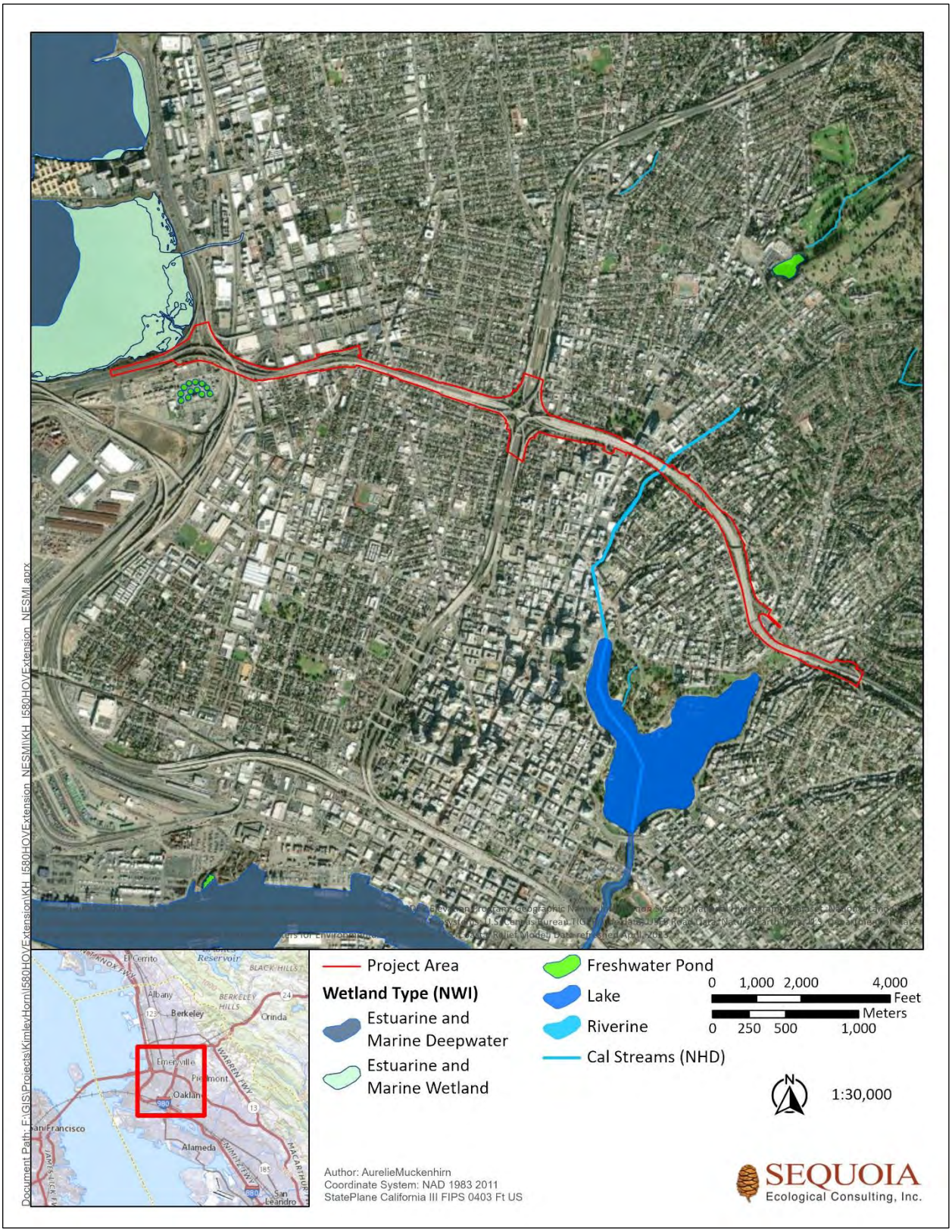


Figure 8. USFWS NWI Wetland and Aquatic Resources in the Vicinity of the Project Site

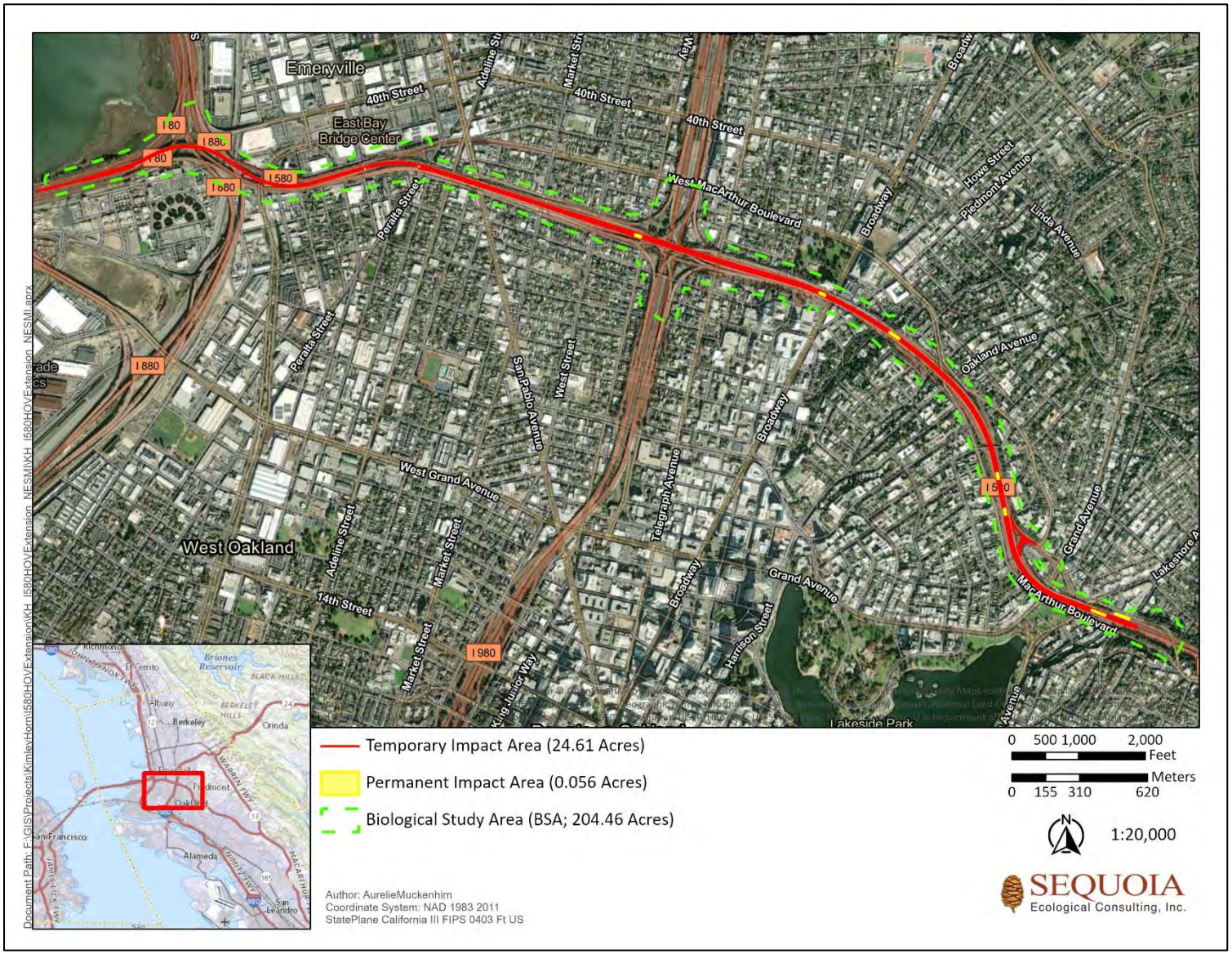


Figure 9. Biological Study Area (BSA) and Temporary and Permanent Impact Areas for the BBF I-580 WB HOV Lane Extension Project

APPENDIX B: Table – Special-Status Plant Species Potential for Occurrence Within the BSA

Scientific Name	Common Name	CRPR	CESA	FESA	Blooms	Habitat	Elevation Range (ft)	Habitat Present/Absent	Potential to Occur
Amsinckia lunaris	bent-flowered fiddleneck	1B.2	None	None	Mar-Jun	Coastal bluff scrub, cismontane woodland, valley and foothill grassland	5-1,640	A	**No potential to occur.**
Arctostaphylos pallida	pallid manzanita	1B.1	CE	FT	Dec-Mar	Broadleafed upland forest, chaparral, cismontane woodland, closed-cone coniferous forest, and coastal scrub	605-1,525	A	**No potential to occur.**
Astragalus tener var. *tener*	alkali milk-vetch	1B.2			Mar-Jun	Playas, valley and foothill grassland, and vernal pools	5-195	A	**No potential to occur.**
Calochortus pulchellus	Mt. Diablo fairy lantern	1B.2			Apr-Jun	Chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland	100-2,755	A	**No potential to occur.**
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	1B.1			May-Oct (Nov)	Valley and foothill grassland	0-755	A	**No potential to occur.**
Chloropyron maritimum ssp. *palustre*	Point Reyes salty bird's-beak	1B.2			Jun-Oct	Marshes and swamps	0-35	A	**No potential to occur.**
Clarkia franciscana	Presidio clarkia	1B.1	CE	FE	May-Jul	Coastal scrub and valley and foothill grassland	80-1,100	A	**No potential to occur.**
Chorizanthe cuspidata var. *cuspidata*	San Francisco	1B.2	None	None	Apr-Jul(Aug)	Coastal bluff scrub, coastal dunes,	5-705	A	**No potential to occur.**

Scientific Name	Common Name	CRPR	CESA	FESA	Blooms	Habitat	Elevation Range (ft)	Habitat Present/Absent	Potential to Occur
	Bay spineflower					coastal prairie, and coastal scrub			
Chorizanthe cuspidata var. *villosa*	woolly-headed spineflower	1B.2	None	None	May-Jul(Aug)	Coastal dunes, coastal prairie, and coastal scrub	5-195	A	**No potential to occur.**
Chorizanthe robusta var. *robusta*	robust spineflower	1B.1		FE	Apr-Sep	Chaparral, cismontane woodland, coastal dunes, and coastal scrub	10-985	A	**No potential to occur.**
Dirca occidentalis	western leatherwood	1B.2	None	None	Jan-Mar (Apr)	Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, and riparian woodland	80-1,395	A	**No potential to occur.**
Eriogonum luteolum var. *caninum*	Tiburon buckwheat	1B.2			May-Sep	Chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland	0-2,295	A	**No potential to occur.**
Eryngium jepsonii	Jepson's coyote-thistle	1B.2			Apr-Aug	Valley and foothill grassland, and vernal pools	10-985	A	**No potential to occur.**
Extriplex joaquinana	San Joaquin spearscale	1B.2			Apr-Oct	Chenopod scrub, meadows and seeps, playas, and valley	5-2,740	A	**No potential to occur.**

Scientific Name	Common Name	CRPR	CESA	FESA	Blooms	Habitat	Elevation Range (ft)	Habitat Present/Absent	Potential to Occur
						and foothill grassland			
Fissidens pauperculus	minute pocket moss	1B.2				North Coast coniferous forest	35-3,360	A	**No potential to occur.**
Fritillaria liliacea	fragrant fritillary	1B.2	None	None	Feb-Apr	Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland	5-1,345	A	**No potential to occur.**
Gilia millefoliata	dark-eyed gilia	1B.2			Apr-Jul	Coastal dunes	5-100	A	**No potential to occur.**
Helianthella castanea	Diablo helianthella	1B.2			Mar-Jun	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland	195-4,265	A	**No potential to occur.**
Hoita strobilina	Loma Prieta hoita	1B.1			May-Jul (Aug-Oct)	Chaparral, cismontane woodland, and riparian woodland	100-2,820	A	**No potential to occur.**
Holocarpha macradenia	Santa Cruz tarplant	1B.1	CE	FT	Jun-Oct	Coastal prairie, coastal scrub, and valley and foothill grassland	35-720	A	**No potential to occur.**
Horkelia cuneata var. *sericea*	Kellogg's horkelia	1B.1			Apr-Sep	Chaparral, closed-cone coniferous	35-655	A	**No potential to occur.**

Scientific Name	Common Name	CRPR	CESA	FESA	Blooms	Habitat	Elevation Range (ft)	Habitat Present/Absent	Potential to Occur
						forest, coastal dunes, and coastal scrub			
Lasthenia conjugens	Contra Costa goldfields	1B.1		FE	Mar-Jun	Cismontane woodland, playas, valley and foothill grassland, and vernal pools	0-1,540	A	**No potential to occur.**
Lessingia hololeuca	woolly-headed lessingia	3			Jun-Oct	Broadleafed upland forest, coastal scrub, lower montane coniferous forest, and valley and foothill grassland	50-1,000	A	**No potential to occur.**
Monolopia gracilens	Woodland woollythreads	1B.2			(Feb) Mar-Jul	Broadleafed upland forest, chaparral, cismontane woodland, north coast coniferous forest, and valley and foothill grassland	330-3,935	A	**No potential to occur.**
Plagiobothrys chorisianus var. *chorisianus*	Choris' popcornflower	1B.2			Mar-Jun	Chaparral, coastal prairie, and coastal scrub	10-525	A	**No potential to occur.**
Plagiobothrys diffusus	San Francisco popcornflower	1B.1	CE		Mar-Jun	Coastal prairie and valley and foothill grassland	195-1,180	A	**No potential to occur.**
Plagiobothrys glaber	hairless popcornflower	1A			Mar-May	Marshes and swamps, and meadows and seeps	50-590	A	**No potential to occur.**
Polemonium carneum	Oregon polemonium	2B.2			Apr-Sep	Coastal prairie, coastal scrub, and	0-6,005	A	**No potential to occur.**

Scientific Name	Common Name	CRPR	CESA	FESA	Blooms	Habitat	Elevation Range (ft)	Habitat Present/Absent	Potential to Occur
						lower montane coniferous forest			
Polygonum marinense	Marin knotweed	3.1			(Apr) May-Aug (Oct)	Marshes and swamps	0-35	A	**No potential to occur.**
Sanicula maritima	adobe sanicle	1B.1	CR		Feb-May	Chaparral, coastal prairie, meadows and seeps, and valley and foothill grassland	100-785	A	**No potential to occur.**
Senecio aphanactis	chaparral ragwort	2B.2			Jan-Apr (May)	Chaparral, cismontane woodland, and coastal scrub	50-2,625	A	**No potential to occur.**
Spergularia macrotheca var. *longistyla*	long-styled sand-spurrey	1B.2			Feb-May	Marshes and swamps, and meadows and seeps	0-835	A	**No potential to occur.**
Streptanthus albidus ssp. *peramoenus*	most beautiful jewelflower	1B.2			(Mar)Apr-Sep (Oct)	Chaparral, cismontane woodland, and valley and foothill grassland	310-3,280	A	**No potential to occur.**
Stuckenia filiformis ssp. *alpina*	Northern slender pondweed	2B.2			May-Jul	Marshes and swamps	985-7,055	A	**No potential to occur.**
Suaeda californica	California seablite	1B.1		FE	Jul-Oct	Marshes and swamps	0-50	A	**No potential to occur.**
Trifolium hydrophilum	saline clover	1B.2	None	None	Apr-Jun	Marshes and swamps, valley and foothill grassland (mesic,	0-985	A	**No potential to occur.**

Scientific Name	Common Name	CRPR	CESA	FESA	Blooms	Habitat	Elevation Range (ft)	Habitat Present/Absent	Potential to Occur
						alkaline), and vernal pools			
Viburnum ellipticum	oval-leaved viburnum	2B.3	None	None	May-Jun	Chaparral, cismontane woodland, and lower montane coniferous forest	705-4,595	A	**No potential to occur.**

KEY

Habitat Present/Absent: Absent [A] - no habitat present and no further work needed. Habitat Present [HP] - habitat is or may be present. The species may be present. Present [P] - the species is present. Critical Habitat [CH] - project footprint is located within a designated critical habitat unit but does not necessarily mean that appropriate habitat is present.

Listed Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC); State Endangered (SE); State Threatened (ST); Fully Protected (SFP); State Rare (SR); State Species of Special Concern (SSC); California Native Plant Society (CNPS)

APPENDIX C: Table – Special-Status Animal Species Potential for Occurrence within the BSA

Scientific Name	Common Name	Listed Status	Habitat Description	Habitat Present/ Absent	Potential to Occur
Mammals					
Reithrodontomys raviventris	salt-marsh harvest mouse	FE, SE	Endemic to the San Francisco Bay-Delta salt marshes dominated by pickleweed (*Salicornia sp.*). Occurs in San Francisco Bay marsh.	A	**No potential to occur.**
Scapanus latimanus parvus	Alameda Island mole	SSC	Endemic to Alameda Island. Inhabits moist, friable soils.	A	**No potential to occur.**
Corynorhinus townsendii	Townsend's big-eared bat	SSC	Roosts in caves, mines, bridges, building, rock crevices, and tree hollows in coastal lowlands below 11,000 feet.	A	**No potential to occur**.
Antrozous pallidus	pallid bat	SSC	Occupies variety of habitats, including grasslands, shrublands, woodlands, and forests from sea level up to mixed conifer forests. Most common in open, dry habitats with rocky areas for roosting.	A	**No potential to occur**.
Nyctinomops macrotis	big free-tailed bat	SSC	Roosts mainly in crevices and cliff rocks, and infrequently roosts in buildings, caves, and tree cavities.	A	**No potential to occur**.
Amphibians/Reptiles					
Ambystoma californiense	California tiger salamander (Sonoma County DPS)	FT, ST	This California endemic species is found in grasslands, oak savanna, and mixed woodland where there are suitable seasonal ponds for breeding and burrows for cover during the dry season.	A	**No potential to occur.**
Rana draytonii	California red-legged frog	FT, SSC	Occurs in lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development.	A	**No potential to occur**.

Scientific Name	Common Name	Listed Status	Habitat Description	Habitat Present/ Absent	Potential to Occur
Rana boylii	foothill yellow-legged frog	SE	Inhabits small to moderately sized, perennial streams characterized by cobble-rocky substrate and shallow, flowing water in valley-foothill riparian, conifer forest, coastal scrub, mixed chaparral, and wet meadow communities.	A	**No potential to occur**.
Emys marmorata	western pond turtle	SSC	Inhabits permanent and intermittent waters of rivers, creeks, small lakes and ponds, marshes, irrigation ditches and reservoirs with logs, branches, boulders, or accessible banks for basking.	A	**No potential to occur.**
Masticophis lateralis euryxanthus	Alameda whipsnake	FT, ST	Limited range, mostly in Alameda and Contra Costa counties, utilizing chaparral, scrub, and rocky outcrops as core habitat. Also uses surrounding woodlands and grassland for foraging and dispersal.	A	**No potential to occur.**
Chelonia mydas	green sea turtle	FT	Common in tropical and subtropical waters as well as coastal beaches. Forages in coastal areas with plentiful algae and sea grass.	A	**No potential to occur.**
Fish					
Oncorhynchus tshawytscha	Chinook salmon (California coastal ESU)	FT	Holds in deep pools, usually with bedrock bottoms and moderate velocities. Spawn in gravel and small cobbles with a low silt content. Parr move in shallow stream margins with dense cover and low water velocity.	A	**No potential to occur**.
Oncorhynchus mykiss	steelhead (Central California coastal DPS)	FT	Prefers streams and lakes with cold water temperatures and	A	**No potential to occur**.

Scientific Name	Common Name	Listed Status	Habitat Description	Habitat Present/ Absent	Potential to Occur
			gravel substrates suitable for spawning.		
Acipenser medirostris	green sturgeon (sDPS)	FT	Spawns in cool sections of the upper Sacrament River. In the fall, migrates to the ocean. Larvae and juveniles rear in the Delta for several years before migrating to the ocean.	A	**No potential to occur**.
Eucyclogobius newberryi	Tidewater goby	FE	Inhabits fresh-saltwater interface where salinity is less than 10 to 12 parts per thousand.	A	**No potential to occur**.
Spirinchus thaleichthys	longfin smelt	FC, ST	Adults found in bays, estuaries, and nearshore coastal areas, and migrate into freshwater reaches of coastal rivers and tributary streams to spawn.	A	**No potential to occur**.
Oncorhynchus kisutch	coho salmon (Central California coastal ESU)	FT	Occurs in small coastal streams and larger rivers. Spawns in low gradient reaches of tributary streams with gravel substrate.	A	**No potential to occur**.
Hypomesus transpacificus	delta smelt	FT	Endemic to the San Francisco Bay, primarily occurs in brackish areas where rivers and the bay mix, but also travels to freshwater for reproduction.	A	**No potential to occur**.
Birds					
Rallus obsoletus obsoletus	California Ridgway's rail	FE, SE	Occurs in tidal salt and brackish marshes typically dominated by pickleweed (*Salicornia* sp.) and cordgrass (*Spartina* sp.).	A	**No potential to occur.**
Charadrius nivosus nivosus	western snowy plover	FT, SSC, BCC	Breeds on coastal beaches on sand spits, dune-backed beaches, unvegetated strands, open area around estuaries and beaches at river mouths.	A	**No potential to occur.**
Sternula antillarum browni	California least tern	FE, SE,	Breeds on beaches or in coastal	A	**No potential to**

Scientific Name	Common Name	Listed Status	Habitat Description	Habitat Present/ Absent	Potential to Occur
		FP	wetlands near estuaries, bays, harbors or the ocean.		**occur.**
Falco peregrinus anatum	American peregrine falcon	FP, BCC	Inhabits cliffs, rocky outcroppings, or tall, man-made structures surrounded by open shrubland, grassland, or chaparral.	A	**No potential to occur.**
Circus hudsonius	northern harrier	SSC	Occurs in variety of habitats, though typically found nesting and foraging in grassland or marsh habitats.	A	**No potential to occur.**
Coturnicops noveboracensis	yellow rail	SSC, BCC	Occurs in shallow marshes with fairly short vegetation.	A	**No potential to occur.**
Geothlypis trichas sinuosa	saltmarsh common yellowthroat	SSC, BCC	Occurs in the tidal marsh system of San Francisco Bay.	A	**No potential to occur.**
Laterallus jamaicensis coturniculus	California black rail	ST, BCC	Occurs in saltwater, brackish, and freshwater marshes with vegetation varying from pickleweed (*Salicornia* sp.) to sedges (*Carex* sp.) and saltgrass (*Distichlis* sp.) to low-growing bulrush (*Scirpus* sp.) and cattails (*Typha* sp.).	A	**No potential to occur.**
Melospiza melodia pusillula	Alameda song sparrow	SSC, BCC	Typically associated with tidal channels of salt and brackish marshes where pickleweed (*Salicornia* sp.) and gumplant (*Grindelia* sp.) are dominant. Occurs in the tidal marsh system of San Francisco Bay.	A	**No potential to occur.**
Reptiles					
Masticophis lateralis euryxanthus	Alameda whipsnake	FT	Occurs in open areas in canyons, rocky hillsides, chaparral, open woodlands, pond edges and stream courses and are restricted to the eastern counties of the San Francisco Bay area. It inhabits the	A	**No potential to occur.**

Scientific Name	Common Name	Listed Status	Habitat Description	Habitat Present/ Absent	Potential to Occur
			inner Coast Ranges in western and central Contra Costa and Alameda counties.		
Chelonia mydas	green sea turtle	FT	Inhabits subtropical and temperate oceans; usually stays near coastlines with seagrass beds.	A	**No potential to occur.**
Invertebrates					
Euphydryas editha bayensis	Bay checkerspot butterfly	FT	Associated with dwarf plantain (*Plantago erecta*) Larvae require a second host plant when dwarf plantain dries up. Found in shallow, serpentine-derived soils.	A	**No potential to occur.**
Danaus plexippus pop. 1	monarch- California overwintering population	FC	Adults who remain in California in the winter use eucalyptus trees (*Eucalyptus* spp.) or a mixture of eucalyptus and Monterey pine (*Pinus radiata*) trees for shelter. Larval host plant for the monarch is milkweed (*Asclepias* spp.).	A	**No potential to occur.**
Branchinecta lynchi	vernal pool fairy shrimp	FT	Inhabits clear to tea-colored freshwater vernal pools in grass or mud bottomed swales, or basalt flow depression pools in unplowed grasslands.	A	**No potential to occur.**

KEY
Habitat Present/Absent: Absent [A] - no habitat present and no further work needed. Habitat Present [HP] - habitat is or may be present. The species may be present. Present [P] - the species is present. Critical Habitat [CH] - project footprint is located within a designated critical habitat unit but does not necessarily mean that appropriate habitat is present.
Listed Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC), Bird of Conservation Concern (BCC); State Endangered (SE); State Threatened (ST); Fully Protected (SFP); State Rare (SR); State Species of Special Concern (SSC); California Native Plant Society (CNPS).

APPENDIX D – Federally Listed Species Effects Determination

Species Name	Status	Reason for Determination or Elimination of Consideration
delta smelt (*Hypomesus transpacificus*)	Threatened	No effect. No suitable habitat present and proposed activities are not expected to have any effect on this species.
Chinook salmon (Central Valley spring-run ESU) (*Oncorhynchus tshawytscha*)	Threatened	No effect. No suitable habitat present and proposed activities are not expected to have any effect on this species.
Chinook salmon (Sacramento River winter-run ESU) (*Oncorhynchus tshawytscha*)	Endangered	No effect. No suitable habitat present and proposed activities are not expected to have any effect on this species.
steelhead (Central Coast DPS) (*Oncorhynchus mykiss*)	Threatened	No effect. No suitable habitat present and proposed activities are not expected to have any effect on this species..
green sturgeon (Southern DPS) (*Acipenser medirostis*)	Threatened	No effect. No suitable habitat present and proposed activities are not expected to have any effect on this species..
salt-marsh harvest mouse (*Reithrodontomys raviventris*)	Endangered	No effect. No suitable habitat present and proposed activities are not expected to have any effect on this species.
California Ridgway's rail (*Rallus obsoletus*)	Endangered	No effect. No suitable habitat present and proposed activities are not expected to have any effect on this species.
California least tern (*Sterna antillarum browni*)	Endangered	No effect. No suitable habitat present, and proposed activities are not expected to have any effect on this species.
western snowy plover (*Charadrius nivosus nivosus*)	Threatened	No effect. No suitable habitat present, and proposed activities are not expected to have any effect on this species.
California tiger salamander Central California DPS (*Ambystoma californiense* pop.1)	Threatened	No effect. No suitable habitat present and proposed activities are not expected to have any effect on this species.
California red-legged frog (*Rana draytonii*)	Threatened	No effect. No suitable habitat present and proposed activities are not expected to have any effect on this species.
Alameda whipsnake (*Masticophis lateralis euryxanthus*)	Threatened	No effect. No suitable habitat present and proposed activities are not expected to have any effect on this species.
Bay checkerspot butterfly (*Euphydryas editha bayensis*)	Threatened	No effect. No suitable habitat present and proposed activities are not expected to have any effect on this species.
green sea turtle (*Chelonia mydas*)	Threatened	No effect. No suitable habitat present and proposed activities are not expected to have any effect on this species.

Species Name	Status	Reason for Determination or Elimination of Consideration
tidewater goby (*Eucyclogobius newberryi*)	Endangered	No effect. No suitable habitat present and proposed activities are not expected to have any effect on this species.
vernal pool fairy shrimp (*Branchinecta lynchi*)	Threatened	No effect. No suitable habitat present and proposed activities are not expected to have any effect on this species.
pallid manzanita *(Arctostaphylos pallida)*	Threatened	No effect. Not present, and proposed activities are not expected to have any effect on this species.
Presidio clarkia (*Clarkia franciscana*)	Endangered	No effect. Not present, and proposed activities are not expected to have any effect on this species.
robust spineflower (*Chorizanthe robusta* var. *robusta*)	Endangered	No effect. Not present, and proposed activities are not expected to have any effect on this species.
Santa Cruz tarplant (*Holocarpha macradenia*)	Endangered	No effect. Not present, and proposed activities are not expected to have any effect on this species.
California seablite (*Suaeda californica*)	Endangered	No effect. Not present, and proposed activities are not expected to have any effect on this species.

APPENDIX E. USFWS IPaC Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: September 26, 2023
Project Code: 2023-0002481
Project Name: Interstate 580 (I-580) Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of

this letter with any request for consultation or correspondence about your project that you submit to our office.

Note: IPaC has provided all available attachments because this project is in multiple field office jurisdictions.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

This project's location is within the jurisdiction of multiple offices. However, only one species list document will be provided for all offices. The species and critical habitats in this document reflect the aggregation of those that fall in each of the affiliated office's jurisdiction. Other offices affiliated with the project:

San Francisco Bay-Delta Fish And Wildlife
650 Capitol Mall
Suite 8-300
Sacramento, CA 95814
(916) 930-5603

PROJECT SUMMARY

Project Code: 2023-0002481

Project Name: Interstate 580 (I-580) Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project

Project Type: Road/Hwy - Maintenance/Modification

Project Description: The MTC, in cooperation with Caltrans and the Alameda CTC, proposes to convert 1.7 miles of an existing general-purpose (GP) lane to an HOV lane. Signing and striping work would occur along the existing HOV lane between I-580 Post Mile 46.9 and I-580 Post Mile 46.7 in Oakland, California. The project site extends from I-580 Post Mile 46.9 to I-580 Post Mile 43.2 and occurs within the United States Geological Survey (USGS) Oakland West 7.5-Minute Topographic Quadrangle and Oakland East 7.5-Minute Topographic Quadrangle. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to approximately the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5). The project limit extends further along I-580 WB from the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) to I-580 Post Mile 43.2 at the Lake Park Ave Overcrossing for the installation of advanced HOV lane signs and restriping. No HOV lane extension is proposed for this portion of the Project site.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.81372815,-122.25088540334698,14z

Counties: Alameda County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 17 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Salt Marsh Harvest Mouse *Reithrodontomys raviventris* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/613	Endangered

BIRDS

NAME	STATUS
California Clapper Rail *Rallus longirostris obsoletus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4240	Endangered
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened

REPTILES

NAME	STATUS
Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened
Green Sea Turtle *Chelonia mydas* Population: East Pacific DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened

AMPHIBIANS

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened
Foothill Yellow-legged Frog *Rana boylii* Population: Central Coast Distinct Population Segment (Central Coast DPS) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5133	Proposed Threatened

FISHES

NAME	STATUS
Tidewater Goby *Eucyclogobius newberryi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRUSTACEANS

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

FLOWERING PLANTS

NAME	STATUS
California Seablite *Suaeda californica* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6310	Endangered
Pallid Manzanita *Arctostaphylos pallida* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8292	Threatened
Presidio Clarkia *Clarkia franciscana* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3890	Endangered
Robust Spineflower *Chorizanthe robusta var. robusta* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9287	Endangered
Santa Cruz Tarplant *Holocarpha macradenia* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6832	Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Bald and Golden Eagle Protection Act of 1940.

2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read the supplemental information and specifically the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

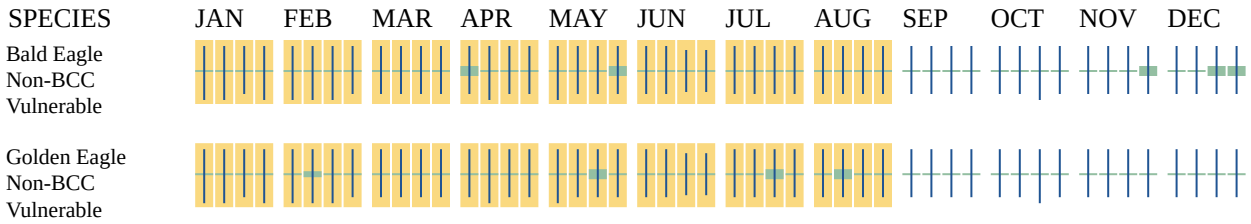
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

■ probability of presence ■ breeding season | survey effort – no data



Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Allen's Hummingbird *Selasphorus sasin* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow *Passerculus sandwichensis beldingi* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Black Oystercatcher *Haematopus bachmani* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591	Breeds Apr 15 to Oct 31
Black Skimmer *Rynchops niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Black Turnstone *Arenaria melanocephala* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Bullock's Oriole *Icterus bullockii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
California Thrasher *Toxostoma redivivum* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Common Yellowthroat *Geothlypis trichas sinuosa* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

NAME	BREEDING SEASON
Gull-billed Tern *Gelochelidon nilotica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9501	Breeds May 1 to Jul 31
Lawrence's Goldfinch *Carduelis lawrencei* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Nuttall's Woodpecker *Picoides nuttallii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse *Baeolophus inornatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Tricolored Blackbird *Agelaius tricolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere

NAME	BREEDING SEASON
Wrentit *Chamaea fasciata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10
Yellow-billed Magpie *Pica nuttalli* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read the supplemental information and specifically the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

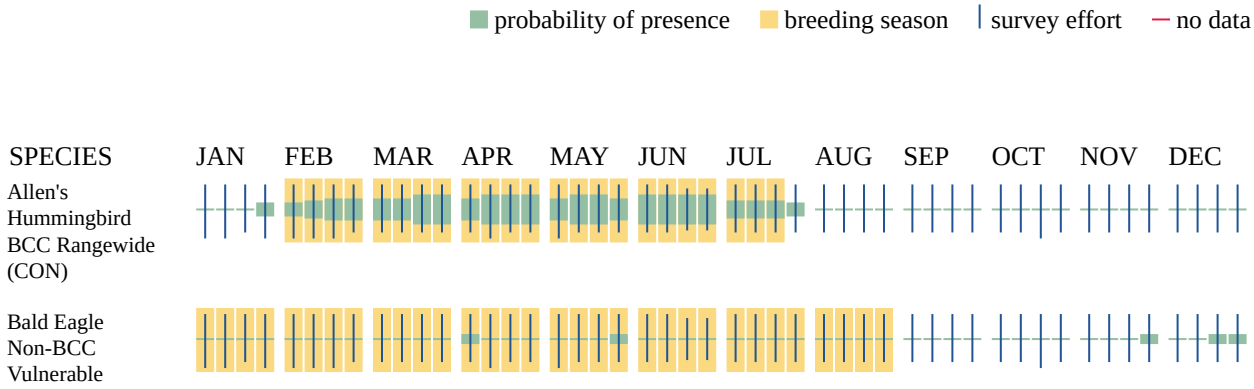
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

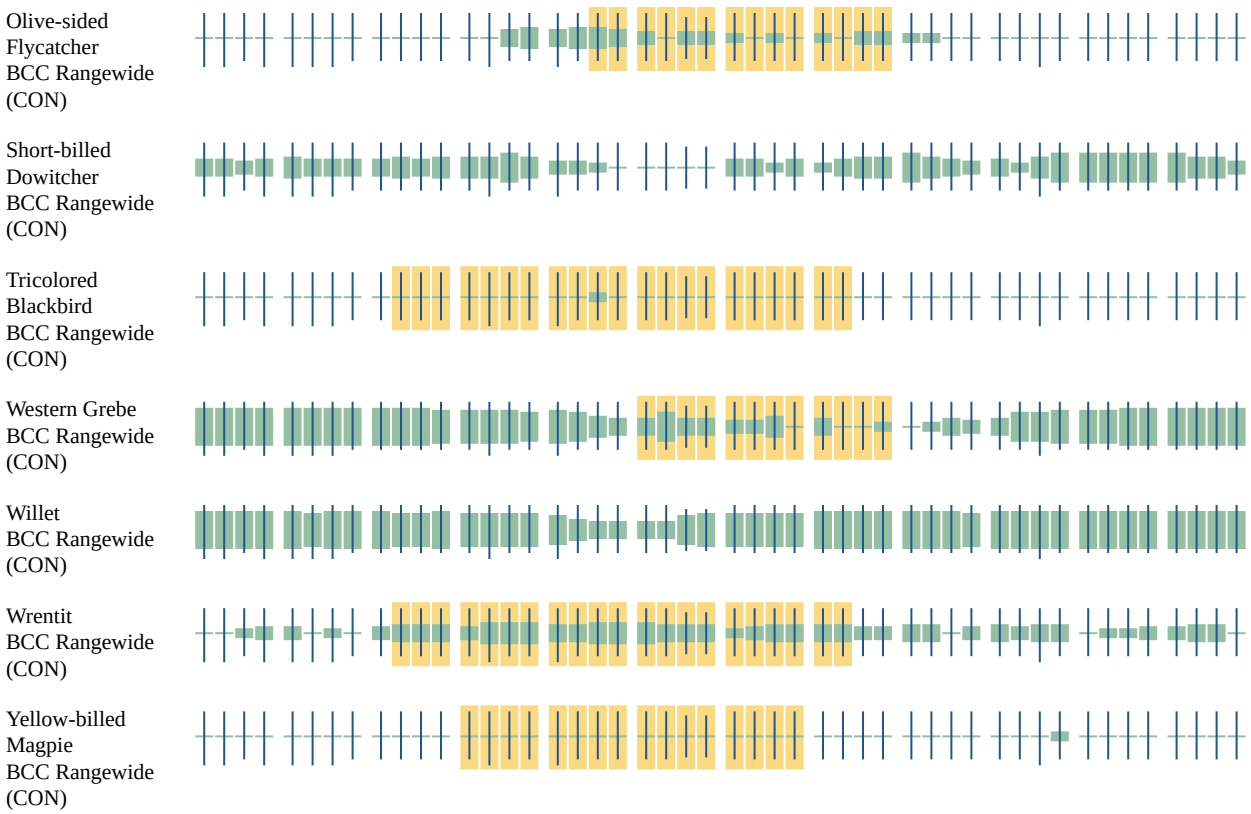
Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.




Belding's Savannah Sparrow BCC - BCR
Black Oystercatcher BCC Rangewide (CON)
Black Skimmer BCC Rangewide (CON)
Black Turnstone BCC Rangewide (CON)
Bullock's Oriole BCC - BCR
California Gull BCC Rangewide (CON)
California Thrasher BCC Rangewide (CON)
Clark's Grebe BCC Rangewide (CON)
Common Yellowthroat BCC - BCR
Golden Eagle Non-BCC Vulnerable
SPECIES
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
Gull-billed Tern BCC Rangewide (CON)
Lawrence's Goldfinch BCC Rangewide (CON)
Marbled Godwit BCC Rangewide (CON)
Nuttall's Woodpecker BCC - BCR
Oak Titmouse BCC Rangewide (CON)



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

ESTUARINE AND MARINE WETLAND

- E2USM
- E2EM1N

RIVERINE

- R4SBAx

IPAC USER CONTACT INFORMATION

Agency: California Department of Transportation
Name: Jesse Reebs
Address: 1342 Creekside Drive
City: Walnut Creek
State: CA
Zip: 94596
Email jesse.reebs@gmail.com
Phone: 9258555500

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Department of Transportation

APPENDIX F. NMFS Species List

Metropolitan Transportation Commission Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project – NMFS Species Lists

Project occur on the following USGS 7.5-minute quadrangle:

- Oakland West – 37122-G3

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) - **X**
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) - **X**
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat - **X**
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat - **X**
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat - **X**

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**
Chinook Salmon EFH - **X**
Groundfish EFH - **X**
Coastal Pelagics EFH - **X**
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office
562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds - **X**

APPENDIX G. CalFish Species List

California Fish Website

Fish Species

Fish Species by Watersheds : 'Angel Island-San Francisco Bay Estuaries-180500021001'

Freshwater native and non-native sh species present currently and/or historically, determined from the PISCES database (Feb. 26, 2014). Some species, such as salmon or steelhead, may no longer be present upstream of dams that lack sh passage.

Yes/No corresponds to California native species

Central Valley spring Chinook Salmon

Oncorhynchus tshawytscha

Yes

Coastrange Sculpin

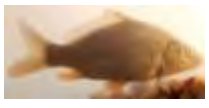
Cottus aleuticus

Yes

Common Carp

Cyprinus carpio

No



Sacramento Pikeminnow

Ptychocheilus grandis

Yes

Sacramento Sucker

Catostomus occidentalis occidentalis

Yes

Yellow n Goby

Acanthogobius avimanus

No

APPENDIX H. Representative Photos of the Project Site

	**Photo 1.** View of the central section of the project area from the west. Ruderal habitat exists along I-580 WB.
	**Photo 2.** View of the proposed staging area within the I-580 WB on-ramp at Grand Avenue.

	**Photo 3.** View of existing roadway and infrastructure located in one of the proposed areas where a sign will be installed in the eastern section along I-580.
	**Photo 4.** View of existing roadway and infrastructure located in another of the proposed areas where a sign will be installed along I-580 in the eastern section of the project site.
	**Photo 5.** View of the proposed staging area within the I-580 WB on-ramp at Grand Avenue.

	**Photo 6.** View of existing roadway and infrastructure located in the middle section. The section is comprised of is primarily elevated and lacks a vegetated shoulder.
	**Photo 7.** View of existing roadway and infrastructure located in the middle section. Surrounding ornamental trees provide potential for nesting birds. However, bird species will likely be tolerant of disturbance due to the persistent current activity on the roads.

	**Photo 8.** View of existing roadway and infrastructure located in another of the proposed areas where a sign will be installed within the western section.
	**Photo 8.** Overview of the project area from University Avenue overpass leading to the western section along I-80. Project disturbance is not expected to go beyond the already disturbed roadway, except for the Grand Avenue staging area.

Attachment C: Phase I Initial Site Assessment

Phase I Initial Site Assessment

BBF I-580 WB HOV Lane Extension

04-ALA-580 PM 43.2/46.9

EA# 04-1W1600

March 2023

Prepared By: Craig Langbein Date: March 3, 2023

Craig Langbein
Parikh Consultants Inc.

Approved By: C.R. Wilson Date: March 16, 2023

Christopher Wilson
Office of Environmental Engineering
District 4, Caltrans

PHASE I INITIAL SITE ASSESSMENT

BAY BRIDGE FORWARD INTERSTATE 580 WESTBOUND HIGH OCCUPANCY VEHICLE LANE EXTENSION PROJECT

OAKLAND

ALAMEDA COUNTY, CALIFORNIA

For

Kimley-Horn & Associates, Inc.

4637 Chabot Dr #300

Pleasanton, CA 94588

By

PARIKH CONSULTANTS, INC.

1497 N. Milpitas Boulevard

Milpitas, CA 95035

(408) 452-9000

February 28, 2023 (DRAFT) Job No. 2022-120-ISA

TABLE OF CONTENTS

LIST OF FIGURES

APPENDICES

PHASE I INITIAL SITE ASSESSMENT
BAY BRIDGE FORWARD INTERSTATE 580 WESTBOUND HIGH OCCUPANCY VEHICLE LANE EXTENSION PROJECT
ALAMEDA COUNTY, CALIFORNIA

EXECUTIVE SUMMARY

The Bay Bridge Forward (BBF) Interstate 580 (I-580) Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project (Project) is located in the City of Oakland within Alameda County, California. The Metropolitan Transportation Commission (MTC) is the Project sponsor, implementing agency, and lead agency. Project partners include the California Department of Transportation and the Alameda County Transportation Commission.

This Phase I Initial Site Assessment (ISA) was performed by PARIKH Consultants, Inc. with the purpose of identifying sites within the area of potential effects (APE) that may pose an adverse environmental impact or represent a recognized environmental condition (REC) or contain activity and use limitations (AULs). This ISA included a review of previous land uses in the Project area through a records review, interpretation maps and aerial photographs, and site reconnaissance.

Four individual sites and one combined site within or adjacent the APE were identified as containing one or more RECs that could impact the APE, including:

- Combined Oakland Terminal Railway Property
- Seismic Retrofit SFOBB Distribution Structure, I-580 at Post Mile 46.3, Oakland
- MacArthur St On-Ramp Widening Project, I-580 from Hollis St to Mandela Pkwy
- Former BP Station #11102, 100 MacArthur Blvd, Oakland
- Former 76 Service Station No. 351644, 66 MacArthur Blvd, Oakland

The most significant REC site is the Combined Oakland Terminal Railway Property which is bound by the current Union Pacific Railroad, I-580, 40th Street, San Pablo Avenue, and West MacArthur Boulevard. The site is currently occupied by commercial businesses, associated car parks, and vacant lots. Historical aerial photographs, topographic maps, and Sanborn maps indicate this area comprised railroad car storage yards, classification yards, spurs, main lines, warehouses, depots,

a blacksmiths shop, machine shops, store rooms, car repair shops, a car painting shop, a lumber shed, cable storage, electrical substation, and warehousing.

Samples should be collected and analyzed for the presence of hazardous materials and petroleum products if soils or groundwater are to be disturbed at or adjacent to the identified REC containing sites. Currently the project does not include any ground disturbance near or adjacent to these sites. However, if design changes, additional evaluations and disposal plans may be required in the event of identification of hazardous materials and petroleum products that are in excess of relevant environmental screening levels.

The Emery Street site listed within this report, contained the only AUL associated with the APE. The site has a recommendation that "*Should off-site redevelopment occur; Alameda County Department of Environmental Health recommends evaluating the redevelopment site(s) for chemicals of concern identified on this site*". This AUL relates to the Project as the site borders the APE and the recommendation states "off-site". Currently the project does not include any ground disturbance near or adjacent to these sites. However, if design changes, additional evaluations and disposal plans may be required in the event of identification of hazardous materials and petroleum products that are in excess of relevant environmental screening levels.

Various homeless camps located within the APE represent RECs due to the likely presence of biohazards associated with untreated human waste, used hypodermic needles, and petroleum products. Soil samples should be collected and analyzed for hazardous substances prior to and if soil disturbance is planned at or adjacent to current or past homeless encampments. Currently the project does not include any ground disturbance near or adjacent to these sites. However, if design changes, additional evaluations and disposal plans may be required in the event of identification of hazardous materials and petroleum products that are in excess of relevant environmental screening levels.

Historical aerial photographs and topographic maps indicate the APE and surrounding areas have supported vehicular activity since the 1920's. The APE and surrounding areas also contain historically heavily used freeways, and intensely urbanized and industrialized areas. Hence, surface soils within the APE area are highly likely to have been affected by aerially deposited lead (ADL).

Various historical and current railroads were and are located within and adjacent to the APE. Groundwater and soils underlying and adjacent to railroads can contain hazardous levels of polycyclic aromatic hydrocarbons, heavy metals, pesticides, herbicides, and asbestos. Soils and groundwater in railroad areas intersecting the APE should be sampled and analyzed for hazardous substances if the soils and groundwater will be disturbed. Currently the project does not include any ground disturbance near or adjacent to these sites. However, if design changes,

additional evaluations and disposal plans may be required in the event of identification of hazardous materials and petroleum products that are in excess of relevant environmental screening levels.

Freeways, on/off ramps, roads, and intersections within the APE contain varying amounts of yellow thermoplastic striping and pavement markings. Such materials can contain hazardous levels of lead and chromium. Caltrans Standard Special Provision (14-11.12) specifies that yellow stripe and pavement markings requires special handling for removal and disposal.

Conclusions and recommendations in this report are qualitative opinions based on limited quantitative information. All conclusions, recommendations, and information included in this report are based upon information that was readily available to PARIKH Consultants, Inc. at the time of report preparation, and on PARIKH Consultants, Inc.'s professional judgment and reviews using accepted environmental site assessment practices pursuant to the scope of work.

1.0 INTRODUCTION

The Bay Bridge Forward (BBF) Interstate 580 (I-580) Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project (Project) is located in the City of Oakland within Alameda County, California. The Metropolitan Transportation Commission (MTC) is the Project sponsor, implementing agency, and lead agency. Project partners include the California Department of Transportation and the Alameda County Transportation Commission. The Project area of potential effects (APE) is shown in Figure 1, Project Location Map.

The purpose of this Phase 1 Initial Site Assessment (ISA) was to identify and evaluate potentially hazardous waste sites and evaluate environmental factors that may have affected soil and groundwater quality in the area of potential effects (APE) due to past or present activities or incidents. The objective of this report was to identify *recognized environmental conditions* (RECs) and *activity and use limitations* (AULs), which are as per American Society for Testing and Materials (ASTM) E1527 - 21:

> REC - (1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.
>
> AUL - legal or physical restrictions or limitations on the use of, or access to, a site or facility: (1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls, are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil, soil vapor, groundwater, and/or surface water on a property.

This ISA was performed from September 2022 to February 2023 and included the following activities:

- Records review
- Historical aerial photograph review
- Topographic and Sanborn map review

- Review of area hydrogeology
- Site reconnaissance
- Preparation of a written report

Four main criteria were used to evaluate whether sites warranted consideration as a REC:

1. Located within the APE;
2. Less than 660 feet from the APE;
3. Hydraulically up-gradient from the APE with regard to groundwater and surface water; and
4. Whether past release of hazardous substances or petroleum products in connection with a site have been addressed to the satisfaction of the applicable regulatory authority.

2.0 PROJECT DESCRIPTION

The Project site extends from I-580 Post Mile 46.9 to I-580 Post Mile 43.2. The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to an high occupancy vehicle (HOV) lane. Signing and striping work would occur along the existing HOV lane between I-580 Post Mile 46.9 and I-580 Post Mile 46.7. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to approximately the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5). The Project limit extends further along I-580 WB from the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) to I-580 Post Mile 43.2 at the Lake Park Ave Overcrossing for the installation of advanced HOV lane signs and restriping. No HOV lane extension is proposed for this portion of the Project site.

GP Lane conversion to an HOV lane would entail the removal of current striping, application of new striping, and installation of signs. The proposed HOV lane would be an HOV 3+. The HOV lane would be separated from the remaining GP lanes by a combination of dashed white striping (continuous access), a single solid white stripe (access discouraged), or solid, double, white striping (restricted access). The proposed HOV lane would operate during the same hours as the existing facility between 5:00 A.M. and 10:00 A.M. and 3:00 P.M. and 7:00 P.M. Monday through Friday. All project work would occur within the current freeway roadway width and right-of-way.

Approximately four roadside signs indicating the HOV lane restrictions and HOV lane operating hours would be installed on existing overhead sign poles and concrete barriers up to 1 mile in advance of the beginning of the proposed HOV lane. Two new overhead sign structures would be installed, one immediately west of the Lakeshore Park Undercrossing (I-580 Post Mile 43.5) and

one near the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5), to support one HOV lane sign each. Approximately ten additional roadside signs would be installed along the HOV lane on existing concrete barriers, overhead sign poles, and lighting poles and new wood posts.

Project construction includes: grinding existing pavement to a depth of no more than 1/8-inch to remove existing striping, application of new striping to the road surface, construction of two new overhead sign structures, and the installation of new roadside signs on existing concrete bridge rails, concrete median barriers, overhead sign poles, and lighting poles and new wood posts. Grinding the road surface would not impact the ground below the road. Construction of the new overhead sign structures would require excavation to a maximum depth of 40 feet below ground surface to construct structure foundations. Dewatering may be required to construct structure foundations. Installation of new signs on existing bridge rails or poles would not require excavation. Existing concrete median barriers to have new roadside signs installed on them would be replaced per the current Caltrans standards by the Project. Installation of new roadside signs on new wood posts would require excavation to a maximum depth of three to four feet below ground surface for sign foundations. Equipment anticipated to be used for Project construction includes but is not limited to: cement mixer, crane truck, concrete saw, concrete breaker, pile driver, asphalt patch truck, dump trucks, and sweeper.

Project construction would require temporary nighttime lane and median closures on I-580 WB and I-580 Eastbound (EB). The medians and left-most lanes of I-580 WB and I-580 EB would be intermittently closed during the nighttime hours for approximately six months for installation of signs and construction of overhead sign structure foundations. The medians on I-580 WB and EB and the two left-most lanes on I-580 WB would be closed during the nighttime hours for approximately one week for installation of overhead sign structures and application of striping. Construction is anticipated to begin in fall 2023 and last for approximately six months.

2.1 Project Purpose

The purpose of the project is to:

- Increase person throughput during peak hours.
- Improve travel time reliability to support buses and high-occupancy vehicles.
- Encourage mode shift by providing travel time savings HOV and transit riders.

2.2 Project Need

I-580 is one of Alameda County's key transportation routes, carrying over 200,000 vehicles per day in its most heavily used segments and serves as a primary conduit to the Transbay/ San Francisco – Oakland Bay Bridge (SFOBB) corridor. SFOBB is the most congested bridge in the San Francisco Bay Area, with the queues on I-580 WB approaching the SFOBB toll plaza bottleneck extending to the Interstate 980 (I-980)/State Route 24 (SR 24) Interchange (I-580 Post Mile 45.2) during the morning peak period from 6 A.M. to 10 A.M. These queues are exacerbated by the heavy weaving associated with lane changes prior to the I-80/I-580 junction. With the SFOBB traffic and population and employment around the San Francisco Bay Area anticipated to continue to grow, corridor improvements along I-580 are required to improve current and future travel conditions for the travelers who use the corridor.

Solutions to reduce the congestion along I-580 WB approaching the SFOBB toll plaza are limited by constrained right-of-way. Currently, the congestion approaching the SFOBB toll plaza is a result of lane changes required for vehicles to enter I-80 EB and WB from I-580 WB since lane changes typically require drivers to slow down to avoid crashes. These lane changes occur between the I-980/SR 24 Interchange (I-580 Post Mile 45.2) and the I-80 Interchange (I-580 Post Mile 46.2). Vehicles in the left lanes on I-580 WB need to cross from the left to right lanes to enter I-80 EB. Simultaneously, vehicles entering I-580 WB from I-980/SR 24 must cross from the right to the left lanes of I-580 to enter I-80 WB and SFOBB. The proposed HOV lane would offer travel time savings for HOV vehicles on I-580 WB intending to enter the SFOBB by pre-positioning them in the leftmost lanes, separating them from the vehicles entering I-580 from I-980/SR 24 intending to enter the SFOBB. As a result, the proposed HOV lane is anticipated to increase the WB person throughput while reducing the travel time for HOV vehicles as compared to non-HOV vehicles. This greater reduction in travel time for HOVs is anticipated to encourage mode shift for current and future travelers.

3.0 RECORDS REVIEW

A search of 136 Federal, State, and County regulatory databases was conducted by Environmental Data Resources (EDR) to determine whether documentation exists relating to environmental incidents, RECs, or AULs within the APE or surrounding properties.

Table 1 lists the number of sites identified in the EDR Area/Corridor Report and the respective databases and search distances. Comprehensive results of the EDR database search are included in Appendix D. The databases searched are listed and described in the Government Records Searched/Data Currency Tracking section at the end of the EDR Area/Corridor Report. Search

distances were from the APE and are standard as per ASTM 1527-21. It should be noted that many properties may be occupied by multiple facilities or have changes in ownership or listing names for the same property. In addition, properties may be listed in multiple databases.

Table 1: Number of EDR sites identified within the respective search distances and database.

Database	Search Distance				
	APE	1/8 mile	1/4 mile	1/2 mile	1 mile
STANDARD ENVIRONMENTAL RECORDS					
Lists of Federal sites subject to CERCLA removals and CERCLA orders					
SEMS	-	1	-	4	-
Lists of Federal CERCLA sites with NFRAP					
SEMS-ARCHIVE	-	-	3	5	-
Lists of Federal RCRA facilities undergoing Corrective Action					
CORRACTS		2			
Lists of Federal RCRA TSD facilities					
RCRA-TSDF	-		1		-
Lists of Federal RCRA generators					
RCRA-LQG		6	13	-	-
RCRA-SQG		27	36	-	-
RCRA-VSQG		2		-	-
Lists of state- and tribal (Superfund) equivalent sites					
CA RESPONSE	1	1	6	12	
Lists of state- and tribal hazardous waste facilities					
CA ENVIROSTOR	3	10	11	26	60
Lists of state and tribal landfills and solid waste disposal facilities					
CA SWF/LF	-		2	1	-
Lists of state and tribal leaking storage tanks					
CA LUST	3	56	47	116	-
CA CPS-SLIC		14	28	43	-
Lists of state and tribal registered storage tanks					
CA UST		25	16	-	-
CA AST	-	3	1	-	-
Lists of state and tribal voluntary cleanup sites					
CA VCP	3	3	6	9	-
Lists of state and tribal brownfield sites					
CA BROWNFIELDS	-		3		-
ADDITIONAL ENVIRONMENTAL RECORDS					
Local Brownfield lists					
US BROWNFIELDS		5	4	7	-
Local Lists of Landfill / Solid Waste Disposal Sites					
CA WMUDS/SWAT		-	1	-	-
Local Lists of Hazardous waste / Contaminated Sites					
CA HIST Cal-Sites			1	5	5
CA CERS HAZ WASTE		33	26	-	-
CA PFAS				1	
Local Lists of Registered Storage Tanks					
CA SWEEPS UST		33		-	-

Database	Search Distance				
	APE	1/8 mile	1/4 mile	1/2 mile	1 mile
CA HIST UST		39		-	-
CA FID UST		21	30	-	-
CA CERS TANKS		11	7	-	-
Local Land Records					
CA DEED	1	4	6	10	-
Records of Emergency Release Reports					
HMIRS	1	-	-	-	-
CA CHMIRS	5	-	-	-	-
Other Ascertainable Records					
RCRA NonGen / NLR	1	178	212	-	-
FUDS	-	-	-	2	2
FINDS	8	-	-	-	-
ECHO	3	-	-	-	-
CA Cortese	2	46	42	103	-
CA DRYCLEANERS	-	4	1	-	-
CA HAZNET	10	-	-	-	-
CA HIST CORTESE	2	44	39	90	-
CA NPDES	1	-	-	-	-
CA PROC	1	1	1		
CA NOTIFY 65		4	3	14	13
CA CIWQS	2	-	-	-	-
CA CERS	3	-	-	-	-
CA NON-CASE INFO	1				
CA HWTS	15	-	-	-	-
EDR HIGH RISK HISTORICAL RECORDS					
EDR Exclusive Records					
EDR Hist Auto	4	47	-	-	-
EDR Hist Cleaner	2	52	-	-	-
EDR RECOVERED GOVERNMENT ARCHIVES					
Exclusive Recovered Govt. Archives					
CA RGA LUST	5	-	-	-	-

Note: The databases searched are listed and described in the Government Records Searched/Data Currency Tracking section at the end of the EDR Area/Corridor Report.

4.0 SITE RECONNAISSANCE

A site reconnaissance was conducted on October 14th, 2022, to obtain information that may indicate the presence of RECs or adverse environmental conditions. The site reconnaissance

consisted of a walk and drive through of publicly accessible areas of the APE, adjacent roads and freeways. No inspections of building interiors or private property were conducted.

The most obvious visible features of environmental concern were homeless encampments and associated trash. These encampments represent RECs and are discussed further in Section 8.3.

The area underneath the MacArthur Freeway between about Wood Street and Hollis Street contained numerous semi-trailers and industrial dumpsters. The physical condition and contents of the trailers and dumpsters were not able to be observed during the site reconnaissance due to locked gates and represents a data gap.

Other than listed above, no indications of RECs were observed during the site reconnaissance.

5.0 HISTORICAL TOPOGRAPHIC MAP REVIEW

The major observations gained from 21 historical topographic maps are listed in this section. Georeferenced topographic maps were downloaded from the USGS Historical Topographic Map Explorer and imported into GIS where they could be compared to the APE and searched for industrial premises, railroads, and agricultural areas. Topographic maps reviewed are listed in Table 2 and shown in Appendix A.

Table 2: List of Topographic maps reviewed for this report.

Map	Year(s)	Scale
Oakland East	2018, 2015, 2012, 1997, 1996, 1980, 1973, 1968, 1959, 1949, 1947	1:24,000
Oakland West	2018, 2015, 2012, 1997, 1996, 1980, 1973, 1968, 1959, 1949	1:50,000

The main observations from the topographic maps are the continued and different stages of development of transport infrastructure, industrialization, commercialization, and urbanization of the APE and surrounding areas. The extent of timing of road and railroad systems in and adjacent to the APE are shown on the topographic maps and is discussed in relevant sections below.

6.0 HISTORICAL AERIAL PHOTOGRAPH REVIEW

Georeferenced historical aerial photographs were provided by EDR and were used to determine the historical use of the APE and indications of activities that may indicate RECs. Appendix B

contains aerial photographs of the area surrounding the APE from years 1939, 1946, 1958, 1963, 1968, 1974, 1982, 1993, 1998, 2005, 2009, 2012, and 2016.

The main observations from the aerial photographs are the timing of urbanization, commercialization, industrialization, and construction of transport infrastructure. The location and timing of relevant railroad infrastructure in and adjacent to the APE is discussed in section 13.

7.0 SANBORN MAP REVIEW

Sanborn Fire Insurance maps from 1951, 1959, and 1970 were reviewed for this report to help identify features that may indicate RECs. The Sanborn maps were provided by EDR and are shown in Appendix C.

Information derived from the Sanborn Maps are discussed in context in section 8.0 for sites identified as relevant to the APE.

8.0 RECOGNIZED ENVIRONMENTAL CONDITIONS

Four individual sites and one combined site within or adjacent the APE were identified as containing one or more RECs that could impact the APE. The sites are listed in Table 3 and locations are shown on Figures 2 and 3. Homeless camps are also considered as an REC and are discussed in section 8.3.

For comprehensive data and description of each site identified here, see the hyperlink contained in Table 3 which links to either the Geotracker or EnviroStor database entries.

Table 3: Sites within or adjacent to the APE that represent an REC and could impact the APE.

Site Name	Address	Assessor's Parcel Numbers	EnviroStor/ GeoTracker ID & hyperlink*
Combined Oakland Terminal Railway Property**	See table #	See table 4	T10000008569; T10000004342;
Seismic Retrofit SFOBB Distribution Structure	I-580 at Post Mile 46.3, Oakland	N/A	60000492
MacArthur St. On-Ramp Widening Project	I-580 from Hollis St to Mandela Pkwy, Oakland	N/A	01470008
Former BP Station #11102	100 MacArthur Blvd, Oakland	010 081200801	T0600100908

Site Name	Address	Assessor's Parcel Numbers	EnviroStor/ GeoTracker ID & hyperlink*
Former 76 Service Station No. 351644	66 MacArthur Blvd, Oakland	010 081300301	T0600101493

* Hyperlinks will be directed to the corresponding EnviroStor or GeoTracker listings for the site(s) containing comprehensive site data.

** Not the official name, this is a combination of APNs representing a larger historical site.

Sites listed in Table 3 are discussed below:

8.1 Combined Oakland Railway Properties

The combined site has a long history of industrial and commercial use. The location is bound by the current Union Pacific Railroad, I-580, 40th Street, San Pablo Avenue, and West MacArthur Boulevard. Table 4 lists the Assessor's Parcel Numbers (APNs) and addresses associated with this site. The site is currently occupied by commercial businesses, associated car parks, and vacant lots. For the purposes of this report the name of this site used here is for a combination of the several adjacent sites that were originally part of a larger industrial complex. The APNs that compose the combined site are listed in Table 4, and where applicable, individual sites, and hyperlinks. Note, the parcels listed in Table 4 do not intersect the APE, however several parcels share a common boundary.

Table 4: APNs associated with the Combined Oakland Railway Property.

APN	Address*	Site	GeoTracker ID / hyperlink
049 061900600	3889 San Pablo Ave	-	-
049 061900300	3838 Hollis St Lot2	Yerba Buena/ East Bay Bridge Center	T10000004342
049 061900400	Emery St	-	-
049 061900100	Hollis St	-	-
049 061900500	3839 Emery St	Yerba Buena/ East Bay Bridge Center; and Emery St	T10000004342; T10000008569
049 061900200	3838 Hollis St Lot2	-	-
007 061701902	Hollis St	Yerba Buena/ East Bay Bridge Center	T10000004342
007 061702301	40th St	-	-
007 061700902	Yerba Buena Ave	-	-
007 061701604	Beach St	-	-

APN	Address*	Site	GeoTracker ID / hyperlink
007 061704702	3700 Mandela Pkwy	-	-
007 061701405	0 Mandela Pkwy	Mandela Parkway Hotel Project	CEQA Analysis
007 061704602	3650 Mandela Pkwy	Oakland Terminal Railway Property	SL1823M1136
007 061701605	1555 40th St	-	-
007 061702200	3938 Horton St	-	-
007 061702100	40th St	-	-
007 061700901	Yerba Buena Ave	-	-
007 061702000	3938 Horton St	-	-
007 061701103	3535 Hollis St	-	-

* All addresses listed here are located within Oakland.

Historical aerial photographs, topographic maps, and Sanborn maps indicate this area comprised railroad car storage yards, classification yards, spurs, main lines, warehouses, depots, a blacksmiths shop, machine shops, store rooms, car repair shops, a car painting shop, a lumber shed, cable storage, electrical substation, and warehousing. Several of these including the blacksmith, car repair, and car painting buildings, had earth floors. Earth floors are significant here due to the relative ease of contaminants to enter soils and groundwater.

Sections of the original site appear to have underlain parts of the APE in the vicinity of Mandela Parkway where historical aerial photographs and topographic maps show railroads encroached onto the APE. Additional artificial fill has likely been placed over the original site soils.

Groundwater contamination that emanated and is potentially still emanating from the combined site could affect the APE. The combined site represents a REC and is included here due to the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment.

The listed individual sites contained within the combined site are described below.

Yerba Buena/East Bay Bridge Center

Yerba Buena/East Bay Bridge Center site is a leaking underground storage tank (LUST) Cleanup Site with a Cleanup Status of “Completed – Case Closed as of 6/28/2017”. Groundwater

monitoring wells were installed and sampled over eleven years to 2001 and analyzed for petroleum products and their breakdown compounds. Groundwater investigations determined that groundwater quality was not significantly affected by the presence of the heavy total petroleum hydrocarbons (TPH) fraction in the soil in spite of the relatively shallow groundwater. Given this, the site contains residual soil and groundwater contamination.

Emery Street

The Emery Street site is a LUST Cleanup Site with a Cleanup Status of "Completed – Case Closed as of 6/28/2017". Potential contaminants of concern include petroleum products. This site was contained within and post-dated the above mentioned Yerba Buena/East Bay Bridge Center site. Very limited concentrations of petroleum hydrocarbon volatile compounds were detected in soil, groundwater, or soil vapor. Given this, the site contains residual soil and groundwater contamination.

Oakland Terminal Railway Property

The Oakland Terminal Railway Property is listed as a Cleanup Program Site with Cleanup Status of "Completed – Case Closed as of 7/1/2002". The site contained hazardous levels of petroleum products within site soils. A program of contaminated soil removal and groundwater monitoring was conducted at the site during 2000. Analytical results for groundwater at the site were apparently below risk-based screening levels for TPH. However, limited data and information was able to be sourced for this site and represents a data gap.

Mandela Parkway Hotel Project

The Mandela Parkway Hotel Project proposes a 220-room, 6-story hotel development. The site is currently a vacant lot and borders the APE. At the time of the site reconnaissance the lot appeared to be used as a parking and storage lot for semi-trailers. The site is not listed on Geotracker or EnviroStor. An Environmental Site Investigation Report was conducted for the proposal which detected soil and groundwater contamination above environmental screening levels (ESLs). Within groundwater TPH diesel was detected at 800 µg/l (ESL 100 µg/l), and TPH motor oil at 4,400 µg/l (ESL 100 µg/l). Metals within groundwater exceeded the respective ESLs and included cobalt, copper, lead, nickel, vanadium, and zinc.

Historical aerial photographs and topographic maps indicate the site contained and was crossed by several railroad car storage and industrial tracks. A large brick smoke stack and associated

industrial building were present on the approximate eastern part of the site containing parcel. The smoke stack and building were probably part of the coal fired Yerba Buena Powerhouse.

8.2 Individual REC Sites

Seismic Retrofit SFOBB Distribution Structure

The Seismic Retrofit Project consisted of strengthening the I-580 viaduct to the west of where it crosses over Mandela Parkway, post mile 46.3, in the City of Oakland. The EnviroStor site type is a "Voluntary Agreement" with a Cleanup Status of "Inactive – needs Evaluation as of 9/3/2010". Potential contaminants of concern (COCs) include lead, polynuclear aromatic hydrocarbons (PAHs) TPH motor oil, TPH diesel. The site was once a wetland at the San Francisco Bay edge and was filled over time with discarded material such as municipal waste, rubble, and earth. This artificial fill material is believed to be the source of most contaminants discovered at the site. The level of contamination generally decreases with increasing depth from the ground surface. The area of contamination as outlined in Caltrans documents, is shown on Figure 2.

The site represents a REC and is included here due to the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment.

MacArthur Blvd On-Ramp Widening Project

The EnviroStor site type is a "Voluntary Agreement" with a Cleanup Status of "No Further Action as of 9/2/2009". The site is defined as the area underneath and adjacent to the WB I-580 viaduct from Hollis Street to Mandela Parkway.

See the Caltrans "Data Quality Objectives and Soil Sampling Plan" for a comprehensive site history description and soil sampling results. Briefly, the western end of the site was a wetland at the edge of San Francisco Bay which was gradually filled in with material such as municipal waste, rubble, and earth. The artificial fill is believed to be the source of most of the contaminants discovered at the site. The site has contained various uses including by: Caltrans as the Ettie Street Facility, light and heavy railroads, the coal fired Yerba Buena Powerhouse, and maintenance

facilities. Soil investigations at the site revealed TPHs, volatile and semi-volatile compounds, and various heavy metals.

A program involving excavation, handling, stockpiling, and disposal of hazardous materials was conducted at the site. The procedures are detailed in the "Hazardous Material Management Report".

Considering the apparent extensive testing and handling of hazardous material as described here, the site is still considered a REC due to the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment.

Former BP Station #11102

The site is currently a gas station with a Piedmont market and is a LUST Cleanup Site with a Cleanup Status of "Completed – Case Closed as of 7/31/2014". Potential contaminants of concern include petroleum products.

A groundwater plume containing methyl tertbutyl ether (MTBE) and tertiary butyl ether (TBE) above ESLs extended from the former LUST to the APE and was detected in a monitoring well (MW-4) located within the APE. The monitoring well was last sampled in 2012. MTBE and TBE concentrations over two years of monitoring showed varying levels and did not indicate a distinctive downward trend. This gas station is also shown on the 1959 Sanborn map. Note the parcel containing the now removed LUST is not located within the APE.

The site represents a REC and is included here due to the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment.

Former 76 Service Station No. 351644

The site is currently a gas station and is a LUST Cleanup Site with a Cleanup Status of "Completed – Case Closed as of 6/12/2020". Potential contaminants of concern include petroleum products.

A groundwater plume containing MTBE above ESLs extended from the former LUST to the APE and was detected in a monitoring well located at the APE boundary. The monitoring well was last sampled in 2013. MTBE concentrations over 11 years of monitoring showed a distinctive downward trend from a high of 2800 µg/l to a low of 47 µg/l in 2013. However, the anticipated decline in MTBE concentrations still indicate that groundwater at the monitoring well are still over

ESLs. This gas station is also shown on the 1959 Sanborn map. Note the parcel containing the now removed LUST is not located within the APE.

The site represents a REC and is included here due to the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment.

8.3 Homeless Encampments

Homeless encampments were obvious at numerous locations within and adjacent to the APE at the time of the site reconnaissance on October 14th, 2022. These encampments also included the various associated vehicles such as campervans, caravans, and sedans.

During the site reconnaissance homeless encampments within or adjacent to the APE appeared to be undergoing cleanup or removal. These encampment locations included the vicinity of Mandela Parkway, 35th St and San Pablo Ave, and Martin Luther King Jr Way. However, areas where homeless encampments are currently or previously located represent RECs due to the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment. The hazardous substances would include biohazards associated with untreated human waste, used hypodermic needles, and petroleum products.

9.0 ACTIVITY AND USE LIMITATIONS

Although the *Seismic Retrofit SFOBB Distribution Structure* and the *MacArthur Street On-Ramp Widening Project* represented RECs that included extensive documentation, the Emery Street site contained the only AUL associated with the APE.

The Emery Street site (T10000008569) has a recommendation from the Alameda County Department of Environmental Health (ACDEH) that "*Should off-site redevelopment occur, ACDEH recommends evaluating the redevelopment site(s) for chemicals of concern identified on this site*". This recommendation is contained within the Underground Storage Tank Case Closure Summary

Form (link: CLOS_L_2017-06-08). This AUL relates to the Project as the site borders the APE and the recommendation states “off-site".

10.0 ASBESTOS CONTAINING MATERIALS

Asbestos containing materials (ACM) were historically used in various construction products including for insulation, floor tiles, shingles, pipes, and adhesives. Asbestos was also used in bridges and other concrete structures. The use of asbestos in construction and building products was generally discontinued prior to about 1980. Asbestos associated with railroads is described in section 13.0.

Residential dwellings and industrial or commercial premises constructed prior to 1980 do not appear to be located directly within the APE and should not be a source of ACM for the Project.

11.0 LEAD BASED PAINT

Lead is a highly toxic metal that may cause a range of health problems, especially in young children. Lead based paint (LBP) was banned for residential use in 1978. Homes built in the U.S. before 1978 are likely to have some lead-based paint. However, LBP is still legal for industrial uses such as for bridges, highways, water towers, pipes, parking lots, guard rails, and utility poles or towers.

Residential dwellings and industrial or commercial premises constructed prior to 1978 do not appear to be located directly within the APE, however the APE is bordered by these structures in various locations. These structures potentially still contain LBP and LBP associated dust. According to the Caltrans SER, vol. 1, ch. 10, LBP on buildings poses a medium risk to a project cost, scope, and schedule.

Most of the APE contains concrete structures that potentially contain LBP. Caltrans SER, vol. 1, ch. 10, states that LBP on bridges, retaining walls, etc. poses a low risk to a project cost, scope, and schedule.

12.0 AERIALLY DEPOSITED LEAD

Lead compounds were first added to gasoline in the 1920s as an octane booster to improve engine performance. A phase out of the use of lead in automotive fuels began in 1974 and by 1992 the practice had been banned in California. As a result, shallow soils in close proximity to highways and other heavily traveled roads have the potential to be contaminated with aerially deposited lead (ADL) in excess of the hazardous waste threshold, requiring disposal at either a Class I landfill

or on-site stabilization. The highest lead concentrations are typically found within 10 feet of road pavement and within the top six inches of soil.

Historical aerial photographs and topographic maps indicate the APE and surrounding areas have supported vehicular activity since the introduction of leaded gasoline in the 1920's. The APE and surrounding areas also contain historically heavily used freeways, and intensely urbanized and industrialized areas. Hence, surface soils within the APE area are highly likely to have been affected by ADL.

According to the Caltrans Standard Environmental Reference Volume 1, Chapter 10 (SER, vol. 1, ch. 10), ADL poses a low risk to a project cost, scope, and schedule.

13.0 RAILROADS

Contamination of soil and groundwater associated with railroads includes from PAHs, heavy metals, pesticides, herbicides, and asbestos. The main source of PAHs in railroad areas derives from machine grease, fuel oils, transformer oils, and creosote and pentachlorophenol preserved railroad ties. Heavy metal contamination of soils in and around railroad areas is derived from construction materials, fuel combustion, cargo leakage, and the wearing of pantographs and associated electrical equipment. Pesticides and herbicides were used to keep railroad areas free from excessive amounts of vegetation and pests.

Asbestos was extensively used in the railroad industry and was a common component of railcars, tracks, structures, and signaling equipment. For the purposes of this ISA, the most common form of asbestos use and contamination would have been derived from brake pads and linings for locomotives and rolling stock.

Currently active railroads that intersect the APE include BART and Union Pacific. The BART Antioch to San Francisco International Airport line runs along the SR 24 center divide. The Union Pacific runs north-south across the APE and underneath the I-80 / I-580 / I-880 Distribution Structures.

Several historical railroads and associated infrastructure ran adjacent or intersected the APE. These railroads included main and industrial lines which led to industrial or commercial premises. The location of these historical railroads and infrastructure are shown in Figure 3 and were digitized from historical aerial photographs and topographic maps.

The most significant and relevant area of railroads and associated infrastructure were located adjacent to the and within the APE in the area approximately bound by the current Union Pacific Railroad, I-580, 40th Street, San Pablo Avenue, and West MacArthur Boulevard. This area is

discussed further in section 8.1. Historical aerial photographs indicate this area comprised storage yards, classification yards, spurs, main lines, warehouses, and depots.

According to the Caltrans Standard Environmental Reference Volume 1, Chapter 10 (SER, vol. 1, ch. 10), railroad lines pose a medium risk to a project cost, scope, and schedule; railroad yards pose a high risk to a project cost, scope, and schedule.

14.0 TRAFFIC STRIPING AND PAVEMENT MARKERS

Lead chromate has been used in yellow traffic striping paints, thermoplastic striping, and pavement markings. Such materials can contain hazardous levels of lead and chromium.

Excluding freeways and on/off ramps, during the site reconnaissance, yellow road striping was observed on the majority of roads and intersections within the APE. Informally and outside of freeways and on/off ramps, yellow road striping was estimated as accounting for about 10 to 20% of road striping within the APE.

The left fog line of freeways and on/off ramps within the APE and was often, although not continuously, composed of yellow road striping.

The extent and location of yellow striping within the APE is also visible on Google Earth imagery.

Caltrans Standard Special Provision (14-11.12 *(1) Removal of Traffic Stripes and Pavement Markings*) specifies that yellow stripe and pavement markings require special handling for removal and disposal.

15.0 AGRICULTURAL IMPACTS

Historical aerial photographs and topographic maps do not show the APE and surrounding areas have been used for agricultural purposes from 1939 to now. Hence, the APE appears not to have been affected by the application of pesticides and herbicides for agricultural use.

16.0 CONCLUSIONS AND RECOMMENDATIONS

Four individual sites and one combined site within or adjacent to the APE were identified as containing one or more RECs that could impact the APE, including:

- Combined Oakland Terminal Railway Property
- Seismic Retrofit SFOBB Distribution Structure, I-580 at postmile 46.3, Oakland

- MacArthur St. On-Ramp Widening Project, I-580 from Hollis St to Mandela Pkwy, Oakland
- Former BP Station #11102, 100 MacArthur Blvd, Oakland
- Former 76 Service Station No. 351644, 66 MacArthur Blvd, Oakland

The most significant REC site is the Combined Oakland Terminal Railway Property which is bound by the current Union Pacific Railroad, I-580, 40th Street, San Pablo Avenue, and West MacArthur Boulevard. The site is currently occupied by commercial businesses, associated car parks, and vacant lots. Historical aerial photographs, topographic maps, and Sanborn maps indicate this area comprised railroad car storage yards, classification yards, spurs, main lines, warehouses, depots, a blacksmiths shop, machine shops, store rooms, car repair shops, a car painting shop, a lumber shed, cable storage, electrical substation, and warehousing.

Samples should be collected and analyzed for the presence of hazardous materials and petroleum products if soils or groundwater are to be disturbed at or adjacent to the identified REC containing sites. Currently the project does not include any ground disturbance near or adjacent to these sites. However, if design changes, additional evaluations and disposal plans may be required in the event of identification of hazardous materials and petroleum products that are in excess of relevant environmental screening levels.

The Emery Street site listed here contained the only AUL associated with the APE. The site has a recommendation from the ACDEH that "*Should off-site redevelopment occur, ACDEH recommends evaluating the redevelopment site(s) for chemicals of concern identified on this site*". This AUL relates to the Project as the site borders the APE and the recommendation states "off-site". Samples should be collected and analyzed for the presence of hazardous materials and petroleum products if soils or groundwater are to be disturbed adjacent to the Emery Street site. Currently the project does not include any ground disturbance near or adjacent to these sites. However, if design changes, additional evaluations and disposal plans may be required in the event of identification of hazardous materials and petroleum products that are in excess of relevant environmental screening levels.

Various homeless camps located within the APE represent RECs due to the likely presence of biohazards associated with untreated human waste and used hypodermic needles, and petroleum products. Soil samples should be collected and analyzed for hazardous substances prior to and if soil disturbance is planned at or adjacent to current or past homeless encampments. Currently the project does not include any ground disturbance near or adjacent to these sites. However, if design changes, additional evaluations and disposal plans may be required in the event of

identification of hazardous materials and petroleum products that are in excess of relevant environmental screening levels.

Historical aerial photographs and topographic maps indicate the APE and surrounding areas have supported vehicular activity since the 1920's. The APE and surrounding areas also contain historically heavily used freeways, and intensely urbanized and industrialized areas. Hence, surface soils within the APE area are highly likely to have been affected by ADL.

Various historical and current railroads were and are located within and adjacent to the APE. Groundwater and soils underlying and adjacent to railroads can contain hazardous levels of polycyclic aromatic hydrocarbons, heavy metals, pesticides, herbicides, and asbestos. Soils and groundwater in railroad areas intersecting the APE should be sampled and analyzed for hazardous substances if the soils and groundwater will be disturbed. Currently the project does not include any ground disturbance near or adjacent to these sites. However, if design changes, additional evaluations and disposal plans may be required in the event of identification of hazardous materials and petroleum products that are in excess of relevant environmental screening levels.

Freeways, on/off ramps, roads, and intersections within the APE contain varying amounts of yellow thermoplastic striping and pavement markings. Such materials can contain hazardous levels of lead and chromium. Caltrans Standard Special Provision (14-11.12) specifies that yellow stripe and pavement markings requires special handling for removal and disposal.

17.0 LIMITATIONS

The operations, facility conditions, and information obtained and utilized in the preparation of this report have been obtained in part from the client, their employees or agents, and are assumed by PARIKH Consultants, Inc. to be complete and correct. It should be noted that this information is subject to professional interpretation, which leads to conclusions, which may differ, based upon opinions specific to individuals.

This report has been presented in accordance with generally accepted environmental assessment practices, based upon information set forth within the report, for specific application to the Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension Project located in the City of Oakland, Alameda County, California. No warranty, expressed or implied, is made.

Conclusions and recommendations in this report are qualitative opinions based on limited quantitative information. Soil and groundwater sampling and analysis were not a part of the scope of work. The scope of work was limited to surface observation at a specific time, a limited aerial survey review, and database research. This assessment is not designed to predict future site or off-site conditions. Site conditions can differ at locations other than those observed within the project area and APE. Subsurface conditions can differ from those observed on the surface.

This investigation is not a risk assessment and is not intended to provide information needed for public health risk assessment purposes. The consultant has endeavored to determine as much as practical about site conditions given what we consider to be a reasonable amount of analysis and research. Additional investigations or sampling and analysis could lead to revised conclusions. Additional searches can usually turn up more information but frequently with a diminishing rate of information return for effort spent. The degree of certainty of an environmental assessment is proportional to the time and effort spent. However, the degree of certainty cannot be 100% even with highly detailed exploratory drilling and testing work well beyond the scope of this study.

Respectfully submitted,

PARIKH CONSULTANTS, INC.

Gary Parikh, P.E., G.E. #666
Project Manager

Craig Langbein, P.G., #9447
Project Geologist

ACRONYM LIST

ACDEH	Alameda County Department of Environmental Health
ACM	asbestos containing material
ADL	aerially deposited lead
APE	area of potential effects
APN	Assessors Parcel Number
ASTM	American Society for Testing and Materials
AUL	activity and use limitation
BART	Bay Area Rapid Transit
BBF	Bay Bridge Forward
Caltrans	California Department of Transportation
COCs	contaminants of concern
EB	eastbound
EDR	Environmental Data Resources
ESLs	environmental screening levels
GIS	Geographic Information System
GP	general purpose
HOV	high occupancy vehicle
I-80	Interstate 80
I-580	Interstate 580
I-980	Interstate 980
ISA	Initial Site Assessment

LBP	lead based paint
LUST	leaking underground storage tank
MW	monitoring well
MTC	Metropolitan Transportation Commission
MTBE	methyl tertbutyl ether
µg/l	micrograms per liter
PAHs	polynuclear aromatic hydrocarbons
PE	Professional Engineer
PG	Professional Geologist
REC	recognized environmental condition
SER	Standard Environmental Reference
SFOBB	Transbay/ San Francisco – Oakland Bay Bridge
SR 24	State Route 24
TBE	tertiary butyl ether
TPH	total petroleum hydrocarbons
U.S.	United States
USGS	United States Geological Survey
WB	Westbound

Attachment D: Noise Technical Memorandum

Noise Technical Memorandum

BBF I-580 WB HOV Lane Extension

04-ALA-580 PM 43.2/46.9

EA# 04-1W1600

November 2022

Prepared By:  Date: December 5, 2022

NOEMI WYSS

NOISE SPECIALIST

KIMLEY-HORN

Approved By: Shilpa Mareddy Date: 12/6/2022

SHILPA MAREDDY

BRANC CHIEF AIR & NOISE

OFFICE OF ENVIRONMENTAL ENGINEERING

DIVISION OF ENVIRONMENTAL PLANNING & ENGINEERING

CALIFORNIA DEPARTMENT OF TRANSPORTATION – DISTRICT 04

Kimley»Horn

MEMORANDUM

To:	Muthanna Omran, Project Manager & Wahida Rashid, Environmental Project Manager Caltrans	
CC:	Pamela Kwan, Assistant Director of Capital Program Delivery Metropolitan Transportation Commission	
From:	Noemi Wyss, Kimley-Horn and Associates, Inc. Ace Malisos, Kimley-Horn and Associates, Inc.	
Date:	December 5, 2022	
Subject:	Bay Bridge Forward I-580 HOV Lane Extension Project – Noise Technical Memorandum	**Project #** 04-ALA-580 **EA** 04-1W160

Project Description

The Bay Bridge Forward (BBF) Interstate 580 (I-580) Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project (Project) is located in the City of Oakland within Alameda County, California. The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to an HOV lane. Signing and striping work would occur along the existing HOV lane between I-580 Post Mile 46.9 and I-580 Post Mile 46.7. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to approximately the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5). The Project limit extends further along I-580 WB from the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) to I-580 Post Mile 43.2 at the Lake Park Ave Overcrossing for the installation of advanced HOV lane signs and restriping. No HOV lane extension is proposed for this portion of the Project site.

GP Lane conversion to an HOV lane would entail the removal of current striping, application of new striping, and installation of signs including two new overhead sign structures. The proposed HOV lane would be an HOV 3+. The HOV lane would be separated from the remaining GP lanes by a combination of dashed white striping (continuous access), a single solid white stripe (access discouraged), and solid, double, white striping (restricted access). All Project work would occur within the existing freeway roadway width and right-of-way.

Federal Noise Regulation Applicability

The proposed roadway improvement Project was reviewed for applicability of 23 CFR 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise.[1] The *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects* (Protocol) is to present California Department of Transportation (Caltrans) policies and procedures for applying 23 CFR 772 in California.[2] Applicability as addressed in the Protocol is consistent with the requirements of 23 CFR 772.

Type I, II, and III Project Definition

A traffic noise analysis is required for all Type I projects as defined in 23 CFR 772. A Type I project involves any of the following activities:

1. The construction of a highway on a new location or
2. The physical alteration of an existing highway where there is either:
    a. Substantial horizontal alteration. A project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition, or
    b. Substantial vertical alteration. A project that removes shielding thereby exposing the line-of-sight between the receptor and the traffic noise source. This is done by altering either the vertical alignment of the highway or the topography between the highway traffic noise source and the receptor; or
3. The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a high-occupancy vehicle (HOV) lane, high-occupancy toll (HOT) lane, bus lane, or truck climbing lane; or
4. The addition of an auxiliary lane, except for when the auxiliary lane is a turn lane; or
5. The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange; or
6. Restriping existing pavement for the purpose of adding a through-traffic lane or an auxiliary lane; or
7. The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot, or toll plaza.

A Type II project is, "A Federal or Federal-aid highway project for noise abatement on an existing highway." As defined in CFR sections 772.5 and 772.7(f), all projects that do not meet the definitions

[1] FHWA 2010. *Procedures for Abatement of Highway Traffic Noise and Construction Noise*. Effective July 13, 2011. Accessed on January 6, 2022.
[2] Caltrans 2020. Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects. Effective April 202. Accessed on January 6, 2022 from https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/traffic-noise-protocol-april-2020-a11y.pdf.

of a Type I or a Type II project are Type III projects, and Type III projects do not require a noise analysis. The following sections detail why the Project does not meet the definitions of a Type I or a Type II Project.

Type I Project

Substantial Horizontal Alteration

A "substantial horizontal alteration" is defined in 23 CFR 772 as a project that halves the distance between the traffic noise source (edge of nearest travel lanes) and the closest receptor between the existing condition to the future build condition.

The nearest residences are approximately 80 feet away from the edge of the existing freeway travel lanes. All the proposed improvements are located within the existing freeway roadway width and right-of-way and would not halve the distance to the receptors. Therefore, the proposed improvements would not constitute a "substantial horizontal alteration" in the Project area.

Substantial Vertical Alteration

A"substantial vertical alteration" is defined in 23 CFR 772 as a project that removes shielding (not including vegetation removal) that exposes the line-of-sight between the receptor and the traffic noise source. This is done by either altering the vertical alignment of the highway or by altering the topography between the highway traffic noise source and the receptor.

The proposed Project would not change the vertical profile of the existing freeway or remove any shielding. Therefore, the proposed improvements would not constitute a "substantial vertical alteration" in the Project area.

Addition and/or Restriping of a Through-Traffic Lane(s)

The 23 CFR 772 defines a project that would result in the addition of a through-traffic lane(s), this includes the addition of a through-traffic lane that functions as a high-occupancy vehicle (HOV) lane, high-occupancy toll (HOT) lane, bus lane, or truck climbing lane, or the restriping existing pavement for the purpose of adding a through-traffic lane or an auxiliary lane, as a Type I project.

The proposed Project would convert the existing GP lane into an HOV lane. This lane conversion would entail the removal of current striping, application of new striping, and installation of signs. However, all project work would occur within the current freeway road width and right-of-way. Therefore, the proposed improvements would not result in the addition of a through-traffic lane or the restriping of existing pavement for the purpose of adding a through-traffic lane.

Type II Project

The Project proposes to extend the existing HOV lane on westbound I-580 by converting 1.7 mile of an existing GP lane into an HOV lane. This HOV lane extension would entail the removal of current striping, application of new striping, and installation of signs. Though the Project does have federal funding, is is not a Federal-aid highway project for noise abatement on an existing highway.

Conclusion

The proposed improvements do not meet the definitions of a Type I or Type II project. The proposed improvements are considered a Type III project which does not require a noise analysis or consideration of abatement measures. The Project would comply with the noise control measures listed in Caltrans Standard Specifications Section 14-8.02. Noise generated by construction activities is anticipated to be within the threshold specified in Caltrans Standard Specification section 14-8.02 except for noise generated by pile driving .Pile driving is required for the installation of overhead sign structure foundations and would be limited to daytime operations only (between 6 A.M. and 9 P.M). The Project would have negligible noise impacts and no further noise analysis is proposed.

Attachment E: Air Quality Conformity Analysis

Air Quality Conformity Analysis

BAY BRIDGE FORWARD Interstate 580 WESTBOUND HIGH OCCUPANCY VEHICLE LANE EXTENSION PROJECT

From the Lake Park Overcrossing (I-580 Post Mile 43.2) to the west of Route 80/580/880 Separation (I-580 Post Mile 46.9) in Alameda County

04-ALA-580 43.2/46.9
EA 04-1W160
Project ID 04-2000-0336

May 2024

Prepared By: _____ Date: May 13, 2024
Ace Malisos
Kimley-Horn and Associates, Inc.

Approved By: Shilpa Mareddy Date: May 30, 2024
Shilpa Mareddy, Air Quality and Noise Branch Chief
Office of Environmental Engineering

Caltrans

Table of Contents

List of Tables

List of Figures

Section 1. Introduction and Project Description

This Air Quality Conformity Analysis contains the information that is required to make a project-level air quality conformity determination for the Bay Bridge Forward Interstate 580 (I-580) Westbound High Occupancy Vehicle Lane Extension Project (Project). This analysis has been prepared to be consistent with information published by FHWA related to Project-Level Conformity Analysis, the Standard Environmental Reference (SER) Air Quality Conformity Findings Checklist (included as Appendix D), applicable U.S. EPA project-level analysis guidance, the Transportation Conformity Regulations at 40 CFR 93 Subpart A, and Section 176(c) of the Federal Clean Air Act (42 USC 7506(c)).

This analysis addresses the conformity requirements of the Federal Clean Air Act. It does not address general air quality analysis or studies conducted for the National Environmental Policy Act (NEPA) or the California Environmental Quality Act (CEQA), and only addresses pollutants for which the project area is designated nonattainment, or attainment with an approved Maintenance State Implementation Plan (SIP), by the U.S. EPA.

This report is intended to provide all information needed by FHWA to make a project-level conformity determination for a project that falls under 23 USC 327 NEPA Assignment to Caltrans; or to support a full project-level conformity determination by Caltrans under 23 CFR 326 NEPA Assignment for projects that require a project-level conformity determination (including regionally significant projects as defined in 40 CFR 93.101), and are categorically excluded from NEPA analysis under 23 CFR 771.117(c)(22) or 23 CFR 771.117(c)(23).

1.1. Project Description

The Project is located in the City of Oakland within Alameda County, California. The Metropolitan Transportation Commission (MTC) is the Project sponsor, implementing agency, and CEQA lead agency. Project partners include the California Department of Transportation (Caltrans) as the NEPA lead agency and the Alameda County Transportation Commission (Alameda CTC).

The Project extends from I-580 Post Mile 43.2 to I-580 Post Mile 46.9. Signing and striping work would occur along the existing HOV lane between I-580 Post Mile 46.7 and I-580 Post Mile 46.9. The proposed HOV lane would extend from the beginning of the existing HOV lane for the San Francisco-Oakland Bay Bridge (SFOBB) Toll Plaza approach at the WB I-580/Interstate 80 (I-80) connector touch-down area (I-580 Post Mile 46.7) to just east of the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5). The Project limit extends further west along I-580 from the Broadway-Richmond Boulevard Undercrossing (I-580 Post

Mile 44.5) to I-580 Post Mile 43.2 at the Lake Park Avenue Overcrossing for the installation of advanced HOV lane signs and restriping. See **Figure 1** and **Figure 2** for a depiction of the Project vicinity and location.

The General Purpose (GP) lane conversion to an HOV lane would entail the removal of current striping, application of new striping, and installation of signs. The proposed HOV lane would be signed for vehicle occupancy of three or more (HOV 3+). The HOV lane would be separated from the remaining GP lanes by a combination of dashed white striping (continuous access) and single solid white stripe (access discouraged). The proposed HOV lane would operate during the same hours as the existing facility between 5:00 A.M and 10:00 A.M. and 3:00 P.M. and 7:00 P.M. Monday through Friday. All Project construction work would occur within the current freeway roadway width and right-of-way.

Approximately four roadside signs indicating the HOV lane restrictions and HOV lane operating hours would be installed on existing overhead sign poles and concrete barriers mounted posts up to 1 mile in advance of the beginning of the proposed HOV lane. Three new overhead sign structures to support signs would be installed, two east of the Lakeshore Park Undercrossing (I-580 Post Mile 43.5), Overhead (OH) Sign #2 and OH Sign #3, and one near the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5), OH Sign #1. Approximately ten additional roadside signs would be installed along the HOV lane on existing overhead sign poles and lighting poles, concrete barriers mounted posts, and new wood posts.

Project construction would include: grinding existing pavement to a depth of no more than 1/8-inch to remove existing striping, application of new striping to the road surface, repairing potholes in the asphalt surface, extension of an existing guardrail, construction of three new overhead sign structures and foundations, and the installation of new roadside signs on existing concrete bridge rails, concrete median barriers, overhead sign poles, and lighting poles and new wood posts. Grinding the road surface would not impact the ground below the road. Guardrail extension would require excavation to a maximum depth of eight feet for installation of wood posts. Construction of the new overhead sign structures would require excavation to a maximum depth of 40 feet below ground surface to construct structure foundations. Dewatering may be required to construct structure foundations. Installation of new signs on existing bridge rails or poles would not require excavation. Existing concrete median barriers to have new roadside signs installed on them would be replaced per the current Caltrans standards by the Project. Installation of new roadside signs on new wood posts would require excavation to a maximum depth of three to five feet below ground surface for sign foundations. Equipment anticipated to be used for Project construction includes but is not limited to: cement mixer, crane truck,

concrete saw, concrete breaker, pile driver, drilling auger, asphalt patch truck, dump trucks, and sweeper.

Project construction would require closure of the I-580 median for the duration of construction. Temporary nighttime lane closures on I-580 WB and I-580 Eastbound (EB) would also be required in addition to median closure. The left-most lane of I-580 WB and I-580 EB would be intermittently closed during the nighttime hours for approximately six months for construction of concrete barriers and overhead sign structure foundations. For installation of overhead sign structures and roadside signs, application of striping, and repairing potholes, the WB lanes of I-580 would be intermittently closed with at least one lane open during nighttime hours for approximately one week. Temporary lane restriping may be required where overhead sign structures would be installed if the median is insufficient to accommodate pile driving equipment for the duration of pile driving activities. Construction is anticipated to begin in winter 2024 and last for approximately six months.

Figure 1: Project Vicinity

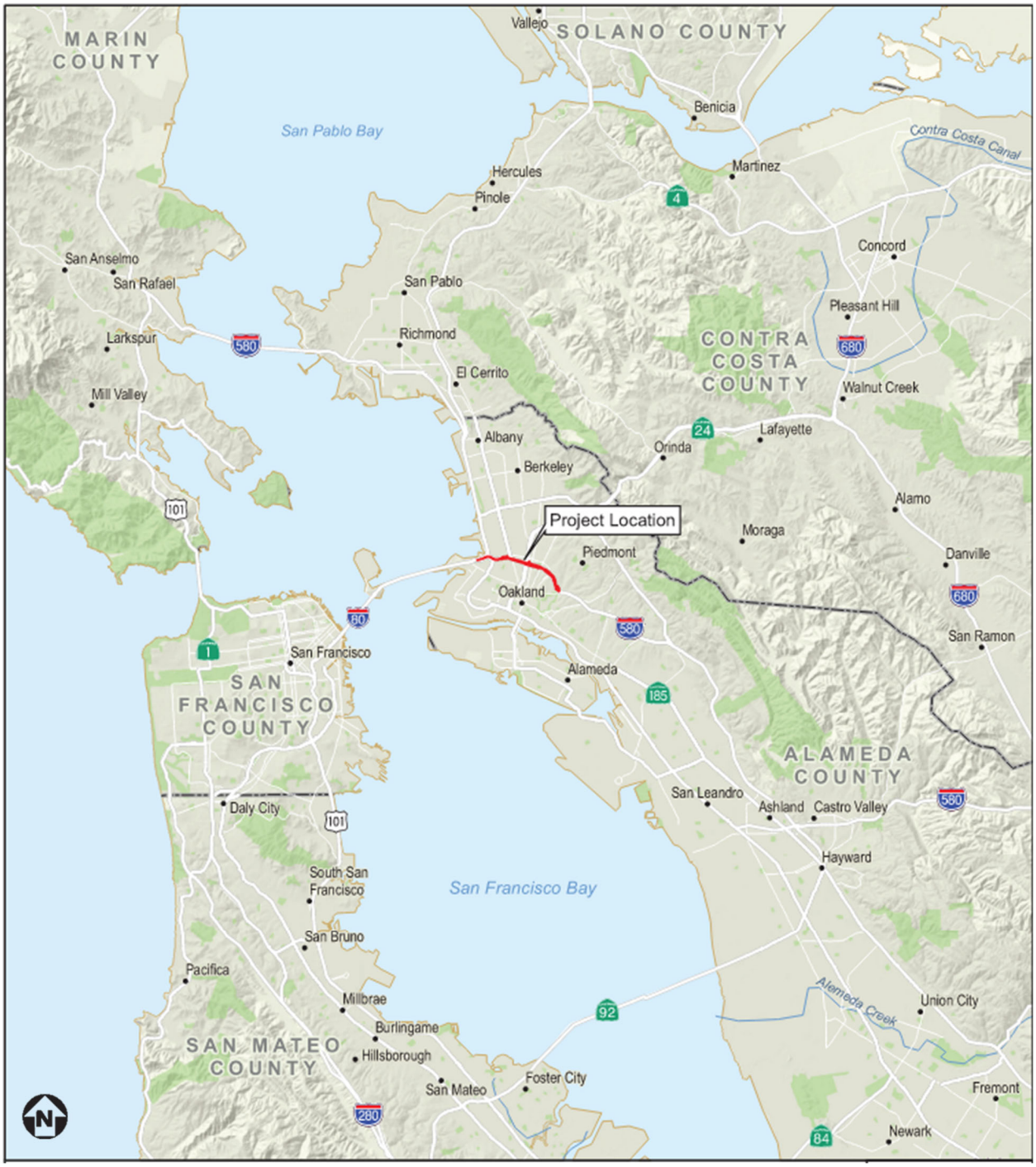
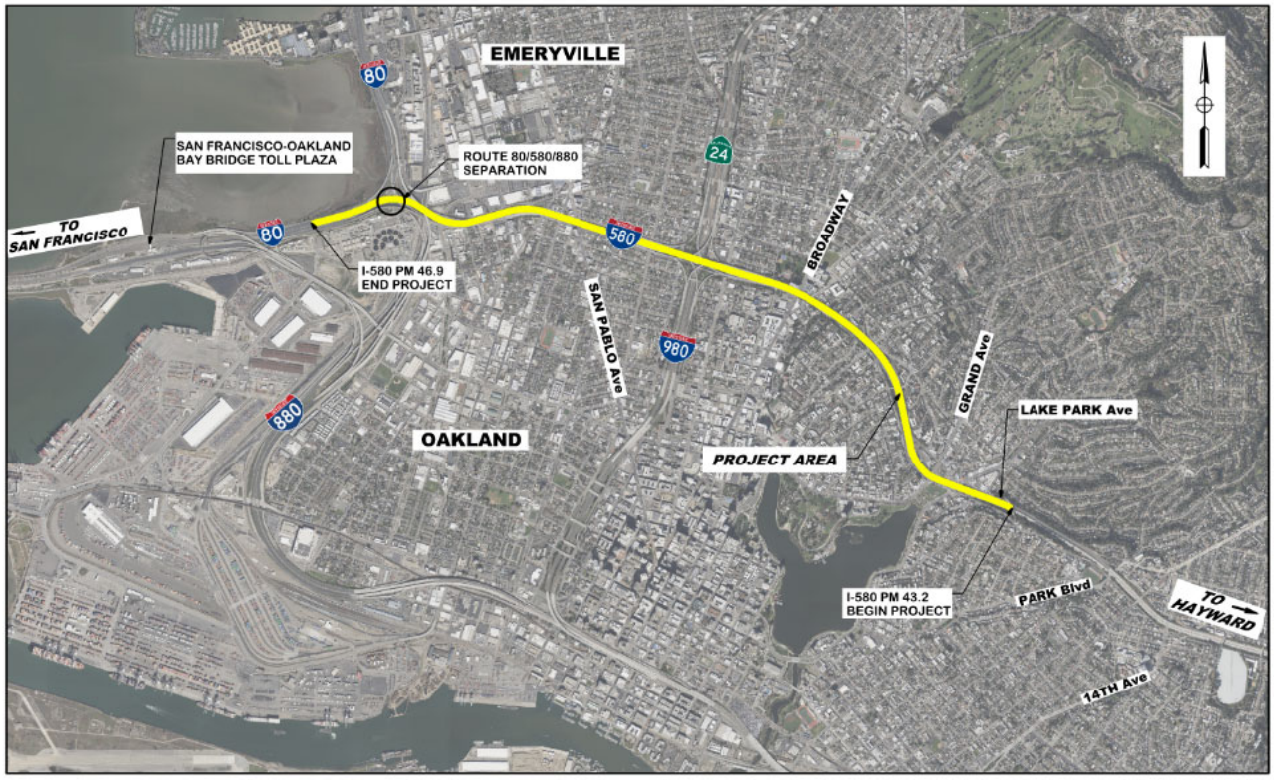


Figure 2: Project Location



1.2. Air Quality Regulatory Framework

Table 1 shows that the proposed project is located in an area that is nonattainment for ozone (O_3) and fine particulate matter ($PM_{2.5}$). This analysis focuses on these criteria pollutant(s). The conformity process does not address pollutants for which the area is attainment/unclassified, mobile source air toxics, other toxic air contaminants or hazardous air pollutants, or greenhouse gases.

Table 1. Project Area Attainment Status

Criteria Pollutant	Federal Attainment Status
Ozone (O_3)	Nonattainment (Marginal)
Nitrogen Dioxide (NO_2)	Attainment-Unclassified
Carbon Monoxide (CO)	Attainment-Unclassified
Particulate Matter (PM_{10})	Attainment-Unclassified
Particulate Matter ($PM_{2.5}$)	Nonattainment (Moderate)

The nonattainment area boundary for O_3 and $PM_{2.5}$ include the nine counties in the San Francisco Bay area (Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma). As shown in **Figure 3**, the project is wholly within the San Francisco Bay Area Basin, which represents the boundary for the attainment conditions listed in **Table 1**.

Figure 3: Nonattainment Area Boundaries

Source: MTC, *Plan Bay Area 2050 Transportation-Air Quality Conformity Analysis Report*, October 2021.

1.3. Public Review Comments Related to Air Quality Conformity

Circulation for public comment was not required because the NEPA determination for this project is a Categorical Exclusion and the CEQA determination for the project is a Categorical Exemption.

Section 2. Regional Conformity

The BBF I-580 WB HOV Extension Project was included in the regional emissions analysis conducted by the MTC for the conforming Bay Area Regional Transportation Plan (RTP), Plan Bay Area 2050 (RTP ID No. 21-T06-049). The Project's design concept and scope have not changed significantly from what was analyzed in the regional emission analysis. This analysis found that the plan, which takes into account regionally significant projects and financial constraint, will conform to the SIP for attaining and maintaining the National Ambient Air Quality Standards (NAAQS) as provided in Section 176(c) of the Clean Air Act. The FHWA and FTA determined that the RTP conforms to the SIP on December 16, 2022. Additional documentation related to the regional emissions analysis is contained in Appendix B.

The BBF I-580 WB HOV Extension Project is also included in the federal Transportation Improvement Program (TIP), which was adopted by the MTC on September 28, 2022 (TIP ID No. ALA190018). The project's open-to-traffic year is consistent with (within the same regional emission analysis period as) the construction completion date identified in the federal TIP and/or RTP. The federal TIP gives priority to eligible Transportation Control Measures (TCMs) identified in the SIP and provides sufficient funds to provide for their implementation. FHWA determined that the TIP conforms to the SIP on December 16, 2022. Documentation to the regional emissions analysis is contained in **Appendix B**.

Section 3. Localized Impact (Hot-Spot) Conformity

3.1. Carbon Monoxide Hot-Spot Analysis

This project is located in an area that is designated attainment-unclassified for carbon monoxide (CO). Therefore, no project-level conformity analysis is necessary for CO.

3.2. $PM_{2.5}$ Hot-Spot Analysis

The proposed project is not considered a project of air quality concern for $PM_{2.5}$ (POAQC) because it does not meet the definition of a POAQC as defined in U.S. EPA's Transportation Conformity Guidance. The project would not add capacity for diesel vehicles on I-580 or increase heavy duty truck traffic by 10 percent or more. The proposed improvements would

increase person throughput during peak hours and improve travel time reliability to support buses and HOV. The project does not include new or expanded bus terminals, rail terminals, or transfer points or affect any intersections. There is no SIP for particulate matter (PM) in the project area. Therefore, PM hot-spot analysis is not required.

There is no approved $PM_{2.5}$ SIP for the project area. Therefore, a written commitment to implement control measures is not required.

The NEPA document for this Project does not identify specific avoidance, minimization, and or mitigation measures for $PM_{2.5}$. A written commitment to implement such control measures is therefore not required.

The project has undergone Interagency Consultation (IAC) regarding POAQC determination. IAC participants concurred that the project is not a POAQC (see Appendix C). The project was first introduced to the IAC participants on January 26, 2023, and the project was determined not to be a POAQC. In March 2024, additional roadway segments were included for analysis and average daily traffic on previously analyzed roadways were updated. Therefore, the project underwent a second IAC on April 25, 2024, and the project was again determined not to be a POAQC.

The approved RTP and TIP for the project area has no PM mitigation or control measures that relate to the project's construction or operation. Therefore, a written commitment to implement PM control measures is not required.

3.3. Construction-Related Hot-Spot Emissions

40 CFR 93.123(c)(5) states that: "CO, PM_{10}, and $PM_{2.5}$ hot-spot analyses are not required to consider construction-related activities which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established 'Guideline' methods. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site."

Because construction of the project is expected to last less than five years, construction-related emissions related to it are not considered in the project-level or regional conformity analysis.

Appendix A. Public Review Comments and Responses Related to Air Quality Conformity

Circulation for public comment was not required because the NEPA determination for this project is a Categorical Exclusion.

Appendix B. Documentation Related to Regional Conformity

Regional Emissions Analysis Conducted for Conforming RTP

The regional emissions analysis found that regional emissions will not exceed the SIP's emission budgets for mobile sources in the build year, a horizon year at least 20 years from when conformity analysis started, and additional years meeting conformity regulation requirements for periodic analysis. The regional emissions analysis was based on the latest population and employment projections for the San Francisco Bay area counties (Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma) that were adopted by the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) at the time the conformity analysis was started on October 21, 2021. These assumptions are less than five years old. The modeling was conducted using current and future population, employment, traffic, and congestion estimates. The traffic data, including the fleet mix data, were based on the most recently available vehicle registration data included in the EMFAC model. EMFAC2017 was used, which was the most recent version of the model developed by the California Air Resources Board and approved for use in California by the U.S. EPA at the time of the analysis.

Public and Interagency Consultation Process for TIP

The 2023 TIP was developed in accordance with MTC policies for community input and interagency consultation procedures. These procedures ensure that the public has adequate opportunity to be informed of the federal TIP development process and encourages public participation and comment.

The 2023 TIP and Draft Transportation-Air Quality Conformity Analysis were released for review and comment on July 5, 2022 and were presented at the Programming and Allocations Committee Meeting on July 13, 2022. The review and comment period closed on August 3, 2022. MTC received one comment from the public during this period. This comment as well as staff's response were presented to the Programming and Allocations Committee on September 14, 2022.

Appendix C. PM Interagency Consultation

From: Harold Brazil <HBrazil@bayareametro.gov>
Sent: Thursday, May 2, 2024 11:13 AM
To: Pamela Kwan <pkwan@bayareametro.gov>
Cc: Fund Management System <fms@bayareametro.gov>; Harold Brazil <HBrazil@bayareametro.gov>
Subject: FMS POAQC Project TIP ID ALA190018 (Bay Bridge Forward: Alameda I-580 WB HOV Lane Ext)

Based on the recent interagency consultation with the Air Quality Conformity Task force, Project TIP ID ALA190018 (FMS ID: 6963) does not fit the definition of a project of air quality concern as defined by 40 CFR 93.123(b)(1) or 40 CFR 93.128 and therefore is not subject to $PM_{2.5}$ project level conformity requirement. Please save this email as documentation confirming the project has undergone and completed the interagency consultation requirement for $PM_{2.5}$ project level conformity. Note project sponsors are required to undergo a proactive public involvement process which provides opportunity for public review as outlined by 40 CFR 93.105(e). For projects that are not of air quality concern, a comment period is only required for project level conformity determinations if such a comment period would have been required under NEPA.

For more information, please see FHWA PM2.5 Project Level Conformity Frequently Asked Questions (FAQ):

http://www.fhwa.dot.gov/environment/air_quality/conformity/policy_and_guidance/faqs/pm25faqs.cfm

If you have any questions, please direct them to Harold Brazil at hbrazil@bayareametro.gov or by phone at 415-778-6747.

METROPOLITAN
TRANSPORTATION
COMMISSION

Bay Area Metro Center
375 Beale Street, Suite 800
San Francisco, CA 94105
415.778.6700
www.mtc.ca.gov

Air Quality Conformity Task Force Meeting

Metropolitan Transportation Commission

Join Zoom Meeting @
https://bayareametro.zoom.us/j/88015790031?from=addon
Meeting ID: 880 1579 0031

(Additional Zoom Meeting Call-In Info on Next Page)

April 25, 2024
9:30 a.m. – 11:00 a.m.

AGENDA

1. Welcome and Introductions

2. Projects with Regional Air Quality Conformity Concerns

   a. Consultation to Determine Project of Air Quality Concern Status
      i. Valley Link Rail Project
      ii. I-580 Westbound High Occupancy Vehicle Lane Conversion Project

3. Approach to the Conformity Analysis for the 2025 Transportation Improvement Program (TIP)

4. Consent Calendar

   a. March 28, 2024 Air Quality Conformity Task Force Meeting Summary

5. Other Items

Next Meeting: May 23, 2024

MTC Staff Liaison: Harold Brazil hbrazil@bayareametro.gov

METROPOLITAN
TRANSPORTATION
COMMISSION

Bay Area Metro Center
375 Beale Street
San Francisco, CA 94105
TEL 415.778.6700
WEB www.mtc.ca.gov

Memorandum

TO: Air Quality Conformity Task Force DATE: April 17, 2024

FR: Harold Brazil W. I.

RE: $PM_{2.5}$ Project Conformity Interagency Consultation

A project sponsors representing two projects, seek interagency consultation from the Air Quality Conformity Task Force (AQCTF) at today's meeting and the projects are as follows:

No.	Project Sponsor	Project Title
1	Federal Transit Administration	Valley Link Rail Project
2	Metropolitan Transportation Commission	I-580 Westbound High Occupancy Vehicle Lane Conversion Project

2ai_Valley_Link_Rail_Project_Assessment_Form.pdf (for the Valley Link Rail project)

2aii_I-580_WB_High_Occupancy_Vehicle_Lane_Conversion_Project_Assessment_Form.pdf (for the I-580 Westbound High Occupancy Vehicle Lane Conversion project)

Application of Criteria for a Project of Air Quality Concern
Project Title: I-580 Westbound High Occupancy Vehicle Lane Conversion Project
Project Summary for Air Quality Conformity Task Force Meeting: April 25, 2024

Description

- Project converts 2.3 miles of an existing general purpose (GP) lane to a HOV 3+ lane.
- The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to immediately west (I-580 Post Mile 44.7) of the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5).
- Project limit extends further along I-580 WB from the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) to the Lakeshore Park Undercrossing (I-580 PM 43.2) for the installation of HOV lane signs only.
- GP Lane conversion to a HOV lane would entail the removal of current striping, application of new striping, and installation of signs.
- The HOV lane would be separated from the remaining GP lanes by a combination of dashed white striping (continuous access), a single solid white stripe (access discouraged), and solid, double, white striping (restricted access).
- Signs indicating the beginning of the HOV lane, HOV lane restrictions, and HOV lane operating hours would be installed starting west of the Lakeshore Park Undercrossing (I-580 Post Mile 43.5), approximately 1 mile in advance of the beginning of the proposed HOV lane (I-580 Post Mile 44.5).
- The project would increase person throughput during peak hours, improve travel time reliability, and encourage mode shift.

Background

- Particulate Matter Hot Spot Analysis Project Summary Form currently being prepared
- Draft Air Quality Assessment Report currently being prepared
- Final Air Quality Assessment Report Approval April 2023
- Draft Environmental Document Approval May 2023
- Air Quality Conformity Report Approval June 2023
- Final Environmental Document July 2023

Not a Project of Air Quality Concern (40 CFR 93.123(b)(1))

(i) New or expanded highway projects with significant number/increase in diesel vehicles?

- Not a new or expanded highway project
- No increase in the number of lanes or capacity improvements
- No increase in traffic volume or significant change to truck percentages on I-580

(ii) Affects intersections at LOS D, E, or F with a significant number of diesel vehicles?

- The project does not include interchanges or intersection LOS's.
- The project would not result in substantial redistribution of traffic or changes in the percentage of truck trips through the site.
- The project would not create any new connections to other roadways or areas, and the project would not open any new areas to development.
- No project changes to land use that would affect diesel traffic percentage.

(iii) New bus and rail terminals and transfer points? — Not Applicable

(iv) Expanded bus and rail terminals and transfer points? — Not Applicable

(v) Affects areas identified in PM_{10} or $PM_{2.5}$ implementation plan as site of violation?

- The project is consistent with MTC RTP (ID 04-ALA-580; 21-T06-049) and is intended to meet the transportation needs in the area based on local land use plans.
- No increase in traffic volume or significant change in truck percentages on I-580.
- The purpose of the project is to promote mode shift by providing travel time savings for carpooling and transit riders, reduce VMT and corresponding emissions, improve safety, and improve operational efficiency.

Project Assessment Form for $PM_{2.5}$ Interagency Consultation

RTIP ID# 04-ALA-580; 21-T06-049

TIP ID# ALA190018

Air Quality Conformity Task Force Consideration Date
April 25, 2024

Project Description *(clearly describe project)*
The Bay Bridge Forward (BBF) Interstate 580 (I-580) Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project (Project) is located in the City of Oakland within Alameda County, California. The Metropolitan Transportation Commission (MTC) is the Project sponsor, implementing agency, and lead agency. Project partners include the California Department of Transportation (Caltrans) and the Alameda County Transportation Commission (CTC).

The project site extends from I-580 Post Mile 43.2 to I-580 Post Mile 46.9. The Project proposes to convert 2.3 miles of an existing general-purpose (GP) lane to an HOV lane. Signing and striping work would occur along the existing HOV lane between I-580 Post Mile 46.7 and I-580 Post Mile 46.9. The proposed HOV lane would extend from the beginning of the existing HOV lane for the San Francisco-Oakland Bay Bridge (SFOBB) Toll Plaza approach at the WB I-580/Interstate 80 (I-80) connector touch-down area (I-580 Post Mile 46.7) to just east of the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5). The Project limit extends further along I-580 WB from the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) to I-580 Post Mile 43.2 at the Lake Park Ave Overcrossing for the installation of advanced HOV lane signs and restriping. No HOV lane extension is proposed for this portion of the project site.

GP Lane conversion to an HOV lane would entail the removal of current striping, application of new striping, and installation of signs. The proposed HOV lane would be an HOV 3+. The HOV lane would be separated from the remaining GP lanes by a combination of dashed white striping (continuous access) and single solid white stripe (access discouraged). The proposed HOV lane would operate during the same hours as the existing facility between 5 A.M. and 10 A.M. and 3 P.M. and 7 P.M. Monday through Friday. All Project work would occur within the current freeway roadway width and right-of-way.

Approximately four roadside signs indicating the HOV lane restrictions and HOV lane operating hours would be installed on existing overhead sign poles and concrete barriers up to 1 mile in advance of the beginning of the proposed HOV lane. Three new overhead sign structures to support signs would be installed, two east of the Lakeshore Park Undercrossing (I-580 Post Mile 43.5) and one near the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5). Approximately ten additional roadside signs would be installed along the HOV lane on existing overhead sign poles and lighting poles, replaced concrete barriers, and new wood posts.

Type of Project:
High Occupancy Vehicle (HOV) Lane Extension

County	**Narrative Location/ Route & Postmiles**
Alameda	The Project is located in Alameda County from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to immediately west (I-580 Post Mile 44.7) of the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) in the Cities of Oakland and Emeryville. **Caltrans 04-ALA-580-PM 43.2/46.9** **EA 04-1W160** **Project ID: 0420000336**

Lead Agency: *Metropolitan Transportation Commission (MTC)*			
Contact Person Pamela Kwan	**Phone #** 415.778.5378	**Fax #**	**Email** pkwan@bayareametro.gov

Federal Action for which Project-Level PM Conformity is Needed (*check appropriate box)*

X **Categorical Exclusion (NEPA)**	**EA or Draft EIS**	**FONSI or Final EIS**	**PS&E or Construction**	**Other**

Schedules Date of Federal Action: June 22, 2023

NEPA Delegation – Project Type (*check appropriate box)*

Exempt	X **Section 326 – Categorical Exemption**	**Section 327 – Non-Categorical Exemption**

Current Programming Dates (*as appropriate)*

	PE/ Environmental	ENG	ROW	CON
Start	Spring 2021	Fall 2022	N/A	Winter 2023
End	Summer 2023	Summer 2023	N/A	Fall 2024

Project Purpose and Need (Summary): *(please be brief)*

Purpose

The purpose of the Project is to:

- Increase person throughput during peak hours.
- Improve travel time reliability to support buses and high-occupancy vehicles.
- Encourage mode shift by providing travel time savings for HOV and transit users.

Need

I-580 is one of Alameda County's key transportation routes, carrying over 200,000 vehicles per day in its most heavily used segments and serves as a primary conduit to the Transbay/ San Francisco – Oakland Bay Bridge (SFOBB) corridor. SFOBB is the most congested bridge in the San Francisco Bay Area, with the queues on I-580 WB approaching the SFOBB toll plaza bottleneck extending to the Interstate 980 (I-980)/State Route 24 (SR 24) Interchange (I-580 Post Mile 45.2) during the morning peak period from 6 A.M. to 10 A.M. These queues are exacerbated by the heavy weaving associated with lane changes prior to the I-80/I-580 junction. With the SFOBB traffic and population and employment around the San Francisco Bay Area anticipated to continue to grow, corridor improvements along I-580 are required to improve current and future travel conditions for the travelers who use the corridor.

Solutions to reduce the congestion along I-580 WB approaching the SFOBB toll plaza are limited by constrained right-of-way. Currently, the congestion approaching the SFOBB toll plaza is a result of lane changes required for vehicles to enter I-80 eastbound (EB) and WB from I-580 WB since lane changes typically require drivers to slow down to avoid crashes. These lane changes occur between the I-980/SR 24 Interchange (I-580 Post Mile 45.2) and the I-80 Interchange (I-580 Post Mile 46.2). Vehicles in the left lanes on I-580 WB need to cross from the left to right lanes to enter I-80 EB. Simultaneously, vehicles entering I-580 WB from I-980/SR 24 must cross from the right to the left lanes of I-580 to enter I-80 WB and SFOBB. The right-of-way is constrained to existing roadways that could not be expanded without demolition of surrounding uses in the dense urban setting or encroachment into the jurisdictional San Francisco Bay area. Solutions must focus on implementing travel demand management to increase person throughput, namely increased HOV use.

Surrounding Land Use/ Traffic Generators (*especially effect on diesel traffic)*
The project will be constructed entirely within the existing right-of-way designated for transportation use. Within the area, I-580 serves activity areas in the cities of Oakland and Emeryville. The proposed Project is surrounded by high-density and single-family residential, and commercial land uses. Diesel heavy truck traffic accounts for approximately 3 percent of the total traffic volumes along I-580 within the Project limits. The Project would not affect the diesel traffic volume between No Build and Build scenarios.

Brief summary of assumptions and methodology used for conducting analysis
The traffic data collected and the 2050 projected volumes assume a gradual annual increase in traffic volumes not related to the Project. Traffic data shows truck percentages generally consistent between Build and No Build scenarios. The data in the No Build and Build scenarios determined the Project would not increase traffic congestion in the westbound direction on I-580 approaching the Broadway-Richmond Boulevard Undercrossing from the I-80 Connector when compared to a no build scenario.

Opening Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility
Table 1 - Opening Year (2025) No Build AADT below highlights the No Build Annual Average Daily Traffic (AADT) of three I-580 segments in the westbound direction: Before the I-980/Highway 24 interchange (from the Harrison on-ramp to the San Pablo off-ramp), After the interchange (from the I-980 on-ramp to the I-80 off-ramp), and the connector from I-580 to the Bay Bridge. On I-580 before the interchange, trucks are approximately 3.76 percent of total AADT or 2,993 trucks in the westbound direction. I-580 after the interchange would have approximately 2.4 percent of trucks in 2025 or approximately 1,163 trucks. The I-580 Connector would have approximately 3.62 percent of AADT as trucks or approximately 2,361 trucks in the westbound. The Project would not increase the total number of lanes or create additional capacity. The intent of the Project is to reduce congestion along the Project alignment by increasing person throughput during peak hours, improving travel time reliability to support buses and HOV vehicles, and encouraging mode shift by providing travel time savings. The conversion of one GP lane to an HOV lane would not result in increases in AADT in the corridor.

Table 1: Opening Year (2025) No Build AADT

Segment	Total AADT[1]	Truck AADT	Truck
I-580 WB east of the Highway 24 and I-980 Interchange			
I-580 West Bound	79,510	2,993	3.76%
Harrison On	9,150	1,489	16.27%
I-980 Off	11,380	1,582	13.91%
SR-24 Off	17,830	1,065	5.98%
San Pablo Off	10,991	669	6.09%
I-580 (Park)	85,043	-	-
Park Blvd On	14,694	-	-
I-580 WB (Park & Lakeshore)	99,737	-	-
Lakeshore Off	10,502	-	-
I-580 WB (Lakeshore & Grand)	89,234	-	-
Grand Off	6,359	-	-
I-580 WB (Grand)	82,876	-	-
Grand On	14,327	4,671	32.60%
I-580 WB (Grand & Oakland)	97,203	4,671	4.81%
I-580 WB from the Highway 24/I-980 Interchange to I-580 WB Connector			
I-580 West Bound	48,460	1,163	2.40%
I-980 On	31,196	1,163	3.73%
SR-24 On	12,274	2,757	22.46%
I-80 Off	49,514	6,186	12.49%

I-580 WB Connector to I-80 WB			
I-580 to Bay Bridge	65,178	2,361	3.62%
[1] Traffic data provided by Elite Transportation Group, January 2024			

Table 2- Opening Year (2025) With Project AADT below highlights the AADT of three I-580 segments in the westbound direction: Before the I-980/Highway 24 interchange (from the Harrison on-ramp to the San Pablo off-ramp), After the interchange (from the I-980 on-ramp to the I-80 off-ramp), and the connector from I-580 to the Bay Bridge. On I-580 before the interchange, trucks are approximately 3.76 percent of total AADT or, 2,990 trucks in the westbound direction. I-580 after the interchange would have approximately 2.38 percent of trucks in 2025 or approximately 1,136 trucks. The I-580 Connector would have approximately 3.59 percent of AADT as trucks or approximately 2,272 trucks in the westbound. It should be noted that with the mode shift assumptions, the mainline segments of I-580 would experience a reduced AADT volume. The segments will also see a generally reduced percentage of trucks in the build scenario (except for the Harrison on-ramp and the SR-24 off-ramp which have a 0.1% increase in the truck AADT and the SR-24 on-ramp which has an approximate increase in truck ADT of 0.3%). The Project would not increase the total number of lanes or create additional capacity. The intent of the Project is to reduce congestion along the Project alignment by increasing person throughput during peak hours, improving travel time reliability to support buses and HOV vehicles, and encouraging mode shift by providing travel time savings. The conversion of one GP lane to an HOV lane would not result in increases in traffic volumes.

Table 2: Opening Year (2025) With Project AADT

Segment	Total AADT[1]	Truck AADT	Truck
I-580 WB east of the Highway 24 and I-980 Interchange			
I-580 West Bound	79,422	2,990	3.76%
Harrison On	9,047	1,481	16.37%
I-980 Off	11,518	1,595	13.85%
SR-24 Off	17,855	1,076	6.02%
San Pablo Off	10,869	664	6.10%
I-580 (Park)	85,119	-	-
Park Blvd On	14,599	-	-
I-580 WB (Park & Lakeshore)	99,719	-	-
Lakeshore Off	10,523	-	-
I-580 WB (Lakeshore & Grand)	89,195	-	-
Grand Off	6,369	-	-
I-580 WB (Grand)	82,826	-	-
Grand On	14,451	4,684	32.41%
I-580 WB (Grand & Oakland)	97,277	4,684	4.82%
Oakland Off	17,855	1,694	9.49%
I-580 WB from the Highway 24/I-980 Interchange to I-580 WB Connector			
I-580 West Bound	47,777	1,136	2.38%
I-980 On	30,692	1,112	3.62%
SR-24 On	11,844	2,699	22.79%
I-80 Off	49,614	6,124	12.34%
I-580 WB Connector to I-80 WB			
I-580 to Bay Bridge	63,288	2,272	3.59%
[1] Traffic data provided by Elite Transportation Group, January 2024			

RTP Horizon Year/ Design Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Table 3, Future (2050) No Build AADT below highlights the No Build scenario of three I-580 segments in the westbound direction: Before the I-980/Highway 24 interchange (from the Harrison on-ramp to the San Pablo off-ramp), after the interchange (from the I-980 on-ramp to the I-80 off-ramp), and the connector from I-580 to the Bay Bridge. On I-580 before the interchange, trucks are approximately 3.88 percent of total AADT or 3,820 trucks in the westbound direction. I-580 after the interchange would have approximately 2.9 percent of trucks in 2050 or approximately 1,704 trucks. The I-580 Connector would have approximately 4.9 percent of AADT as trucks or approximately 4,414 trucks in the westbound. The Project would not increase the total number of lanes or create additional capacity. The intent of the Project is to reduce congestion along the Project alignment by increasing person throughput during peak hours, improving travel time reliability to support buses and HOV vehicles, and encouraging mode shift by providing travel time savings. The conversion of one GP lane to an HOV lane would not result in increases in traffic volumes.

Table 3: Future (2050) No Build AADT

Segment	Total AADT[1]	Truck AADT	Truck
I-580 WB east of the Highway 24 and I-980 Interchange			
I-580 West Bound	98,372	3,820	3.88%
Harrison On	11,502	1,894	16.47%
I-980 Off	17,764	2,102	11.83%
SR-24 Off	21,730	1,231	5.66%
San Pablo Off	11,621	677	5.83%
I-580 (Park)	112,280	-	-
Park Blvd On	17,926	-	-
I-580 WB (Park & Lakeshore)	130,205	-	-
Lakeshore Off	12,674	-	-
I-580 WB (Lakeshore & Grand)	117,532	-	-
Grand Off	12,829	-	-
I-580 WB (Grand)	104,703	-	-
Grand On	16,809	6,253	37.20%
I-580 WB (Grand & Oakland)	121,512	6,253	5.15%
Oakland Off	23,140	2,431	10.51%
I-580 WB from the Highway 24/I-980 Interchange to I-580 WB Connector			
I-580 West Bound	58,759	1,704	2.90%
I-980 On	41,794	1,893	4.53%
SR-24 On	23,698	4,314	18.20%
I-80 Off	62,959	7,995	12.70%
I-580 WB Connector to I-80 WB			
I-580 to Bay Bridge	90,035	4,414	4.90%

[1] Traffic data provided by Elite Transportation Group, January 2024

Table 4 – Future (2050) With Project AADT below highlights three I-580 segments in the westbound direction: (Before the I-980/Highway 24 interchange from the Harrison on-ramp to the San Pablo off-ramp, After the interchange from the I-980 on-ramp to the I-80 off-ramp, and the connector from I-580 to the Bay Bridge). On I-580 before the interchange, trucks are approximately 3.89 percent of total AADT or 3,808 trucks in the westbound direction. I-580 after the interchange would have approximately 2.84 percent of trucks or approximately 1,579 trucks. The I-580 Connector would have approximately 4.92 percent of AADT as trucks or approximately 4,007 trucks in the westbound. It should be noted that the Harrison on ramp results in a 0.4% increase in truck AADT. However, most segments result in a reduced total AADT and truck AADT in the build scenario (with the exception of the Harrison on-ramp, SR-24 off-ramp, and SR-24 on-ramp which have an approximate 0.4%, 0.2%, and 0.4% increase in the truck AADT, respectively). The Project would not increase the

total number of lanes or create additional capacity. The intent of the Project is to reduce congestion along the Project alignment by increasing person throughput during peak hours, improving travel time reliability to support buses and HOV vehicles, and encouraging mode shift by providing travel time savings. The conversion of one GP lane to an HOV lane would not result in increases in traffic volumes.

Table 4: Future (2050) With Project AADT

Segment	Total AADT[1]	Truck AADT	Truck
I-580 WB east of the Highway 24 and I-980 Interchange			
I-580 West Bound	97,970	3,808	3.89%
Harrison On	11,032	1,858	16.84%
I-980 Off	18,396	2,158	11.73%
SR-24 Off	21,842	1,278	5.85%
San Pablo Off	11,064	651	5.88%
I-580 (Park)	112,626	-	-
Park Blvd On	17,494	-	-
I-580 WB (Park & Lakeshore)	130,121	-	-
Lakeshore Off	12,771	-	-
I-580 WB (Lakeshore & Grand)	117,350	-	-
Grand Off	12,874	-	-
I-580 WB (Grand)	104,476	-	-
Grand On	17,376	6,314	36.34%
I-580 WB (Grand & Oakland)	121,852	6,314	5.18%
Oakland Off	23,882	2,506	10.49%
I-580 WB from the Highway 24/I-980 Interchange to I-580 WB Connector			
I-580 West Bound	55,637	1,579	2.84%
I-980 On	39,489	1,663	4.21%
SR-24 On	23,698	4,314	18.20%
I-80 Off	63,414	7,714	12.16%
I-580 WB Connector to I-80 WB			
I-580 to Bay Bridge	81,395	4,007	4.92%

[1] Traffic data provided by Elite Transportation Group, January 2024

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Not Applicable. The Project does not involve interchanges or intersections.

RTP Horizon Year/ Design Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Not Applicable. The Project does not involve interchanges or intersections.

Opening Year: If facility is bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses

Not applicable. The Project is not a bus, rail, or intermodal facility, it is a highway improvement.

RTP Horizon Year/ Design Year: If facility is bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses

Not applicable. The Project is not a bus, rail, or intermodal facility, it is a highway improvement.

Describe potential traffic redistribution effects of congestion relief (*impact on other facilities)*

The Project is located within an urbanized area of the Cities of Oakland and Emeryville and its construction would result in minimal or no traffic redistribution in the project area because of the limited parallel routes and the congested network in the project area that lead to the Bay Bridge. The proposed conversion of a GP lane to a HOV on I-580 is anticipated to improve overall traffic operations. The Project would not create any new connections to other roadways or areas, and the project would not open any new areas to development. Similarly, the overall capacity of I-580 in the Project site would not substantially change because the Project would not add any new through lanes to those roadways. The anticipated mode shift from SOVs to HOVs, and the associated increase in person throughput would contribute to a reduction in delay and improved level of service operation during peak hours in the immediate Project area.

Comments/Explanation/Details *(please be brief)*

The proposed project is in a nonattainment area for federal $PM_{2.5}$ standards. Therefore, according to 40 CFR Part 93, a hotspot analysis is required for conformity purposes. However, the Environmental Protection Agency (EPA) does not require a quantitative hotspot analysis for projects that are not a project of air quality concern (POAQC). Five types of projects listed in 40 CFR Section 93.123(b)(1) qualify as a POAQC. The following discussion evaluates whether the proposed project falls into any of these POAQC categories.

1. The project is not a new or expanded highway project that would have a significant number of or increase in the number of diesel vehicles (40 CFR Section 93.123 (b)(1)(i)).

The traffic analysis for this Project to date shows that the percentage of trucks will generally remain the same with and without the Project and the AADT will not substantially change with the Project. The Project does not increase capacity, therefore AADT would not increase in the Build scenario. As discussed above, the Project does not involve interchanges or intersections and would not affect LOS.

2. The project is not likely to affect any intersections (40 CFR Section 93.123 (b)(1)(ii)).

As described above under "Describe potential traffic redistribution effects of congestion relief," the Project would improve person throughput during peak hours and travel time reliability to support buses and high-occupancy vehicles and encourage mode shift by converting a GP lane to a HOV lane. The Project would improve safety and level of service operation in the immediate Project area.

The Project would not affect any intersections and would provide an extension of the I-580 HOV lane. This change would improve the level of service operation in the immediate area and would relieve congestion along the highway.

3. The project does not include the construction of a new bus or rail terminal with a significant number of diesel vehicles congregating at a single location (40 CFR Section 93.123 (b)(1)(iii)).

Not applicable - No bus or rail terminals are affected by the Project.

4. The project does not expand an existing bus or rail terminal with significant increases in the number of diesel vehicles congregating at a single location (40 CFR Section 93.123 (b)(1)(iv)).

Not applicable - No bus or rail terminals are affected by the Project.

5. The project is not in or affecting locations, areas or categories of sites that are identified in the $PM_{2.5}$ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation (40 CFR Section 93.123 (b)(1)(v)).

   The proposed Project is consistent with MTC RTP (IDs 04-ALA-580; 21-T06-049) and is *intended to meet the transportation needs in the area based on local land use plans. EPA's March 2006 guidance document, Transportation Guidance for Qualitative Hot-spot Analysis in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas, references two-step criteria to identify "a significant volume of diesel truck traffic." The first criterion is facilities with greater than 125,000 ADT volumes. If the first criterion is met, the second criterion is that 8 percent or more of said traffic volumes (i.e., 10,000 vehicles or more) are diesel truck traffic volumes. As discussed above, ADT volumes are not greater than 125,000 on the specified road segments. Furthermore, the truck volumes along the segments do not exceed 10,000 vehicles.*
   The purpose of the Project will alter an existing lane along the highway and, as stated previously, will not include an increase in the total number of lanes or create additional capacity. Therefore, the project would not result in increases traffic volumes. The Project does not affect locations identified in an applicable implementation plan or implementation plan submission. On January 9, 2013, the U.S. EPA issued a final rule that determined the San Francisco Bay Area air basin has attained the 24-hour PM2.5 National Ambient Air Quality Standards (NAAQS). As a result, new state implementation plan (SIP) provisions are not necessary to demonstrate how the air basin will attain the standard.

Based on the evaluation above, the Project should not be considered a POAQC and does not require a quantitative hot-spot analysis to demonstrate that it will not cause or worsen an existing $PM_{2.5}$ violation.

Figure 1: Project Vicinity

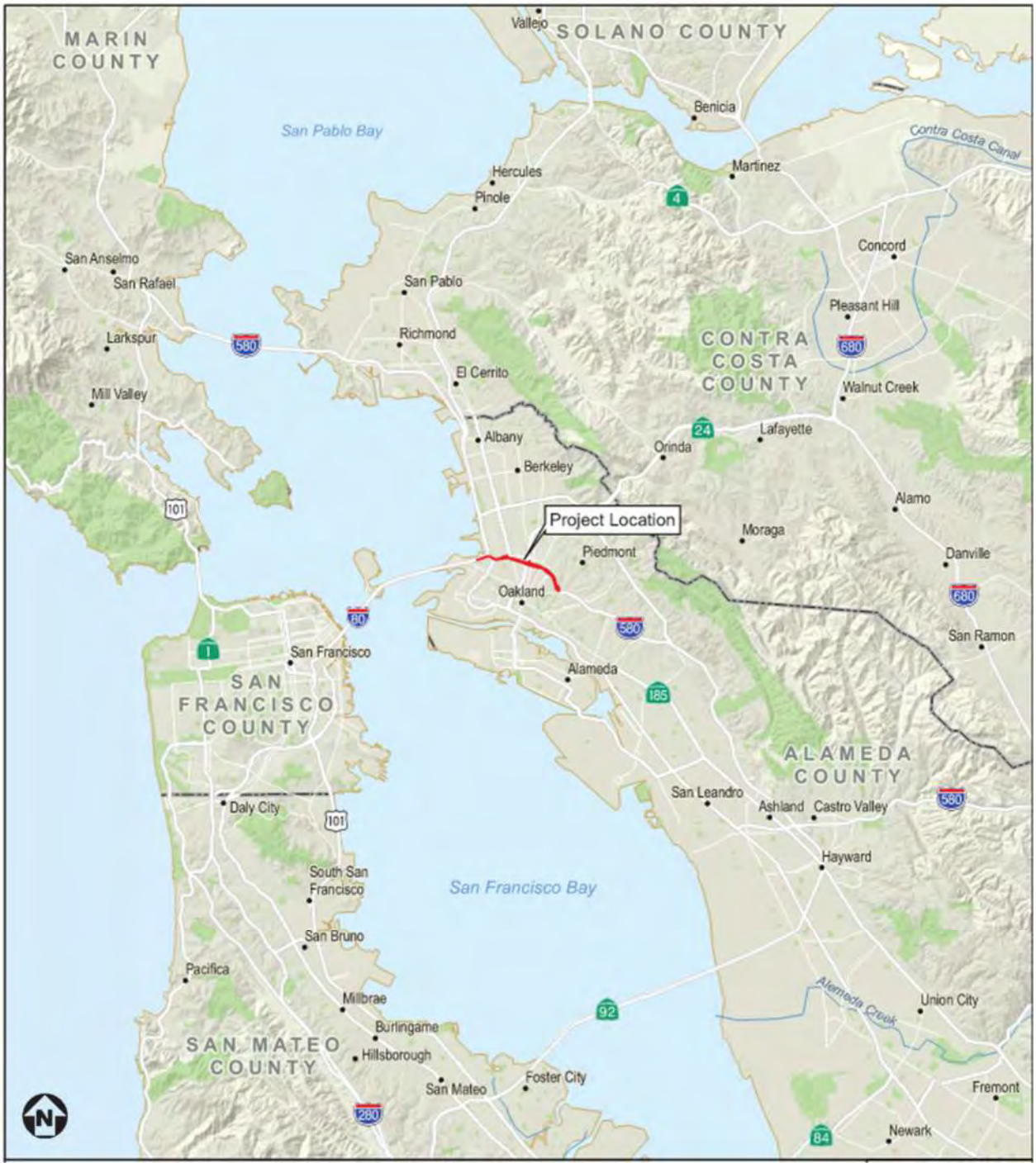
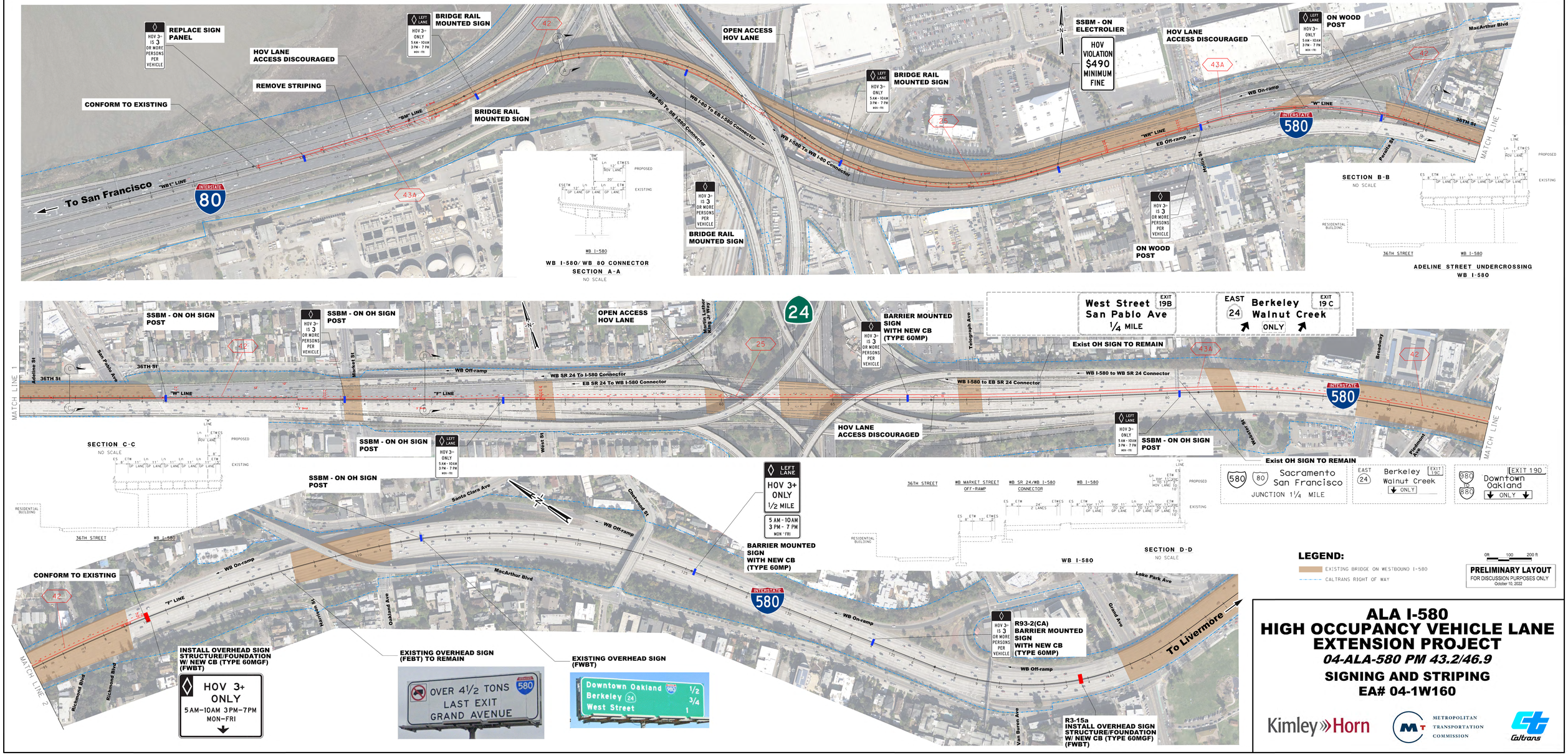


Figure 2: Project Location



ALA I-580
HIGH OCCUPANCY VEHICLE LANE EXTENSION PROJECT

04-ALA-580 PM 43.2/46.9

SIGNING AND STRIPING

EA# 04-1W160

Kimley»Horn

METROPOLITAN TRANSPORTATION COMMISSION

Caltrans

Air Quality Conformity Task Force
Summary Meeting Notes
April 25, 2024

Participants:

Chadi Chazbek – Kimley-Horn
Rodney Tavitas – Caltrans
Celine Chen – FTA
Marianne Payne – Valley Link
Radhika Mothkuri – Caltrans
Michael Dorantes – EPA
Emma Maggioncalda – Caltrans
Cidney Chiu – Caltrans
Libby Nachman – MTC
Shilpa Mareddy – Caltrans
Jasmine Amanin – FHWA
Paul Hensleigh – YSAQMD
Eden Winniford – YSAQMD
Andrea Gordon – BAAQMD
Mark Tang – BAAQMD
Alexandra Haisley – AECOM
Jen McNeil Dhadwal – AECOM
Andrea Gordon – BAAQMD
Kien Le – Caltrans
Darrin Trageser – ICF
Ace Malisos – Kimley-Horn
Kevin Krewson – Caltrans
Michael Kay – AECOM
Suriya Vallamsundar – Trinity Consultants
Mallory Atkinson – MTC
John Saelee – MTC
Harold Brazil – MTC
Tanay Pradhan – Kimley-Horn
Karishma Becha – Caltrans
Keith Lay – ICF
Erika Espinosa Araiza – Caltrans
Erika Vaca – Caltrans

1. **Welcome and Self Introductions**: Harold Brazil (MTC) called the meeting to order at 9:35 am.

2. **$PM_{2.5}$ Project Conformity Interagency Consultation**

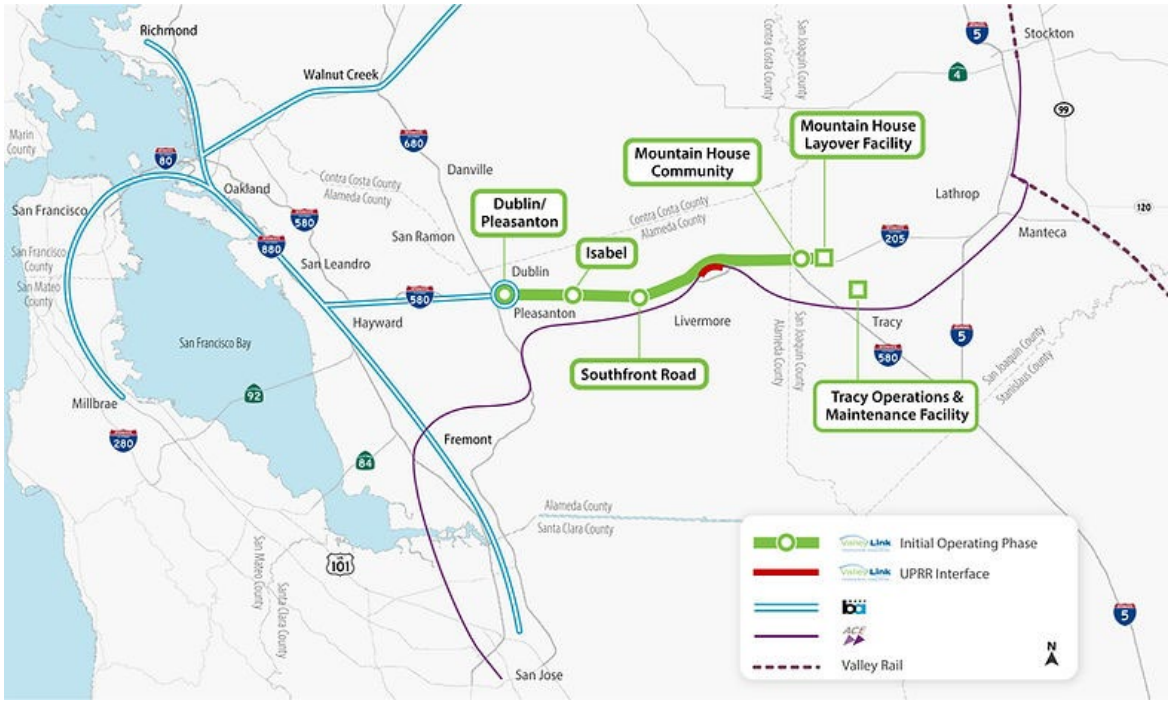
   a. **Consultation to Determine Project of Air Quality Concern Status**

      i. Valley Link Rail Project

Marianne Payne (Valley Link) began the presentation for the Valley Link Rail by introducing the Valley Link Rail project team and introduced herself as one of the 105,000 daily commuters traveling through the Altamont Pass and conveyed her compassion towards the project. Ms. Payne added that the project is very much needed in the region and the Valley Link Rail project team is currently advancing the environmental assessment.

Michael Kay (AECOM) from the Valley Link Rail project team identified the project's location as:

- Located in Alameda and San Joaquin Counties and No-Build Alternatives were presented
- Considering one Build Alternative and a No Build Alternative
- Build Alternative would construct passenger rail service along 22-mile corridor, providing all-day bidirectional service using zero emissions multiple unit (ZEMU) vehicles



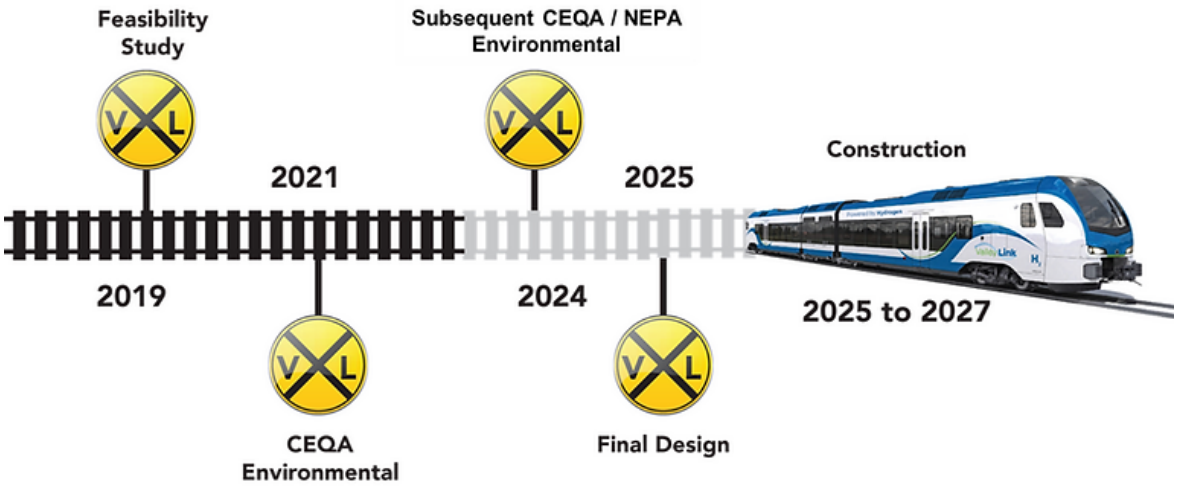
Mr. Kay summarized the Valley Link Rail project's purpose and need as follows:

- Provide a frequent and reliable transit option in the I-580 corridor while connecting housing, people, and jobs.
- Connect the Tri-Valley Hub to the state rail system to support megaregional mobility, furthering the vision of the California State Rail Plan, the Metropolitan Transportation Commission's (MTC)
- Plan Bay Area 2050, and the SJCOG Regional Transportation Plan and Sustainable Communities Strategy.
- Enhance mobility and accessibility options for all communities within the Northern California Megaregion.
- Support local, state (California Climate Initiative), and federal goals to promote sustainability, reduce greenhouse gas (GHG) emissions and enhance environmental quality.

Mr. Kay added that the Valley Link Rail project would establish a new passenger rail service along 22-mile corridor between the existing Dublin/Pleasanton BART Station and the proposed Mountain House Community Station in San Joaquin County and other project components would include:

- Alignment would be constructed within a combination of existing I-580 median, existing transportation corridor owned by Alameda County, existing Caltrans right-of-way, and new right-of-way to be acquired for the project.
- Four new stations and three support facilities would be constructed.
- I-580 would be shifted to accommodate the project while maintaining existing freeway lanes and interchange ramp configurations, including existing express lane facilities.

Mr. Kay concluded his presentation on the Valley Link Rail project by going through the project's schedule:



Question and Answer Discussion

Michael Dorantes (EPA) noted the proposed project is expected to result in a travel mode shift in turn reducing VMT on I-580 in the opening or horizon years and asked if there was ridership documentation showing the VMT reduction? Michael Kay (AECOM) indicated he did not have the VMT data immediately available – but, as a conservative approach, the Valley Link Rail project team did not take the travel mode shift VMT reduction in their emissions modeling.

Mr. Dorantes also asked if the Valley Link Rail project included public engagement meetings regarding the original CEQA document and if there were any concerns from the public about the project? Mr. Kay stated the project team had a public scoping meeting prior to the CEQA documentation completion and once the CEQA document was released for public review – 2 public hearings were conducted, one in the Tracy area and one in the Livermore area, to take public comment. (public hearings – (in person) May 8th in Livermore and May 9th in Mountain House; virtual option May 15th)

Mr. Kay added the Valley Link Rail project team and received several, extensive comments from the public and from regional and local agencies and the comments were addressed in the final document.

* *Note*: Draft SEIR open for public comment until June 6. See https://www.getvalleylinked.com/

Jasmine Amanin (FHWA) asked if the Valley Link Rail project is intended to be implemented in phases and Mr. Kay indicated that no, the project would not be phased over time and the proposed project includes the alignment as described in the presentation.

> ***Final Determination:*** With input from EPA, FTA, FHWA and Caltrans (deferring their determination to FHWA), the Task Force concluded the Valley Link Rail project was not of air quality concern.

ii. I-580 Westbound High Occupancy Vehicle Lane Conversion Project

Ace Malisos (Kimley-Horn) began the presentation for the I-580 Westbound High Occupancy Vehicle Lane Conversion project by reminding the Task Force that this project was previously reviewed by the group last year and the project team now has updated traffic data, and this presentation will be summarized of those updates.

Mr. Malisos added that the project is located along westbound I-580 within the city of Oakland and extends from the Bay Bridge Toll Plaza to the Lake Park Avenue overcrossing.

Project Location

Mr. Malisos went through the I-580 Westbound High Occupancy Vehicle Lane Conversion project's purpose, which is to:

- Increase person throughput during peak hours
- Improve travel time reliability to support buses and high-occupancy vehicles
- Encourage mode shift by providing travel time savings for HOV and transit users

Mr. Malisos provided an informational listing of the I-580 Westbound High Occupancy Vehicle Lane Conversion project's facets:

- Conversion of the existing left lane into an HOV 3+ lane on WB I-580
- Installation of two overhead sign structures
- Installation of barrier-mounted and bridge rail-mounted signs
- Pavement delineation for the proposed HOV lane
- The project is constructed entirely within the existing State ROW
- No pavement widening is anticipated for the project
- Categorical Exemptions for CEQA and Categorical Exclusion for NEPA environmental clearance

Mr. Malisos also mentioned that additional roadway segments were included for analysis and ADT on previously analyzed roadways were updated.

Mr. Malisos discussed how approximately four roadside signs indicating the HOV lane restrictions and HOV lane operating hours would be installed on existing overhead sign poles and concrete barriers up to 1 mile in advance

of the beginning of the proposed HOV lane. Three new overhead sign structures to support signs would be installed, two east of the Lakeshore Park Avenue undercrossing (I-580 Post Mile 43.5) and one near the Broadway-Richmond Boulevard undercrossing (I-580 Post Mile 44.5). Mr. Malisos also disclosed that approximately ten additional roadside signs would be installed along the HOV lane on existing overhead sign poles and lighting poles, replaced concrete barriers, and new wood posts.

Installation of Signs

Michael Dorantes (EPA) asked that since the updated data doesn't change the overall traffic data too much – what were the key changes that occurred with the updated modeling for the traffic data on the project? Mr. Malisos responded by indicating that some segments were not originally included in the traffic analysis because they were not affected by the project – but the subsequent traffic study ended up including those segments. The project team wanted to be consistent with what was analyzed in the traffic study and the additional segments were included in the project-level conformity assessment form. Also, Mr. Malisos mentioned that there were some changes in the traffic volumes and the traffic engineers on the project team attribute the changes to rounding error.

> ***Final Determination:*** With input from EPA, FTA, Caltrans and FHWA (deferring their determination to Caltrans), the Task Force concluded the I-580 Westbound High Occupancy Vehicle Lane Conversion project was not of air quality concern.

3. Approach to the Conformity Analysis for the 2025 Transportation Improvement Program (TIP)

Harold Brazil (MTC) discussed the approach to the Conformity Analysis for the 2025 TIP and pointed out key aspects of the analysis including:

- <u>Latest Planning Assumptions:</u>
    - UrbanSim; regional land use forecasting model – UrbanSim relies on regional control totals of jobs, housing, and population, developed and adopted by ABAG, to analyze the effects of land use and transportation strategies on the forecasted regional development pattern.
    - Travel Model One; Updated travel demand forecasts using MTC's Travel Model One (version 1.5.2), released March 2019, was developed for the Horizon initiative, so it added representation for:

        - ride-hailing (or Transportation Network Company - TNC) and taxi modes
        - autonomous vehicles

      with the most up to date highway and transit networks.
    - EMFAC2021; VMT estimates used in the federally approved EMFAC2021 emission model will be consistent with the California Air Resources Board's (CARB) recommended adjustment methods. This newest model reflects CARB's current understanding of statewide and regional vehicle activities, emissions, and recently adopted regulations such as Advanced Clean Trucks (ACT) and Heavy Duty Omnibus regulations.

- Emissions Budget/Interim Emissions:

    - For Ozone: MTC will use the 1-hour motor vehicle emissions budget from the 2001 Ozone Attainment Plan as the 8-hour motor vehicle emissions budget to demonstrate conformity with the 8-hour ozone standard.
    - For $PM_{2.5}$: MTC will use the "Baseline Year Test" interim emission test to demonstrate conformity with the 24-hour PM2.5 standard. Consistent with EPA's Transportation Conformity Rule $PM_{2.5}$ and PM10 Amendments; Final Rule published in the federal register in March 2010.

Schedule for the Transportation Air Quality Conformity Analysis for the 2025 Transportation Improvement Program (TIP)

Activity	Timeline
Conformity Task Force Reviews Proposed Conformity Approach	April 25, 2024
MTC Staff Conducts Technical Analysis & Report Preparation	May 2024
Release Draft Conformity Analysis for Public Review and Begin Public Comment Period	June 18, 2024
Discuss Draft Conformity Analysis with AQCTF	June 27, 2024
End of Public Comment Period	July 18, 2024
AQCTF Briefing on Responses to Comments	July 25, 2024
Committee Approval	September 11, 2024
Commission Approval	September 25, 2024
Expected FHWA/FTA Final Approval of 2025 TIP and AQ Conformity Analysis	*Later Fall 2024*

Task Force members had no questions or comments.

4. Consent Calendar

a. April 25, 2024 Air Quality Conformity Task Force Meeting Summary

Final Determination; With input from all members, the Task Force concluded that the consent calendar was approved.

5. Other Items

- Harold Brazil (MTC) shared the MTC website location for current and past Task Force meetings at: https://mtc.ca.gov/sites/default/files/documents/2024-04/AQCTF_Agenda_Packet_04_25_24.pdf

- Michael Dorantes (EPA) updated the group with information from EPA's transportation conformity headquarter office applicable to exemptions applied for transportation enhancement activities for interested MPOs to use a resource. Mr. Dorantes also stated that these types of projects should no longer be referred to as *transportation enhancement activities*, and they have been rebranded in a way to transportation alternatives.
  See link at: https://www.fhwa.dot.gov/environment/transportation_alternatives/

From: Fund Management System <fms@bayareametro.gov>
Sent: Friday, February 10, 2023 3:37 PM
To: Kevin Chen
Cc: Fund Management System; Harold Brazil
Subject: FMS POAQC Project TIP ID: ALA190018 (Bay Bridge Forward: Alameda I-580 WB HOV Lane Ext) update: Project is a not a POAQC

Dear Project Sponsor

Based on the recent interagency consultation with the Air Quality Conformity Task force, Project TIP ID ALA190018 (FMS ID: 6963) does not fit the definition of a project of air quality concern as defined by 40 CFR 93.123(b)(1) or 40 CFR 93.128 and therefore is not subject to PM2.5 project level conformity requirement. Please save this email as documentation confirming the project has undergone and completed the interagency consultation requirement for PM2.5 project level conformity. Note project sponsors are required to undergo a proactive public involvement process which provides opportunity for public review as outlined by 40 CFR 93.105(e). For projects that are not of air quality concern, a comment period is only required for project level conformity determinations if such a comment period would have been required under NEPA. For more information, please see FHWA PM2.5 Project Level Conformity Frequently Asked Questions (FAQ):
http://www.fhwa.dot.gov/environment/air_quality/conformity/policy_and_guidance/faqs/pm25faqs.cfm

If you have any questions, please direct them to Harold Brazil at hbrazil@bayareametro.gov or by phone at 415-778-6747

METROPOLITAN
TRANSPORTATION
COMMISSION

Bay Area Metro Center
375 Beale Street, Suite 800
San Francisco, CA 94105
415.778.6700
www.mtc.ca.gov

Air Quality Conformity Task Force Meeting

Metropolitan Transportation Commission

Join Zoom Meeting @
https://bayareametro.zoom.us/j/84383698853
Meeting ID: 843 8369 8853

(Additional Zoom Meeting Call-In Info on Next Page)

January 26, 2023
9:30 a.m. –11:00 a.m.

AGENDA

1. Welcome and Introductions

2. $PM_{2.5}$ Project Conformity Interagency Consultations

   a. Consultation to Determine Project of Air Quality Concern Status
      i. Interstate 680 Northbound Express Lane Completion Project
      ii. Open Road Tolling Conversion Northern Bridges Project
      iii. Richmond-San Rafael Bridge Open Road Tolling and I-580 Westbound High Occupancy Vehicle Lane Project
      iv. I-580 Westbound High Occupancy Vehicle Lane Conversion Project

   b. Confirm Project Projects Exempt from $PM_{2.5}$ Conformity
      Projects Exempt Under 40 CFR 93.126 – Not of Air Quality Concern

3. Projects with Regional Air Quality Conformity Concerns

   a. Review of the Regional Conformity Status for New and Revised Projects
      3a_Regional_AQ_Conformity_Review_012623.pdf
      3a_Attachment-A_List_of_Proposed_New_Projects_012623.pdf
   b. Dumbarton Forward Operational Improvements Project
      – Task Force discussion for regional conformity determination

4. Consent Calendar

   a. December 1, 2022 Air Quality Conformity Task Force Meeting Summary

5. Other Items

   Next Meeting: February 23, 2023

MTC Staff Liaison: Harold Brazil hbrazil@bayareametro.gov

Application of Criteria for a Project of Air Quality Concern
Project Title: I-580 Westbound High Occupancy Vehicle Lane Conversion Project
Project Summary for Air Quality Conformity Task Force Meeting: January 26, 2023

Description

- Project converts 1.7 miles of an existing general purpose (GP) lane to a HOV 3+ lane.
- The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to immediately west (I-580 Post Mile 44.7) of the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5).
- Project limit extends further along I-580 WB from the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) to the Lakeshore Park Undercrossing (I-580 PM 43.6) for the installation of HOV lane signs only.
- GP Lane conversion to a HOV lane would entail the removal of current striping, application of new striping, and installation of signs.
- The HOV lane would be separated from the remaining GP lanes by a combination of dashed white striping (continuous access), a single solid white stripe (access discouraged), and solid, double, white striping (restricted access).
- Signs indicating the beginning of the HOV lane, HOV lane restrictions, and HOV lane operating hours would be installed starting west of the Lakeshore Park Undercrossing (I-580 Post Mile 43.6), approximately 1 mile in advance of the beginning of the proposed HOV lane (I-580 Post Mile 44.7).
- The project would increase person throughput during peak hours, improve travel time reliability, and encourage mode shift.

Background

- Particulate Matter Hot Spot Analysis Project Summary Form currently being prepared
- Draft Air Quality Assessment Report currently being prepared
- Final Air Quality Assessment Report Anticipated Approval April 2023
- Draft Environmental Document Approval May 2023
- Air Quality Conformity Report Approval June 2023
- Final Environmental Document July 2023

Not a Project of Air Quality Concern (40 CFR 93.123(b)(1))

(i) New or expanded highway projects with significant number/increase in diesel vehicles?

- Not a new or expanded highway project
- No increase in the number of lanes or capacity improvements
- No increase in traffic volume or truck percentages on I-580

(ii) Affects intersections at LOS D, E, or F with a significant number of diesel vehicles?

- The project does not include interchanges or intersection LOS's.
- The project would not result in substantial redistribution of traffic or changes in the percentage of truck trips through the site.
- The project would not create any new connections to other roadways or areas, and the project would not open any new areas to development.
- No project changes to land use that would substantially affect diesel traffic percentage.

(iii) New bus and rail terminals and transfer points? — Not Applicable

(iv) Expanded bus and rail terminals and transfer points? — Not Applicable

(v) Affects areas identified in PM_{10} or $PM_{2.5}$ implementation plan as site of violation?

- The project is consistent with MTC RTP (ID 04-ALA-580; 21-T06-049) and is intended to meet the transportation needs in the area based on local land use plans.
- No increase in traffic volume or truck percentages on I-580.
- The purpose of the project is to promote mode shift by providing travel time savings for carpooling and transit riders, reduce VMT and corresponding emissions, improve safety, and improve operational efficiency.

Project Assessment Form for $PM_{2.5}$ Interagency Consultation

RTIP ID# 04-ALA-580; 21-T06-049

TIP ID# ALA190018

Air Quality Conformity Task Force Consideration Date
January 26, 2023

Project Description *(clearly describe project)*
The Bay Bridge Forward (BBF) Interstate 580 (I-580) Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project (Project) is located in the City of Oakland within Alameda County, California. The Metropolitan Transportation Commission (MTC) is the Project sponsor, implementing agency, and lead agency. Project partners include the California Department of Transportation (Caltrans) and the Alameda County Transportation Commission (CTC).
The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to an HOV lane. Signing and striping work would occur along the existing HOV lane between I-580 Post Mile 46.9 and I-580 Post Mile 46.7. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector to approximately the Broadway-Richmond Boulevard Undercrossing. The Project limit extends further along I-580 WB from the Broadway-Richmond Boulevard Undercrossing to I-580 Post Mile 43.2 at the Lake Park Ave Overcrossing for the installation of advanced HOV lane signs and restriping. No HOV lane extension is proposed for this portion of the Project site.
GP Lane conversion to an HOV lane would entail the removal of current striping, application of new striping, and installation of signs. The proposed HOV lane would be an HOV 3+. The HOV lane would be separated from the remaining GP lanes by a combination of dashed white striping (continuous access), a single solid white stripe (access discouraged), or solid, double, white striping (restricted access). The proposed HOV lane would operate during the same hours as the existing facility between 5 A.M and 10 A.M. and 3 P.M. and 7 P.M. Monday through Friday. All Project work would occur within the current freeway roadway width and right-of-way.
Approximately four roadside signs indicating the HOV lane restrictions and HOV lane operating hours would be installed on existing overhead sign poles and concrete barriers up to 1 mile in advance of the beginning of the proposed HOV lane. Two new overhead sign structures would be installed, one immediately west of the Lakeshore Park Undercrossing (I-580 Post Mile 43.5) and one near the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5), to support one HOV lane sign each. Approximately ten additional roadside signs would be installed along the HOV lane on existing concrete barriers, overhead sign poles, and lighting poles and new wood posts.

Type of Project:
High Occupancy Vehicle (HOV) Lane Extension

County	**Narrative Location/ Route & Postmiles**
Alameda	The Project is located in Alameda County from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to immediately west (I-580 Post Mile 44.7) of the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) in the Cities of Oakland and Emeryville. **Caltrans 04-ALA-580-PM 43.2/46.9** **EA 04-1W160** **Project ID: 0420000336**

Lead Agency: *Metropolitan Transportation Commission (MTC)*

Contact Person	Phone #	Fax #	Email
Pamela Kwan	415.778.5378		pkwan@bayareametro.gov

Federal Action for which Project-Level PM Conformity is Needed (*check appropriate box)*

X **Categorical Exclusion (NEPA)**	**EA or Draft EIS**	**FONSI or Final EIS**	**PS&E or Construction**	**Other**

Schedules Date of Federal Action: June 22, 2023

NEPA Delegation – Project Type (*check appropriate box)*

Exempt	X **Section 326 – Categorical Exemption**	**Section 327 – Non-Categorical Exemption**

Current Programming Dates (*as appropriate)*

	PE/ Environmental	ENG	ROW	CON
Start	Spring 2021	Fall 2022	Summer 2022	Winter 2023
End	Summer 2023	Summer 2023	Late 2024	Fall 2024

Project Purpose and Need (Summary): *(please be brief)*

Purpose

The purpose of the Project is to:

- Increase person throughput during peak hours.
- Improve travel time reliability to support buses and high-occupancy vehicles.
- Encourage mode shift by providing travel time savings for HOV and transit users.

Need

I-580 is one of Alameda County's key transportation routes, carrying over 200,000 vehicles per day in its most heavily used segments and serves as a primary conduit to the Transbay/ San Francisco – Oakland Bay Bridge (SFOBB) corridor. SFOBB is the most congested bridge in the San Francisco Bay Area, with the queues on I-580 WB approaching the SFOBB toll plaza bottleneck extending to the Interstate 980 (I-980)/State Route 24 (SR 24) Interchange (I-580 Post Mile 45.2) during the morning peak period from 6 A.M. to 10 A.M. These queues are exacerbated by the heavy weaving associated with lane changes prior to the I-80/I-580 junction. With the SFOBB traffic and population and employment around the San Francisco Bay Area anticipated to continue to grow, corridor improvements along I-580 are required to improve current and future travel conditions for the travelers who use the corridor.

Solutions to reduce the congestion along I-580 WB approaching the SFOBB toll plaza are limited by constrained right-of-way. Currently, the congestion approaching the SFOBB toll plaza is a result of lane changes required for vehicles to enter I-80 eastbound (EB) and WB from I-580 WB since lane changes typically require drivers to slow down to avoid crashes. These lane changes occur between the I-980/SR 24 Interchange (I-580 Post Mile 45.2) and the I-80 Interchange (I-580 Post Mile 46.2). Vehicles in the left lanes on I-580 WB need to cross from the left to right lanes to enter I-80 EB. Simultaneously, vehicles entering I-580 WB from I-980/SR 24 must cross from the right to the left lanes of I-580 to enter I-80 WB and SFOBB. Therefore, solutions must focus on improving the efficiency along the corridor to reduce congestion approaching the toll plaza. Currently, there is no transit priority or HOV facility in the corridor. The lack of an HOV priority lane discourages people from taking transit or carpooling.

Surrounding Land Use/ Traffic Generators (*especially effect on diesel traffic)*

Within the area, I-580 serves activity areas in the cities of Oakland and Emeryville. The proposed Project is surrounded by high-density and single-family residential, and commercial land uses. Diesel heavy truck traffic accounts for approximately 3 percent of the total traffic volumes along I-580 within the Project limits.

Brief summary of assumptions and methodology used for conducting analysis

An Air Quality Study Report will be prepared to identify sensitive receptors and provide a quantitative analysis of construction-related emissions. The analysis will assess No Build and Build scenarios to determine whether the Project would reduce vehicle delay and traffic congestion in the westbound direction on I-580 approaching the Broadway-Richmond Boulevard Undercrossing from the I-80 Connector when compared to a no build scenario. It is anticipated that a carbon monoxide hot spot analysis is not needed.

Opening Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Table 1, Opening Year (2025) below highlights the No Build Annual Average Daily Traffic (AADT) of three I-580 segments (Before the I-980/Highway 24 interchange, After the interchange, and the connector from I-580 to the Bay Bridge) in the westbound direction based on orientation of the roadway. On I-580 before the interchange, trucks are approximately 3.9 percent of total AADT or 3,131 trucks in the westbound direction. I-580 after the interchange would have approximately 2.6 percent of trucks in 2025 or approximately 1,334 trucks. The I-580 Connector would have approximately 3.5 percent of AADT as trucks or approximately 2,270 trucks in the westbound. The Project would not add lanes or create additional capacity. Therefore, traffic volumes would not change between Build and No Build conditions.

Table 1: Opening Year (2025) No Build AADT

Segment	Total AADT[1]	Truck AADT	Truck
I-580 Before the Highway 24 and I-980 Interchange			
I-580 West Bound	80,543	3,131	3.9%
Harrison On	9,419	1,562	16.6%
I-980 Off	10,555	1,547	14.7%
SR-24 Off	17,103	1,046	6.1%
San Pablo Off	10,746	765	7.1%
I-580 After the Highway 24 and I-980 Interchange			
I-580 West Bound	51,560	1,334	2.6%
I-980 On	31,712	1,180	3.7%
SR-24 On	13,726	3,167	23.1%
I-80 Off	47,099	5,576	11.8%
Connector			
I-580 to Bay Bridge	64,276	2,270	3.5%

[1] Traffic data provided by Elite Transportation Group, December 2023

Table 2, Opening Year (2025) below highlights AADT of three I-580 segments (Before the I-980/Highway 24 interchange, After the interchange, and the connector from I-580 to the Bay Bridge) in the westbound direction based on orientation of the roadway with the Project. On I-580 before the interchange, trucks are approximately 4 percent of total AADT or 3,103 trucks in the westbound direction. I-580 after the interchange would have approximately 2.4 percent of trucks in 2025 or approximately 1,224 trucks. The I-580 Connector would have approximately 3.4 percent of AADT as trucks or approximately 2,113 trucks in the westbound. The Project would not add lanes or create additional capacity. Therefore, traffic volumes would not change between Build and No Build conditions.

Table 2: Opening Year (2025) With Project AADT

Segment	Total AADT[1]	Truck AADT	Truck
I-580 Before the Highway 24 and I-980 Interchange			

I-580 West Bound	80,424	3,103	3.9%
Harrison On	9,245	1,541	16.7%
I-980 Off	11,253	1,580	14.0%
SR-24 Off	17,310	1,065	6.1%
San Pablo Off	10,852	776	7.1%
I-580 After the Highway 24 and I-980 Interchange			
I-580 West Bound	50,255	1,224	2.4%
I-980 On	31,267	1,148	3.7%
SR-24 On	14,061	3,071	21.8%
I-80 Off	47,373	5,494	11.6%
Connector			
I-580 to Bay Bridge	62,587	2,113	3.4%
[1] Traffic data provided by Elite Transportation Group, December 2023			

RTP Horizon Year/ Design Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Table 3, Future (2050) AADT below highlights the No Build scenario of three I-580 segments (Before the I-980/Highway 24 interchange, After the interchange, and the connector from I-580 to the Bay Bridge) in the westbound direction based on orientation of the roadway. On I-580 before the interchange, trucks are approximately 4.3 percent of total AADT or 4,451 trucks in the westbound direction. I-580 after the interchange would have approximately 3.4 percent of trucks in 2050 or approximately 2,484 trucks. The I-580 Connector would have approximately 4.7 percent of AADT as trucks or approximately 3,998 trucks in the westbound. The Project would not add lanes or create additional capacity. Therefore, traffic volumes would not change between Build and No Build conditions.

Table 3: Future (2050) No Build AADT

Segment	Total AADT[1]	Truck AADT	Truck
I-580 Before the Highway 24 and I-980 Interchange			
I-580 West Bound	103,094	4,451	4.3%
Harrison On	12,734	2,229	17.5%
I-980 Off	13,992	1,940	13.9%
SR-24 Off	18,408	1,141	6.2%
San Pablo Off	10,498	1,115	10.6%
I-580 After the Highway 24 and I-980 Interchange			
I-580 West Bound	72,932	2,484	3.4%
I-980 On	44,153	1,973	4.5%
SR-24 On	30,335	6,190	20.4%
I-80 Off	51,919	5,206	10.0%
Connector			
I-580 to Bay Bridge	85,916	3,998	4.7%
[1] Traffic data provided by Elite Transportation Group, December 2023			

Table 4, Future (2050) AADT below highlights three I-580 segments (Before the I-980/Highway 24 interchange, After the interchange, and the connector from I-580 to the Bay Bridge) in the westbound direction based on orientation of the roadway with the Project. On I-580 before the interchange, trucks are approximately 4.2

percent of total AADT or 4,325 trucks in the westbound direction. I-580 after the interchange would have approximately 3.0 percent of trucks in 2050 or approximately 1,979 trucks. The I-580 Connector would have approximately 4.2 percent of AADT as trucks or approximately 3,281 trucks in the westbound. The Project would not add lanes or create additional capacity. Therefore, traffic volumes would not change between Build and No Build conditions.

Table 4: Future (2050) With Project AADT

Segment	Total AADT[1]	Truck AADT	Truck
I-580 Before the Highway 24 and I-980 Interchange			
I-580 West Bound	102,550	4,325	4.2%
Harrison On	11,938	2,134	17.9%
I-980 Off	17,185	2,089	12.2%
SR-24 Off	19,353	1,227	6.3%
San Pablo Off	10,984	1,163	10.6%
I-580 After the Highway 24 and I-980 Interchange			
I-580 West Bound	66,965	1,979	3.0%
I-980 On	42,116	1,826	4.3%
SR-24 On	31,868	5,749	18.0%
I-80 Off	53,168	4,832	9.1%
Connector			
I-580 to Bay Bridge	78,195	3,281	4.2%

[1] Traffic data provided by Elite Transportation Group, December 2023

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Not Applicable. The Project does not involve interchanges or intersections.

RTP Horizon Year/ Design Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Not Applicable. The Project does not involve interchanges or intersections.

Opening Year: If facility is bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses

Not applicable. The Project is not a bus, rail, or intermodal facility, it is a highway improvement.

RTP Horizon Year/ Design Year: If facility is bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses

Not applicable. The Project is not a bus, rail, or intermodal facility, it is a highway improvement.

Describe potential traffic redistribution effects of congestion relief (*impact on other facilities)*

The Project is located within an urbanized area of the Cities of Oakland and Emeryville and its construction would not result in substantial traffic redistribution. The Project is proposed to improve person throughput during peak hours and travel time reliability to support buses and HOV and encourage mode shift by converting a GP lane to a HOV lane. The Project would improve safety and level of service operation in the immediate Project area. While the proposed conversion of a GP lane to a HOV on I-580 would improve traffic operations, the overall capacity of I-580 would not substantially change because the segments nearby the Project would remain unchanged. The Project would not create any new connections to other roadways or areas, and the project would not open any new areas to development. Similarly, the overall capacity of I-580 in the Project site would not substantially change because the Project would not add any new through lanes to those roadways.

Comments/Explanation/Details *(please be brief)*

The proposed project is in a nonattainment area for federal $PM_{2.5}$ standards. Therefore, according to 40 CFR Part 93, a hotspot analysis is required for conformity purposes. However, the Environmental Protection Agency (EPA) does not require a quantitative hotspot analysis for projects that are not a project of air quality concern (POAQC). Five types of projects listed in 40 CFR Section 93.123(b)(1) qualify as a POAQC. The following discussion evaluates whether the proposed project falls into any of these POAQC categories.

1. The project is not a new or expanded highway project that would have a significant number of or increase in the number of diesel vehicles (40 CFR Section 93.123 (b)(1)(i)).

The traffic analysis for this Project to date shows that the percentage of trucks will remain the same with and without the Project and the AADT will remain the same with and without the Project. The Project does not increase capacity, therefore AADT would not change in the Build scenario. As discussed above, the Project does not involve interchanges or intersections and would not affect LOS.

2. The project is not likely to affect any intersections (40 CFR Section 93.123 (b)(1)(ii)).

As described above under "Describe potential traffic redistribution effects of congestion relief," the Project would improve person throughout during peak hours and travel time reliability to support buses and high-occupancy vehicles and encourage mode shift by converting a GP lane to a HOV lane. The Project would improve safety and level of service operation in the immediate Project area.

The Project would not affect any intersections and would provide an extension of the I-580 HOV lane. This change would improve the level of service operation in the immediate area and would relieve congestion along the highway.

3. The project does not include the construction of a new bus or rail terminal with a significant number of diesel vehicles congregating at a single location (40 CFR Section 93.123 (b)(1)(iii)).

Not applicable - No bus or rail terminals are affected by the Project.

4. The project does not expand an existing bus or rail terminal with significant increases in the number of diesel vehicles congregating at a single location (40 CFR Section 93.123 (b)(1)(iv)).

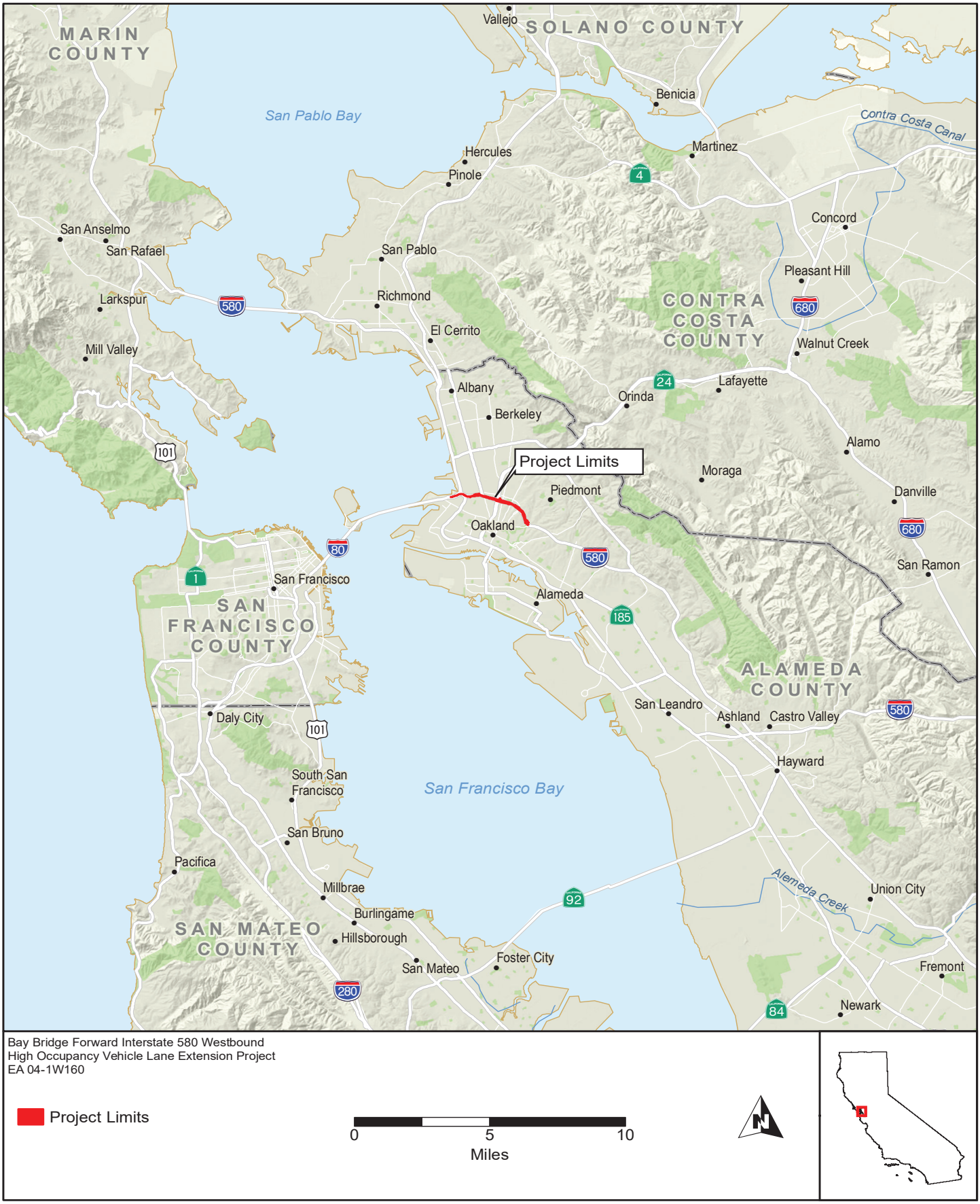
Not applicable - No bus or rail terminals are affected by the Project.

5. The project is not in or affecting locations, areas or categories of sites that are identified in the $PM_{2.5}$ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation (40 CFR Section 93.123 (b)(1)(v)).

The proposed Project is consistent with MTC RTP (IDs 04-ALA-580; 21-T06-049) and is *intended to meet the transportation needs in the area based on local land use plans. EPA's March 2006 guidance document, Transportation Guidance for Qualitative Hot-spot Analysis in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas, references two-step criteria to identify "a significant volume of diesel truck traffic." The first criterion is facilities with greater than 125,000 ADT volumes. If the first criterion is met, the second criterion is that 8 percent or more of said traffic volumes (i.e., 10,000 vehicles or more) are diesel truck traffic volumes. As discussed above, ADT volumes are not greater than 125,000 on the specified road segments. Furthermore, the truck volumes along the segments do not exceed 10,000 vehicles.*

The purpose of the Project is to alter an existing lane and add improvements along the highway. The Project does not include capacity improvements and therefore would not increase diesel truck volumes or AADT. The Project does not affect locations identified in an applicable implementation plan or implementation plan submission. On January 9, 2013, the U.S. EPA issued a final rule that determined the San Francisco Bay Area air basin has attained the 24-hour PM2.5 National Ambient Air Quality Standards (NAAQS). As a result, new state implementation plan (SIP) provisions are not necessary to demonstrate how the air basin will attain the standard.

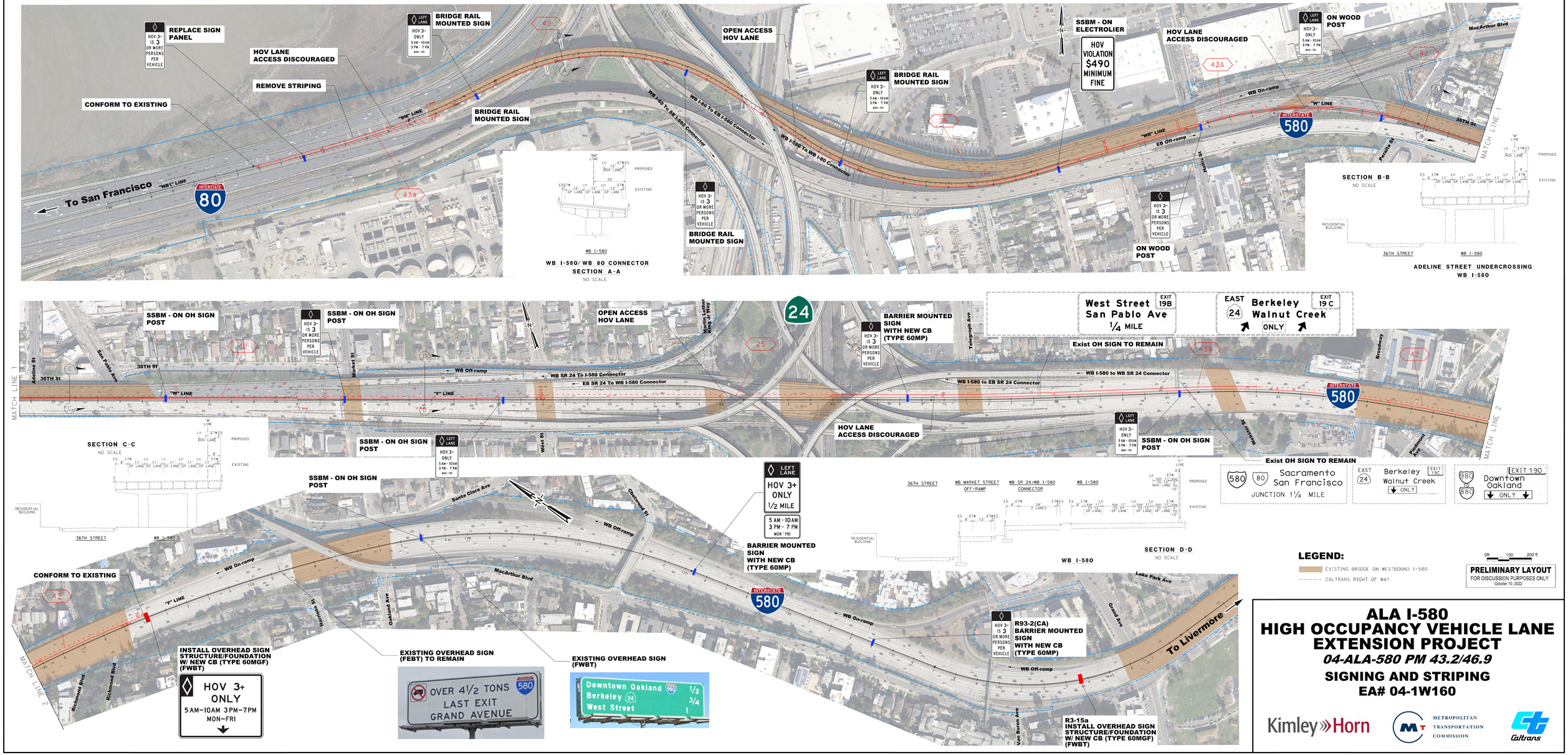
Based on the evaluation above, the Project should not be considered a POAQC and does not require a quantitative hot-spot analysis to demonstrate that it will not cause or worsen an existing $PM_{2.5}$ violation.



Bay Bridge Forward Interstate 580 Westbound
High Occupancy Vehicle Lane Extension Project
EA 04-1W160

Project Limits

LOCATION MAP



ALA I-580
HIGH OCCUPANCY VEHICLE LANE EXTENSION PROJECT

04-ALA-580 PM 43.2/46.9

SIGNING AND STRIPING

EA# 04-1W160

Kimley»Horn

METROPOLITAN TRANSPORTATION COMMISSION

Caltrans

Air Quality Conformity Task Force
Summary Meeting Notes
January 26, 2023

Participants:

Chadi Chazbek – Kimley-Horn
Rodney Tavitas – Caltrans
Alexander Smith – FTA
Garrett Kaya – WKE
Cam Oakes – Caltrans
Abhijit Bagde – Caltrans
Vicky Hsu – HDR
Michael Dorantes – EPA
Emma Maggioncalda – Caltrans
Cidney Chiu – Caltrans
John Saelee – MTC
Shilpa Mareddy – Caltrans
Patrick Pittenger – FHWA
Paul Hensleigh – YSAQMD
Sri Koneru – HDR
Peter Lee – MTC/BATA
Adekemi Ademuyewo – FHWA
George Gorman – HDR
Andrea Gordon – BAAQMD
Eldar Levin - HDR
Ingrid Supit – MTC/BATA
Olivia Chan – Kimley-Horn
Mike Aronson – Kittelson
Ace Malisos – Kimley-Horn
Danae Hall – Kimley-Horn
Angela Louie – MTC
Prasanna Muthireddy – Kimley-Horn
Jay Witt – Illingworth-Rodkin, Inc.
Angie Kung – HDR
Noemi Wyss – Kimley-Horn
Uyenlan Vu – HDR
Edwin Xie – Kimley-Horn
Adam Crenshaw – MTC
Harold Brazil – MTC
Tanay Pradhan – Kimley-Horn
Karishma Becha – Caltrans
Stephanie Hu – CCTA
Erika Espinosa Araiza – Caltrans
Erika Vaca – Caltrans
Jonathan Goodman – Caltrans

1. **Welcome and Self Introductions**: Harold Brazil (MTC) called the meeting to order at 9:35 am.

2. **$PM_{2.5}$ Project Conformity Interagency Consultation**

   a. **Consultation to Determine Project of Air Quality Concern Status**

      i. **Interstate 680 Northbound Express Lane Completion Project**

Garrett Kaya (WKE) began the presentation for the Interstate 680 Northbound Express Lane Completion project by reviewing the previous meeting with the Task Force March 2022, where:

- 1C, 2, 3 and No-Build Alternatives were presented
- The project was determined **not** to be a POAQC

Mr. Kaya stated the purpose of the Interstate 680 Northbound Express Lane Completion project was:

- Reduce peak-period congestion and delay
- Optimize use of existing HOV lane capacity
- Improve travel time reliability
- Provide efficient travel options for all vehicles

Based on comments received during public scoping and the implementation of SB743 for Vehicles Miles Traveled (VMT), the Interstate 680 Northbound Express Lane Completion project team recently added a new alternative that converts an existing General Purpose (GP) lane to an express lane. The segment north of SR242 would remain as a HOV to Express Lane conversion. This new GP lane conversion alternative (number 5) does not add capacity since it does not add any new lanes and –

- Does not change land use along the corridor
- Truck percentages along the corridor are consistent with other Build Alternatives

Build Alternatives

- Four Build Alternatives
  - **Alternative 1C**
    - Close the Gap with Realignment
  - **Alternative 2**
    - Reduce the Gap plus Braided Ramps
  - **Alternative 3**
    - Close the Gap with Realignment plus Braided Ramps
  - **Alternative 5**
    - Reduce the Gap with GP conversion plus Braided Ramps

Patrick Pittenger (FHWA): asked to confirm that the additional alternative being presented is because of the need to conform with the CEQA process as compared to the previous process that was undertaken. Mr. Kaya indicated that it was a combination of 2 reasons:

1. There is a VMT component that is now part of the CEQA process and in the state of California we are required to look at alternatives that reduce the vehicle miles traveled.

2. There were comments received during the public scoping period that asked to look at doing GP lane conversions and (originally) it didn't look like it was going to be doable. After digging into the details of the traffic data, alternative 5 showed results were better than the No build alternative – so at that point alternative 5 became a viable to move forward with.

Opening Year 2027 AADT Summary
@ I-680 North of Oak Park

Alternative	Truck AADT	Total AADT**	% Trucks
No Build*	6,108	156,623	3.9%
Alternative 1C	6,108	167,534	3.6%
Alternative 2	6,108	167,679	3.6%
Alternative 3	6,108	168,146	3.6%
Alternative 5	6,108	157,423	3.9%

Source: Kittleson & Associates Traffic Forecast, 2022
*Truck Percentage from Caltrans 2020 Census Data applied to No Build AADT
**General Purpose Lanes plus Express Lane

Build Alternatives do not add lane capacity that is available to truck traffic.

Rodney Tavitas (Caltrans) commented: when the project is submitted to Caltrans for review, please make sure the information within the CTIPS database showing continuous funding throughout the all phases of the project – from PE to right away, because again, if Caltrans sees a gap, we are going to ask questions. Mr. Kaya acknowledged the comment.

Final Determination: With input from EPA, FTA, FHWA and Caltrans (deferring their determination to FHWA), the Task Force concluded the Interstate 680 Northbound Express Lane Completion project was not of air quality concern.

ii. Open Road Tolling Conversion Northern Bridges Project

Sri Koneru (HDR) began the presentation for the Open Road Tolling Conversion Northern Bridges project by indicating the Bay Area Toll Authority (BATA), in cooperation with Caltrans, proposes to convert the existing all All-Electronic Tolling (AET) systems to Open Road Tolling (ORT) systems at the Antioch Bridge, Benicia-Martinez Bridge, and Carquinez Bridge.

Mr. Koneru also mentioned the proposed Open Road Tolling Conversion Northern Bridges project is located at the toll plazas for the Antioch Bridge, Benicia-Martinez Bridge, and Carquinez Bridge in Contra Costa and Solano Counties. The Project would provide toll discounts to high occupancy vehicles with three or more passengers (HOV 3+) at all three bridge locations.

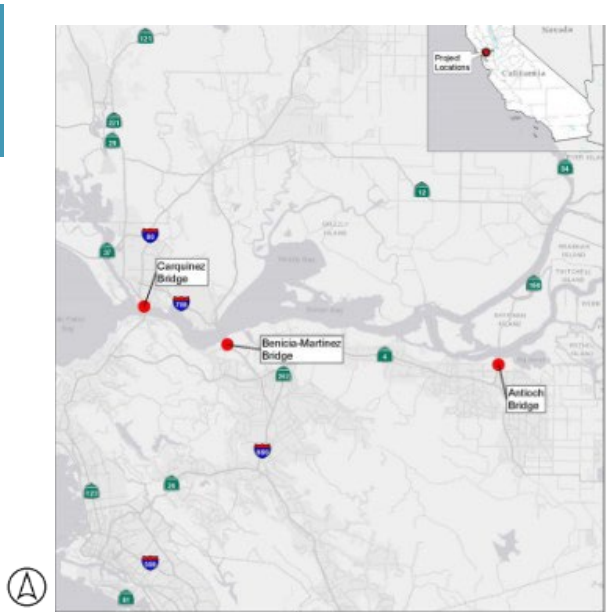
Mr. Koneru listed the purposes and needs for the Open Road Tolling Conversion Northern Bridges project with the following:

- Replace aging tolling infrastructure
- Enhance safety at toll plazas
- Improve operations through bridge toll plazas

Project Location

Northern Bridges (EA 04-2W520)

- **Antioch Bridge:** SR-160
  (Contra Costa County)
- **Benicia-Martinez Bridge:** I-680
  (Contra Costa County)
- **Carquinez Bridge:** I-80
  (Contra Costa and Solano Counties)



Mr. Koneru added that the Open Road Tolling Conversion Northern Bridges project is needed to address operational and safety deficiencies for vehicles traveling through BATA toll collection facilities at the Antioch, Benicia-Martinez, and Carquinez Bridge toll plazas. The existing toll collection system is aging, and improvements are required to meet the technological standards for both the existing AET systems and the proposed ORT systems. The existing toll collection booths and other civil infrastructure that were used during manual toll collection need to be removed to improve travel time and safety.

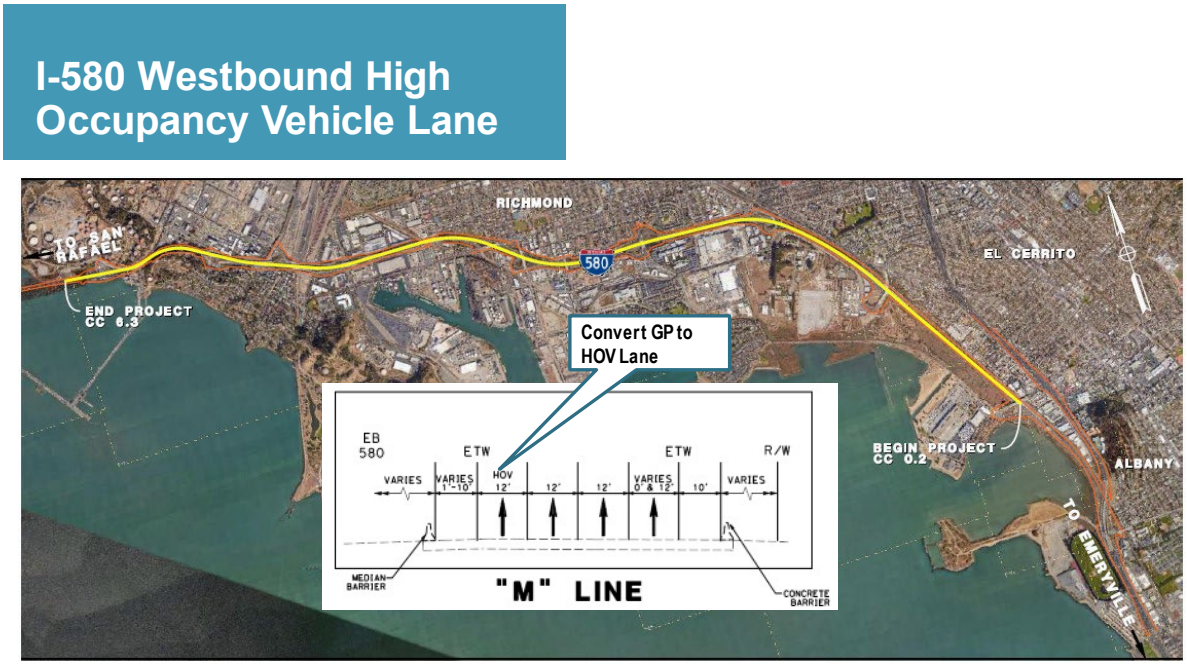
Final Determination: With input from EPA, FTA, Caltrans and FHWA (deferring their determination to Caltrans), the Task Force concluded the Interstate 680 Northbound Express Lane Completion project was not of air quality concern.

iii. Richmond-San Rafael Bridge Open Road Tolling and I-580 Westbound High Occupancy Vehicle Lane Project

Ace Malisos (Kimley-Horn) began the presentation for the Richmond-San Rafael Bridge Open Road Tolling and I-580 Westbound High Occupancy Vehicle Lane project by indicating the Bay Area Toll Authority (BATA) proposes the Richmond-San Rafael (RSR) Bridge Open Road Tolling (ORT) and Interstate 580 (I-580) Westbound High Occupancy Vehicle (HOV) Lane Project (proposed project). BATA developed the RSR Bridge Forward initiative which implements a suite of strategies to address congestion and improve options for travelling in the RSR Bridge Corridor. The RSR Bridge ORT and I-580 Westbound HOV Lane Project would provide safety and operational improvements on westbound I-580 approaching the RSR Bridge by reinstating a previous westbound I-580 HOV lane through Richmond to encourage carpooling and transit ridership, and replacing the existing tolling structure with open road tolling.

Mr. Malisos went on to say the purpose of the Richmond-San Rafael Bridge Open Road Tolling and I-580 Westbound High Occupancy Vehicle Lane project is to:

- Promote mode shift by providing travel time savings for carpooling and transit riders;
- Reduce Vehicle Miles Traveled (VMT) and corresponding greenhouse gas (GHG) emissions;
- Improve safety by eliminating the need to pass through the existing toll plaza; and
- Improve operational efficiency by upgrading the existing toll infrastructure to accommodate the future BATA system-wide upgrade on the toll collection system.



Mr. Malisos also mentioned the Richmond-San Rafael Bridge Open Road Tolling and I-580 Westbound High Occupancy Vehicle Lane project is needed to address operational and safety deficiencies for vehicles traveling through the BATA toll collection facilities at the toll plaza and to encourage carpooling and transit ridership.

Mr. Malisos said the Richmond-San Rafael Bridge Open Road Tolling and I-580 Westbound High Occupancy Vehicle Lane project consists of the following improvements:

- Remove the existing RSR Bridge Toll Booths, tolling equipment and canopy structure and install an ORT gantry.
- Reconfigure I-580 mainline at the proposed ORT gantry to three lanes (two general purpose lanes and one HOV3+ lane) and improve weaving bottle neck caused by existing seven lanes merging to two lanes.
- Realign Stenmark Drive on-ramp to conform to I-580 reconfiguration and install separate ORT gantry for the Stenmark Drive on-ramp.
- Convert the leftmost general-purpose lane along I-580 to an HOV2+ lane from Regatta Boulevard interchange to the Stenmark Drive off-ramp
- Removal, replacement, or relocation of existing roadway signs and signposts, as needed, for the ORT and HOV conversion.
- Trenching and/or horizontal directional drilling (up to 3-ft deep and 2-ft wide) to extend electrical and communication conduit and fiber and bring these services to the tolling equipment, signage, and toll equipment building. Auxiliary cabinets may be required between toll equipment building and gantries.
- Modifications to drainage systems, grading, lighting, landscaping, and necessary utility connections/relocations for the new toll collection facilities.

Michael Dorantes (EPA) asked about what project factors are projected to contribute to reductions in VMT and greenhouse gas emissions and Mr. Malisos responded by indicating that the continuous HOV lane component of the project is projected to increase the number of people carpooling and using transit. (due to increased transit efficiency from the continuous HOV lane through the corridor)

Final Determination: With input from EPA, FTA, Caltrans and FHWA (deferring their determination to Caltrans), the Task Force concluded the Richmond-San Rafael Bridge Open Road Tolling and I-580 Westbound High Occupancy Vehicle Lane project was not of air quality concern.

iv. I-580 Westbound High Occupancy Vehicle Lane Conversion Project

Ace Malisos (Kimley-Horn) began the presentation for the I-580 Westbound High Occupancy Vehicle Lane Conversion project by stating the The Bay Bridge Forward (BBF) Interstate 580 (I-580) Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension project is in the City of Oakland. The Metropolitan Transportation Commission (MTC) is the Project sponsor, implementing agency, and lead agency on the project. Project partners include the Caltrans and the Alameda County Transportation Commission (CTC).

Mr. Malisos went on to say the I-580 Westbound High Occupancy Vehicle Lane Conversion project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to an HOV lane. Signing and striping work would occur along the existing HOV lane between I-580 Post Mile 46.9 and I-580 Post Mile 46.7. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector to approximately the Broadway-Richmond Boulevard Undercrossing. The project limit extends further along I-580 WB from the Broadway-Richmond Boulevard Undercrossing to I-580 Post Mile 43.2 at the Lake Park Ave Overcrossing for the installation of advanced HOV lane signs and restriping. No HOV lane extension is proposed for this portion of the Project site.

Project Location

Mr. Malisos pointed out; the purpose of the I-580 Westbound High Occupancy Vehicle Lane Conversion project is to:

- Increase person throughput during peak hours.
- Improve travel time reliability to support buses and high-occupancy vehicles.
- Encourage mode shift by providing travel time savings for HOV and transit users.

Mr. Malisos added GP Lane conversion to an HOV lane would entail the removal of current striping, application of new striping, and installation of signs. The proposed HOV lane would be an HOV 3+. The HOV lane would be separated from the remaining GP lanes by a combination of dashed white striping (continuous access), a single solid white stripe (access discouraged), or solid, double, white striping (restricted access). The proposed HOV lane would operate during the same hours as the existing facility between 5 A.M and 10 A.M. and 3 P.M. and 7 P.M. Monday through Friday. All Project work would occur within the current freeway roadway width and right-of way.

Final Determination: With input from EPA, FTA, Caltrans and FHWA (deferring their determination to Caltrans), the Task Force concluded the I-580 Westbound High Occupancy Vehicle Lane Conversion project was not of air quality concern.

b. Confirm Projects Are Exempt from $PM_{2.5}$ Conformity

i. Projects Exempt Under 40 CFR 93.126 – Not of Air Quality Concern

The Task Force had no concerns.

Final Determination: With input from FTA, FHWA, EPA, Caltrans and MTC, the Task Force agreed that the projects on the exempt list **2b_POAQC_Exempt_List_012323.pdf** are exempt from $PM_{2.5}$ project level analysis.

3. Projects with Regional Air Quality Conformity Concerns

a. Regional Conformity Status for New and Revised Projects

Adam Crenshaw (MTC) stated MTC is proposing to add two projects the TIP through future amendments and the projects are scheduled to go to the Commission in March 2023. Abhijit Bagde (Caltrans) commented that Caltrans will be making an internal TIP approval on Friday (1/27/23) and Patrick Pittenger (FHWA) indicated he would follow-up with federal partners to complete the process.

Task Force members had no other comments.

b. Dumbarton Forward Operational Improvements Project

Eldar Levin (HDR) began the presentation for the Dumbarton Forward Operational Improvements project by identifying the project purpose and need –

Need:

- Significant highway peak period congestion results in increased travel times

- Accelerated growth in the jobs-housing imbalance between the East Bay and Peninsula has increased traffic congestion and travel times along the corridor
- Limited Transbay highway capacity is available, resulting in the need implement innovative strategies to improve operations and mobility, and incentivize bus use
- Current Transbay buses do not have travel time reliability for users

Purpose:

- Increase person throughput by encouraging use of Transbay bus services
- Improve travel time reliability for bus commuters
- Reduce peak-period congestion and delay along the SR 84/Dumbarton Bridge corridor

Mr. Levin went on to describe the Dumbarton Forward Operational Improvements project including the following components:

- Implement a contiguous preferential bus-only lane along the right side of Bayfront Expressway in both directions, between Marsh Rd and the Dumbarton Bridge (< 3 mi), by use of signing, striping, and signals
- Operate the PTBOL in the WB direction during the AM peak period, and in the EB direction during the PM peak period, at a maximum speed of 35 mph (Note: the PTBOL is closed all other times)
- Implement an additional traffic signal phase at the intersections with Marsh Rd and Willow Rd, to accommodate a dedicated left-turn phase for buses (in the WB direction)
- Deploy Transit Signal Prioritization at the following five intersections: Marsh Rd, Chrysler Dr, Chilco St, and the two Facebook Way intersections
- Complete other minor improvements – relocations and/or protection of fixed objects, cold planing and overlaying pavement sections, modifying curb ramps and sidewalks

Mr. Levin concluded the discussion of the Dumbarton Forward Operational Improvements project by indicating the following:

- The Project would reduce vehicle-hours of delay (VHD), person-hours of delay (PHD), travel times, and maximum individual delays: the Project would also increase travel speeds for all modes of travel;
- The PTBOL on SR 84/Bayfront Expressway would improve mobility between southern Alameda County and San Mateo County, increase person throughput, and reduce congestion within cities that are directly affected by traffic along the Dumbarton Bridge corridor;
- The Project is not anticipated to generate additional vehicular or truck trips, therefore AADT and truck percentages along SR 84 for the Build and No Build conditions are considered the same

After Mr. Levin's presentation, Harold Brazil (MTC) confirmed the Dumbarton Forward Operational Improvements project was included in MTC's travel demand modeling for the Plan Bay Area 2050 (PBA2050) conformity analysis and Patrick Pittenger (FHWA), Michael Dorantes (EPA) Alexander Smith (FTA) and Rodney Tavitas (Caltrans) concurred for the regional conformity determination for the project.

4. Consent Calendar

a. December 1, 2022 Air Quality Conformity Task Force Meeting Summary

Final Determination; With input from all members, the Task Force concluded that the consent calendar was approved.

5. Other Items

- Cam Oakes (Caltrans) and Cid Chiu (Caltrans) introduced themselves as the replacements for Dick Fahey's Caltrans District 4 Task Force representative.
- Andrea Gordon (BAAQMD) updated the group on EPA's proposal to lower the $PM_{2.5}$ annual standard and Michael Dorantes (EPA) followed the standard could be as low as 8 micrograms, or as high as 11 micrograms per cubic meter.
- Patrick Pittenger (FHWA) mentioned FWHA is currently looking to fill two positions: a Senior Community Planner for District 4 and an Air Quality Specialist.

Appendix D. Air Quality Conformity Finding Checklist

Transportation Air Quality Conformity Findings Checklist

PROJECT INFORMATION

Project Name: Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension Project

DIST-CO-RTE-PM: District 4 – Alameda County – Interstate 580 – PM 43.2 to PM 46.9

EA: 04-1W160 **Federal Aid Number:** 0420000336

Document Type: ☒ 23 USC 326 CE ☐ 23 USC 327 CE ☐ EA ☐ EIS

CHECKLIST

Step 1. Is the project located in a nonattainment or maintenance area for ozone, nitrogen dioxide, carbon monoxide (CO), PM2.5, or PM10 per EPA's Green Book listing of non-attainment areas?

☐ If no, go to Step 18. **Transportation conformity does not apply to the project.**

☒ If yes, go to Step 2.

Step 2. Is the project exempt from conformity per 40 CFR 93.126 or 40 CFR 93.128?

☐ If yes, go to Step 18. **The project is exempt from all project-level conformity requirements (40 CFR 93.126 or 128)** (check one box below and identify the project type, if applicable).

☐ 40 CFR 93.126[1]
Project type from Table 2: _____

☐ 40 CFR 93.128

☒ If no, **go** to Step 3.

Step 3. Is the project exempt from regional conformity per 40 CFR 93.127?

☐ If yes, go to Step 8. **The project is exempt from regional conformity requirements (40 CFR 93.127)** (identify the project type).
Project type: _____

☒ If no, go to Step 4.

Step 4. Is the project located in a region with a currently conforming RTP and TIP?

☒ If yes, t**he project is included in a currently conforming RTP and TIP per 40 CFR 93.115. The project's design and scope have not changed significantly from what was assumed in RTP conformity analysis (40 CFR 93.115[b])** Go to Step 8.

☐ If no and the project is located in an isolated rural area, go to Step 5.

☐ If no and the project is not located in an isolated rural area, STOP and do not proceed until a conforming RTP and TIP are adopted.

---

[1] Please refer to Clarifications on Exempt Project Determinations to verify exempt project type from Table 2. Road diets, auxiliary lanes less than one-mile, and ramp metering may be exempt under "projects that correct, improve, or eliminate a hazardous location or feature."

Step 5. For isolated rural areas, is the project regionally significant per 40 CFR 93.101, based on review by Interagency Consultation?

☐ If yes, go to Step 6.

☐ If no, go to Step 8. **The project, located in an isolated rural area, is not regionally significant and does not require a regional emissions analysis (40 CFR 93.101 and 93.109[e]).**

Step 6. Is the project included in another regional conformity analysis that meets the isolated rural area analysis requirements per 40 CFR 93.109, including Interagency Consultation and public involvement?

☐ If yes, go to Step 8. **The project, located in an isolated rural area, has met its regional analysis requirements through inclusion in a previously-approved regional conformity analysis that meets current requirements (40 CFR 93.109[e]).**

☐ If no, go to Step 7.

Step 7. The project, located in an isolated rural area, requires a separate regional emissions analysis.

☐ **Regional emissions analysis for regionally significant project, located in an isolated rural area, is complete. Regional conformity analysis was conducted that includes the project and reasonably foreseeable regionally significant projects for at least 20 years. Interagency Consultation and public participation were conducted. Based on the analysis, the interim or emission budget conformity tests applicable to the area are met (40 CFR 93.109[e] and 95.105).**[2] Go to Step 8.

Step 8. Is the project located in a CO nonattainment or maintenance area? (South Coast Air Basin only)

☒ If no, go to Step 9. **CO conformity analysis is not required.**

☐ If yes, **hot-spot analysis requirements for CO per the** CO Protocol (or per EPA's modeling guidance, CAL3QHCR can be used with EMFAC emission factors[3]) **have been met. Project will not cause or contribute to a new localized CO violation (40 CFR 93.116 and 93.123)**[4]. Go to Step 9.

Step 9. Is the project located in a PM10 and/or a PM2.5 nonattainment or maintenance area?

☐ If no, go to Step 13. **PM2.5/PM10 conformity analysis is not required.**

☒ If yes, go to Step 10.

---

[2] The analysis must support this conclusion before going to the next step.

[3] Use of the CO Protocol is strongly recommended due to its use of screening methods to minimize the need for modeling. When modeling is needed, the Protocol simplifies the modeling approach. Use of CAL3QHCR must follow U.S. EPA's latest CO hot spot guidance, using EMFAC instead of MOVES; see: http://www.epa.gov/otaq/stateresources/transconf/projectlevel-hotspot.htm#co-hotspot.

[4] As of October 1, 2007, there are no CO nonattainment areas in California. Therefore, the requirements to not worsen existing violations and to reduce/eliminate existing violations do not apply.

Step 10. Is the project considered to be a Project of Air Quality Concern (POAQC), as described in EPA's Transportation Conformity Guidance for PM 10 and PM 2.5?

☒ If no, **the project is not a project of concern for PM10 and/or PM2.5 hot-spot analysis based on 40 CFR 93.116 and 93.123 and EPA's Hot-Spot Analysis Guidance. Interagency Consultation concurred with this determination on _____**. Go to Step 12.

☐ If yes, go to Step 11.

Step 11. The project is a POAQC.

☐ **The project is a project of concern for PM10 and/or PM2.5 hot-spot analysis based on 40 CFR 93.116 and 93.123, and EPA's Hot-Spot Guidance. Interagency Consultation concurred with this determination on _____. Detailed PM hot-spot analysis, consistent with 40 CFR 93.116 and 93.123 and EPA's Hot-Spot Guidance, shows that the project would not cause or contribute to, or worsen, any new localized violation of PM10 and/or PM2.5 standards.** Go to Step 12.

Step 12. Does the approved PM SIP include any PM10 and/or PM2.5 control measures that apply to the project, and has a written commitment been made as part of the air quality analysis to implement the identified SIP control measures? [Control measures can be found in the applicable Federal Register notice at: https://www.epa.gov/state-and-local-transportation/conformity-adequacy-review-region-9#ca.]

☐ If yes, **a written commitment is made to implement the identified SIP control measures for PM10 and/or PM2.5 through construction or operation of this project (40 CFR 93.117).** Go to Step 14.

☒ If no, go to Step 13.

Step 13a. Have project-level mitigation or control measures for CO, PM10, and/or PM2.5, included as part of the project's design concept and scope, been identified as a condition of the RTP or TIP conformity determination? AND/OR

Step 13b. Are project-level mitigation or control measures for CO, PM10, and/or PM2.5 included in the project's NEPA document? AND

Step 13c (applies only if Step 13a and/or 13b are answered "yes"). Has a written commitment been made as part of the air quality analysis to implement the identified measures?

☐ If yes to 13a and/or 13b and 13c, **a written commitment is made to implement the identified mitigation or control measures for CO, PM10, and/or PM2.5 through construction or operation of this project. These mitigation or control measures are identified in the project's NEPA document and/or as conditions of the RTP or TIP conformity determination (40 CFR 93.125(a)).** Go to Step 14.

☒ If no, go to Step 14.

Step 14. Does the project qualify for a Categorical Exclusion pursuant to 23 USC 326?

☒ If yes, go to step 15.

☐ If no, the project requires preparation of a Categorical Exclusion, EA, or EIS pursuant to 23 USC 327. Go to Step 16.

Step 15. Is any analysis required by steps 1-13 of this form?[5]

☒ If yes, then Caltrans prepares the appropriate analysis and documentation for the project file and makes the conformity determination through its signature on the CE form. No FHWA involvement is required. See the AQCA Annotated Outline. Go to Step 18.

☐ If no, then Caltrans makes the conformity determination through its signature on the CE form. No FHWA involvement is required. Go to Step 18.

Step 16. Is the project located in a non-attainment/maintenance area for **ozone only** and considered not regionally significant/non-exempt?

☐ If yes, go to Step 18.[6]

☐ If no, then **an AQCA is needed**. See the AQCA Annotated Outline. Caltrans submits a conformity determination request to FHWA for FHWA's conformity determination. Go to Step 17.

Step 17. Send FHWA Request for Conformity Determination package and FHWA Submittal Package Checklist to DOTP- Air Quality (rodney.tavitas@dot.ca.gov) and DEA-Air Quality (daisy.laurino@dot.ca.gov) for completeness review. Please direct technical questions to DOTP-Air Quality office. Headquarters staff will coordinate with FHWA on behalf of the district.

Date of FHWA air quality conformity determination: _____

Step 18. STOP as all air quality conformity requirements have been met.

SIGNATURE

Print name		
Enter title	Signature	Date

[5] Please note that not all projects that qualify for a categorical exclusion will be exempt from air quality conformity requirements. Many types of projects that may qualify for a CE (such as the addition of auxiliary lanes less than one-mile, weaving lanes less than one-mile, turning lanes less than one-mile, climbing lanes less than one-mile, parking, road diets, ramp metering, and even many bridge projects) MAY require some level of project level conformity analysis and may even require interagency consultation. Additionally, please note that for ALL projects the project file must include evidence that one of the three following situations apply: 1) Conformity does not apply to the project area; or 2) The project is exempt from all conformity analysis requirements; or 3) The project is subject to project-level conformity analysis (and possibly regional conformity analysis) and meets the criteria for a conformity determination. The project file must include all supporting documentation and this checklist.

[6] Project-level conformity analysis shows that the project will conform to the State Implementation Plan. Because the project area is Attainment/Unclassified for carbon monoxide (CO) and particulate matter (PM10 and PM2.5), no hot spot analysis is required for the project-level conformity determination by 40 CFR 93.116 and 93.123. The project comes from a conforming Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP). Include documentation of interagency consultation review in the final CE/EA/EIS, if applicable.

Attachment F: Water Quality Assessment Report

Water Quality Assessment Report

The Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension Project

Alameda County, California

04-Ala-580 PM 43.2/46.9

EA 04-1W160/*PN: 0420000336*

August 2022

Caltrans

Water Quality Assessment Report

ALA I-580/I-80 WB HOV Lane Extension Project

Alameda County, California
04-ALA-580 PM 43.2/46.9
EA 04-1W160/*PN: 0420000336*

August 2022

STATE OF CALIFORNIA
Department of Transportation

Prepared By: Andy Duong Date: 08/2022
Title: Professional Engineer
Phone Number: (213) 505-0295
Office Name and address: 3699 Wilshire Blvd, STE 120
Los Angeles, CA 90010
Agency or Firm Name: The Alliance Group Enterprise, Inc.

Executive Summary

The Bay Bridge Forward (BBF) Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project (Project) proposes to convert the left most general-purpose lane of a short segment of westbound I-580 to an HOV3+ lane. In the westbound direction, on the I-80 approach to the San Francisco-Oakland Bay Bridge (SFOBB) Toll Plaza, an existing HOV3+ lane emerges on the left side as the I-580/I-80 connector touches down around PM 46.7. The converted lane would begin near the SR 24/I-980 interchange, extending the existing HOV lane for the SFOBB Toll Plaza approach by approximately 1.7 miles.

This Water Quality Assessment report (WQAR) evaluates how the proposed Project may affect the water quality of surface and groundwater resources and their beneficial uses.

A National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) does not apply as the Project has a disturbed soil area (DSA) of less than 1.0 acre. The Project will implement standardized measures to address temporary water quality impacts. Temporary treatment Best Management Practices (BMPs) may be implemented based on further evaluation of the Project conditions prior to construction. Adverse impacts to water quality are not anticipated based on the build alternative.

The proposed Project improvements are not anticipated to encroach on waters of the US, surrounding floodplains, or environmentally sensitive areas; as such, the regulatory permits mentioned in **Section 2** of this report are not anticipated.

Table of Contents

List of Figures

List of Tables

1. INTRODUCTION

1.1 Approach to Water Quality Assessment

The purpose of the Water Quality Assessment Report (WQAR) is to fulfill the requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), and to provide information for National Pollutant Discharge Elimination System (NPDES) permitting. The document includes a discussion of the proposed Project, the general environmental setting of the Project area, and the regulatory framework with respect to water quality; it also provides data on surface water and groundwater resources within the Project area and the water quality of these waters, describes water quality impairments and beneficial uses, and identifies potential water quality impacts/benefits associated with the proposed Project, and recommends avoidance and/or minimization measures for potentially adverse impacts.

Relevant water quality documents were reviewed in preparation for this report. The San Francisco Bay Basin Water Quality Control Plan, the FEMA FIRM for Alameda County, and the Easy Bay Plain Subbasin Groundwater Sustainability Plan.

1.2 Project Description

The Project is located in the City of Oakland within Alameda County, California. The Metropolitan Transportation Commission (MTC) is the Project sponsor, implementing agency, and lead agency. Project partners include the California Department of Transportation and the Alameda County Transportation Commission.

The Project site extends from I-580 Post Mile 46.9 to I-580 Post Mile 43.2. The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to an HOV lane. Signing and striping work would occur along the existing HOV lane between I-580 Post Mile 46.9 and I-580 Post Mile 46.7. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to approximately the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5). The Project limit extends further along I-580 WB from the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) to I-580 Post Mile 43.2 at the Lake Park Ave Overcrossing for the installation of advanced HOV lane signs and restriping. No HOV lane extension is proposed for this portion of the Project site.

GP Lane conversion to an HOV lane would entail the removal of current striping, application of new striping, and installation of signs. The proposed HOV lane would be an HOV 3+. The HOV lane would be separated from the remaining GP lanes by a combination of dashed white striping (continuous access), a single solid white stripe (access discouraged), or solid, double, white striping (restricted access). The proposed HOV lane would operate during the same hours as the existing facility between 5:00 A.M and 10:00 A.M. and 3:00 P.M. and 7:00 P.M. Monday through Friday. All project work would occur within the current freeway roadway width and right-of-way.

Approximately four roadside signs indicating the HOV lane restrictions and HOV lane operating hours would be installed on existing overhead sign poles and concrete barriers up to 1 mile in advance of the beginning of the proposed HOV lane. Two new overhead sign structures would be installed, one immediately west of the Lakeshore Park Undercrossing (I-580 Post Mile 43.5) and one near the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5), to support one HOV lane sign each. Approximately ten additional roadside signs would be installed along the HOV lane on existing concrete barriers, overhead sign poles, and lighting poles and new wood posts.

Project construction includes: grinding existing pavement to a depth of no more than 1/8-inch to remove existing striping, application of new striping to the road surface, construction of two new overhead sign structures, and the installation of new roadside signs on existing concrete bridge rails, concrete median barriers, overhead sign poles, and lighting poles and new wood posts. Grinding the road surface would not impact the ground below the road. Construction of the new overhead sign structures would require excavation to a maximum depth of 40 feet below ground surface to construct structure foundations. Dewatering may be required to construct structure foundations. Installation of new signs on existing bridge rails or poles would not require excavation. Existing concrete median barriers to have new roadside signs installed on them would be replaced per the current Caltrans standards by the Project. Installation of new roadside signs on new wood posts would require excavation to a maximum depth of three to four feet below ground surface for sign foundations. Equipment anticipated to be used for Project construction includes but is not limited to: cement mixer, crane truck, concrete saw, concrete breaker, pile driver, asphalt patch truck, dump trucks, and sweeper.

Project construction would require temporary nighttime lane and median closures on I-580 WB and I-580 Eastbound (EB). The medians and left-most lanes of I-580 WB and I-580 EB would be intermittently closed during the nighttime hours for approximately six months for installation of signs and construction of overhead sign structure foundations. The medians on I-580 WB and EB and the two left-most lanes on I-580 WB would be closed during the nighttime hours for approximately one week for installation of overhead sign structures and application of striping. Construction is anticipated to begin in fall 2023 and last for approximately six months.

1.2.1 No-Build Alternative

The No-Build Alternative proposes no modifications to the current I-580 corridor, and therefore will not meet the purpose and need of the Project.

1.2.2 Build Alternative

The Build Alternative will consist of the following primary components:

- Conversion of the left most general-purpose lane to an HOV 3+ lane in the westbound (WB) direction of I-580 between SR-24/I-980 interchange and the WB flyover touch-down at I-80.
- Installation of two overhead sign structures.

- Upgrade of existing nonstandard concrete barriers for the installation of barrier-mounted signs.
- Installation of pavement delineation and the "Diamond" pavement markings for the proposed HOV lane.

Figure 1 – Project Limits

Figure 2 – Project Vicinity

2. Regulatory Setting

2.1 Federal Laws and Requirements

Clean Water Act

In 1972 Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source unlawful unless the discharge is in compliance with a NPDES permit. Known today as the Clean Water Act (CWA), the objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters". Congress has amended it several times, and in the 1987 amendments, Congress directed dischargers of stormwater from municipal and industrial/construction point sources to comply with the NPDES permit program. Important CWA sections are:

- Sections 303 and 304 require states to promulgate water quality standards, criteria, and guidelines.

- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S., to obtain certification from the State that the discharge will comply with other provisions of the act. (Most frequently required in tandem with a Section 404 permit request. See below).

- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. The Federal Environmental Protection Agency delegated to the California State Water Resources Control Board (SWRCB) the implementation and administration of the NPDES program in California. The SWRCB established nine Regional Water Quality Control Boards (RWQCBs). The SWRCB enacts and enforces the Federal NPDES program and all water quality programs and regulations that cross Regional boundaries. The nine RWQCBs enact, administer and enforce all programs, including NPDES permitting, within their jurisdictional boundaries. Section 402(p) requires permits for discharges of stormwater from industrial, construction, and Municipal Separate Storm Sewer Systems (MS4s) including the State of California Department of Transportation.

- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S, including wetlands. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to authorize a variety of minor Project activities with no more than minimal effects.

There are also two types of Individual permits: Standard Individual permit and Letter of Permission. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Individual permits. For Standard Individual permit, the

USACE decision to approve is based on compliance with U.S. Environmental Protection Agency's (EPA) Section 404 (b)(1) Guidelines (U.S. EPA CFR 40 Part 230), and whether permit approval is in the public interest. The 404(b)(1) Guidelines were developed by the U.S. EPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA), to the proposed discharge that would have less effects on waters of the U.S., and not have any other significant adverse environmental consequences. Per Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures have been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the USACE, even if not subject to the 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4.

2.2 State Laws and Requirements

Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, expanded the enforcement authority of the State Water Resources Control Board (SWRCB) and the 9 Regional Water Control Boards (RWCB) and provides the legal basis for water quality regulation within California. This Act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the State. It predates the CWA and regulates discharges to bodies of water, including groundwater and surface waters not considered waters of the U.S. Additionally, the Porter-Cologne Act defines the term "Waste", and expands on the CWA definition for "Pollution". Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be regulated even when the discharge is already permitted or exempt under the CWA.

State Water Resources Control Board and Regional Water Quality Control Boards
The SWRCB adjudicates water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

The SWRCB and RWQCBs are responsible for establishing the water quality standards as required by the CWA, and regulating discharges to protect beneficial uses of water bodies. Details regarding water quality standards in a project area are contained in the applicable RWQCB Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments in their jurisdictions, and then set standards necessary to protect these uses. Consequently, the water quality standards developed for particular water body segments are based on the designated use and vary depending on such use. Water body segments that fail to meet standards for specific pollutants are included in a Statewide List in accordance with CWA Section 303(d). If a Regional Board determines that waters are impaired for one or more

constituents and the standards cannot be met through point source or non-source point controls (NPDES permits or Waste Discharge Requirements), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed. The SWRCB implemented the requirements of CWA Section 303(d) through Attachment IV of the Caltrans Statewide MS4, as it includes specific TMDLs for which Caltrans is the named stakeholder.

- **National Pollutant Discharge Elimination System (NPDES) Program**

  Municipal Separate Storm Sewer Systems (MS4)
  Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of stormwater dischargers, including MS4s. The U.S. EPA defines an MS4 as "any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that are designed or used for collecting or conveying stormwater." The SWRCB has identified Caltrans as an owner/operator of an MS4 pursuant to federal regulations. The Caltrans MS4 permit covers all Department rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

  The Caltrans MS4 Permit, NPDES No. CAS000003, SWRCB Order No. 2012-0011-DWQ (adopted on September 19, 2012 and effective on July 1, 2013), as amended by Order No. 2014-0006-EXEC (effective January 17, 2014), Order No. 2014-0077-DWQ (effective May 20, 2014) and Order No. 2015-0036-EXEC (conformed and effective April 7, 2015) contains three basic requirements:

  1. Caltrans must comply with the requirements of the CGP (see below);

  2. Caltrans must implement a year-round program in all parts of the State to effectively control stormwater and non-stormwater discharges; and

  3. Caltrans stormwater discharges must meet water quality standards through implementation of permanent and temporary (construction) BMPs to the Maximum Extent Practicable, and other measures deemed necessary by the SWRCB and/or other agency having authority reviewing the stormwater component of the project.

  To comply with the permit, Caltrans developed the Statewide Storm Water Management Plan (SSWMP) to address stormwater pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing stormwater management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in stormwater and non-stormwater discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The

proposed Project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address stormwater runoff.

Construction General Permit

Construction General Permit (NPDES No. CAS000002, SWRCB Order No. 2009-0009-DWQ, adopted on November 16, 2010) became effective on February 14, 2011 and was amended by Order No. 2010-0014-DWQ and Order No. 2012-0006-DWQ. The permit regulates stormwater discharges from construction sites which result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development.

For all projects subject to the CGP, the applicant is required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). All Project Registration Documents, including the SWPPP, are required to be uploaded into the SWRCB's on-line Stormwater Multiple Application and Report Tracking System (SMARTS), at least 30 days prior to construction.

Waivers from CGP coverage.

Projects that disturb over 1.0 acre but less than 5 acres of soil, may qualify for waiver of CGP coverage. This occurs whenever the R factor of the **Watershed Erosion Estimate in tons/acre** is less than 5. Within this CGP formula, there is a factor related to when and where the construction will take place. This factor, the 'R' factor, may be low, medium or high. When the R factor is below the numeric value of 5, projects can be waived from coverage under the CGP, and are instead covered by the Caltrans Statewide MS4.

In accordance with SSWMP, a Water Pollution Control Plan (WPCP) is necessary for construction of a Caltrans project not covered by the CGP.

Construction activity that results in soil disturbances of less than one acre is subject to the CGP if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop a SWPPP, to implement soil erosion and pollution prevention control measures, and to obtain coverage under the CGP.

The CGP contains a risk-based permitting approach by establishing three levels of risk possible for a construction site. Risk levels are determined during the planning, design, and construction phases, and are based on project risk of generating sediments and the potential impairment of the receiving body of water. Requirements apply according to the Risk Level determined. A Risk Level 1 (lowest risk) project requires minimum BMPs and visual (weekly; before, during, after rain events; non-stormwater) monitoring. A Risk Level 2 project requires minimum BMPs, Numeric Action Level (NAL) monitoring of pH and turbidity, visual monitoring and runoff monitoring. A Risk Level 3 (highest risk) project must meet the Level 2 requirements, as well as pre- and post-construction aquatic biological assessments during specified seasonal windows.

Section 401 Permitting

Under Section 401 of the CWA, any project that may result in a discharge to a water of the United States and requires a federal license or permit must obtain a 401 Certification, which certifies that the project will be in compliance with State water quality standards.

The most common federal permit triggering 401 Certification is a CWA Section 404 permit, issued by USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before USACE issues a 404 permit.

In some cases the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may prescribe WDRs under the State Water Code (Porter-Cologne Act). WDRs may specify the inclusion of additional project features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

2.3 Regional and Local Requirements

The proposed Project is located within the jurisdiction of the San Francisco RWQCB (Region 2). The San Francisco RWQCB has prepared Water Quality Control Plans (Basin Plans) to help preserve and enhance water quality and to protect the beneficial uses of State waters. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The Basin Plan includes an implementation plan describing the actions by the Regional Board and others that are necessary to achieve and maintain the water quality standards.

The SWRCB adopted an antidegradation policy (SWRCB Resolution No. 68-16_ per the CWA (40 CFR 131.12), which requires that existing high-quality waters are maintained unless “there is a demonstration that: (1) allowing some degradation is consistent with the maximum benefit to the people of the state; and (2) that such degradation would not unreasonably affect existing or potential beneficial use” (SWRCB 1968). The federal and state policies require that the existing instream uses and the level of water quality necessary for protection of the uses is maintained and protected. A reduction in water quality is permitted only if the reduction is necessary to accommodate important economic or social development.

3. AFFECTED ENVIRONMENT

3.1 Hydrology

3.1.1 Regional Hydrology

The San Francisco Bay Region (Region) is 4,603 square miles and characterized by its dominant feature, 1,100 square miles of the 1,600 square mile San Francisco Bay Estuary. The Region also includes coastal portions of Marin and San Mateo counties, from Tomales Bay in the north to Pescadero and Butano Creeks in the south. The Sacramento and San Joaquin rivers contribute almost all the freshwater inflow to the Bay. Many small rivers and streams also convey fresh water to the Bay system. Much of the freshwater inflow is trapped upstream by the dams, canals, and reservoirs of California's water diversion projects, which provide water to industries, farms, homes, and businesses throughout the state. Flows in the Region are highly seasonal, with more than 90 percent of the annual runoff occurring during the winter rainy season between October and April. Many streams experience lower flows during the middle or late summer.

3.1.2 Local Hydrology

3.1.2.1 Precipitation and Climate

Average annual precipitation near the Project limits is 2.39 inches. Oakland has a warm summer Mediterranean climate; the region typically has warm, dry summers, and mild, wet winters. Most rainfall occurs during winter and early spring. The average annual high temperature is 67.2 degrees Fahrenheit, and the average low temperature is 51.2 degrees Fahrenheit (National Oceanic and Atmospheric Association 2021).

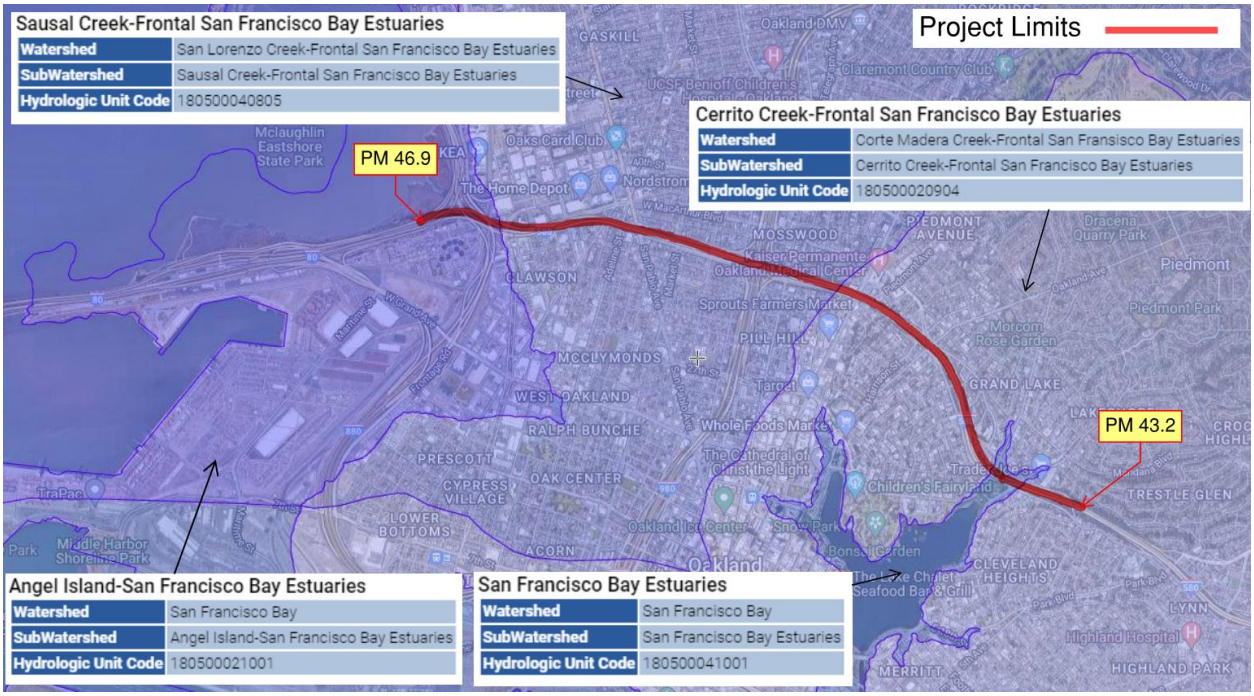
3.1.2.2 Surface Waters

The Project directly discharges to the San Francisco Bay which is identified as an impaired body in the 2014-2016 303(d) list. Based upon the Project scope, it is not anticipated that any work will affect the existing water quality of the surface water. The Project will not exceed the total maximum daily load (TMDL) for the surface waters per data provided by Caltrans. The TMDL data for the relevant surface waters is presented in Table 3-1 below.

Table 3-1: Total Maximum Daily Load Constituents

Water Body	TMDL Constituent
San Francisco Bay, Central	Chlordane, DDT (Dichlorodiphenyltrichloroethane). Dieldrin, Dioxin compounds, Furan compounds, Invasive Species, Mercury, PCBs (Polychlorinated biphenyls), Selenium, Trash
Lake Merritt	Organic Enrichment/Low Dissolved Oxygen, Trash

Figure 3: Hydrologic Area



The beneficial uses of water are defined in the Water Quality Control Plan for the San Francisco Bay Basin. The beneficial uses that apply to the applicable surface waters for the Project are listed:

- **Industrial Service Supply (IND) –** Uses of water for industrial activities that do not depend primarily on water quality, including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil well repressurization.
- **Industrial Process Supply (PROC)** – Uses of water for industrial activities that depend primarily on water quality.
- **Commercial and Sport Fishing (COMM)** – Uses of water for commercial or recreational collection of fish, shellfish, or other organisms, including, but not limited to, uses involving organism intended for human consumption or bait purposes.
- **Shellfish Harvesting (SHELL)** - Uses of water that support habitats suitable for the collection of crustaceans and filter-feeding shellfish (e.g., clams, oysters, and mussels) for human consumption, commercial, or sport purposes.
- **Cold Freshwater Habitat (COLD) –** Uses of water that support cold water ecosystems, including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- **Estuarine Habitat (EST) –** Uses of water that support estuarine ecosystems, including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds), and the propagation, sustenance, and migration of estuarine organisms.

- **Fish Migration (MIGR) –** Uses of water that support habitats necessary for migration, acclimatization between fresh water and salt water, and protection of aquatic organisms that are temporary inhabitants of waters within the region.
- **Preservation of Rare and Endangered Species (RARE)** – Uses of waters that support habitats necessary for the survival and successful maintenance of plant or animal species established under state and/or federal law as rare, threatened, or endangered.
- **Fish Spawning (SPWN)** – Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.
- **Wildlife Habitat (WILD)** – Uses of waters that support wildlife habitats, including, but not limited to, the preservation and enhancement of vegetation and prey species used by wildlife, such as waterfowl.
- **Water Contact Recreation (REC-1)** – Uses of water for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, and uses of natural hot springs.
- **Noncontact Water Recreation (REC-2)** – Uses of water for recreational activities involving proximity to water, but not normally involving contact with water where water ingestion is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- **Navigation (NAV)** – Uses of water for shipping, travel, or other transportation by private, military, or commercial vessels.

Table 3-2 Lists the beneficial uses for the nearest-named water bodies to the Project.

Table 3-2: Beneficial Use Designations for Surface Waters

Water Body	Beneficial Uses
San Francisco Bay, Central	IND, PROC, COMM, SHELL, EST, MIGR, RARE, SPWN, WILD, REC-1, REC-2, NAV
Lake Merritt	COMM, SHELL, EST, SPWN, WARM, WILD, REC-1, REC-2

3.1.2.3 Floodplains

The Project limits are located within FEMA flood Zones A and X. Alameda County FIRM panels 58, 59, 67, and 68 define the flood zones as follows:

- Zone A – special flood hazard areas subject to inundation by the 1 percent Annual Chance Flood event; no base flood elevations (BFEs) determined
- Zone X – areas of 0.2 percent Annual Chance Flood; areas of 1 percent Annual Chance Flood with average depths of less than 1 foot or with drainage areas less than 1 square mile and areas protected by levees from the 1 percent Annual Chance Flood

3.1.3 Groundwater Hydrology

The Project area lies within the East Bay Plain (EBP) Subbasin, which covers 61,000 acres. EBP Subbasin is bounded in the north and west by San Francisco Bay, in the east by the East Bay Hills, and in the south by the Niles Cone Subbasin. The primary sources of water are the Mokelumne River and Easy Bay Hills reservoirs.

Groundwater elevations vary with depth, so the aquifer system is divided into four depth intervals for characterization of groundwater levels and flow:

- **Upper Shallow Aquifer:** 0–50 ft below ground surface (bgs) (Water Table Aquifer Zone, or upper portion of Shallow Aquifer Zone where stream/aquifer interaction occurs) (0 ft – 40 ft msl)
- **Lower Shallow Aquifer:** 50–200 ft bgs (0 ft – 20 ft msl)
- **Intermediate Aquifer:** 200–400 ft bgs (0 ft – 10 ft msl)
- **Deep Aquifer:** Greater than 400 ft bgs (-20 ft to 0 ft msl)

In the Upper Shallow Aquifer Zone, groundwater elevations typically range from about 40 ft above mean sea level (msl) near the East Bay Hills to about 0 ft above msl at the San Francisco Bay margin. In the Lower Shallow Aquifer, groundwater elevations typically range from about 20 ft above mean seal level near the East Bay Hills to about 0 ft above msl at the San Francisco Bay margin. In the Intermediate Aquifer Zone, groundwater elevations range from about 10 ft msl near the Easy Bay Hills to about 0 ft msl near the San Francisco Bay margin. In the Deep Aquifer Zone, groundwater elevations range from -20 ft below msl to 0 ft above msl.

The EBP Subbasin has been evaluated for several major constituents. The minimum threshold is based on the maximum containment level (MCL), which is defined as the highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the MCL goal as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water. Total Dissolved Solids (TDS) has secondary MCLs of 500 mg/L (recommended) and 1,000 mg/L (maximum). Average concentrations are generally less than 1,000 mg/L except in localized areas near San Francisco Bay. Chloride has secondary MCLs of 250 mg/L (recommended) and 500 mg/L (maximum). Nitrate concentration has a primary MCL of 10 mg/L for nitrate as nitrogen. Arsenic has a primary MCL of 10 ug/L. Uses of recycled water include large-scale irrigation projects (e.g., parks, golf courses) and industrial facilities (e.g., energy facility and refinery cooling).

4. ENVIRONMENTAL CONSEQUENCES

4.1 Potential Impacts to Water Quality

4.1.1 Temporary Impacts to Water Quality

Alternative 1 (No Build Alternative)

Under the "No Build" alternative, no improvements other than routine roadway maintenance would be made. The "No Build" alternative would result in no short-term water quality impacts from construction related activities.

Alternative 2 (Build Alternative)

The Project scope involves removal of current striping, application of new striping, and the installation of roadside signs and overhead signs. The construction of overhead signs requires piles to be driven to a depth of up to 40 feet which may encroach into groundwater level. Dewatering operations may be required upon confirmation from a Geotechnical Engineer during PS&E phase regarding the presence of groundwater within the excavation depths for the pile foundations. If the Project requires the discharge of groundwater encountered during construction, the discharge must be made to conform with the water quality requirements of the waste discharge permit issued by the RWQCB. Dewatering BMPs must be used to control sediment and pollutants, and the discharge must comply with the WDRs issued by the San Francisco Bay RWQCB. Should dewatering operations be needed, methods and required permits are to be discussed at the next phase of the Project. Potential temporary impacts to water quality that can be anticipated during the construction of the build alternative include trash from workers, construction waste, petroleum products from construction equipment, and sanitary wastes from portable toilets.

4.1.2 Long-term Impacts During Operation and Maintenance

Alternative 1 (No Build Alternative)

Under the "No Build" alternative, no improvements other than routine roadway maintenance would be made. The "No Build" alternative would result in no short-term water quality impacts from construction related activities.

Alternative 2 (Build Alternative)

There are no anticipated long-term water quality impacts from construction related activities for the "Build Alternative".

5. AVOIDANCE AND MINIMIZATION MEASURES

The following measures have been identified to minimize temporary impacts on water resources and water quality for the Project under the Build Alternative:

WQ-1 The Project will comply with the provision of the *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for the State of California, Department of Transportation, Order No. 2012-0011-DWQ, NPDES No. CAS00003* and any subsequent permits in effect at the time of construction

WQ-2 Caltrans-approved temporary treatment BMPs may be implemented to provide and will operate as designed, consistent with the requirements of NPDES Permit and WDRs for Caltrans and any subsequent permits in effect at the time of construction. Temporary treatment BMPs may include, but are not limited to, temporary sediment control, and waste management and materials pollution control.

WQ-3 The contract specifications require the contractor to prepare a Water Pollution Control Program (WPCP) for projects not subject to requirements of the CGP. A WPCP is required for this project.

The project results in a soil disturbance less than once acre and is exempt from the Construction General Permit (CGP) per the State Water Resources Control Board's (SWRCB) requirements, additionally, the project does not pose significant water quality risk, therefore a Storm Water Pollution Prevention Plan (SWPPP) is not required.

6. REFERENCES

6.1 Works Cited

Caltrans Stormwater Quality Handbook Project Planning and Design Guide (PPDG): http://www.dot.ca.gov/design/hsd/ppdg/PPDG-Final_2017-07.pdf

Caltrans Water Quality Planning Tool: http://www.water-programs.com/wqpt.htm

Regional Water Quality Control Board website and Basin Plans: http://www.swrcb.ca.gov/plans_policies/

FEMA Maps: https://www.fema.gov/flood-maps

6.2 Preparer(s) Qualifications

Soupie Dethlefsen, Design Engineer

Bachelor of Science, Civil Engineering

2 years of experience in environmental documentation and water quality assessment

Attachment G: Visual Impact Assessment Memorandum

Revised 5/3/24

Visual Impact Assessment Memorandum
EA# 04-1W160 - BBF I-580 WB HOV Lane Extension Project

Prepared by: Michael P. Madsen **Date:** May 3, 2024
Michael P. Madsen, PLA #5798
Kimley-Horn and Associates, Inc.

Approved by: Philip Dinh **Date:** 5/9/24
Philip Dinh, PLA #6435
Caltrans Landscape Associate
Office of Landscape Architecture
District 4 – Bay Area

Statement of Compliance: Produced in compliance with National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) requirements, as appropriate, to meet the level of analysis and documentation that has been determined necessary for this project.

Table of Contents

List of Appendices

List of Figures

List of Tables

List of Acronyms and Abbreviations

AVE	Area of Visual Effect
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
Handbook	*Caltrans 2023 VIA Handbook*
FHWA	Federal Highway Administration
NEPA	National Environmental Policy Act
VIA	Visual Impact Assessment

1 Introduction

1.1 Purpose of Report and Assessment Methodology

The purpose of this visual impact assessment (VIA) memorandum is to document potential visual change in the Area of Visual Effect (AVE) for the Bay Bridge Forward (BBF) Interstate 580 (I-580) Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project (Project) in the City of Oakland. This memorandum covers the entire Project area which spans from I-580 Post Mile 43.2 to I-580 Post Mile 46.9.

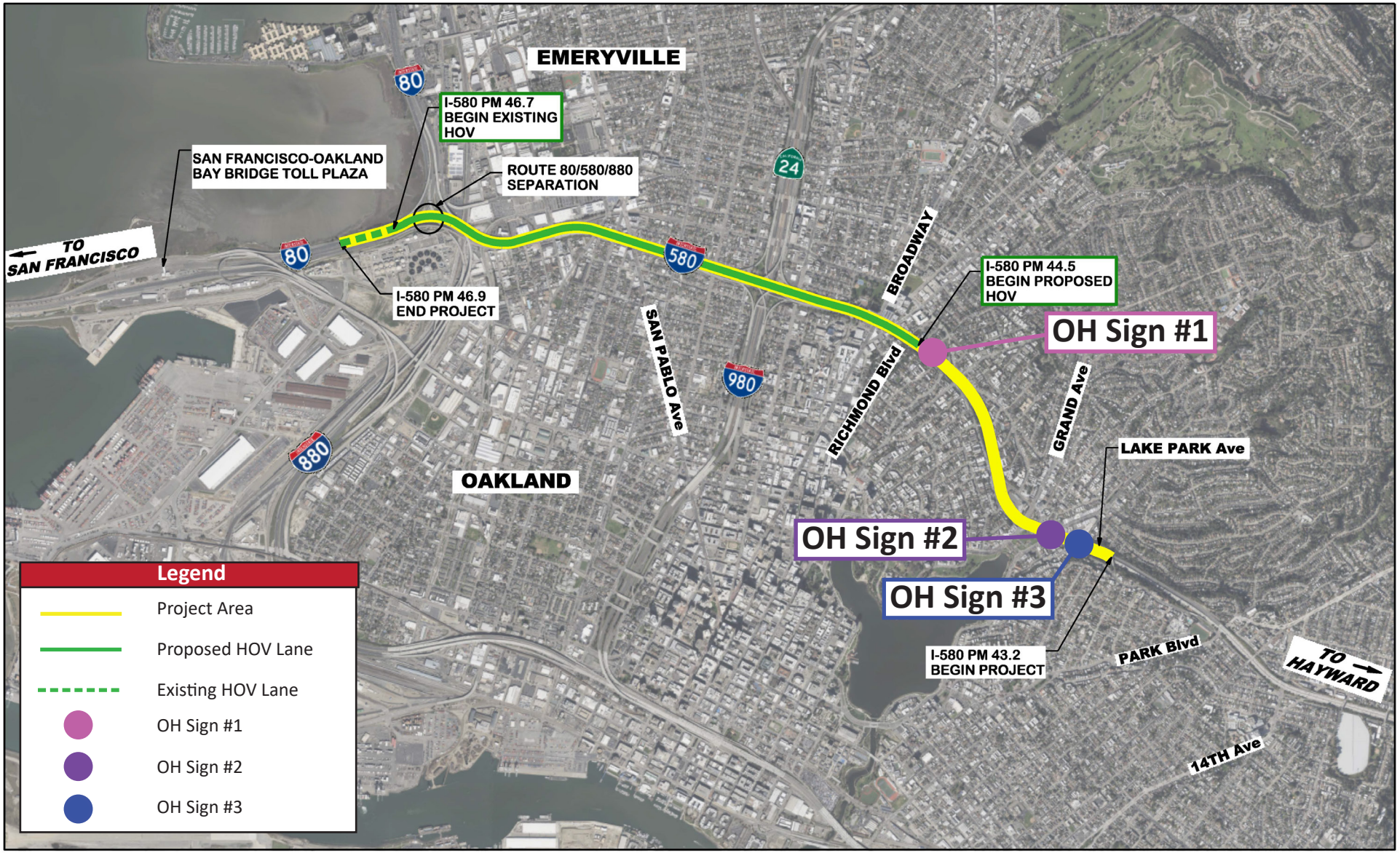
The AVE is defined by the Federal Highway Administration as “The area in which views of the project would be visible as influenced by the presence or absence of intervening topography, vegetation, and structures”. While this memorandum considers the entire Project area, the memorandum utilizes the proposed overhead signs as a means of evaluating the Project’s potential visual impacts, as those features would result in the largest visual changes in the Project area and are the only Project features with the potential to impact the visual environment.

This memorandum follows the guidance outlined in the publication *Guidelines for the Visual Impact Assessment of Highway Projects*, published by the Federal Highway Administration (FHWA) in January 2015. The formatting of this template is aligned with the directions and examples included in the *Caltrans 2023 VIA Handbook* (*Handbook*), available at: https://dot.ca.gov/programs/design/lap-visual-impact-assessment.

2 Establishment Phase

2.1 Project Location and Setting

The Project location and setting provide the context for determining the type of changes to the existing visual environment. The Project extends from I-580 Post Mile 43.2 to I-580 Post Mile 46.9. Signing and striping work would occur along the existing HOV lane between I-580 Post Mile 46.7 and I-580 Post Mile 46.9. The proposed HOV lane would extend from the beginning of the existing HOV lane for the San Francisco-Oakland Bay Bridge (SFOBB) Toll Plaza approach at the WB I-580/Interstate 80 (I-80) connector touch-down area (I-580 Post Mile 46.7) to just east of the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5). The Project limit extends further west along I-580 from the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) to I-580 Post Mile 43.2 at the Lake Park Avenue Overcrossing for the installation of advanced HOV lane signs and restriping. See Figure 1 for a depiction of the Project limits and improvements.



Kimley-Horn, 2024

Figure 1: Project Area

Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension
Visual Impact Assessment

Not to scale

Kimley»Horn

2.2 Project Description

The Project is located in the City of Oakland within Alameda County, California. The Metropolitan Transportation Commission (MTC) is the Project sponsor, implementing agency, and California Environmental Quality Act (CEQA) lead agency. Project partners include the California Department of Transportation (Caltrans) and the Alameda County Transportation Commission (Alameda CTC).

The General Purpose (GP) lane conversion to an HOV lane would entail the removal of current striping, application of new striping, and installation of signs. The proposed HOV lane would be signed for vehicle occupancy of three or more (HOV 3+). The HOV lane would be separated from the remaining GP lanes by a combination of dashed white striping (continuous access) and single solid white stripe (access discouraged). The proposed HOV lane would operate during the same hours as the existing facility between 5:00 A.M and 10:00 A.M. and 3:00 P.M. and 7:00 P.M. Monday through Friday. All Project construction work would occur within the current freeway roadway width and right-of-way.

Approximately four roadside signs indicating the HOV lane restrictions and HOV lane operating hours would be installed on existing overhead sign poles and concrete barriers mounted posts up to 1 mile in advance of the beginning of the proposed HOV lane. Three new overhead sign structures to support signs would be installed, two east of the Lakeshore Park Undercrossing (I-580 Post Mile 43.5), Overhead (OH) Sign #2 and OH Sign #3, and one near the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5), OH Sign #1. Approximately ten additional roadside signs would be installed along the HOV lane on existing overhead sign poles and lighting poles, concrete barriers mounted posts, and new wood posts.

Project construction would include: grinding existing pavement to a depth of no more than 1/8-inch to remove existing striping, application of new striping to the road surface, repairing potholes in the asphalt surface, extension of an existing guardrail, construction of three new overhead sign structures and foundations, and the installation of new roadside signs on existing concrete bridge rails, concrete median barriers, overhead sign poles, and lighting poles and new wood posts. Grinding the road surface would not impact the ground below the road. Guardrail extension would require excavation to a maximum depth of eight feet for installation of wood posts. Construction of the new overhead sign structures would require excavation to a maximum depth of 40 feet below ground surface to construct structure foundations. Dewatering may be required to construct structure foundations. Installation of new signs on existing bridge rails or poles would not require excavation. Existing concrete median barriers to have new roadside signs installed on them would be replaced per the current Caltrans standards by the Project. Installation of new roadside signs on new wood posts would require excavation to a maximum depth of three to five feet below ground surface for sign foundations. Equipment anticipated to be used for Project construction includes but is not limited to: cement mixer, crane truck, concrete saw, concrete breaker, pile driver, drilling auger, asphalt patch truck, dump trucks, and sweeper.

Project construction would require closure of the I-580 median for the duration of construction. Temporary nighttime lane closures on I-580 WB and I-580 Eastbound (EB)

would also be required in addition to median closure. The left-most lane of I-580 WB and I-580 EB would be intermittently closed during the nighttime hours for approximately six months for construction of concrete barriers and overhead sign structure foundations. For installation of overhead sign structures and roadside signs, application of striping, and repairing potholes, the WB lanes of I-580 would be intermittently closed with at least one lane open during nighttime hours for approximately one week. Temporary lane restriping may be required where overhead sign structures would be installed if the median is insufficient to accommodate pile driving equipment for the duration of pile driving activities. Construction is anticipated to begin in winter 2024 and last for approximately six months.

2.2.1 Project Purpose:

The purpose of the Project is to:

- Increase person throughput during peak hours.
- Improve travel time reliability to support buses and high-occupancy vehicles.
- Encourage mode shift by providing travel time savings for HOV and transit users.

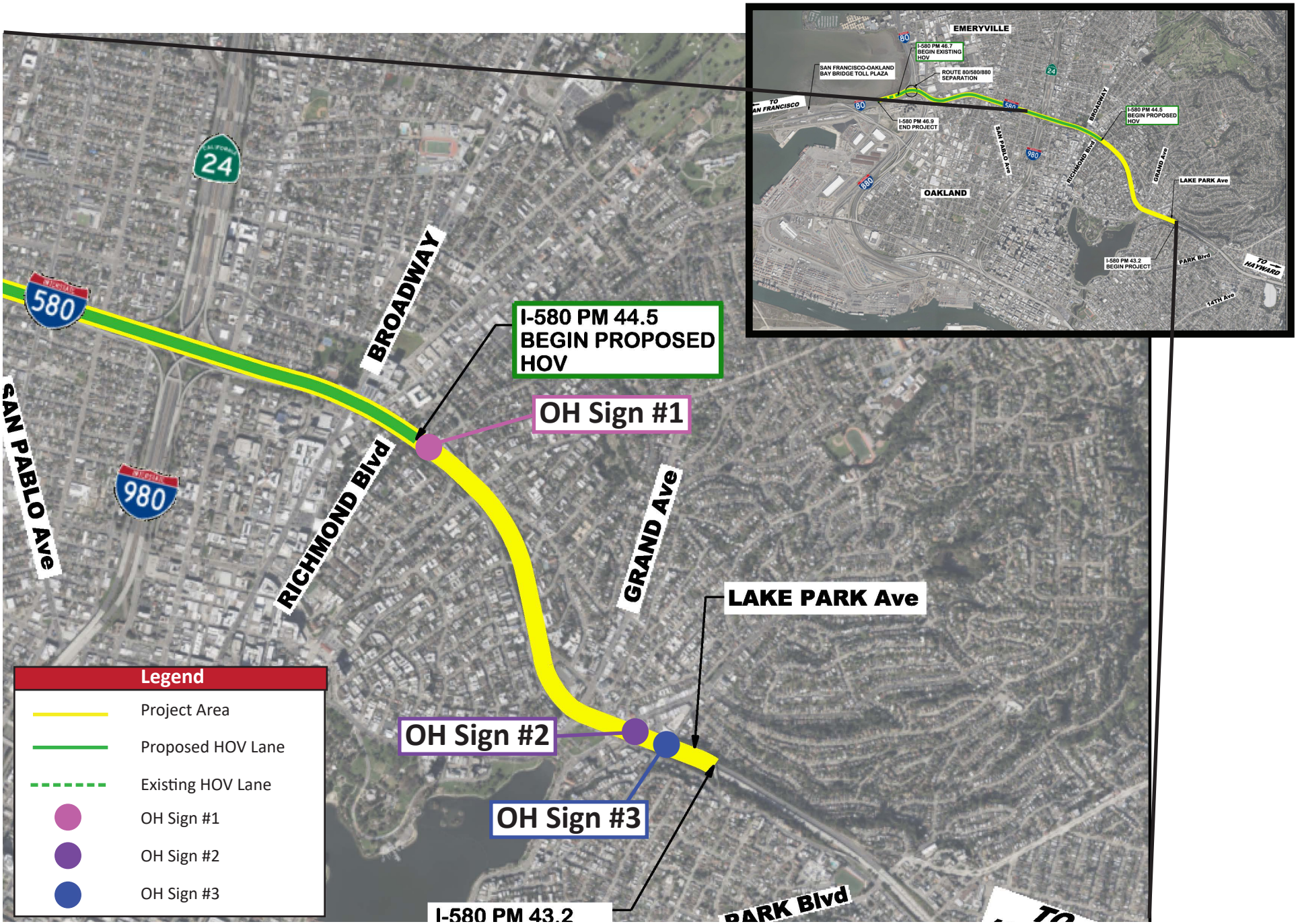
2.2.2 Project Need

I-580 is one of Alameda County's key transportation routes, carrying over 200,000 vehicles per day in its most heavily used segments and serves as a primary conduit to the Transbay/ San Francisco – Oakland Bay Bridge (SFOBB) corridor. SFOBB is the most congested bridge in the San Francisco Bay Area, with the queues on I-580 WB approaching the SFOBB toll plaza bottleneck extending to the Interstate 980 (I-980)/State Route 24 (SR 24) Interchange (I-580 Post Mile 45.2) during the morning peak period from 6 A.M. to 10 A.M. These queues are exacerbated by the heavy weaving associated with lane changes prior to the I-80/I-580 junction. With the SFOBB traffic and population and employment around the San Francisco Bay Area anticipated to continue to grow, corridor improvements along I-580 are required to improve current and future travel conditions for the travelers who use the corridor.

Solutions to reduce the congestion along I-580 WB approaching the SFOBB toll plaza are limited by constrained right-of-way. Currently, the congestion approaching the SFOBB toll plaza is a result of lane changes required for vehicles to enter I-80 EB and WB from I-580 WB since lane changes typically require drivers to slow down to avoid crashes. These lane changes occur between the I-980/SR 24 Interchange (I-580 Post Mile 45.2) and the I-80 Interchange (I-580 Post Mile 46.2). Vehicles in the left lanes on I-580 WB need to cross from the left to right lanes to enter I-80 EB. Simultaneously, vehicles entering I-580 WB from I-980/SR 24 must cross from the right to the left lanes of I-580 to enter I-80 WB and SFOBB. The right-of-way is constrained to existing roadways that could not be expanded without demolition of surrounding uses in the dense urban setting or encroachment into the Bay Conservation and Development Commission's jurisdiction related to the San Francisco Bay Area. Solutions must focus on implementing travel demand management to increase person throughput, namely increased HOV use.

2.3 Description of Area of Visual Effect:

This section defines the study area of the AVE for the Project. As noted previously, this memorandum considers the entire Project area; however, the memorandum utilizes the proposed overhead signs as a means of evaluating the Project's potential visual impacts, as those features would result in the largest visual changes in the Project area and are the only Project features with the potential to impact the visual environment. See Figure 2 for the locations of the overhead signs within the Project area referred to as OH Sign #1, OH Sign #2, and OH Sign #3, respectively.



Source: Kimley-Horn, 2024

Figure 2: Overhead Sign Location Map

Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension

Visual Impact Assessment

Not to scale

Kimley»Horn

2.4 Visual Resources and Scenic Resources

Per Caltrans, “A highway may be designated as scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view”. Within the Project area, I-580 is *Officially Designated* as a Scenic Highway from I-580 Post Mile 34.5 to I-580 Post Mile 45.2, and *Eligible* for listing as a Scenic Highway from I-580 Post Mile 45.2 to I-580 Post Mile 47.4. Two of the proposed overhead signs will be installed east of the Lakeshore Park Undercrossing (I-580 Post Mile 43.5) and one overhead sign will be installed near the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5). Thus, the new overhead signs would be installed along the *Officially Designated* and *Eligible* Scenic Highway sections of the Project area.

The Project area does have Classified Landscape Freeway Status in some portions. Per Caltrans, “A classified landscaped freeway is a section of freeway with ornamental vegetation planting that meets the criteria established by the California Code of Regulations, Outdoor Advertising Regulations, Title 4, Division 6. This designation is used in the control and regulation of outdoor advertising displays”. I-580 has this status within the following sections of the Project area:

- I-580 Post Mile 43.2 to I-580 Post Mile 43.5
- I-580 Post Mile 43.63 to I-580 Post Mile 45.711
- I-580 Post Mile 45.856 to I-580 Post Mile 46.090

3 Inventory Phase

This section describes the setting within the AVE in terms of landscape visual character and describes how the Project influences the natural, cultural, and existing environments.

3.1 Description of Landscape Visual Character

The Project area is comprised of the existing I-580 corridor and is surrounded by office, retail, and residential neighborhoods that are generally buffered by heavy vegetation and change in topography. The overall visual character of the Project area and surroundings is urban. The proposed new overhead sign structures are the Project features with the greatest potential to impact the visual environment. However, the overhead signs closely resemble the existing signage within the Project area. Any impact to the visual environment from the overhead signs would be minor. The Project is not anticipated to substantially degrade the existing visual character of the Project area and the surrounding landscape.

3.2 Description of Landscape Visual Quality

Visual quality is the viewers’ overall aesthetic impression of a view or landscape and is determined by considering the intactness, unity, and vividness of the natural, cultural, and existing environments. As the Project area and AVE comprise the existing I-580 corridor and urban surroundings, there are few natural environments and cultural environments comprised of buildings and infrastructure but no artifacts. The existing

environment contains distracting features such as guardrails, fencing, signage, utility poles, and overcrossings. Thus, the existing environment has a low intactness. Further, I-580 is primarily elevated within an urban setting in the Project area, i.e., human-made changes dominate the landscape. As a result, unity and vividness are also low.

3.3 Viewers

Neighbors (people with views *to* the transportation project), *travelers* (people with views *from* the transportation project) and viewpoints will not be affected by the Project.

Neighbors: Overall viewer sensitivity is moderate and viewer exposure is low for the Neighbors groups. For this Project the following neighbor groups were considered:

- **Residential Viewers:** There are some residents who live directly adjacent to the Project area. Specifically, there are residents north and south of the Project area near OH Sign #1, and south of the Project area near OH Sign #2 and OH Sign #3. Residential viewers are highly sensitive to visual changes; however, exposure for these viewers to the Project is low. In other words, residential views to the I-580 corridor are partially obstructed by topography and/or vegetation. Residents adjacent to the Project area will notice little change in visual quality with the introduction of the Project's overhead signs.
- **Commercial Viewers (employees and customers):** At a few locations, commercial viewers have views of the Project area. Specifically, commercial viewers exist north of OH Sign #2 and OH Sign #3. While these commercial viewers would have moderate exposure to the Project changes, they also have low sensitivity to visual changes.

Travelers: Overall viewer sensitivity and exposure for highway travelers is moderate to low. Their response to potential Project impacts would likely be moderate to low. Travelers are primarily comprised of commuters and tourists and are separated into two viewer groups:

- **Commuters:** Within the Project area, commuters that frequently travel the area can include personal vehicle drivers, passengers, transit users, as well as delivery drivers and truck drivers. Regular area commuters have greater awareness of the visual environment because of their familiarity with the Project area due to repeated trips. Congestion can slow down drivers and give them more time to observe their surroundings. At posted speeds, however, drivers tend to focus on long- to mid-range views straight ahead, while passengers have more time to absorb a wider range of views. When traveling at posted speeds, commuter exposure to visual change will be low.
- **Tourists:** Tourist travelers tend to have a high interest in the visual environment, but less awareness than the commuter travelers described above. Similar to the commuter travelers, when traveling at a slower speed during congestion, tourists can focus even more on their surroundings. Unlike commuter travelers, tourist travelers have high viewer sensitivity. Although tourist travelers have low familiarity with the views, the purpose of their drive is often, in part, to observe their surrounding visual environment. Tourist travelers are often from outside the region and do

not have the same expectations as commuter travelers. Therefore, their exposure to visual change will be low.

3.4 Viewpoints

Viewpoints can be vistas, open landscape views, ocean views, views of important mountains, views of historic or attractive buildings, rock outcrops, heritage trees, tree groves etc. The importance of each viewpoint is determined by the level of scenic resource designation, the distance of the scenic or visual resource, and the visual quality of the scenic or visual resource. In Section 4, Analysis Phase, of this memo, visual impacts are determined. A key view point is identified as analysis tool. Visual impacts are determined by assessing changes to the visual resources and predicting viewer response to those changes. These impacts can be beneficial or detrimental and are given a ranking from low to high based on the anticipated changes to the visual resources and overall visual quality, as well as the anticipated viewer response.

4 Analysis Phase

While this memorandum analyzes potential visual impacts of the entire Project, this analysis section focuses on the proposed overhead signs. This is a result of the overhead signs having the highest potential of any Project element to impact the visual environment. To determine the impact of the overhead signs, the AVE at each overhead sign location is described and the proposed changes detailed. OH Sign #3 is identified as having more potential to impact the visual environment than OH Sign #1 or OH Sign #2. Thus, a key viewpoint is identified then simulated to depict the potential impact of OH Sign #3. The impact of OH Sign #3 is considered to be the greatest possible visual impact for the Project.

4.1 Overhead Sign Locations

4.1.1 OH Sign #1

The location of OH Sign #1 is shown in Figure 3. OH Sign #1 is proposed in the center median of I-580. The AVE in this area equates to the driver's viewshed in the direction of WB travel. In the driver's viewshed, there are existing trees that block views beyond the road, making any visual impact due to the introduction of this sign minor. Installation of OH Sign #1 is not anticipated to impact the visual environment.

Kimley-Horn, 2024

Figure 3: OH Sign #1

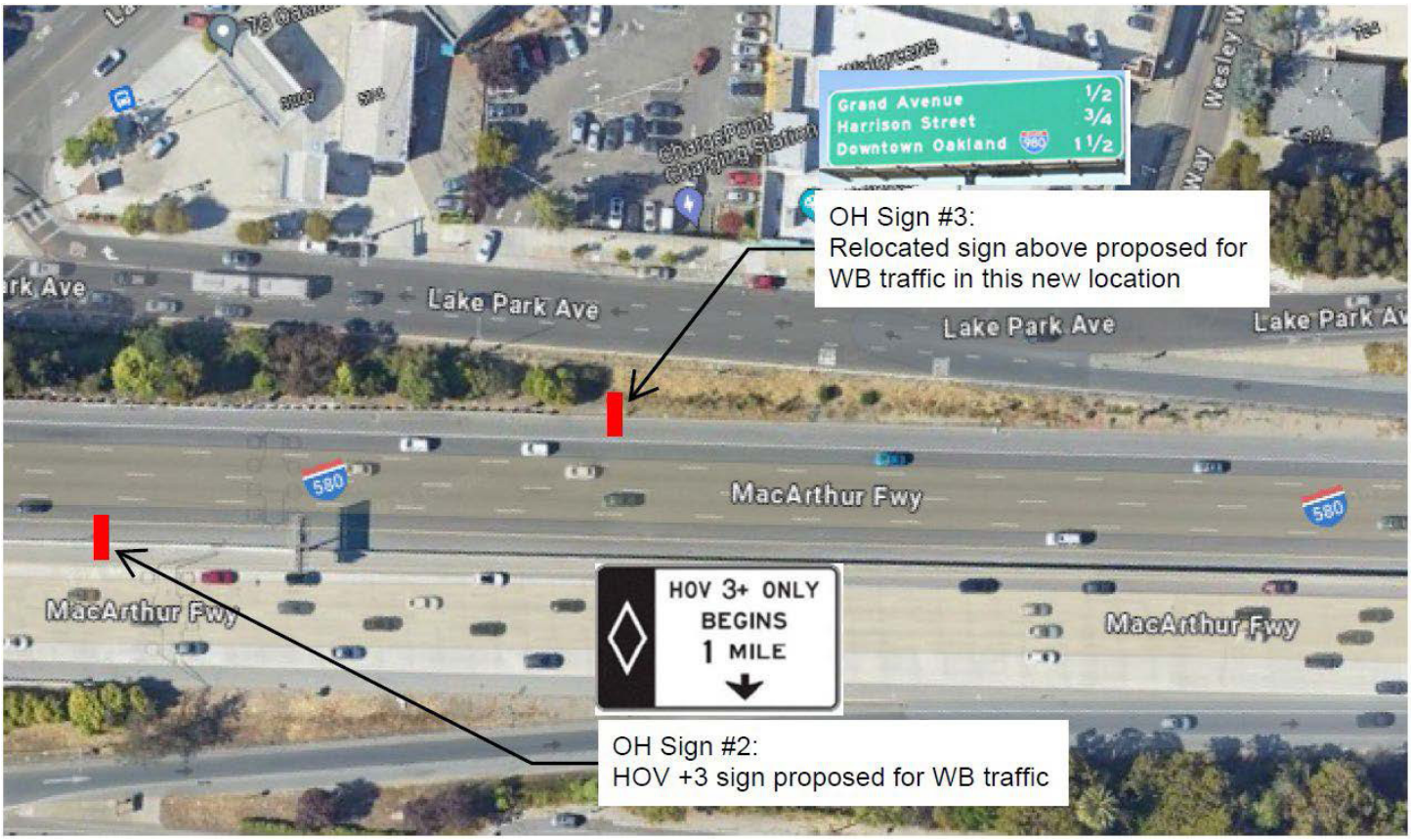
Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension
Visual Impact Assessment

Not to scale

Kimley»Horn

4.1.2 OH Sign #2 and OH Sign #3

Figure 4 shows the locations of OH Sign #2 and OH Sign #3. The AVE in this area also equates to the driver's viewshed in the direction of WB travel. The new OH Sign #2 is proposed about 100' west of the existing sign structure in the median of I-580. The existing OH sign will be removed. The existing sign panel facing the EB traffic would be relocated to the new OH sign #2, while the existing sign panel facing the WB traffic would be relocated to the new overhead sign structure at the OH Sign #3 location along the outside edge of pavement. A new HOV 3+ sign panel facing the WB traffic would also be added on the new sign structure at OH Sign #2. Thus, there is insignificant change in the driver's viewshed and no impact to the view of any significant scenic resources from OH Sign #2 as the existing overhead sign footprint will not change. OH Sign #3 will partially disrupt the existing view to the adjacent area off the Lakeshore Avenue exit as a new overhead sign is introduced. As OH Sign #3 would disrupt the existing view, the balance of the analysis focuses on OH Sign #3 as the element of the Project with the most potential to impact the visual environment.



Kimley-Horn, 2024

Figure 4: OH Signs #2 and #3

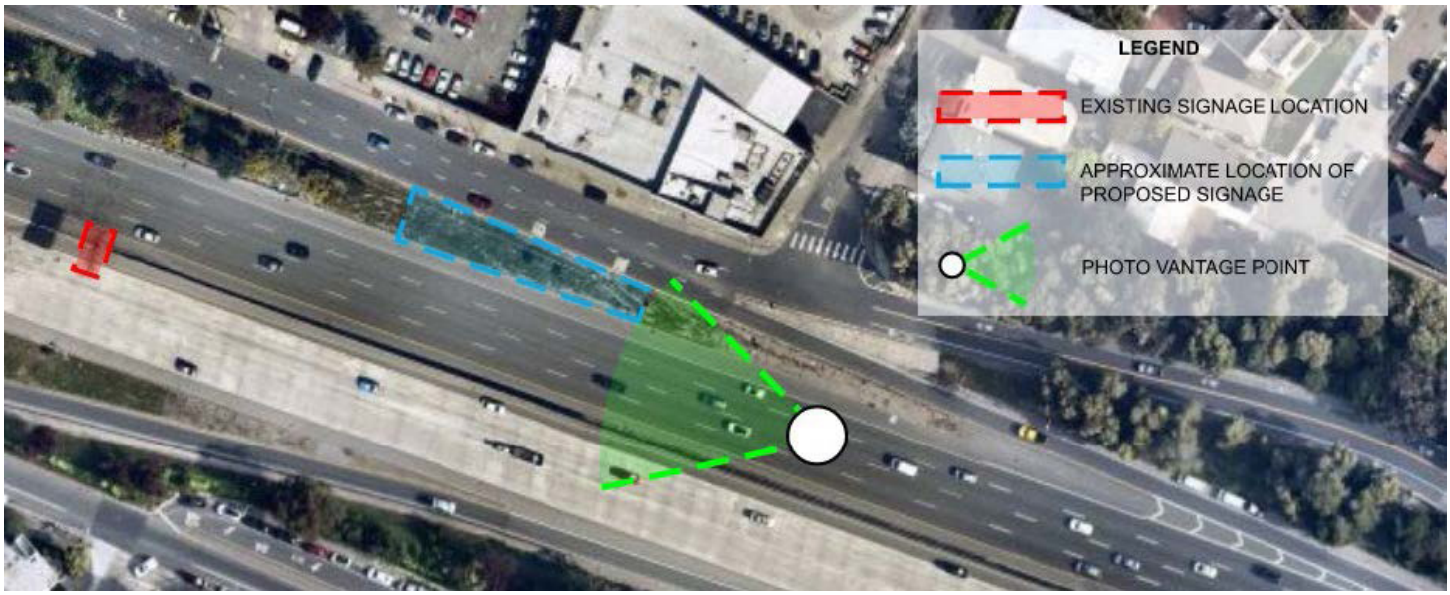
Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension
Visual Impact Assessment

Not to scale

Kimley»Horn

4.2 Key View

Because OH Sign #3 will partially disrupt the view to the adjacent area off the Lakeshore Avenue exit, a key view location was established to analyze OH Sign #3, see Figure 5. A key view location represents the point at which viewer groups have the highest potential to be affected by the Project, considering exposure and sensitivity. This key view location was selected because there is the introduction of a new sign where one currently does not exist and travelers have the opportunity to look beyond the interstate corridor onto the surrounding neighborhood. North of the key view are various grocers and other commercial storefronts and landscaping exists immediately to the west. The existing key view is shown in Figure 6. A visual simulation was prepared to better understand the visual change resulting from this Project (i.e., OH Sign #3) and is included as Figure 7.



Kimley-Horn, 2024

Figure 5: Key View Visual Simulation Vantage Point

Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension
Visual Impact Assessment

Not to scale

Kimley»Horn

Kimley-Horn, 2024

Figure 6: Key View, Existing Conditions

Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension

Visual Impact Assessment

Not to scale

Kimley»Horn

Kimley-Horn, 2024

Figure 7: Key View, Proposed Condition Visual Simulation

Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension

Visual Impact Assessment

Not to scale

Kimley»Horn

4.3 Evaluation of Visual Impact

This section considers the temporary and permanent visual impacts of the Project.

4.3.1 Temporary Impacts:

Visual impacts as a result of Project construction are temporary as construction activities are temporary. Project construction would require closure of the I-580 median for the duration. Temporary lane closures will also occur through the construction period. Nighttime construction would require temporary lighting. The temporary lighting would introduce a minimal amount of new light to the Project area during construction. However, the amount of light introduced would be minimal and subject to Caltrans rules requiring best management practices (e.g., glaring light shall be directed away from residential areas during nighttime construction activities). As the lighting would be temporary, minimal, and subject to best practice requirements, there would be no permanent effects to the visual environment.

No tree removal is currently proposed, and vegetation removal would be minimal and limited to grubbing of small patches in bare gravel or dirt shoulder areas adjacent to the roadway. Minimizing the removal of existing vegetation and providing proper erosion control methods for areas to be disturbed, as defined in Measures VA-1 and VA-2 (5 Environmental Commitments), would minimize temporary visual impacts from construction. Temporary impacts are not discussed further in this memo.

4.3.2 Permanent Impacts:

Figure 6 shows the existing condition view from the key view. The photograph of the existing conditions was taken from the WB I-580 mainline looking west toward the existing overhead signage (i.e., the location of OH Sign #2). This key view is intended to represent the general view of travelers. The existing view is comprised of background vegetation and views to the areas surrounding the interstate. The dominant colors are that of dark gray (pavement), green (vegetation), and light blue (sky).

As noted, OH Sign #3 will be located between I-580 and the Lakeshore Avenue exit ramp. The existing guardrail will be extended to accommodate the introduction of this new sign. The actual sign panel to be installed on OH Sign #3 is currently installed at the existing median overhead sign 100’ east of the proposed OH Sign #2. A new HOV 3+ sign panel will be installed on the new OH Sign #2. A photorealistic simulation was prepared for this key view and is represented in Figure 7 to represent the visual change resulting from the Project.

The introduction of OH Sign #3 is not anticipated to impact the view of any significant scenic resource. As mentioned, in this location, travelers can look beyond the interstate corridor onto the surrounding neighborhood. OH Sign #3 will draw the traveler’s eye in this direction where commercial storefronts and existing landscaping can be seen. The Project is not anticipated to have a substantial adverse effect on any scenic vistas or cause damage to existing trees, vegetation, or rock outcroppings.

While OH Sign #3 would partially disrupt the view to the adjacent area off the Lakeshore Avenue exit, it would neither substantially degrade the existing visual character or quality of the site and its surroundings nor impact the scenic roadway designations in

the area. As previously noted, the Project area is located within *Officially Designated* and *Eligible* Scenic Highway sections and has Classified Landscape Freeway Status in some portions, including the area where OH Sign #3 would be installed. Scenic Highway sections require regulation of land use and density, detailed land and site planning, control of outdoor advertising, control of earthmoving and landscaping, and control of the appearance of structures visible from the section. Classified Landscape Freeway Status requires consideration of ornamental vegetation planting and outdoor advertising displays along the designated section. The Project does not alter the land uses or development density beyond the existing roadway; does not conflict with adopted land plans for the area; does not include significant earthmoving nor landscaping; does not introduce structures at odds with the existing urban roadway visual environment; nor does it introduce outdoor advertising. As such, the Project will not impact the visual environment, the existing Classified Landscape Freeway status, or the Scenic Highway Designation.

The Project does not include any new lighting features. Thus, the Project would not introduce any permanent new sources of light or glare to the Project area. Therefore, the Project would have no adverse effect of daytime or nighttime lighting or glare in the area.

Scoring and the associated VIA Scoping Questionnaire is included at the back of this memorandum in Appendix A.

5 Environmental Commitments

5.1 Recommendations for Environmental Commitment Measures

Environmental commitments have been proposed to ensure the visual impact of the Project is remains minimal. Environmental commitments will be designed and implemented with the concurrence of the District Landscape Architect. The following environmental commitments are proposed:

Table 1 - Minimization Measures

MINIMIZATION MEASURES	
No.	***Description***
VA-1	**Utilize Erosion Control Methods.** All soils and ground surfaces disturbed by trenching and construction activities shall be restored and treated with erosion control.
VA-2	**Screening of Construction Equipment and Materials.** During construction operations, unsightly material and equipment in staging areas shall be placed where they are less visible and/or covered where possible. Construction activities shall limit all construction lighting to within the area of work and avoid light trespass through directional lighting, shielding, and other measures as needed.

6 Conclusions

No significant visual impact is anticipated as result of the Project. Temporary impacts are temporary by nature and minimal. OH Sign #3 was identified to have the highest potential for visual impact of any Project element. Other than the introduction of the sign itself, the potential visual changes are the extension of the existing guardrail, and possible minor vegetation removal. However, as discussed above, this does not constitute an impact to the existing visual environment. As the impact from OH Sign #3 would be the greatest potential Project impact, it is anticipated that this Project will not significantly impact the visual environment.

Appendix A: Scoping Questionnaire

Questionnaire to Determine Visual Impact Assessment (VIA) Level

Use the following questions and subsequent score as a guide to help determine the appropriate level of VIA documentation. This questionnaire assists the VIA preparer (i.e. Landscape Architect) in estimating the probable visual impacts of a proposed project on the environment and in understanding the degree and breadth of the possible visual issues. The goal is to develop a suitable document strategy that is thorough, concise and defensible.

Enter the project name and consider each of the twelve questions below. Select the response that most closely applies to the proposed project and corresponding number on the right side of the table. Points are automatically computed at the bottom of the table and the total score should be matched to one of the four groups of scores at the end of the questionnaire that include recommended levels of VIA study and associated annotated outlines (i.e., memo, standard, advanced).

This scoring system should be used as a preliminary guide and should not be used as a substitute for objective analysis on the part of the preparer. Although the total score may recommend a certain level of VIA document, circumstances associated with any one of the ten question-areas may indicate the need to elevate the VIA to a greater level of detail. For projects done by others on the State Highway System, the District Landscape Architect should be consulted when scoping the VIA level and provide concurrence on the level of analysis used.

The Standard Environmental Reference, Environmental Handbook, Volume I: Chapter 27-Visual & Aesthetics Review lists preparer qualifications for conducting the visual impact assessment process. Landscape Architects receive formal training in the area of visual resource management and can appropriately determine which VIA level is appropriate.

Preparer Qualifications:

> "Scenic Resource Evaluations and VIA's are performed under the direction of licensed Landscape Architects. Landscape Architects receive formal training in the area of visual resource management with a curriculum that emphasizes environmental design, human factors, and context sensitive solutions. When recommending specific visual mitigation measures, Landscape Architects can appropriately weigh the benefits of these different measures and consider construction feasibility and maintainability."

Calculate VIA Level Score

Project Information

Project Name

BBF I-580 HOV Extension project

Project Identification #

EA# 04-1W160

Project Location (Dist-Co-Rte-PM)

District 4, Alameda County, Philip Dinh, Caltrans

Preparer Name and CA LA License Number

Michael Madsen, PLA #5798

Caltrans District Landscape Architect (DLA)

For projects on State Highway System Only, Name of Caltrans District Landscape Architect (DLA) providing VIA Questionnaire Score Concurrence - if different than above.

Lydia C. Mac, PLA #5035

Visual Features of Project and its Alternative(s)

GP Lane conversion to an HOV lane + associated signage

Additional Visual Context Remarks

Approximately four roadside signs being installed related to the HOV+3 la

Regulatory Framework

Potential Agencies that may have to be Involved

☐ **Federal** ☑ **State** ☐ **Local** ☐ **Tribal** ☐ **Other**

Visual Change and Sensitivity

Landscape Observations

☐ **Water** ☐ **Visually dominant landforms** ☐ **Natural vegetation**

☐ **Visually Appealing Structures** ☐ **Other features of interest**

Impact of Project on Natural, Cultural, and Existing Project Environments

☑ **Highly compatible** ☐ **Moderately compatible** ☐ **Not compatible**

☐ **Other**

Landscape Context and Development Patterns

☐ **Natural/Undeveloped** ☐ **Rural** ☐ **Suburban** ☑ **Urban**

Scenic, Visual and Historic Resource(s) within the Area of Visual Effect

☑ **Officially designated State Scenic Highway**

☐ **Eligible Scenic Highway** ☐ **Visual resources**

☐ **Federally (or otherwise) designated historic, scenic resource**

Expected Agency Involvement

MTC, Caltrans, Alameda CTC

Expected Public Feedback

- [ ] **Scenic resources identified as important**
- [ ] **Not important**
- [x] **No public feedback**

Change to Visual Environment

1. **Does the project's aesthetic approach appear to be consistent with applicable laws, ordinances, regulations, policies, or standards?**

   Although the State is not required to comply with regional and local planning ordinances and other regulations, these documents are critical in understanding the importance that communities place on visual resources. The Caltrans Environmental Planning branch may have copies of the planning documents that pertain to the project. If not, this information can be obtained by contacting the local planning department.

   High Consistency (2 point)

2. **Will permits be required by outside regulatory agencies (i.e., federal, state, or local)?**

   Permit requirements can have an unintended consequence on the visual environment. Anticipated permits, as well as specific permit requirements may be determined by talking with the project Environmental Planner and Project Engineer. Note: coordinate with the Caltrans representative responsible for obtaining the permit prior to communicating directly with any permitting agency.

   Yes, local or multiple local only (2 points)

3. **Will the project character be compatible with the visual character of the existing landscape?**

   Consider the types of adverse changes to the scenic integrity of the landscape caused by the project. Evaluate the scale and extent of the project features compared to the surrounding scale of the community. Is the project likely to give an urban appearance to an existing rural or suburban community?

   High Compatibility (1 points)

4. **Will the project contrast adversely with the memorability (vividness), natural harmony and/or cultural order (unity) of the existing landscape?**

   Evaluate the scale and extent of the project features compared to the scale of the visual elements within the surroundings. Is the project likely to change the appearance in a way that is contrasting with the line, color, form, and texture of the existing landscape visual character?

   Low Adverse Contrast (2 point)

5. **Will the project, when viewed together with other past or foreseeable projects, result in a cumulative adverse change in the visual quality or character of the existing landscape?**

   Identify any projects in the area (both Caltrans' and others') that have been recently constructed and/or are reasonably foreseeable and/or currently planned for future construction. The window of time and the extent of area applicable to possible cumulative impacts should be based on a reasonable anticipation of the viewing public's awareness of cumulative change.

Project will not result in cumulative impacts (1 point)

6. **Will the project produce a new source of substantial light or glare, which will adversely affect daytime or nighttime views within the area?**

Identify new sources of lighting and glare and how day- and nighttime visual conditions may change.

Low potential for adverse effects (2 point)

7. **What is the potential that the project proposal will be controversial within the community?**

Assess the level of public concern by talking with local agency management and staff familiar with the affected community's sentiments as evidenced by past projects and/or current information.

No Potential that project will be controversial (1 point)

8. **How sensitive are potential viewer groups likely to be regarding visible changes proposed by the project?**

Consider among other factors who the viewer groups represent, the number of viewers within the group, probable viewer expectations, activities, viewing duration, and orientation. The expected viewer sensitivity level may be scoped by applying professional judgment, and by soliciting information from other Caltrans staff, local agencies and community stakeholders familiar with the affected community's sentiments and demonstrated concerns..

No Sensitivity (1 point)

9. **What level of local concern is there for the types of specific project features (e.g., bridge structures, large excavations, sound barriers, or median planting removal) and construction impacts that are proposed?**

Certain project improvements can be of special interest to local citizens, causing a heightened level of public concern, and requiring a more focused visual analysis.

Low Level of Concern (2 points)

10. **Are there federally, state, locally designated scenic or historic resources, or other visual resources within the project area of visual effect (i.e., viewshed)?**

For example: protected viewsheds, visually sensitive public use areas, national historic/scenic trails, historic sites or structures, scenic designated viewpoints, wild and scenic rivers, state scenic highways or federal scenic byways, or potential visual resources such as stands of trees, rock outcroppings, etc.

Multiple potential visual resources or a single designated scenic resource

11. **Will the project sponsor or public benefit from a more detailed visual analysis in order to help reach consensus on a course of action to address potential visual impacts?**

Consider the proposed project features, possible visual impacts, and probable environmental commitments.

No Benefit (1 point)

12. **Will the project likely require design changes to reduce the extent of visual resource impacts?**

Consider design changes and enhancements such as realignment, additional alignment alternatives, vertical profile adjustments, extensive landscaping, architectural treatment, color and texture treatments and/or lighting of aboveground structures.

No design changes (1 point)

Assumptions/Issues

Assumptions/Issues

Calculate Total

It is recommended that you print a copy of these calculations for the project file.

Project Score: 19

Select An Outline Based Upon Project Score

The total score will indicate the recommended VIA level for the project. In addition to considering circumstances relating to any one of the 12 questions that would justify elevating the VIA level, also consider any other project factors that would influence level selection.

Score 12-18 VIA Questionnaire

No visual resource related regulatory requirements. No or negligible visual changes to the environment are proposed. None or minimal public concern has been identified. This Questionnaire with rationale for selected responses to questions in the available spaces after each question along with a statement of no visual resource impact is appropriate and provides a sufficient rationale why a technical study is not required.

Score 19-28 VIA Memorandum

Very limited visual resource related regulatory requirements. Minor visual changes to the environment are proposed. Minor public concern from the public may be expected. A VIA Memorandum is appropriate in this case. The VIA Memorandum should briefly describe project features, impacts and any environmental commitment measures. Visual simulations are not necessary. Go to the Directions for using and accessing VIA Memorandum Annotated Outline (website link).

Score 29-38 Standard VIA Report

Several visual resource related regulatory requirements. Moderately noticeable visual changes to the environment are proposed. Moderate public concern may be expected. A fully developed Standard VIA Report is appropriate. The report should describe in detail the project's visual attributes, its visual impact and potential environmental commitment measures. Visual simulations are recommended. This report will likely receive public review. Go to the Directions for using and accessing the Standard VIA Annotated Outline (website link).

Score 39-48 Advanced VIA Report

Extensive visual resource related regulatory requirements and clearly noticeable changes to the environment are proposed. Moderate to high public concern may be expected. A fully developed Advanced VIA Report is appropriate. The report should describe in detail and numerically score the project's visual change and sensitivity, its visual impact and any environmental commitments proposed. Visual simulations are required. It is appropriate to alert the Project Development Team to the potential for

highly adverse impacts and to consider project alternatives to avoid those impacts. This technical study will receive close public review. Go to the Directions for using and accessing the Advanced VIA Annotated Outline (website link coming soon).

Statewide Campaigns

- ADA Access
- Adopt-A-Highway
- Amber Alert
- Be Work Zone Alert
- CAL FIRE
- Cal OES: Power Outage and Fire Recovery Resources
- California Climate Investments
- California Connected
- California Transportation Plan 2050
- Clean California
- Energy Upgrade
- Go Safely California
- HeatReadyCA.com
- Move Over Law
- REAL ID
- Save Our Water
- Stormwater Education Campaign
- Tenant and Landlord Resources
- Unclaimed Property

Attachment H: Historic Property Survey Report and Archaeological Survey Report

HISTORIC PROPERTY SURVEY REPORT

1. UNDERTAKING DESCRIPTION AND LOCATION

District	County	Route	Post Mile(s)	EA	E-FIS Project Number
4	ALA	580	43.6-46.9	04-1W160	

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S.C. 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.

The studies for this undertaking were carried out in a manner consistent with Caltrans' regulatory responsibilities under Section 106 of the National Historic Preservation Act (36 CFR Part 800) and pursuant to the January 2014 *First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act* (Section 106 PA), as well as under Public Resources Code 5024 and pursuant to the January 2015 *Memorandum of Understanding Between the California Department of Transportation and the California State Historic Preservation Office Regarding Compliance with Public Resources Code Section 5024 and Governor's Executive Order W-26-92, addended 2019* (5024 MOU) as applicable.

Project Description:

The Bay Bridge Forward Interstate 580 (I-580) Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project (Project) is located in the City of Oakland within Alameda County, California. The Metropolitan Transportation Commission (MTC) is the Project sponsor, implementing agency, and lead agency. Project partners include Caltrans and the Alameda County Transportation Commission.

The Project site extends from I-580 Post Mile 46.9 to I-580 Post Mile 43.2. The Project proposes to convert 1.7 miles of an existing general purpose lane to an high occupancy vehicle (HOV) lane. Signing and striping work would occur along the existing HOV lane between I-580 Post Mile 46.9 and I-580 Post Mile 46.7. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to approximately the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5). The Project limit extends farther along I-580 WB from the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) to I-580 Post Mile 43.2 at the Lake Park Ave Overcrossing for the installation of advanced HOV lane signs and restriping. No HOV lane extension is proposed for this portion of the Project site.

A full project description as it pertains to cultural resources can be found in Attachment 1.

2. AREA OF POTENTIAL EFFECTS

In accordance with Section 106 PA Stipulation VIII.A, the Area of Potential Effects (APE) for the Project was established in consultation with Lindsay Busse, PQS Principal Investigator – Archaeology, Helen Blackmore, PQS Principal Architectural Historian, and Muthanna Omran, Caltrans Project Manager on 3/30/2023. The APE includes the full horizontal extent of all potential project activities totaling 99.68 acres in size and 3.34 linear miles long (PM 43.61 to 46.95; see Attachment 1, Figure 3). The architectural APE is identical to the archaeological APE except where the archaeological APE was expanded to follow the boundaries of one archaeological site.

The vertical extent of the APE varies greatly. The majority of impacts will entail no subsurface disturbance or disturbance only to the pavement of I-580 (grinding existing road surface, re-paving, and the application of new striping) and if possible, installing new signs on existing signposts. However, the construction of three new overhead signposts may be necessary, in which case the construction of overhead sign foundations would require excavation to a maximum depth of 40 feet below ground surface in two locations. The APE includes all project work, staging areas, access, and any cultural resources boundaries.

3. CONSULTING PARTIES / PUBLIC PARTICIPATION

☒ Native American Heritage Commission

- On November 19, 2021, Alyssa Scott of Far Western submitted a Sacred Lands File and Native American Contacts List Request to the NAHC.
- NAHC Cultural Resources Analyst, Cody Campagne, responded on February 15, 2022. The search of the Sacred Lands File was positive, indicating the presence of Native American cultural resources in the immediate project area. A list of 10 Native American interested individuals/organizations was provided.

☒ Native American Tribes, Groups and Individuals

- Irene Zwierlein, Chairperson, Amah Mutsun Tribal Band of Mission San Juan Bautista. Letter and email sent 3/17/22 and 9/30/22; phone call on 10/4/22. Requested that any construction crews receive cultural sensitivity training.
- Monica Arellano, Vice Chairwoman, Muwukma Ohlone Indian Tribe of the San Francisco Bay Area. Letter and email sent 3/17/22 and 9/30/22; phone call on 10/4/22. No response received.
- Tony Cerda, Chairperson, Costanoan Rumsen Carmel Tribe, Letter and email sent 3/17/22 and 9/30/22; phone call on 10/4/22. No response received.
- Ann Marie Sayers, Chairperson, Indian Canyon Mutsun Band of Costanoan. Letter and email sent 3/17/22 and 9/30/22; phone call on 10/4/22. No response received.
- Kanyon Sayers-Roods, Indian Canyon Mutsun Band of Costanoan. Letter and email sent 3/17/22 and 9/30/22; phone call on 10/4/22.
- Katherine Erolinda Perez, Chairperson, North Valley Yokuts Tribe. Letter and email sent 3/17/22 and 9/30/22; phone call on 10/4/22. No response received.
- Timothy Perez, North Valley Yokuts Tribe. Letter and email sent 3/17/22 and 9/30/22; phone call on 10/4/22. No response received.
- Andrew Galvan, The Ohlone Tribe. Letter and email sent 3/17/22 and 9/30/22; phone call on 10/4/22. No response received. Asked if a Sacred lands file request had been made and a survey conducted. Adrian Whitaker, Ph.D. from Far Western responded on 10/5/22 to respond that a sacred lands file request had been made but that no survey was conducted because the entire project was within the existing paved right-of-way.
- Corrina Gould, Chairperson, the Confederated Villages of Lisjan. Letter and email sent 3/17/22 and 9/30/22; phone call on 10/4/22. No response received.
- Kenneth Woodrow, Chairperson, Wuksache Indian Tribe/Eshom Valley Band. Letter and email sent 3/17/22 and 9/30/22; phone call on 10/4/22, no response received.

4. SUMMARY OF IDENTIFICATION EFFORTS

☒ National Register of Historic Places (NRHP)
☒ California Register of Historical Resources (CRHR)
☒ National Historic Landmark (NHL)
☒ California Historical Landmarks (CHL)
☐ California Points of Historical Interest
☒ California Historical Resources Information System (CHRIS)
☒ Caltrans Historic Bridge Inventory
☐ Caltrans Cultural Resources Database (CCRD)
☒ Other Sources consulted:

- District 4 buried site sensitivity model.

☒ Results:

The entire APE is paved and elevated and therefore did not require pedestrian survey or has been recently surveyed (NWIC records search 21-0881 on January 3, 2022); no pedestrian survey was conducted for the current

undertaking. One previously recorded resource (P-01-012011) is within the horizontal APE, but is buried at least one foot below the ground surface and no sub-surface impacts are planned in that portion of the APE. The project work will be taking place on an elevated section of roadway. The site is not within the vertical APE.

Buried site sensitivity in the entire APE varies from lowest to highest, but areas with proposed subsurface impacts are exclusively within areas of low sensitivity for buried resources and no further testing is recommended.

5. PROPERTIES IDENTIFIED

☒ Caltrans, in accordance with Section 106 PA Stipulation VIII.C.5 has determined there are cultural resources within the APE that were **previously determined not eligible** for inclusion in the NRHP with SHPO concurrence and those determinations remain valid. Copy of SHPO/Keeper correspondence is attached.

☒ Bridges listed as **Category 5** (previously determined not eligible for listing in the NRHP) in the Caltrans Historic Bridge Inventory are present within the APE and those determinations remain valid. Appropriate pages from the Caltrans Historic Bridge Inventory are attached.

- Distribution Structure (Br. No. 33-0061L; PM 04-ALA-580-46.5L)
- Distribution Structure (Br. No. 33-0061R; PM 04-ALA-580-46.5R)
- Adeline Street UC (Br. No. 33-0280L; PM 04-ALA-580-45.74)
- Adeline Street UC (Br. No. 33-0280R; PM 04-ALA-580-45.74)
- Macarthur Blvd. Separation 580/123 (Br. No. 33-0281R; PM 04-ALA-580-45.99)
- Broadway-Richmond Blvd UC (Br. No. 33-0285; PM 04-ALA-580-44.51)
- Macarthur Blvd OC (Br. No. 33-0287; PM 04-ALA-580-44.32)
- Oakland Avenue OC (Br. No. 33-0288; PM 04-ALA-580-44.28)
- Harrison Street UC Off-Ramp (Br. No. 33-0289K; PM 04-ALA-580-44.33)
- Harrison Street UC On-Ramp (Br. No. 33-0289S; PM 04-ALA-580-44.33)
- Chetwood Street OC (Br. No. 33-0290; PM 04-ALA-580-44.07)
- Webster Street UC (Br. No. 33-0296; PM 04-ALA-580-44.81)
- Webster Street UC (Br. No. 33-0296K; PM 04-ALA-580-44.81)
- Telegraph Avenue UC (Br. No. 33-0297; PM 04-ALA-580-45.03)
- Telegraph Avenue UC Off-Ramp (Br. No. 33-0297K; PM 04-ALA-580-45.03)
- Oakland Separation 580/24-980 (Br. No. 33-0298; PM 04-ALA-580-45.15)
- Martin Luther King Jr UC (Br. No. 33-0299; PM 04-ALA-580-45.25)
- Martin Luther King Jr UC On-Ramp (Br. No. 33-0299K; PM 04-ALA-580-45.25)
- Martin Luther King Jr UC Off-Ramp (Br. No. 33-0299S; PM 04-ALA-580-45.25)
- West Street UC (Br. No. 33-0300; PM 04-ALA-580-45.39)
- Market Street UC (Br. No. 33-0301; PM 04-ALA-580-45.56)
- North Connector OC (E&W 580-E 24; Br. No. 33-0302H; PM 04-ALA-580-45.23)
- South Connector OC (E&W 580-E 24; Br. No. 33-0303H; PM 04-ALA-580-45.14)
- Santa Clara Avenue POC (Br. No. 33-0312; PM 04-ALA-580-43.76)
- Van Buren Avenue POC (Br. No. 33-0313; PM 04-ALA-580-43.75)

6. FINDING FOR THE UNDERTAKING

☒ Caltrans, pursuant to Section 106 PA Stipulation IX.A, has determined a Finding of No Historic Properties Affected is appropriate for this undertaking because there are no historic properties within the APE.

7. CEQA CONSIDERATIONS

☒ Caltrans PQS has determined that there are resources in the project area that **are historical resources** for the purposes of CEQA; see Section 5.

8. LIST OF ATTACHED DOCUMENTATION

☒ Project Vicinity, Location, and APE Maps. See Attachment 1, Figures 1, 2, and 3.

☒ Attachment 1: Archaeological Survey Report (ASR)

Alyssa Scott and Adrian Whitaker *Archaeological Survey Report for the Bay Bridge Forward Interstate 580 Westbound High Occupancy vehicle Lane Extension Project, Alameda County, California.*

☒ Attachment 2: Caltrans Historic Bridge Inventory Sheet

9. HPSR PREPARATION AND CALTRANS APPROVAL

Prepared by: _____ 1/18/2023
Adrian Whitaker, Ph.D. Date
Principal Investigator, Prehistoric Archaeology
Far Western Anthropological Research Group, Inc.

Reviewed for
Approval by: _____ 3/30/2023
Lindsay Busse, MSc.
District 4 Caltrans PQS Principal Investigator, Prehistoric Archaeology Date

Approval by: _____ 4/21/2023
Brian Gassner
Acting District 4 EBC Office of Cultural Resource Studies Date

Approval by: _____ 4/13/2023
Helen Blackmore, MSc.
District 4 EBC Office of Cultural Resource Studies Date

ATTACHMENT 1

ARCHAEOLOGICAL SURVEY REPORT

Archaeological Survey Report for the Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension Project, Alameda County, California

04-ALA-580-PM 43.6/46.9
EA 04-1W160

By:
Alyssa Scott
Adrian Whitaker

January 2023

USGS Topographic Quadrangles:
Oakland West 7.5-minute

***Site*:**
P-01-012011

Submitted to:
Chadi Chazbek
Regional Vice President
Kimley-Horn and Associates, Inc.
4637 Chabot Dr., Suite 300
Pleasanton, CA 94588

FAR WESTERN ANTHROPOLOGICAL RESEARCH GROUP, INC.
2727 Del Rio Place, Suite A, Davis, California, 95618
http://www.farwestern.com 530-756-3941

Archaeological Survey Report for the Bay Bridge Forward Interstate 580 Westbound High Occupancy Vehicle Lane Extension Project, Alameda County, California

04-ALA-580-PM 43.6/46.9
EA 04-1W160

Prepared by:

Alyssa Scott, Ph.D., R.P.A.
Adrian R. Whitaker, Ph.D.
Far Western Anthropological Research Group, Inc.

January 2023

Recommended for Approval by:

Metropolitan Transportation Commission

Reviewed by:

Lindsay Busse
PQS Principal Investigator Prehistoric Archaeology
California Department of Transportation, District 4
111 Grand Avenue
Oakland, CA 94623-0660

Approved by:

Brian Gassner

Brian Gassner
Acting Branch Chief, Archaeology
California Department of Transportation, District 4
111 Grand Avenue
Oakland, CA 94623-0660

Submitted to:
Chadi Chazbek
Regional Vice President
Kimley-Horn and Associates, Inc.
4637 Chabot Dr., Suite 300
Pleasanton, CA 94588

MANAGEMENT SUMMARY

Far Western Anthropological Research Group, Inc., (Far Western) on behalf of Kimley-Horn and the Metropolitan Transportation Commission (MTC), conducted archaeological investigations in support of the Bay Bridge Forward Interstate 580 (I-580) Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project, Alameda County, California (04-ALA-580-PM 43.6/46.9). The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to a HOV lane. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile [PM] 46.7) to approximately the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5). The Project limit extends farther along I-580 WB from the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) to I-580 Post Mile 43.6 approximately 0.1 mile west of the Lakeshore Park Undercrossing (I-580 Post Mile 43.5) for the installation of HOV lane signs only. No HOV lane extension is proposed for this portion of the Project site. The project is entirely within Caltrans right-of-way and there are no planned construction easements.

MTC is the Project sponsor. Project partners include the California Department of Transportation (Caltrans) and the Alameda County Transportation Commission. Caltrans, acting as the lead agency for Section 106 compliance under the delegated authority of the Federal Highway Administration, is providing the project oversight. The studies conducted for this project are consistent with Caltrans responsibilities under the January 1, 2014, *First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* for compliance with Section 106 of the National Historic Preservation Act. MTC will act as the California Environmental Quality Act compliance lead.

Tasks conducted by Far Western include an archival records search, Native American outreach, and a geoarchaeological buried site sensitivity analysis of the study area, which includes the project Area of Potential Effects (APE) surrounded by a one-quarter-mile buffer. The records search revealed 108 prior cultural resources studies and 151 previously identified cultural resources (including built environment resources) within the records search area. A Sacred Lands File search conducted by the Native American Heritage Commission (NAHC) identified a sacred site important to local Native Americans but additional consultation has not yet identified where that sacred site is located or if it is in the project APE. Far Western sent letters and follow-up emails, and made follow-up phone calls, to individuals on the Native American Contacts List provided by the NAHC, to request input they may have on the proposed project; this consultation is ongoing.

Pedestrian surface survey was unnecessary since the majority of the APE consists of the paved I-580 corridor. The buried site sensitivity of the project area varies from lowest to highest. Areas of high and highest sensitivity, however, do not overlap with areas of proposed ground disturbance for the project. One previously recorded resource (P-01-012011) is within the APE, but is a buried deposit within an area of the APE that will not require any subsurface impacts.

Buried site sensitivity varies in the APE with 5.9 percent (5.91 acres) within areas of high or highest sensitivity, 26.4 percent (26.47 acres) within areas of Moderate sensitivity, 31.6 percent (31.57 acres) within areas of low sensitivity and 35.9 percent (35.81 acres) within areas of lowest sensitivity. Although there are areas of high and highest buried site sensitivity in the project corridor, subsurface impacts are limited to the lone location west of Martin Luther King Jr. Drive, which is within areas of low and moderate sensitivity.

It is Caltrans' policy to avoid cultural resources whenever possible. Further investigations may be needed if the site(s) cannot be avoided by the project. If buried cultural resources are encountered during construction, it is Caltrans' policy that work stop in that area until a qualified archaeologist can evaluate the nature and significance of the find. Additional survey will be required if the project changes to include areas not previously surveyed.

TABLE OF CONTENTS

APPENDICES

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

The Bay Bridge Forward Interstate 580 (I-580) Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project (Project) is located in the City of Oakland within Alameda County, California (Figures 1 and 2). Metropolitan Transportation Commission (MTC) is the Project sponsor and lead agency. Project partners include the California Department of Transportation (Caltrans) and the Alameda County Transportation Commission. The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to a High Occupancy Vehicle (HOV) lane. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile [PM] 46.7) to approximately the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5). The Project limit extends farther along I-580 WB from the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) to I-580 Post Mile 43.6 approximately 0.1 mile west of the Lakeshore Park Undercrossing (I-580 Post Mile 43.5) for the installation of HOV lane signs only. No HOV lane extension is proposed for this portion of the Project site. The entire project will take place within Caltrans right-of-way and there are no planned construction easements.

The studies conducted for this project are consistent with Caltrans responsibilities under the January 1, 2014, *First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* for compliance with Section 106 of the National Historic Preservation Act. To comply with Section 106 and the California Environmental Quality Act (CEQA) regarding the treatment of cultural resources within the project area, Far Western Anthropological Research Group, Inc., (Far Western) on behalf of Kimley-Horn, undertook a cultural resources investigation in support of the Project. Far Western conducted an archival records search; a geoarchaeological buried site sensitivity analysis; and coordinated with the Native American Heritage Commission (NAHC) and local Native Americans. Senior Archaeologist Alyssa Scott and Principal Investigator Adrian Whitaker authored this report. All of these individuals meet or exceed Secretary of Interior Standards for their positions.

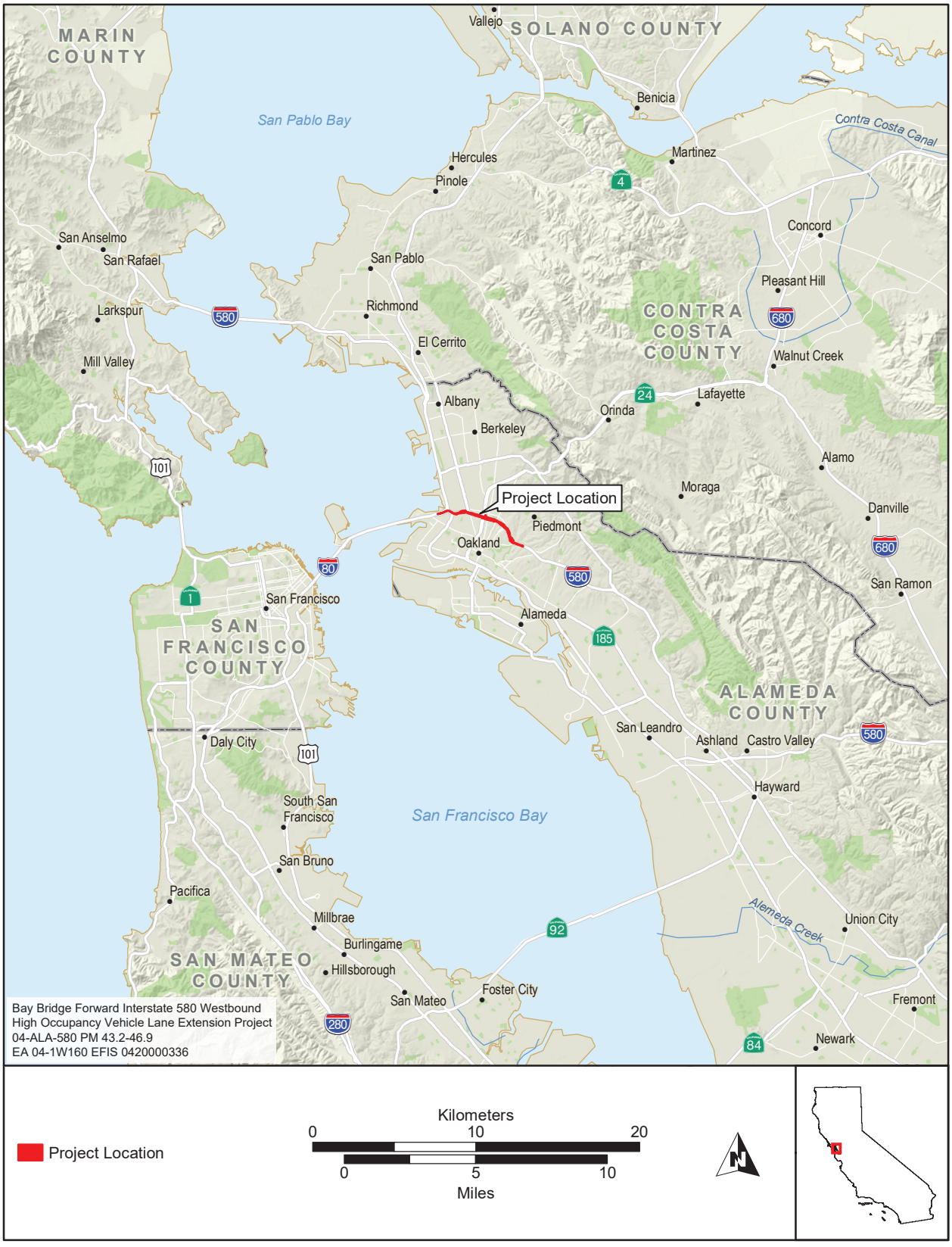


Figure 1. Project Vicinity.

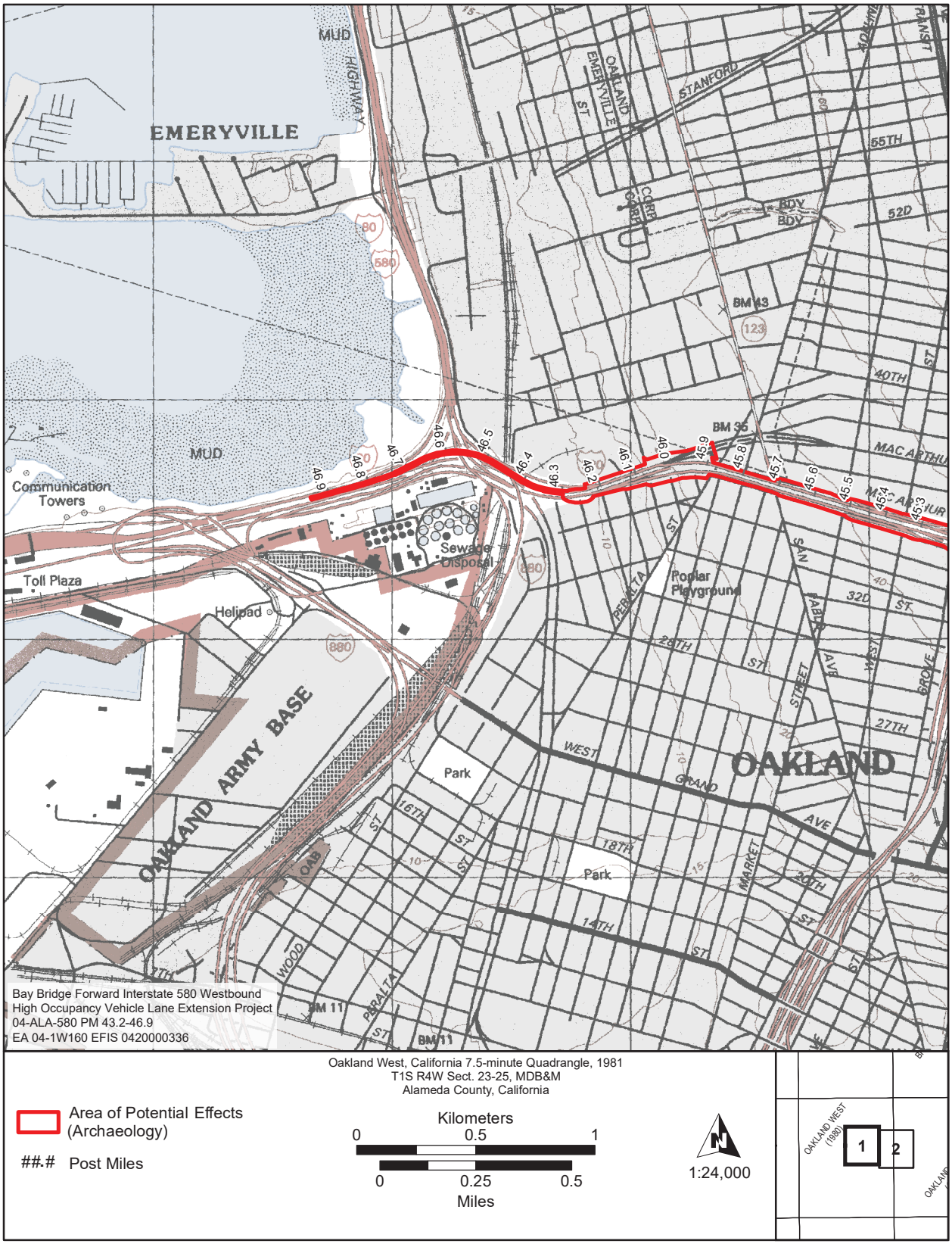


Figure 2. Project Location (1 of 2).

Page 2 of 2

Figure 2. Project Location (2 of 2).

2. PROJECT LOCATION AND DESCRIPTION

The Project aims to replace or update lane signage and re-stripe lanes on I-580 to extend to convert an existing freeway lane to an HOV lane. The purpose of the project is to increase person throughput during peak hours, improve travel time reliability to support buses and high-occupancy vehicles, and encourage mode shift by providing travel time savings for carpoolers and transit riders.

I-580 WB is one of Alameda County's key transportation routes, carrying more than 200,000 vehicles per day in its most heavily used segments and serves as a primary conduit to the Transbay/ San Francisco–Oakland Bay Bridge (SFOBB) corridor. SFOBB is the most congested bridge in the San Francisco Bay Area, with the queues on I-580 WB approaching the SFOBB toll plaza bottleneck extending to the Interstate 980 (I-980)/State Route 24 (SR 24) Interchange (I-580 PM 45.2) during the morning peak period from 6:00 AM to 10:00 AM. These queues are exacerbated by the heavy weaving associated with lane changes prior to the I-80/I-580 junction. With the SFOBB traffic and population and employment around the San Francisco Bay Area anticipated to continue to grow, corridor improvements along I-580 are required to improve current and future travel conditions for the travelers who use the corridor.

Solutions to reduce the congestion along I-580 WB approaching the SFOBB toll plaza are limited by constrained right-of-way. Currently, the congestion approaching the SFOBB toll plaza is a result of lane changes required for vehicles to enter I-80 eastbound (EB) and WB from I-580 WB since lane changes typically require drivers to slow down to avoid accidents. These lane changes occur between the I-980/SR 24 Interchange (I-580 PM 45.2) and the I-80 Interchange (I-580 PM 46.2). Vehicles in the left lanes on I-580 WB need to cross from the left to right lanes to enter I-80 EB. Simultaneously, vehicles entering I-580 WB from I-980/SR 24 must cross from the right to the left lanes of I-580 to enter I-80 WB and SFOBB. The proposed HOV lane would offer travel time savings for HOV vehicles on I-580 WB intending to enter the SFOBB by pre-positioning them in the leftmost lanes, separating them from the vehicles entering I-580 from I-980/SR 24 intending to enter the SFOBB. As a result, the proposed HOV lane is anticipated to increase the WB person throughput while reducing the travel time for HOV vehicles as compared to non-HOV vehicles. This greater reduction in travel time for HOVs is anticipated to encourage mode shift for current and future travelers.

PROJECT DESCRIPTION

The Bay Bridge Forward Interstate 580 (I-580) Westbound (WB) High Occupancy Vehicle (HOV) Lane Extension Project (Project) is located in the City of Oakland within Alameda County, California. The Metropolitan Transportation Commission (MTC) is the Project sponsor, implementing agency, and lead agency. Project partners include Caltrans and the Alameda County Transportation Commission.

The Project site extends from I-580 Post Mile 46.9 to I-580 Post Mile 43.2. The Project proposes to convert 1.7 miles of an existing GP lane to an HOV lane. Signing and striping work would occur along the existing HOV lane between I-580 Post Mile 46.9 and I-580 Post Mile 46.7. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to approximately the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5). The Project limit extends farther along I-580 WB from the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5) to I-580 Post Mile 43.2 at the Lake Park Ave Overcrossing for the installation of advanced HOV lane signs and restriping. No HOV lane extension is proposed for this portion of the Project site.

GP Lane conversion to an HOV lane would entail the removal of current striping, application of new striping, and installation of signs. The proposed HOV lane would be an HOV 3+. The HOV lane would be separated from the remaining GP lanes by a combination of dashed white striping (continuous access), a single solid white stripe (access discouraged), or solid, double, white striping (restricted access). The proposed HOV lane would operate during the same hours as the existing facility between 5:00 A.M and 10:00

A.M. and 3:00 P.M. and 7:00 P.M. Monday through Friday. All project work would occur within the current freeway roadway width and right-of-way.

Approximately four roadside signs indicating the HOV lane restrictions and HOV lane operating hours would be installed on existing overhead sign poles and concrete barriers up to one mile in advance of the beginning of the proposed HOV lane. Two new overhead sign structures would be installed, one immediately west of the Lakeshore Park Undercrossing (I-580 Post Mile 43.5) and one near the Broadway-Richmond Boulevard Undercrossing (I-580 Post Mile 44.5), to support one HOV lane sign each. Approximately ten additional roadside signs would be installed along the HOV lane on existing concrete barriers, overhead sign poles, and lighting poles and new wood posts.

Project construction includes: grinding existing pavement to a depth of no more than 1/8-inch to remove existing striping, application of new striping to the road surface, construction of two new overhead sign structures and foundations, and the installation of new roadside signs on existing concrete bridge rails, concrete median barriers, overhead sign poles, and lighting poles and new wood posts. Grinding the road surface would not impact the ground below the road. Construction of the new overhead sign structures would require excavation to a maximum depth of 40 feet below ground surface to construct structure foundations. Dewatering may be required to construct structure foundations. Installation of new signs on existing bridge rails or poles would not require excavation. Existing concrete median barriers to have new roadside signs installed on them would be replaced per the current Caltrans standards by the Project. Installation of new roadside signs on new wood posts would require excavation to a maximum depth of three to four feet below ground surface for sign foundations. Equipment anticipated to be used for Project construction includes but is not limited to: cement mixer, crane truck, concrete saw, concrete breaker, pile driver, asphalt patch truck, dump trucks, and sweeper.

Project construction would require closure of the I-580 median for the duration of construction. Temporary nighttime lane closures on I-580 WB and I-580 Eastbound (EB) would also be required in addition to median closure. The left-most lane of I-580 WB and I-580 EB would be intermittently closed during the nighttime hours for approximately six months for construction of concrete barriers and overhead sign structure foundations. The two left-most lanes on I-580 WB would be closed during the nighttime hours for approximately one week for installation of overhead sign structures and roadside signs, and application of striping. Temporary lane restriping may be required where overhead sign structures would be installed if the median is insufficient to accommodate pile driving equipment for the duration of pile driving activities. Construction is anticipated to begin in winter 2023 and last for approximately six months.

ARCHAEOLOGICAL AREA OF POTENTIAL EFFECTS

In accordance with Section 106 PA Stipulation VIII.A, the Area of Potential Effects (APE) for the Project was established in consultation with Lindsay Busse, PQS Principal Investigator – Archaeology, Helen Blackmore, PQS Principal Architectural Historian, and Muthanna Omran, Caltrans Project Manager. The APE includes the full horizontal extent of all potential project activities totaling 99.68 acres in size and 3.34 linear miles long (PM 43.61 to 46.95; Figure 3). The architectural APE is identical to the archaeological APE except where the archaeological APE was expanded to follow the boundaries of one archaeological site.

The vertical extent of the APE varies greatly. The majority of impacts will entail no subsurface disturbance or disturbance only to the pavement of I-580 (grinding existing road surface, re-paving, and the application of new striping) and if possible, installing new signs on existing signposts. However, the construction of two new overhead signposts may be necessary, in which case the construction of overhead sign foundations would require excavation to a maximum depth of 40 feet below ground surface in two locations. The APE includes all project work, staging areas, access, and any cultural resources boundaries.

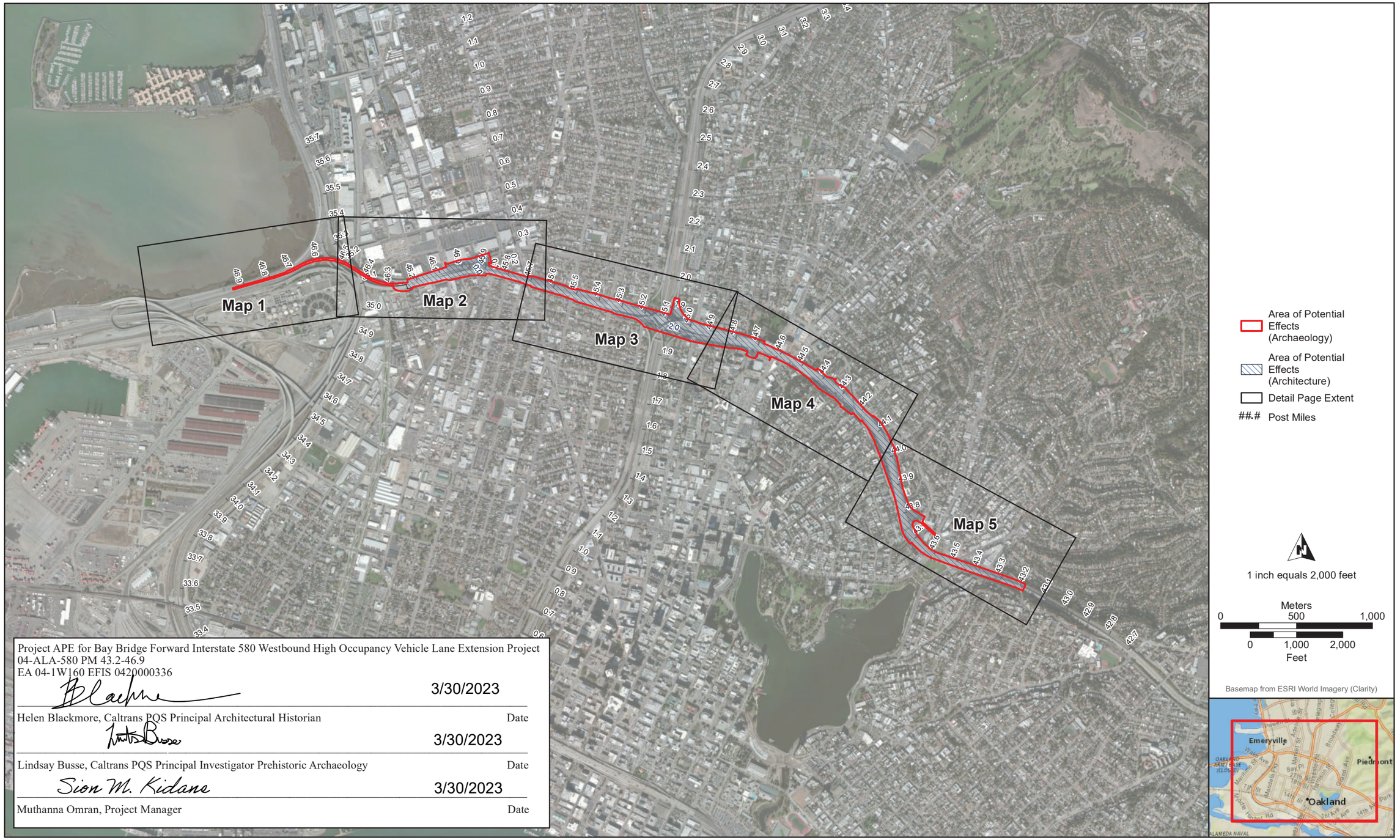
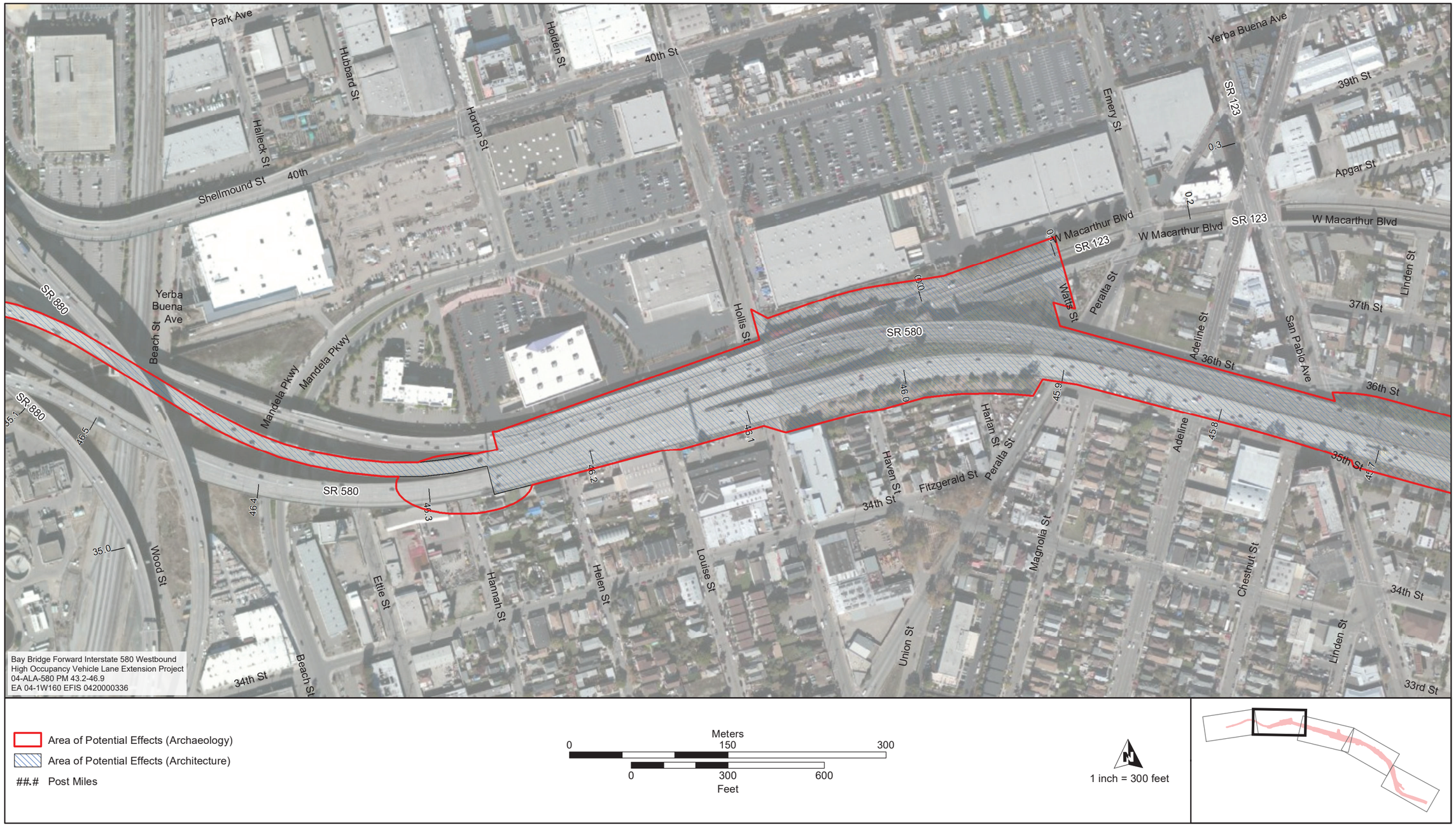


Figure 3. Area of Potential Effects (1 of 6).

Figure 3. Area of Potential Effects (2 of 6).



Page 2 of 5

Figure 3. Area of Potential Effects (3 of 6).

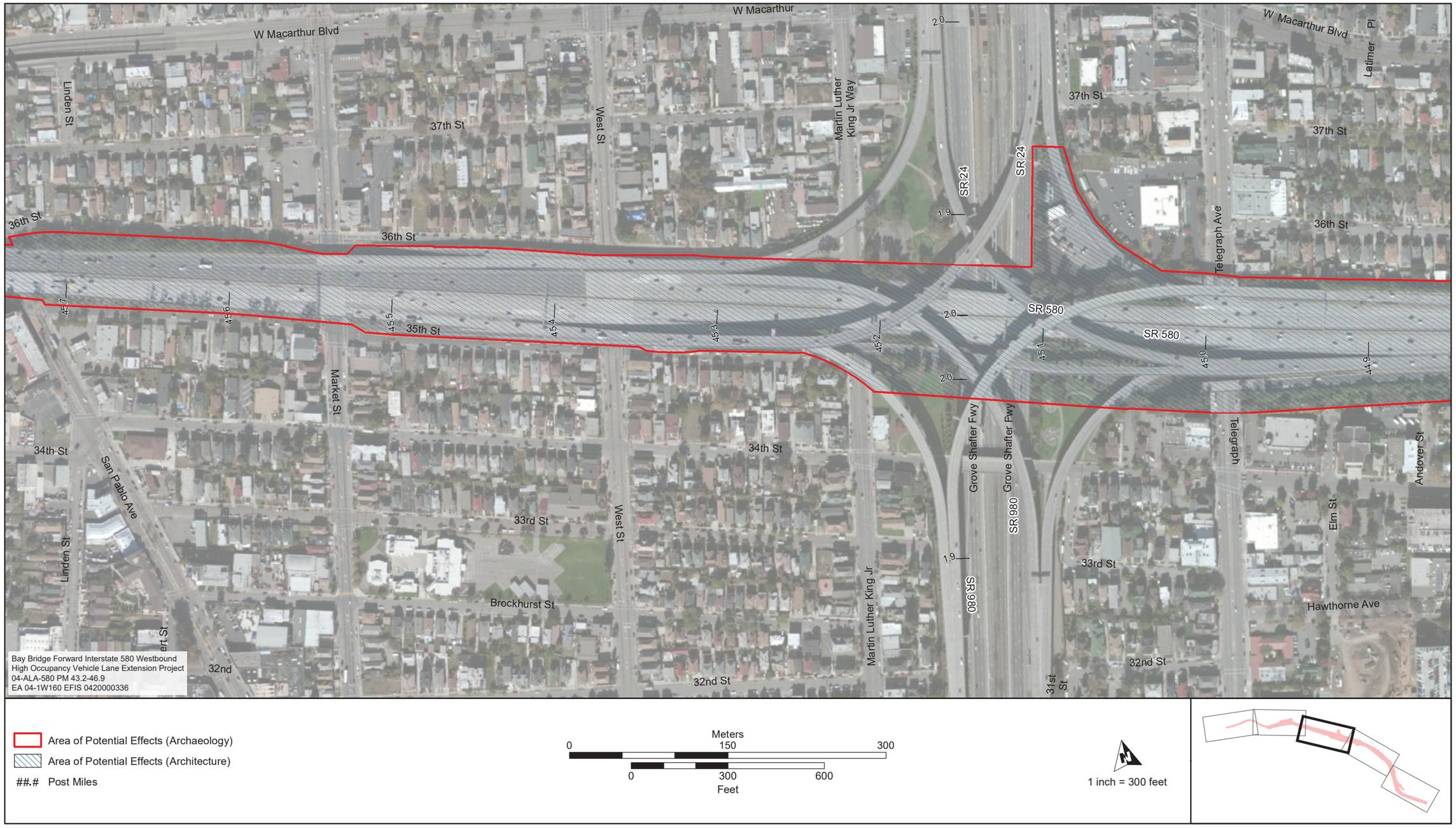


Figure 3. Area of Potential Effects (4 of 6).

Figure 3. Area of Potential Effects (5 of 6).

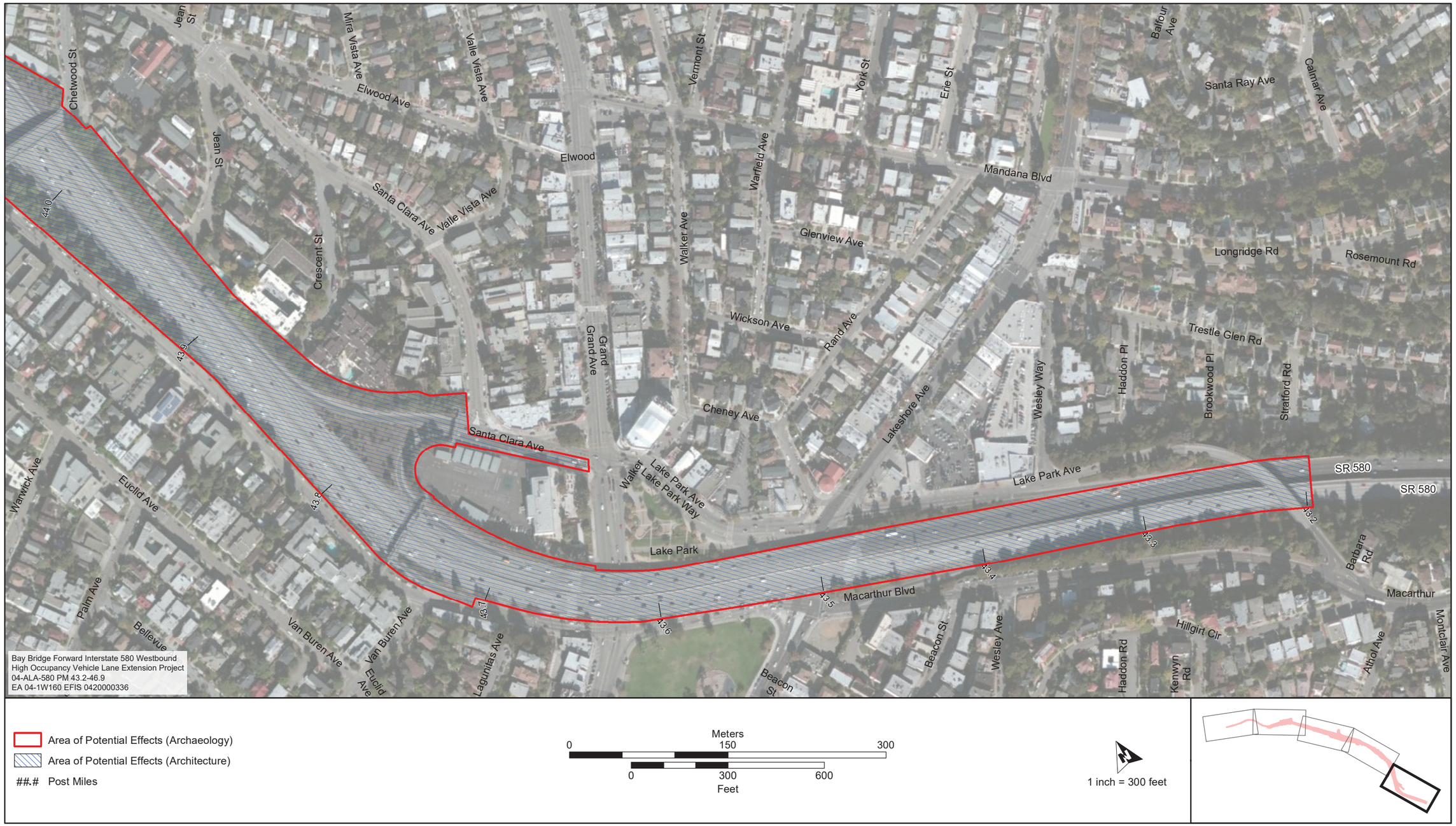


Figure 3. Area of Potential Effects (6 of 6).

3. NATURAL AND CULTURAL CONTEXTS

This section presents an overview of the environmental, ethnographic, prehistoric, and historic contexts for the project vicinity, incorporating the results of previous and current records searches (described in the next section). Much of the following is adapted from Johnson (2015) and Higgins et al. (2020).

NATURAL ENVIRONMENT

The project area is located within the San Francisco Bay region. Specifically, it lies along the eastern interior shore of the San Francisco Bay, mostly within the mud flats off of the historic-era bayshore. Today the northern end of the project is east of San Leandro Bay, adjacent to the San Leandro Bay Park and the power lines travel southeast and stay approximately one mile from the current bay shoreline. One segment courses through the Hayward Regional Shoreline. The project area terminates adjacent to the salt evaporators at Eden Landing Ecological Reserve. While segments of the power line traverse through these marsh and shoreline areas, most of it is on areas historically in-filled and developed.

San Francisco Bay, formed by rising sea levels at the end of the Pleistocene, is part of a large estuary that includes San Pablo and Suisun bays and the Carquinez Strait, all north of the proposed project. A series of watercourses drain into the Bay from the San Francisco Peninsula. The native vegetation along undeveloped areas of the project is coastal salt marsh plants. These includes saltbrush (*Atriplex prostrata*), salt grass (*Distichlis spicata*), pickleweed (*Salicornia virginica*), Pacific cordgrass (*Spartina foliosa*; San Francisco BCDC 2007). Coastal grassland plants are also present with Pacific reed grass (*Calamagrostis nutkaensis*), Pacific hairgrass (*Deschampsia holciformis*), and California bentgrass (*Agrostis californica*), are mixed with introduced species from Europe (Crampton 1974).

Historically, the Bay Area environments contained varied animal resources such as fish, shellfish, and large mammals, as well as a range of plant resources. Anadromous fish were available in the creeks that drained into the Bay. Tule elk (*Cervus elaphus nannodes*), pronghorn (*Antilocapra americana*), and grizzly bear (*Ursus arctos*), all native to the area, were hunted out by the 1900s, and most of the Bay marshlands have been destroyed by landfill projects and construction.

Paleoenvironment

Prior to the incursion and ecological disruptions brought by Euro-Americans, the Bay Area featured a mosaic of plant communities ranging from saltmarsh to redwood forest to grassland to mixed evergreen woodland (Moratto 2004:221). The East Bay plain was predominantly grass covered with patches of brush and coast live oak groves (Chavez 1989; Wallace and Lathrap 1975:2). Vegetation was densest along the freshwater drainages, which supported yellow willow, California laurel, California buckeye and coast live oaks (Chavez 1989; Wallace and Lathrap 1975).

Changes in the sea level during the Pleistocene and Holocene geological epochs had a profound effect on archaeological sites in the San Francisco Bay Area. Fluctuations of the sea level during the Pleistocene, resulting from the extraction of water to form glacial ice, and from the return of the water when the ice melted, caused the sea at times to withdraw from the continental margin and at other times to inundate it (Bickel 1978; Howard 1962; Milliman and Emery 1968). This event is known as the Wisconsin Regression and the Holocene Transgression.

The sea level 30,000 to 35,000 years ago was near the present one (Milliman and Emery 1968). Subsequent glacier growth lowered the sea level to about 130 meters 16,000 years ago. At around 13,000 BC, the coastal shoreline was more than 25 kilometers west of San Francisco's present ocean beaches

(Moratto 2004:219). The Holocene Transgression began at about 12,000 BC and the sea level rose rapidly until about 7,000 years ago, after which the rise was more gradual (Milliman and Emery 1968).

The San Francisco Bay is a relatively recent feature of the landscape. When the ice of the last glacial stage (Wisconsin Glaciation) began to melt, a large amount of water was returned to the oceans, causing the sea level to rise and flood among the mountain blocks of the San Francisco Bay region. Prior to 9000 BC, San Francisco Bay was a large valley within which several smaller river valleys converged (Josselyn 1983; Stright 1990:451). At this time, the Sacramento River surged through the rocky gorge of the Golden Gate and then flowed across what is today the continental shelf, finally emptying into the ocean many kilometers west of the present shoreline (Moratto 2004:219). At 9000 BC, when the sea level was 65 to 70 meters below mean sea level, the bedrock base of the Golden Gate became submerged (Stright 1990:451).

San Francisco Bay, as we know it, was formed during a period of relatively rapid sea-level rise (an average rate of 2.0 centimeters per year) between 9000 and 6000 BC (Stright 1990:451). After 4000 BC, when sea-level rise slowed to a rate of 0.1 to 0.2 centimeters per year, marshes began to develop around the bay. During this post-4000 BC period, numerous shellmounds were created as a result of human activity within the Bay Area (Stright 1990:451). In addition, rising sea levels may account for such archaeological phenomena as submerged sites, paucity of cultural remains, and shifts through time in the use of particular food resources (Bickel 1978; Moratto 2004). A marked decrease in the rate of sea-level rise occurred approximately 6000 BC (Bickel 1978:11; Josselyn 1983:6). Eventually, sedimentation rates exceeded the sea-level rise and extensive intertidal mudflats developed (Bickel 1978:11 Josselyn 1983:6). Many of the marshlands surrounding the Bay were established no more than 3,000 years ago (Moratto 2004:221).

The growth of marshes is of archaeological interest because most of the San Francisco Bay shellmounds were located in close proximity to marshes (Bickel 1978; Nelson 1909). Marshes are particularly productive ecosystems. The area's prehistoric populations took advantage of this productivity by harvesting fish, shellfish, birds, and land mammals which lived or fed in or near the marsh, as well as the marsh plants themselves (Bickel 1978:12).

The San Francisco Bay and its environs make up the largest contiguous tidal marsh system on the west coast of North America. The maximum extent of tidal marshes was documented by the United States Coast and Geodetic Survey between 1850 and 1897. Total acreage for marshes surrounding San Francisco, San Pablo, and Suisun bays probably exceeded 800 square kilometers (Josselyn 1983:6). During historic times, Schenck (1926:157) reported extensive marshes to the south of Emeryville and to the north of West Berkeley.

The present-day tidal wetlands have been greatly impacted by anthropogenic influences and we can now only infer how prehistoric marshes appeared (Josselyn 1983:6). The most dramatic changes occurred during the period of hydraulic mining for gold in the Sierra Nevada (1855–1884). At that time, large water guns were used to wash overburden and gold-containing deposits through sluiceways. The sediments flowed into streams and fine sediments reached Suisun and San Pablo bays, causing widespread shoaling (Josselyn 1983:12). Court injunctions stopped the practice in 1884, but sediments probably continued to accumulate in the Bay through the early twentieth century (Josselyn 1983:12). The urbanization of the Bay Area in the post-World War II era has encroached substantially on the remaining tidal wetlands.

The flooding of the San Francisco Bay due to sea-level rise has continued since the human occupation of the area. Archaeological evidence for this phenomenon exists since the basal layers of a number of prehistoric shellmounds are now below sea level. This can be accounted for by either rising sea levels or land subsistence or some combination of these factors.

PRECONTACT AND HISTORIC CONTEXTS

Prehistoric Chronology

The first regional chronology for the Bay Area was established by R. K. Beardsley in 1948 (Beardsley 1948, 1954a, 1954b) and was based on the typological chronology developed earlier for the Sacramento Valley (Lillard et al. 1939). Beardsley's three-horizon sequence for the San Francisco Bay shore and Marin coast sites was adapted to the classification developed for the interior; it was assumed that the two areas shared a common cultural tradition and that differences in material culture reflected local environmental adaptation (Beardsley 1948, 1954a, 1954b). Based on artifacts found in association with human burials, Beardsley assigned the lower levels of Emeryville to the Middle Horizon and the remaining levels to the Late Horizon (AD 500–1500; Wallace and Lathrap 1975:5). Ellis Landing, Stege, and West Berkeley were ascribed to the Middle Horizon (Wallace and Lathrap 1975:5). Wallace and Lathrap (1975) indicated an Early Horizon component at the West Berkeley site. In fact, the prehistoric cultural record at the West Berkeley Shellmound extends from the Early Horizon Period (ca. 2500 BC) to the Fernandez Facies of phase II of the Late Horizon (ca. AD 500; Busby and Bard 1978; Wallace and Lathrap 1975). A chronological reassessment of the West Berkeley Shellmound indicates relatively continuous occupation from 3030 BC to AD 780 (Ingram 1998).

During the Early Horizon and the entire Middle Horizon, shellmounds and the associated bayshore-adapted culture are usually attributed to the Berkeley Pattern (Bennyhoff and Fredrickson 1994; Fredrickson 1974; Moratto 2004), which reflects changes in subsistence from the earlier Windmiller Pattern with an emphasis on acorns as a dietary staple (Moratto 2004:209). This change is evidenced by relatively more mortars and pestles, a well-developed bone industry, distinctive diagonal flaking of large concave-base points, and certain forms of *Olivella* and *Haliotis* shell beads and ornaments (Moratto 2004:209–210).

Along the bayshore, a regional specialization in the Berkeley Pattern emphasized the collection of shellfish from rich marshlands (Luby and Gruber 1999:96). Significantly, the West Berkeley Shellmound is the "type site" for the Berkeley Pattern, as defined by Fredrickson (1973:125a-126). Accordingly, the lower portions of the West Berkeley Shellmound represent the earliest known evidence of this pattern on the bayshore (Moratto 2004:261).

During the Late Horizon (AD 500–1500), shellmounds were associated with a broad set of characteristics termed the Augustine Pattern (Bennyhoff and Fredrickson 1994; Fredrickson 1974; Luby and Gruber 1999). The Augustine Pattern is characterized by the introduction of the bow, arrow, and harpoon; a general intensification of occupation resulting in larger, more densely occupied areas; increased social stratification; use of cremation for "wealthier" burials; and a continuing emphasis on intensive gathering of shellfish and acorns, but with more fishing and hunting (Bennyhoff and Fredrickson 1994; Fredrickson 1974; Luby and Gruber 1999:96). Bone awls were common, along with distinctive *Haliotis* and *Olivella* shell beads, and clamshell beads are introduced as a form of currency.

Along with the West Berkeley Shellmound, several other Bay Area sites have been dated to the Early Horizon, although the West Berkeley Shellmound currently represents the earliest dated representation of the horizon. A salvage archaeological operation undertaken at the University Village site (CA-SMA-77), near Palo Alto in Santa Clara County, resulted in the discovery of artifacts assigned to an early San Francisco Bay Period from ca. 1500 BC to 1000 BC (Gerow 1968). While it corresponded to the Early Horizon of the Sacramento Valley, the Early Bay Period was evidenced by a distinctive subsistence strategy and mortuary behavior (Gerow 1968). Another salvage archaeological effort at the Stone Valley Site (CCO-308) in Alamo, in Contra Costa County, yielded artifacts dating to the Early Horizon Period (Fredrickson 1966).

Precontact Settlement Patterns

Shellmounds in the San Francisco Bay area range from sparse scatters of shell and heaps of shell adjacent to inland occupation sites to conspicuous, burial-associated and exceptionally large mounds containing many layers of crushed shell (Luby and Gruber 1999:96–97). Most San Francisco Bay Area shellmounds are distributed along the bayshore where freshwater streams empty into the bay (Lightfoot 1997:136). Moratto (2004:281) describes the "typical" bayshore village of 4,000 to 2,000 years ago as being located "in a marshside setting near a freshwater stream." This sort of ecotonal location permitted the exploitation of the bay, mudflats, marshes, rocky shore, and inland zones (Moratto 2004:282). According to Moratto (2004:282), it is not an accident that virtually all the early Berkeley Pattern settlements are located near coastal or bayshore marshlands, since these productive ecosystems were able to sustain large native populations.

The classic large shellmounds, including the West Berkeley Shellmound, are all located within a strip of marshland two to seven kilometers wide, and appear to be clustered with smaller shellmounds into groups (Lightfoot 1997:136; Luby and Gruber 1999:97). It appears that between 12 and 24 of the larger shellmounds (i.e., those with basal diameters of 100 meters or more) once existed (Luby and Gruber 1999:97). Lightfoot (1997) suggests that the large shellmound sites were repeatedly used as both residential locales and long-term repositories for the dead, and perhaps as socio-political centers.

Most large shellmounds were oval or oblong in plan, with deposits sometimes extending below the modern ground surface (Lightfoot 1997:131; Luby and Gruber 1999:97; Nelson 1909). Usually, the long axes of the mounds paralleled the shoreline or freshwater stream (Nelson 1909). Mound matrices are varied, but were primarily composed of crushed shell, soil, fire-cracked rocks, chipped and ground stone, clay items, animal bone, and burials (Gifford 1916; Lightfoot 1997:131; Luby and Gruber 1999:97). Lightfoot (1997) observes that the internal composition of the mounds varies greatly both within sites and between sites. Large shellmounds also have associated architectural features, including evidence of hearths, pits, house floors, and ovens (Lightfoot 1997; Luby and Gruber 1999:97). Human burials, refuse from domestic activities, and evidence of tool manufacture are also present (Luby and Gruber 1999:97).

Most of the shellmounds were either reused frequently over long periods of time or were continuously occupied (Luby and Gruber 1999:96). The issue of whether the large shellmound sites were reoccupied continues to be debated (Lightfoot 1993,1997; Moratto 2004). A number of other shellmound sites exist or existed relatively close to the Study Area. These include several shellmounds identified by Nelson: ALA-322, -323, -321, and -323a (Loud 1919). Other types of sites, including bedrock milling stations, seasonal encampments, and specialized task sites were located at interior locations some distance from the large shellmounds (Lightfoot 1997; Parkman 1994). Parkman (1994:49) suggests that the locations of bedrock milling stations represent small spring and summer encampments focused on bulb and hard grass seed exploitation and small fall camps focused on acorn exploitation.

Historic Context (adapted from Siskin et al. 2018)

The historic context of the Study Area is organized into the Early Contact, Spanish-Colonial, Mexican, Early American, the City of Oakland prior to World War II, and post-World War II periods.

Early Contact Period (AD 1542–1769)

In 1542, Juan Sebastian Cabrillo was the first of the Europeans explorers to sail along the California coast. The goal of this expedition was to explore the new territory and to find suitable locations for establishing Franciscan missions; during this expedition Cabrillo rediscovered Monterey Bay, described by sailors 100 years earlier. Several accounts of this expedition exist including those of Fray Juan Crespí

(Bolton 1971), Miguel Costansó (Browning 1992), and Pedro Fages (Priestley 1937). In 1772, a Spanish expedition led by Pedro Fages traveled through the Contra Costa hills in search of a land route from Monterey to Point Reyes (Hoover et al. 1990). This expedition traveled down to the shores of the San Pablo Bay, crossed what was probably Pacheco Creek and over the western portion of Mount Diablo, ultimately passing through Contra Costa County. During the return portion of this trip, Fages passed through Alameda County and reentered the San Francisco Bay Area (Hoover et al. 1990). The primary meaning of *alameda* is derived from the Spanish word *alamo*, meaning poplar or cottonwood. Alameda County was likely named from El Arroyo de la Alameda (Alameda Creek), which was lined with willow and sycamore trees that gave it the appearance of a road lined with trees (Hoover et al. 1990).

Spanish-Colonial Period (AD 1769–1822)

The arrival of the Spanish and the subsequent establishment of the missions had a dramatic effect on native lifeways. The destruction of native culture resulted from the disruption of social systems, changes in subsistence and settlement patterns, alteration of the landscape with the introduction of European plants and animals, and European diseases. The California missions of the Bay Area and surrounding regions were established as follows: Mission San Carlos Borromeo de Carmelo in 1770, Mission San Francisco de Asis in 1776, Mission Santa Clara de Asis in 1777, Mission San José in 1797, Mission San Rafael Arcangel in 1817, and Mission San Francisco Solano in Sonoma in 1823. As the populations of Ohlone, who were originally brought to the Santa Clara de Asis, San Francisco de Asis, and San José missions, fled or died of disease, the Spanish were forced to go farther afield in search of replacement neophytes (Milliken 1995:255).

Mexican Period (AD 1822–1850)

In 1821, Mexico declared independence from Spain and in 1822 California became a Mexican territory. Following the secularization of the missions in 1834, representatives of the Mexican government distributed very large land grants to various individuals. Native Americans continued to work as laborers for new landowners (Beck and Haase 1988). During 1821 and 1846, when California was under the control of the Mexican Government, San Francisco was divided into ranchos.

Early American Period (1848–1900)

A few weeks before the US formally acquired California from the Republic of Mexico through the Treaty of Guadalupe Hidalgo in 1848, gold was discovered along the American River, sparking a Gold Rush. Immigrants flooded into the territory, those arriving by sea funneled through the San Francisco Bay Area and the Central Valley to gold fields in the Sierra Nevada. By the end of 1849, the once small hamlet of San Francisco exploded to a population of 25,000 people. This massive influx of population helped to propel California to statehood in 1850 and fostered the creation of numerous communities. The discovery of gold also resulted in the establishment of new transportation corridors through the San Francisco East Bay (East Bay) region traveled by gold seekers on their way to the Sierra Nevada gold fields. As traffic inland increased, enterprising individuals established towns along the routes to provide food, shelter, and other necessities to the on-rushing miners. Three of these entrepreneurs, Andrew Moon, Horace W. Carpentier, and Edson Adams, recognized the potential of the East Bay for such a townsite, eventually founding what is now the City of Oakland. Incorporated on May 4, 1852, Oakland was officially recognized as a city two years later.

Creation of transportation networks was the engine of growth of the East Bay from the mid-nineteenth century through the twentieth century. Early on, Oakland realized the economic importance of its waterfront. West of the northern end of the Study Area, a small harbor was constructed and used for transporting logs cut from the hills east of Oakland to other markets 1840s and 1850s [sic]. Oakland's waterfront access and early development of its shipping facilities encouraged road and railroad construction. Central Pacific Railroad (after

1885, the Southern Pacific Railroad) consolidated the operations of many smaller companies formed in the 1860s and 1870s to complete its transcontinental route. The Central Pacific linked Oakland's wharves to a larger national market, and in the process encouraged commercial and residential development along its main line. In 1892, the Oakland, San Leandro and Hayward Electric Railway (OSL&H) was constructed, connecting Oakland to San Leandro via East 14th Street and was an immediate success. In the late nineteenth and early twentieth century, the smaller commuter lines were amalgamated into the Key System that competed with and outlasted the Southern Pacific's East Bay transportation system.

The construction of the Central Pacific line through east Oakland opened new land for development centered on the local Central Pacific rail stations. Several stations for this railway were built along the Study Area. In the 1870s and 1880s, subdivisions were developed around these stations, with a mixture of commercial, industrial and working-class residential uses over the next few decades.

The growth of San Francisco, coupled with the construction of rail lines in the East Bay, facilitated Oakland's increased industrial base, as more goods either passed through or originated in Oakland. The period of hasty and makeshift construction of a rapidly growing California between 1850 and 1870 gave way to larger need for finished products throughout the state, resulting in the establishment or expansion of many industries in Oakland to meet this demand. Between 1850 and 1870 industrialists built 16 factories of various industries in Oakland; over the next three decades, that number increased threefold, to 51 plants by 1900. These enterprises included lumber mills, breweries, canneries, cotton mills, stone and metal works, shipbuilders, and agricultural processors.

Oakland Before World War II (1900–1940)

During the first three decades of the twentieth century, the City of Oakland experienced considerable residential, commercial, and industrial growth. Oakland's early twentieth-century growth reflected a trend apparent throughout the Bay Area. As houses became more affordable, and thus financially within reach of laborers and their families, builders erected housing tracts close to specific workplaces such as industrial plants. Most working-class families needed to live in neighborhoods easily accessible to their workplace by foot or trolley, while middle class families, who more often had access to automobile transportation, settled outside of the industrial centers. The housing boom experienced by Oakland after the 1906 earthquake continued into the 1920s, fed by post-World War I prosperity and increasing popularity of the automobile.

Industry and commerce increased at a similar pace to residential development in Oakland during the first three decades of the twentieth century. In the decade following the 1906 earthquake, downtown Oakland developed as a retail, banking and office sector, with hotels on the fringes. Industry concentrated in the waterfront areas and in west Oakland. In 1909, the City of Oakland regained control of its waterfront, which it had given away to private entities (primarily Southern Pacific) some 60 years earlier. The return of the waterfront to municipal control, as well as the construction of the Panama Canal and the start of World War I, resulted in a dramatic increase in shipbuilding and heavy industry in the city. Furthermore, the Army Corps' completion of a navigable channel (US Tidal Canal) at Brickyard Slough, which joined San Leandro Bay with Oakland's Inner Harbor, in 1901 opened new economically feasible land along the city's shore for development, further spurring commerce and growth particularly in east Oakland.

Demographics began to change in the 1920s as well. Once a neighborhood predominantly of western-European descent, Japanese, Portuguese, Italian and Mexican family[sic] began moving into the area and over the next two decades, the percentage of Japanese residents increased greatly. The internment of the Japanese population during World War II corresponded with the transformation of this hamlet into industrial uses.

World War II to the Present

World War II had profound impacts on the East Bay, its population, economy, and infrastructure. During World War II, the San Francisco-Oakland metropolitan area that included San Francisco, Oakland, and many smaller East Bay communities, had to find room for over half million-wartime workers employed in its vast complex of military bases and support facilities. A few new industrial parcels were developed and some of the early residences in and around the Study Area were demolished during the war period.

The automobile featured prominently in both Oakland's growth and its problems during the postwar years. Automobile transportation between East Bay communities improved when the first sections of the East Shore Freeway (later known as Eastshore Freeway, Nimitz Freeway, and now I-880) extension, opened in 1950. This new, elevated freeway extended from downtown Oakland south to San Leandro Creek. Numerous buildings and dozens of residences and industrial properties were demolished for its construction, yet an economic impact study of the new freeway in the region found that this transportation route promoted industrial development. The freeway was widened from four to eight lanes between 1956 and 1963.

From the mid to latter part of the twentieth century, the area in and around the Study Area was further developed with industrial and commercial buildings and this area continues to be altered through demolition and new construction until today.

ETHNOGRAPHIC CONTEXT

Ethnography (adapted from Leach-Palm and Kaijankoski 2015)

The project corridors fall within the aboriginal territory of two Native groups: the Ohlone/ Costanoan (from the Spanish word *Costaños* or "coastal people") who lived (and live) along both sides of San Francisco Bay, and the Bay Miwok who lived throughout much of what is now interior Contra Costa County. The traditional way of life for both groups was greatly impacted by the influx of explorers and the establishment of missions by the Spanish in the late eighteenth century. Colonization and occupation of their lands by Spanish, Mexicans, and then Anglo-Americans substantially reduced and displaced Native California populations, though recent research has demonstrated the great extent to which native peoples maintained their cultural beliefs through this trying period. Unfortunately, few Ohlone or Bay Miwok individuals were present in the Bay Area during the early years of the twentieth century and therefore extensive ethnographies are not available for either group. The following brief summaries are drawn from Harrington (1942), Kroeber (1925), Levy (1978), and Milliken (1995, 2006).

Most of what we know about the ethnographic-period Bay Area groups comes from early Spanish accounts—explorers, missionaries, soldiers, and settlers—along with a few twentieth-century interviews by anthropologists who gathered information from oral histories. Recent interpretations of traditional lifeways, sometimes contradicting earlier studies, are largely based on mission records research done by Milliken (1983, 1995, 2006). At the time of Spanish contact, the Bay Area and Coast Range valleys were dotted with Native villages. Kroeber (1925:464) estimates an aboriginal population of 7,000 Ohlone, while Cook (1943) suggests it may have been 10,000. For the much smaller Bay Miwok groups, Milliken (2006:Table 3) estimates a population of fewer than 2,000. From north to south, the project corridor passes through the ethnographic-period territories of the following tribes: *Huichiun* (Costanoans), *Irgin* (Bay Miwok), and *Tuibun* (Costanoans).

Milliken describes how the San Francisco Bay region was divided "among scores of independent tribes, associations of families that worked together to harvest wild plant and animal resources within fixed territories and to maintain yearly ceremonial cycles" (1995:13). These various tribes spoke dialects of five mutually unintelligible languages: Costanoan/Ohlone, Bay Miwok, Plains Miwok, Patwin, and Wappo. While many anthropologists have grouped these tribes according to their languages, Milliken (1995:14)

argues that "the most obvious cultural contrasts… were probably determined by geographic and ecological factors" that characterized the coastal, Bay shore, interior valley, and riverine habitats. Some tribes occupied a central village, while others had several villages within a few miles of each other.

These groups had a rich variety of plant and animal resources in the marshes and estuaries, rolling hills, and valleys that make up the East Bay region. Men fished and hunted, while women harvested "an astonishing variety of seeds, nuts, fruit, and bulbs" (Milliken 1995:16). Valuable goods like obsidian, sinew-backed bows, basketry materials, tobacco, and other items not locally available were obtained through trade with neighboring groups. Grass seeds, acorns, fish, shellfish, and large game animals were the primary food sources. Houses were made of bulrush or grass-bundle thatching; clothing was minimal in the temperate climate. Although they are not known to have cultivated crops, the local people practiced annual burning to ensure an abundance of seed-bearing annuals and forage for large game, and to facilitate the gathering of fall-ripening acorns (Crespí 1927; Levy 1978:491).

Life for these people began to change forever in the fall/winter of 1769. Milliken (1995:Chapter 3) provides a detailed account of the first Spanish incursions into the Bay Area, beginning with the Portolá scouting expedition. He reports that some of the Native groups fed the strangers and exchanged gifts with them, while others—including the *Tuibuns* and *Irgins*—were afraid, annoyed, and even hostile. The founding of Mission San Francisco in 1776 was the beginning of the end for their traditional way of life.

Since the 1980s, the modern Ohlone community has undergone a period of revitalization based on familial ties and former Rancheria affiliations. Although they have yet to receive formal recognition from the federal government, the Ohlone are becoming increasingly organized as a political unit and have developed an active interest in preserving their ancestral heritage. Descendants of the Ohlone still live in the area, and many are active in maintaining their traditions and advocating for Native American issues.

4. SOURCES CONSULTED

RECORDS SEARCH RESULTS

On January 3, 2022, the Northwest Information Center (NWIC) at Sonoma State University provided records search results for Project. Lists were made of all previously conducted archaeological studies and recorded cultural resources within a one-quarter-mile buffer of the project APE (IC File No.: 21-0881). The California Inventory of Historic Resources was also reviewed.

The records search revealed 108 prior cultural resources studies and 151 previously identified cultural resources (including built environment resources) within the records search area (Appendix A). Previous studies include 19 that fall within or intersect the project APE (Table 1; Figure 4). These studies account for a large proportion of the APE, but since most studies occurred along adjacent city streets, an exact percentage cannot be calculated. According to the NWIC classifications, 40 studies focused on evaluation or field study of architectural or historic-era resources, 34 of the projects in the records search area were primarily archaeological studies, including excavations, field studies, or monitoring, 22 are categorized as mixed, involving the field study of both precontact archaeological resources and architectural/historic-era resources. Another 12 studies in the records search are not fieldwork-based (Table 1).

These studies document cultural resources in the records search area including archaeological deposits and architectural resources. There are numerous built environment resources within the records search area, but all are outside the Caltrans right-of-way and will not be affected by the project (Appendix A). Only one archaeological resource has been identified within the APE (P-01-012011; ALA-700H), and one resource "CG-5" is within the records search area (Table 2; Figure 4). CG-5 was identified by Munns and Mason in 2000 but a site record was never prepared. It was listed in a survey report as "an area of dark midden soil with moderate density cultural materials including six *Olivella* cap type shell beads, miscellaneous marine shell fragments, and two bird bone fragments." The resource is mapped well outside the current project area.

The APE is within a quarter mile of the Haven-Harlen-34th Street District and the Lake Merritt Historical Districts. The California Inventory of Historic Resources lists two resources within a quarter mile of the APE, the Lake Merritt Duck Refuge and St. Mary's College. The Lake Merritt Wild Duck Refuge includes the approximately 160-acre lake, its immediate shoreline bounded by the encircling paved walkway, and the small group of islands made from dredging spoils in the 1890s. St. Mary's College is located on Broadway and Hawthorne in Oakland.

P-01-012011 (CA-ALA-700H)

This resource is a historic-era archaeological site identified beneath the MacArthur Maze. It consists of two disturbed historic-era refuse deposits, likely dating to the early 1930s. The two artifact concentrations were found in a displaced context and did not represent intact deposits. While the site record indicates the potential for buried features such as privies, these features were not identified when the site was recorded. Concentration 1 consisted of 336 artifacts divided between five functional groups, mainly domestic items. Concentration 2 consisted of 90 items divided into five functional groups, also with mainly domestic items. Both date to the late nineteenth and early twentieth century but lack integrity. While the site record is drawn to include a wide area under and adjacent to the highway, this site boundary is not based on actual testing and there is no evidence of deposits under the highway.

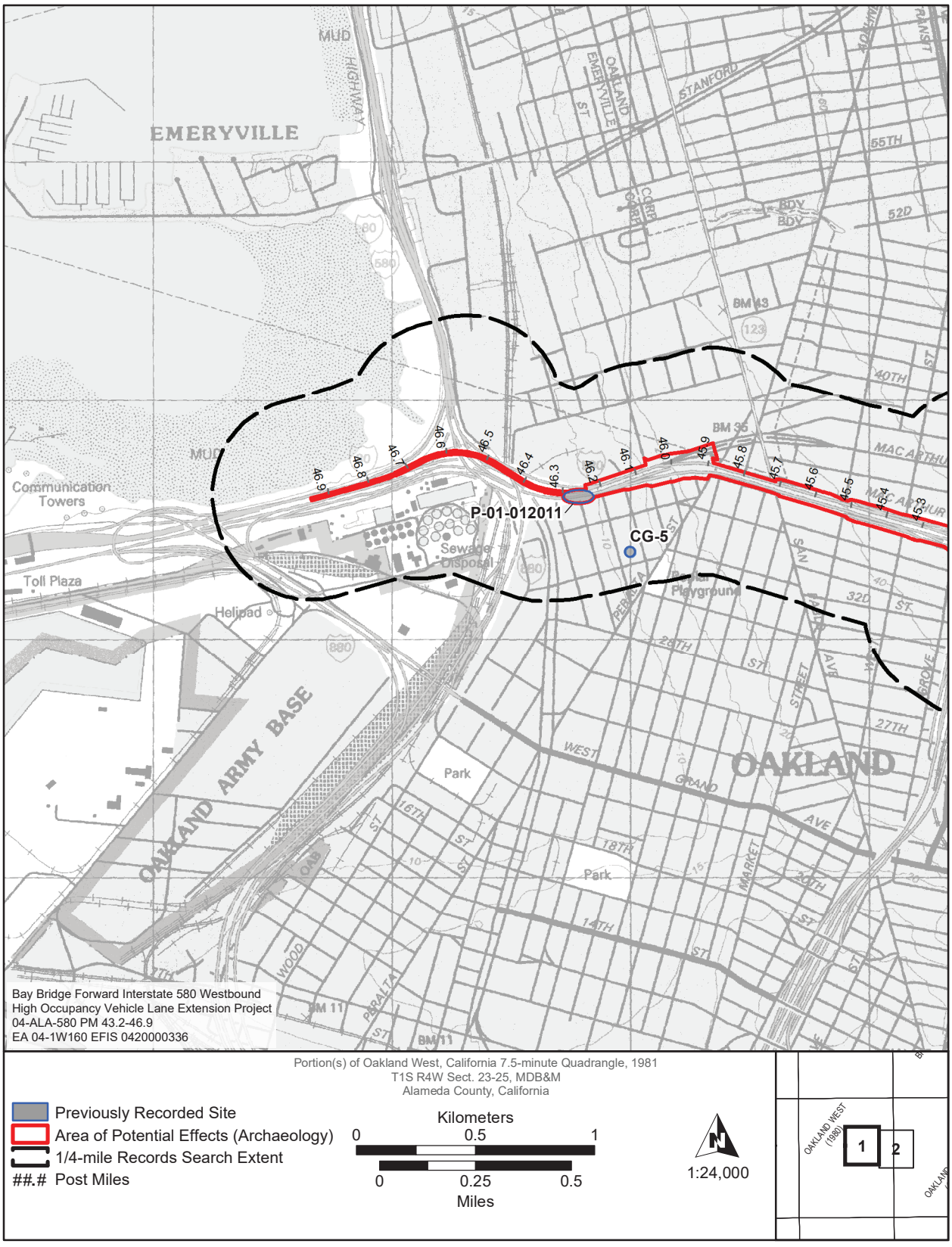


Figure 4. Records Search Results (1 of 2).

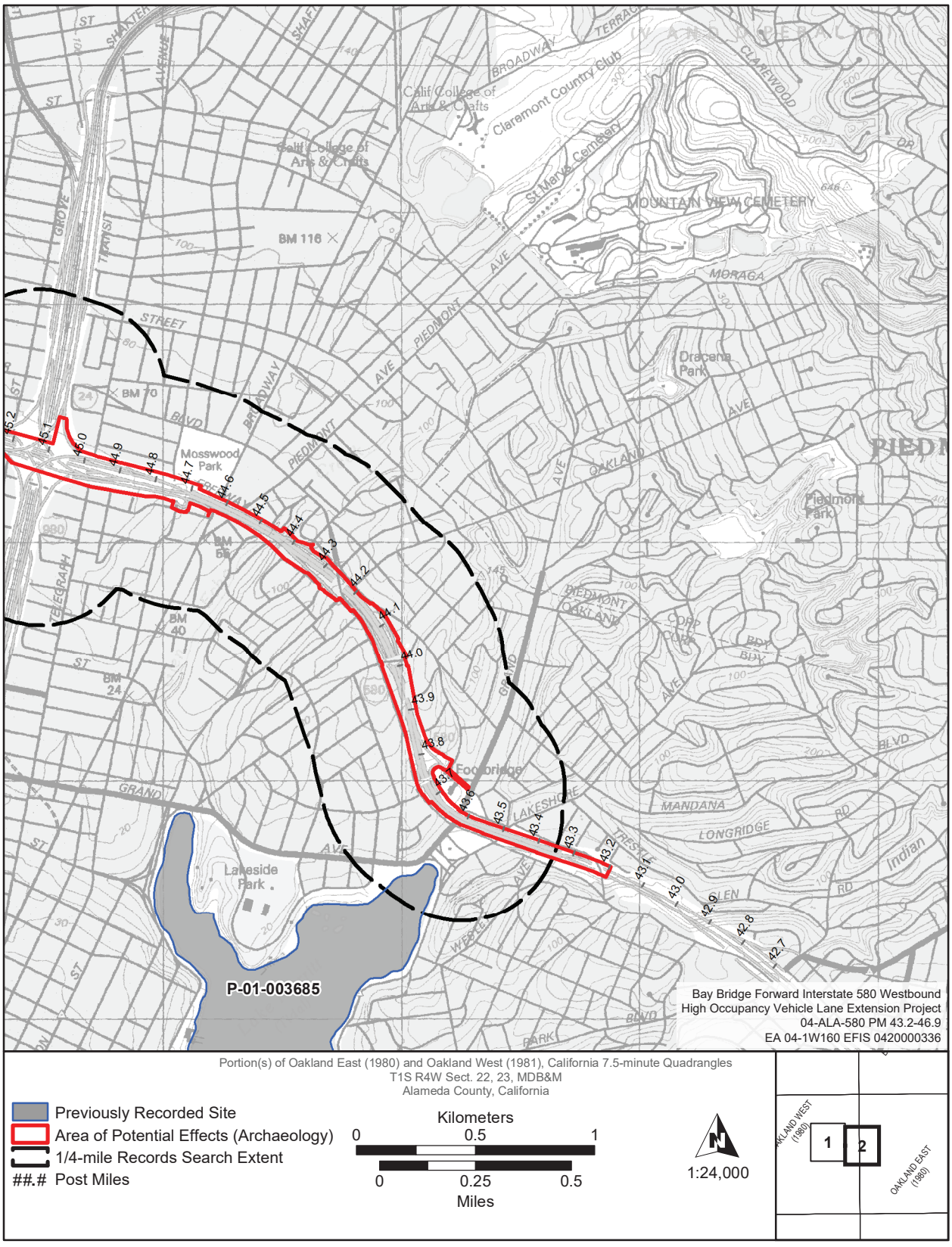


Figure 4. Records Search Results (2 of 2).

Table 1. Previous Cultural Resources Studies that Fall with the Area of Potential Effects.

STUDY NO. (S-)	YEAR	AUTHOR(S)	TITLE
004950	1982	Mara Melandry	*First Addendum Archaeological Survey Report for Proposed High Occupancy Vehicle Lanes from the Bay Bridge to Carquinez Bridge in Alameda and Contra Costa Counties, 04-Ala/CC 80 2.0/8.0; 0.0/14.1, 04209-400211*
005810	1983	Jeffrey C. Bingham	*Negative Archaeological Survey Report, Proposed HOV Lanes on Route 80 to the Route 580/24 Interchange in the City of Oakland, 04-ALA-580 P.M. 45.2/46.9, 04-ALA-80 P.M. 1.0/2.8 04207-380011*
012289	1990	Donna M. Garaventa, Michael R. Fong, Sondra A. Jarvis, and Angela M. Banet	*Archaeological Survey Report, I-880/Cypress Replacement Project, 04-ALA-880 P.M. 32.4/34.3, E.A. #04195-190271 MEQ 85001, Cities of Oakland and Emeryville, Alameda County, California*
022820	2000	Wendy J. Nelson, Tammara Norton, Larry Chiea, and Eugenia Mitsanis	*Cultural Resources Survey for the Level (3) Communications Long Haul Fiber Optics Project, Segment WS07: Oakland to San Jose*
023778	2000	David Chavez and Jan M. Hupman	*Archaeological Resources Investigations for the EBMUD East Bayshore Recycled Water Project, Alameda County, California*
027893	2000	Ann M. Munns and Roger D. Mason	*Cultural Resources Survey Report, Level (3) Long Haul Fiber Optic Project: Segment WS02 in Emeryville & Oakland, Alameda County, California*
033061	2006	Nancy Sikes, Cindy Arrington, Bryon Bass, Chris Corey, Kevin Hunt, Steve O'Neil, Catherine Pruett, Tony Sawyer, Michael Tuma, Leslie Wagner, and Alex Wesson	*Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California*
037362	1990		*Historic Property Survey Report for the Proposed I-880 Reconstruction Project in the Cities of Oakland and Emeryville, Alameda County, ALA-880 32.12/34.31; ALA-580 45.99/46.95; ALA-80 1.99/3.39; 04195-190271 MEQ85001*
038249	2010	Suzanne Baker	*Historic Property Survey Report, the Alameda County Transit District's East Bay Bus Rapid Transit Project in Berkeley, Oakland, and San Leandro*
038249	2010	Suzanne Baker	*Addendum to Positive Archaeological Survey Report for the Alameda County Transit District's East Bay Bus Rapid Transit Project in Berkeley, Oakland, and San Leandro, California*
038249	2010	Suzanne Baker	*Addendum Historic Property Survey Report, the Alameda County Transit Project in Berkeley, Oakland, and San Leandro*
038249	2010	Suzanne Baker	*Second Addendum to Positive Archaeological Survey Report for Alameda County Transit District's East Bay Bus Rapid Transit Project in Berkeley, Oakland, and San Leandro, California*
038249	2005	Suzanne Baker	*Positive Archaeological Survey Report for the Alameda-Contra Costa Transit District's East Bay Bus Rapid Transit Project in Berkeley, Oakland, and San Leandro*
038249	2006	Milford Wayne Donaldson and Leslie T. Rogers	*FTA051227A; National Register of Historic Places Determination of Eligibility for Properties within the Area of Potential Effects for the Proposed AC Transit Bus Rapid Transit Project, Alameda County, California*
038249	2005		*Finding of Effect for AC Transit East Bay Bus Rapid Transit Project*
038251	2011	Jack Meyer	*Buried Archaeological Site Assessment and Extended Phase I Subsurface Explorations for the I-80 Integrated Corridor Mobility Project, Caltrans District 04, Alameda and Contra Costa Counties, California, 04-ALA-CC-80, P.M. ALA 1.99/P.M. ALA 8.04, P.M. CC 0.0/P.M. CC 13.49, EA 3A7761 / EA 3A7771*
047078	2015	Suzanne Baker	*Archaeological Survey Report, Martin Luther King Jr. Way Streetscape Project, From West Grand Avenue to 40th Street, City of Oakland, Alameda County, California, Federal Project No. CML 5012 (128)*
047106	2015	Heidi Koenig	*Invasive Cordgrass Project, 2015-2016 Work Locations, Cultural Resources Assessment*
051164	1996	Grace Ziesing	*Alameda County Seismic Retrofit Project, Results of Test Excavations at Bent SE91 (Caltrans reference: 4-ALA-24/580/980 I/C, PM R1.85/R2.2:44.9/45.2:1.7/2.0; EA 4257-13316K Seismic Retrofit #569) (letter results)*

Table 2. Previously Recorded Archaeological Resources in the Records Search Area.

Primary No. (P-01-)	Trinomial (CA-ALA-)	Resource Type	Description	Intersects APE?	Last Update
012011	000700H	Site	MacAuthor-01H	Yes	2018

Archaeological Sites within the Area of Potential Effects

P-01-012011; CA-ALA-000700H

Site P-01-012011; ALA-000700H is a subsurface historic-era archaeological site consisting of two artifact deposits. The site was originally recorded in 2018 during exploratory backhoe trenching. Based on artifacts dating to the nineteenth and early twentieth centuries, the site is estimated to date to the late 1900s–1930s. Historic Sanborn maps show that a residential neighborhood existed prior to the construction of the freeway. Artifacts include Bristol-slip glazed two-toned stoneware bottle sherds which typically date from 1880 to 1900, a yellow-ware mixing bowl fragment with a dendritic design commonly found in the nineteenth century, a two-piece mold-made bottle dating to approximately 1845 to 1913 (Newman 1970:72). Other domestic artifacts uncovered at the site include porcelain canning jar lid liners, a metal horse figurine, shell, an amethyst tinted (ca. 1880–1925) salad dressing bottle embossed with "E.R. Durkee & Co. Salad Dressing," hotel-ware pitcher, a fork, transferprint ceramic sherds, and other artifacts. Although the two deposits were believed to be disturbed by heavy machinery during the construction of the freeway, the site record notes that intact deposits such as privy pits may also exist below the surface.

NATIVE AMERICAN OUTREACH

On November 19, 2021, Alyssa Scott of Far Western submitted a Sacred Lands File and Native American Contacts List Request to the NAHC. NAHC Cultural Resources Analyst, Cody Campagne, responded on February 15, 2022. The search of the Sacred Lands File was positive, indicating the presence of Native American cultural resources in the immediate project area. A list of 10 Native American interested individuals/organizations was provided. Letters initiating consultation Section 106 of the NHPA and AB 52 as required by CEQA were sent to these individuals on March 17, 2022, via email and the United States Postal Service. Follow up emails were sent on September 30 and phone calls on October 4, 2022, in an attempt to contact each group (Table 3). The contact log is included in Appendix B, though Consultation is ongoing. Irene Zwierlein requested that cultural sensitivity training be given to any construction crews undertaking ground-disturbing activity. Andrew Galvan asked what the results of the Sacred Lands File search were and whether a pedestrian survey had been undertaken. Adrian Whitaker responded to these questions via email on October 5, 2022.

BURIED SITE SENSITIVITY ASSESSMENT

Buried Site Considerations

The potential for buried archaeological sites is a practical challenge faced by archaeologists and cultural resources managers who must make a reasonable effort to identify archaeological deposits in three-dimensional space to ensure that potentially important resources are not affected by project activities. However, before buried sites can be avoided, sampled, or otherwise "managed," they must first be identified. Most buried sites are not found by conventional pedestrian surface surveys because they typically lack visible or obtrusive features that would indicate their presence to an observer in the field (Bettis 1992:120).

Table 3. Summary of Native American Outreach Efforts.

NAME	POSITION	AFFILIATION	COMMENTS/ RESPONSE
Irene Zwierlein	Chairperson	Amah Mutsun Tribal Band of Mission San Juan Bautista	Requested that any construction crews receive cultural sensitivity training.
Tony Cerda	Chairperson	Costanoan Rumsen Carmel Tribe	None to Date
Ann Marie Sayers	Chairperson	Indian Canyon Mutsun Band of Costanoan	None to Date
Kanyon Sayers-Roods	MLD Contact	Indian Canyon Mutsun Band of Costanoan	None to Date
Monica Arellano	Vice Chairwoman	Muwekma Ohlone Indian Tribe of the SF Bay Area	None to Date
Katherine Perez	Chairperson	North Valley Yokuts Tribe	None to Date
Timothy Perez	-	North Valley Yokuts Tribe	None to Date
Andrew Galvan	-	The Ohlone Indian Tribe	Asked about the Sacred Lands File and whether a survey had been conducted; Adrian Whitaker responded to these questions on 10/5/22.
Kenneth Woodrow	Chairperson	Wuksache Indian Tribe/Eshom Valley Band	None to Date
Corrina Gould	Chairperson	The Confederated Villages of Lisjan	None to Date

This predicament is further compounded in regions where archaeological sites over by urban development, or had surface signatures obliterated by agricultural practices or livestock grazing. Yet, early detection of buried archaeological deposits is particularly important to reduce significant delays and unexpected costs associated with the discovery of buried sites as part of project-related activities. It is crucial, therefore, that a sensitivity study be performed to determine where buried sites are most likely to be located, and that subsurface exploration is conducted in those areas of high sensitivity that will be subject to subsurface ground disturbance.

Buried Site Sensitivity Factors

Generally, there is an inverse relationship between landform-age and the potential for buried archaeological deposits. Archaeological deposits are not, for example, present within Pleistocene-age landforms that developed prior to human colonization of North America (Rosenthal and Meyer 2004a, 2004b). Landforms that pre-date the Holocene (ca. 11,500 BP), in other words, have little or no potential to contain buried sites because there were few, if any, people yet present in the region. Therefore, as a first step in evaluating sensitivity factors, landforms with the potential to contain buried sites must be distinguished from those that are too ancient to contain them, allowing older portions of the landscape to be confidently excluded from further consideration.

Most Holocene-age depositional landforms (e.g., alluvial fans and floodplains) have a general "geologic potential" to contain buried sites as they were formed after the arrival and occupation of the region by precontact people. While this basic distinction between Pleistocene and Holocene landforms addresses the potential for buried sites in Holocene landforms, the relative probability of locating a buried site depends largely on a more fine-grained distinction between the ages of different Holocene landforms. This approach further reduces the amount of area (i.e., volume of sediments) that may need to be searched for buried sites, and increases the likelihood that buried sites will be identified, if present.

Finally, archaeological deposits are not distributed randomly throughout the landscape, but tend to occur in specific geo-environmental settings (Foster and Sandelin 2003:4; Hansen et al. 2004:5; Pilgram

1987; Rosenthal and Meyer 2004a). It is well established that most precontact occupation sites are associated with level or nearly level landforms located near present or former water sources, usually within a distance of 200 meters, or approximately 656 feet, particularly near perennial streams, rivers, and springs. This means that many sites are situated in settings subject to periodic flooding and sediment deposition due to the combination of low-lying topography and active water sources. For this reason, the locations of present and former water sources play an important role in determining where buried sites are more likely to occur, and serve to further target probable locations of buried sites.

Buried Site Assessment

To assess the potential for buried archaeological deposits within the project APE and one-quarter-mile buffer, totaling 1,464.3 acres, a sensitivity study was conducted that considers factors that either encouraged or discouraged human use or occupation of certain landforms (i.e., age, geomorphic setting, distance to water and other resources), combined with those that affected the subsequent preservation of those landforms (i.e., erosion or burial). In general, sensitivity levels can range from Lowest, Low, Moderate, High, and Highest. Figure 5 illustrates the distribution of specific sensitivity levels across the study area. The historic-era Bayshore was located just east of the modern I-580/I-80 interchange. Sensitivity to the west of the Bayshore is for sites submerged under both modern fill and historic bay-mud. Project impacts will not be sufficient in these locations to reach these deposits.

Buried site sensitivity varies in the APE with 5.9 percent (5.91 acres) within areas of high or highest sensitivity, 26.4 percent (26.47 acres) within areas of Moderate sensitivity, 31.6 percent (31.57 acres) within areas of low sensitivity and 35.9 percent (35.81 acres) within areas of lowest sensitivity. Although there are areas of high and highest buried site sensitivity in the project corridor, subsurface impacts are limited to the lone location west of Martin Luther King Jr. Drive, which is within areas of low and moderate sensitivity.

Project impacts into native soil are limited and the locations in which these impacts are planned are within areas of low or moderate sensitivity for buried precontact resources. As a result, the buried site sensitivity assessment identifies a low probability of identifying previously unidentified precontact resources.

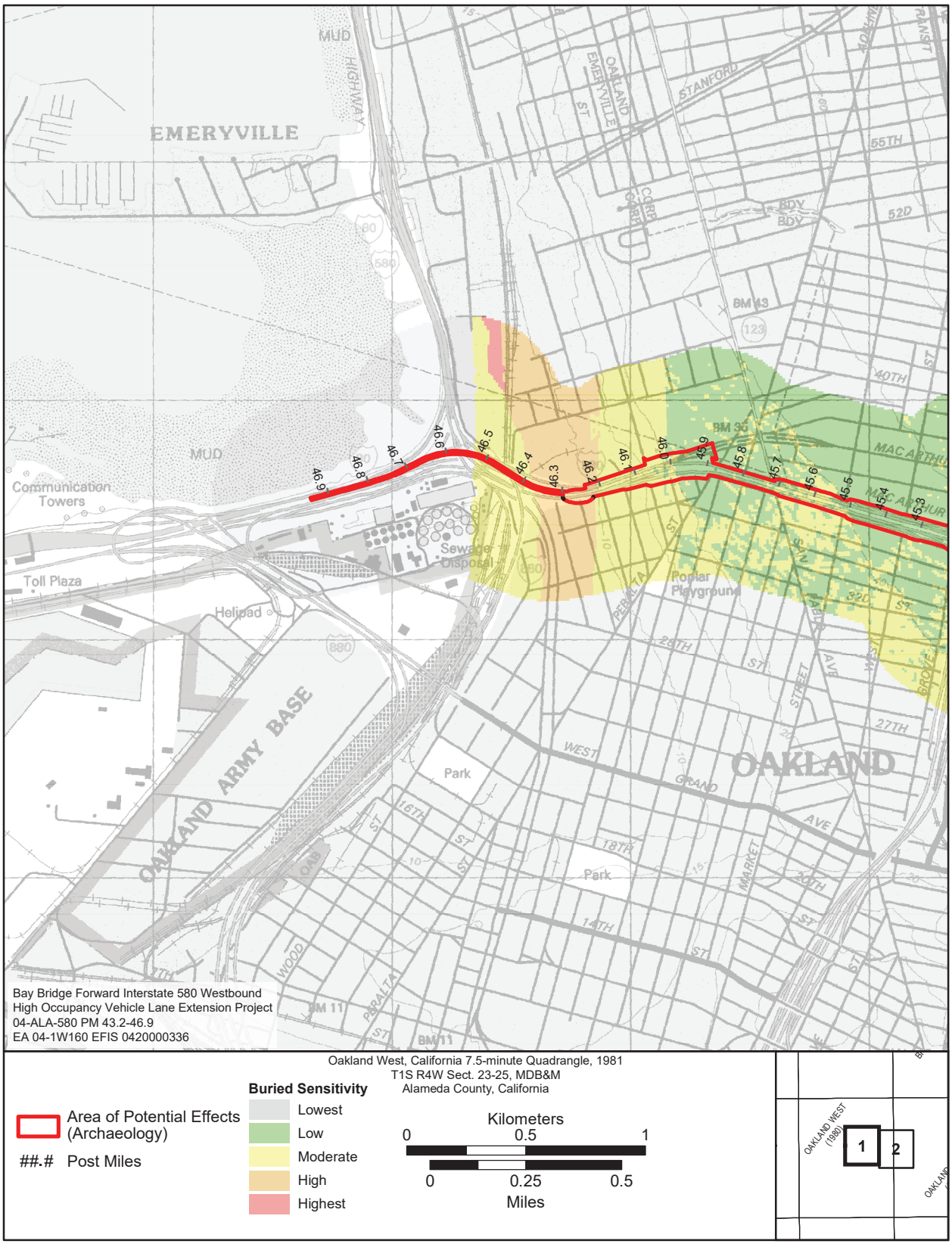


Figure 5. Buried Site Sensitivity Analysis (1 of 2).

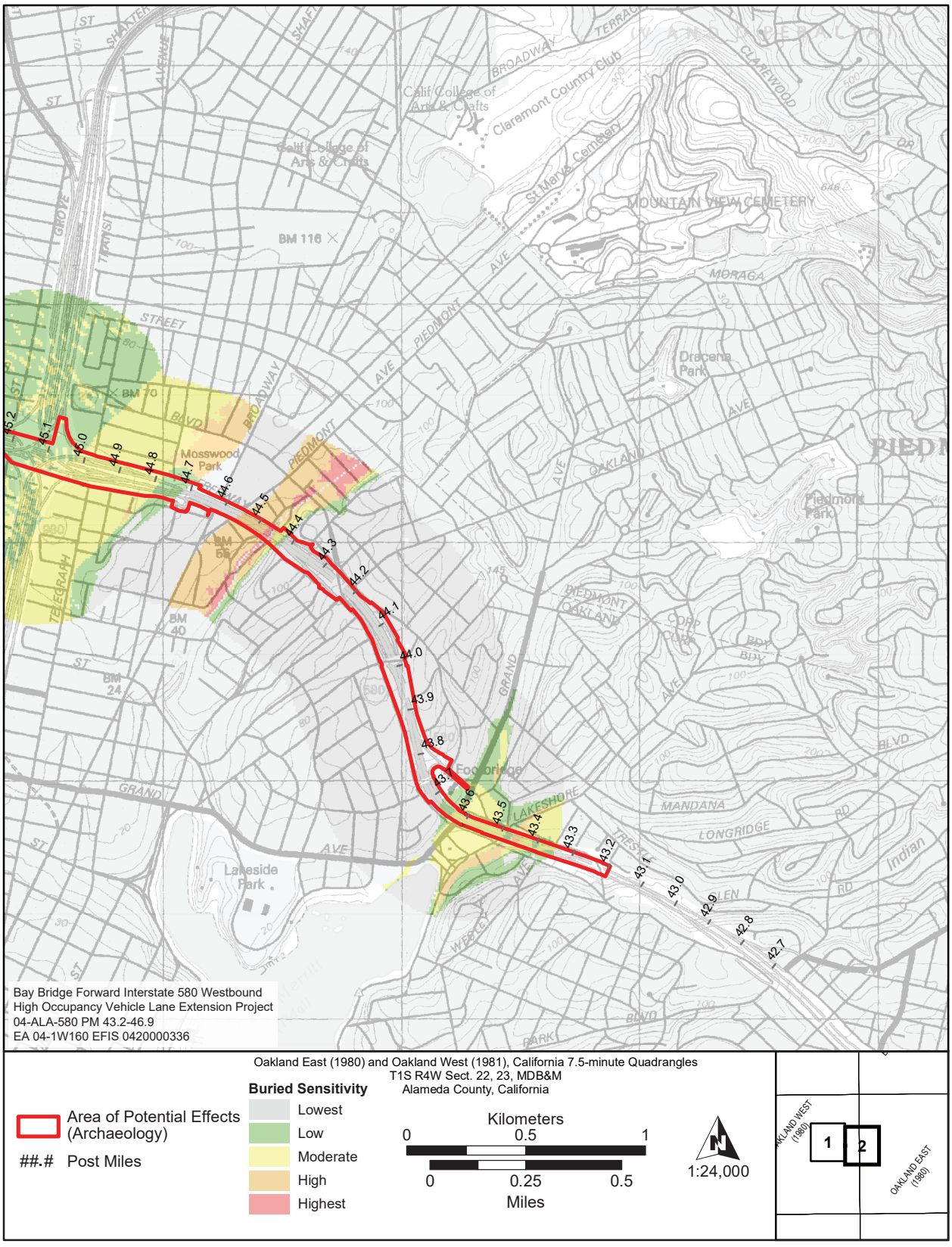


Figure 5. Buried Site Sensitivity Analysis (2 of 2).

5. STUDY FINDINGS AND CONCLUSION

In general, the three-mile-long project APE is narrow and runs either along elevated roadways or through heavily urbanized areas; artificial surfaces (notably elevated roads) characterize the entire project area. The entire APE is paved and therefore no pedestrian survey was conducted for the current undertaking. One previously recorded resource (P-01-012011) is within the APE, but is buried at least one foot below the surface and consisted of historic-era deposits that lacked integrity. The project will not include any sub-surface impacts within the vicinity of the recorded site deposit and therefore the site will not be affected by the project (Table 4).

Buried site sensitivity in the entire APE varies from lowest to highest, but areas with proposed subsurface impacts are exclusively within areas of low sensitivity for buried resources and no further testing is recommended.

Table 4. Resources within the Area of Potential Effects and Recommendations for Additional Work.

SITE DESIGNATION	DESCRIPTION	RECOMMENDATIONS
P-01-012011	Historic-era refuse deposit	No preventative action necessary

CONCLUSION

Only one archaeological resource is present with the project area. This resource is a likely-ineligible historic-era deposit without a surface manifestation. The resource will not be affected by the project since it was identified below the surface and there will be no subsurface impacts in that location.

UNIDENTIFIED CULTURAL MATERIALS

If previously unidentified cultural materials are unearthed during construction, it is Caltrans' policy that work be halted in that area until a qualified archaeologist can assess the significance of the find. Additional survey will be needed if project limits are extended beyond the present survey limits.

6. REFERENCES CITED

Beardsley, Richard K.

1948 Cultural Sequences in Central California Archaeology. *American Antiquity* 14(1):1–28.

1954a *Temporal and Areal Relationships in California Archaeology: Part I*. Reports of the University of California Archaeological Survey 24, Berkeley, California.

1954b Temporal and Areal Relationships in California Archaeology: Part II. *Reports of the University of California Archaeological Survey* 25, Berkeley, California.

Beck, Warren A., and Ynez D. Haase

1988 *Historical Atlas of California*. University of Oklahoma Press, Norman, Oklahoma.

Bennyhoff, James A., and David A. Fredrickson

1994 A Proposed Integrative Taxonomic System for Central California. In *Toward a New Taxonomic Framework for Central California Archaeology*, pp. 15–24. Contributions of the University of California Archaeological Research Facility.

Bettis, E. Arthur III

1992 Soil Morphologic Properties and Weathering Zone Characteristics as Age Indicators in Holocene Alluvium in the Upper Midwest. In *Soils in Archaeology*, edited by Vance T. Holliday, pp. 119–144. Smithsonian Institution, Washington, DC.

Bickel, Polly M.

1978 Changing Sea Levels along the California Coast: Anthropological Implications. *Journal of California Anthropology* 5(1):6–20.

Bolton, Herbert E.

1971 *Fray Juan Crespi, Missionary Explorer on the Pacific Coast, 1769–1774*. AMS Press, New York.

Browning, Peter (editor)

1992 *The Discovery of the San Francisco Bay: The Portola Expedition of 1769–1770 by Miguel Costanso*. Great West Books, Lafayette, California.

Busby, Colin I., and James C. Bard

1978 *An Assessment of Aboriginal Cultural Resources Present on Certain Berkeley Redevelopment Commission Properties, City of Berkeley: A Short Form Report*. S-01288. On file, Northwest Information Center, Sonoma State University, Rohnert Park, California.

Chavez, David

1989 *Archaeological Recovery Program for the West Berkeley Site (CA-ALA-307), Sanitary Sewer Rehabilitation for Infiltration Correction Projects of Berkeley, California (Subbasin 15-011) Clean Water Grant No. C-06-2967-110. S-11125*. On file, Northwest Information Center, Sonoma State University, Rohnert Park, California.

Cook, Sherburne F.

1943 *The Conflict between the California Indians and White Civilization I: The Indian Versus the Spanish Mission. Ibero-Americana 21*. (Reprinted in 197 *in The Conflict between the California Indian and White Civilization*. University of California Press, Berkeley.)

Crampton, Beecher

1974 *Grasses in California*. California Natural History Guides. University of California Press, Berkeley.

Crespí, Juan

1927 *Fray Juan Crespí: Missionary Explorer on the Pacific Coast 1769–1774*. University of California Press, Berkeley.

Foster, Daniel G., and Linda C. Sandelin

2003 *Techniques for Discovering Precontact Archaeological Sites during Survey of CDF Projects*. California Department of Forestry and Fire Protection. http://calfire.ca.gov/resource_mgt/archaeology-foster_reports.php, accessed January 2005 (updated January 2012).

Fredrickson, David A.

1966 *CCO-308: The Archaeology of a Middle Horizon Site in Interior Contra Costa County, California*. Master's thesis, Department of Anthropology, University of California, Davis.

1973 *Early Cultures of the North Coast Ranges, California*. Ph.D. dissertation, Department of Anthropology, University of California, Davis.

1974 Cultural Diversity in Early Central California: A View from the North Coast Ranges. *Journal of California Anthropology* 1(1):41-54.

Gerow, Bert A., with Roland W. Force

1968 *An Analysis of the University Village Complex: with a Reappraisal of Central California Archaeology*. Stanford University Press, Stanford, California.

Gifford, Edward W.

1916 *The Composition of California Shellmounds*. University of California Publications in American Archaeology and Ethnology 12:1-29.

Hansen, David T., G. James West, Barbara Simpson, and Pat Welch

2004 *Modeling Spatial Uncertainty in Analysis of Archeological Site Distribution*. US Bureau of Reclamation, Mid Pacific Region, Sacramento, California. http://gis.esri.com/library/userconf/proc02/pap0287/p0287.htm, accessed January 2005.

Harrington, John P.

1942 *Culture Elements Distribution, XIX: Central California Coast*. University of California Anthropological Records 7(1):1–46.

Higgins, Courtney, Barb Siskin, Sarah Izzi, and Naomi Scher

2020 *Cultural Resources Inventory for the Oakland J-East Shore 115kV Reconductoring Project, Alameda County, California*. Far Western Anthropological Research Group, Inc., Davis, California.

Hoover, Mildred Brooke, Eugene Rensch, Ethel Grace Rensch, and William N. Abeloe

1990 *Historic Spots in California*. Fifth Edition. Stanford University Press, Stanford, California.

Howard, A. D.

1962 *Evolution of the Landscape of the San Francisco Bay Region*. University of California Press, Berkeley, California.

Ingram, B. L.

1998 Differences in Radiocarbon Age between Shell and Charcoal from a Holocene Shellmound in Northern California. *Quaternary Research* 49:02-110.

Johnson, Melissa K.

2015 *Archaeological Survey Report for Bay Road Phase II and III Improvement Project, San Mateo County, California*. Far Western Anthropological Research Group, Inc., Davis, California. Submitted to California Department of Transportation, District 4, Oakland.

Josselyn, M.

1983 *The Ecology of San Francisco Bay Tidal Marshes: A Community Profile*. US Fish and Wildlife Service, Division of Biological Services, Washington, DC.

Kroeber, Alfred L.

1925 *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Smithsonian Institution, Washington, DC. (Reprinted by Dover Publications, New York, 1976.)

Leach-Palm, Laura, and Philip Kaijankoski

2015 *Archaeological Survey Report for the MTC Interstate 880 Express Lane Phase I Project, Alameda and Santa Clara Counties, California*. Far Western Anthropological Research Group, Inc., Davis, California. Submitted to California Department of Transportation, District 4, Oakland; on behalf of HDR Engineering, Inc., Sacramento, California, and Metropolitan Transportation Commission, Oakland, California.

Levy, Richard

1978 Costanoan. In *California*, edited by Robert F. Heizer, pp. 485-495. Handbook of North American Indians Vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, DC.

Lightfoot, Kent G.

1997 Cultural Construction of Coastal Landscapes: A Middle Holocene Perspective from San Francisco Bay. In *Archaeology of the California Coast During the Middle Holocene*, edited by Jon M. Erlandson and Michael A. Glassow, pp. 129-142. Perspectives in California Archaeology 4, Jeanne E. Arnold, general editor. Institute of Archaeology, University of California, Los Angeles, California.

Lillard, Jeremiah B., Richard F. Heizer, and Franklin Fenenga

1939 *An Introduction to the Archaeology of Central California*. Sacramento Junior College Department of Anthropology Bulletin 2. Board of Education of the Sacramento City Unified School District, Sacramento, California.

Loud, L.

1912 *Presidio Mound #417*. University of California Archaeological Survey Manuscripts, 362. Archaeological Research Facility, University of California, Berkeley.

Luby, Edward M., and Mark F. Gruber

1999 The Dead Must be Fed: Symbolic Meanings of the Shellmounds of the San Francisco Bay Area. *Cambridge Archaeological Journal* 9:95-108.

Milliken, Randall

1983 The Spatial Organization of Human Population on Central California's San Francisco Peninsula at the Spanish Arrival. Unpublished Master's thesis, Cultural Resources Studies, Sonoma State University, Rohnert Park, California.

1995 *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1769-1810*. Ballena Press Anthropological Papers 43. Edited by T. C. Blackburn. Ballena Press, Menlo Park, California.

2006 *The Central California Ethnographic Community Distribution Model, Version 2.0, with Special Attention to the San Francisco Bay Area – Cultural Resources Inventory of Caltrans District 4 Rural Conventional Highways*. Consulting in the Past and Far Western Anthropological Research Group, Inc., Davis, California. Submitted to Office of Cultural Resource Studies, California Department of Transportation District 4, Environmental Division.

Milliman, J. D., and K. Emery

1968 Sea Levels During the Past 35,000 Years. *Science* 162(3858):1121-1123.

Moratto, Michael J.

2004 *California Archaeology*. Second Edition Academic Press, Inc., San Diego, California.

Nelson, Nels C.

1909 Shellmounds of the San Francisco Bay Region. *University of California Publications in American Archaeology and Ethnology* 7(4):310-356.

Newman, T. Stell

1970 A Dating Key for Post-Eighteenth Century Bottles. *Historical Archaeology* 4(1):70–75.

Parkman, E. B.

1994 The Bedrock Milling Station. In *Ohlone Past and Present*, edited by Lowell Bean, pp. 43-63. Ballena Press, Ramona, California.

Pilgram, Tom

1987 *Predicting Archaeological Sites from Environmental Variables: A Mathematical Model for the Sierra Nevada Foothills, California*. B.A.R. International Series 320. Oxford, England.

Priestley, Herbert

1937 *A Historical, Political, and Natural Description of California by Pedro Fages, solider of Spain*. University of California Press, Berkeley.

Rosenthal, Jeffrey S., and Jack Meyer

2004a *Landscape Evolution and the Archaeological Record: A Geoarchaeological Study of the Southern Santa Clara Valley and Surrounding Region*. Center for Archaeological Research at Davis Publication No. 14, University of California, Davis.

2004b *Cultural Resources Inventory of Caltrans District 10 Rural Conventional Highways - Volume III: Geoarchaeological Study; Landscape Evolution and the Archaeological Record of Central California*. Far Western Anthropological Research Group, Inc., Davis, California. Submitted to California Department of Transportation, District 10, Stockton. On file, Central California Information Center, California State University, Stanislaus.

San Francisco Bay Conservation and Development Commission (San Francisco BCDC)

2007 *Shoreline Plants: A Landscape Guild for the San Francisco Bay*. http://www.bcdc.ca.gov/planning/SPLG.pdf, accessed May 2018.

Schenck, W. Egbert

1926 Historic Aboriginal Groups of the California Delta Region. *University of California Publications in American Archaeology and Ethnology* 23(2):123–146.

Siskin, Barb, Dina Ryan, and Joshua McWaters

2018 *Archaeological Survey Report for the 42nd Avenue/High Street Access Improvement Project*. Garcia and Associates, San Rafael, California. Prepared for California Department of Transportation, District 4, Oakland.

Stright, Melanie J.

1990 Archaeological Sites on the North American Continental Shelf. *Geological Society of American Centennial Special Volume 4*. Boulder, Colorado.

Wallace, W. J., and D. W. Lathrap

1975 *West Berkeley (CA-ALA-307): A Culturally Stratified Shellmound on the East Shore of San Francisco Bay*. Contributions of the University of California Archaeological Research Facility 29.

.

APPENDIX A

RECORDS SEARCH RESULTS
CONFIDENTIAL

Appendix A. Records Search Results.

Study No. (S-)	Year	Author(s)	Title	Intersects APE?
779	1977	David Chavez	*Preliminary Cultural Resources Assessment of the East Bay Municipal Utility District (EBMUD) Wet Weather Facilities/Overflow Project Facilities Sites, Alameda and Contra Costa Counties, California*	NO
779	1979	David Chavez	*Supplement to Preliminary Cultural Resources Assessment of the East Bay Municipal Utility District (EBMUD) Wet Water Facilities/Overflow Project Facilities Sites, Alameda County, California*	NO
4950	1982	Margaret Buss	*Archaeological Survey Report for Proposed High Occupancy Vehicle Lanes from Bay Bridge to Carquinez Bridge, 04-ALA/CC-80 2.0/8.0, 0.0/14.1, EA 04209-400211*	NO
4950	1991	-	*Addendum Historic Property Survey Report for Operational Improvements to Route I-80 in Alameda and Contra Costa Counties (ALA-80, P.M. 1.3/8.0; CC-80 0, P.M. 0/10.6) 04135-400211*	NO
4950	1991	Glenn Gmoser	*Second Addendum Archaeological Survey Report: Cutting Boulevard (04-ALA/CC-80 20.8-.9; 0.0/14.1 04209-400211)*	NO
4950	1991	Elizabeth Krase	*Historic Architecture Survey Report for the Proposed Operational Improvements to Interstate 80 at the Cutting Boulevard Interchange, 04-CC-80 P.M. 1.8/2.5, Within the City Limits of Richmond and El Cerrito, Contra Costa County, 04225-180241*	NO
4950	1991	Glenn Gmoser	*Third Addendum Archaeological Survey Report: Richmond Parkway/Atlas Road 04-CCo-80, PM 6.2/7.4, EA 04135-400211 (Segment of Ala/CC 80 Route 2.0/8.0; PM 0.0/14.1, EA 04209-400211*	NO
4950	1991	Judy D. Tordoff	*Field Evaluation of Historic Period Remains in Contra Costa County (letter report)*	NO
4950	1982	Mara Melandry	*First Addendum Archaeological Survey Report for Proposed High Occupancy Vehicle Lanes from the Bay Bridge to Carquinez Bridge in Alameda and Contra Costa Counties, 04-Ala/CC 80 2.0/8.0; 0.0/14.1, 04209-400211*	YES
5810	1983	Jeffrey C. Bingham	*Negative Archaeological Survey Report, Proposed HOV Lanes on Route 80 to the Route 580/24 Interchange in the City of Oakland, 04-ALA-580 P.M. 45.2/46.9, 04-ALA-80 P.M. 1.0/2.8 04207-380011*	YES
12289	1990	Donna M. Garaventa, Michael R. Fong, Sondra A. Jarvis, and Angela M. Banet	*Archaeological Survey Report, I-880/Cypress Replacement Project, 04-ALA-880 P.M. 32.4/34.3, E.A. #04195-190271 MEQ 85001, Cities of Oakland and Emeryville, Alameda County, California*	YES
16800	1992	Richard D. Ambro	*Archaeological Cultural Resource Study for the Bay/Shellmound Street Project*	NO
22820	2000	Wendy J. Nelson, Tammara Norton, Larry Chiea, and Eugenia Mitsanis	*Cultural Resources Survey for the Level (3) Communications Long Haul Fiber Optics Project, Segment WS07: Oakland to San Jose*	YES
23367	1999	Colin I. Busby and Stuart A. Guedon	*Archaeological Monitoring Closure Report - IKEA Project, 4400 Shellmound Street, Cities of Emeryville and Oakland, Alameda County (letter report)*	NO
23778	2002	David Chavez	*Archaeological Resources Investigations for the EBMUD East Bayshore Recycled Water Project, Alameda County, California: Supplemental Report*	NO
23778	2002	Daivd Chavez and Jan M. Hupman	*Archaeological Resources Investigations for the EBMUD East Bayshore Recycled Water Project, Alameda County, California: Additional Pipeline Alignments*	NO
23778	2000	David Chavez and Jan M. Hupman	*Archaeological Resources Investigations for the EBMUD East Bayshore Recycled Water Project, Alameda County, California*	YES
25526	1997	Colin Busby, Melody Tannam, Donna Garaventa, Michael Corbett, and Woodruff Minor	*Historic Property Survey Report/Finding of Effect, 50-Foot Channel Navigation Improvements Project, Oakland Harbor, Alameda County*	NO
27893	2000	Ann M. Munns and Roger D. Mason	*Cultural Resources Survey Report, Level (3) Long Haul Fiber Optic Project: Segment WS02 in Emeryville & Oakland, Alameda County, California*	YES
28040	2000	-	*Letter Report on the Impact of the Cypress Structure Project on the Oakland Army Base Historic District*	NO
29458	2001	Earth Touch LLC	*580/Grand (CA-0801A), 2930 Lakeshore Avenue, Oakland, California*	NO
29666	2004	Lorna Billat	*Roof Mounted Antennas and New Equipment Lease Area Inside Existing Storage Area with Building, 580/980 (SF-12070A), 650 34th Street, Oakland, CA.*	NO
30419	2005	Dana E. Supernowicz	*Collocation ("CO") Submission Packet, FCC Form 621, 381 Oakland, BA-12793.*	NO
30419	2005	Dana E. Supernowicz	*Cultural Resources Study of the 381 Oakland Avenue Project, T-Mobile USA, Inc., Site No. B-12793, 381 Oakland Avenue, Oakland, Alameda County, California 94611*	NO

Appendix A. Records Search Results.

Study No. (S-)	Year	Author(s)	Title	Intersects APE?
30581	2004	Colin I. Busby	*Archaeological Assessment Report, Glen Echo Creek Restoration Project (Zone 12, Line B), 235 30th Street, City of Oakland, Alameda County, California.*	NO
30590	2004	William Kostura	*California Register of Historical Resources Evaluation Report, 235 30th Street, City of Oakland, Alameda County, California.*	NO
31997	2005	David Stone and Karen Foster	*Historic Property Survey Report, BART Seismic Retrofit Project, Berkeley Hills Tunnel to Montgomery Street Station, Caltrans District 4, Alameda and San Francisco Counties, California*	NO
31997	2005	Jami Layton	*Historical Resources Evaluation Report, BART Seismic Retrofit Project, Berkeley Hills Tunnel to Montgomery Street Station, Alameda and San Francisco Counties, California*	NO
31997	2005	-	*Archaeological Survey Report, Bart Seismic Retrofit Project, Berkeley Hills Tunnel to Montgomery Street Station, Caltrans District 4, Alameda and San Francisco Counties, California*	NO
31997	2005	-	*Finding of No Adverse Effect, BART Seismic Retrofit Project, Berkeley Hills Tunnel to Montgomery Street Station, Caltrans District 4, Alameda and San Francisco Counties, California*	NO
31997	2005	Milford Wayne Donaldson	*FHWA050310A, Historic Properties Survey Report (HPSR) for the proposed San Francisco Bay Area Rapid Transit Distric (BART) Seismic Retrofit Project from the Berkeley Hills Tunnel (Alameda County) to the Montgomery Street Station (San Francisco County), a Local Assistance project*	NO
32164	1999	Harry Y. Yahata and Robert L. Gross	*Historic Property Survey Report and Findings of No Historic Properties Affected for the Mandela Parkway Corridor Improvement Project, City of Oakland, Alameda County, 04-Ala-880-KP, 52.5/54.9 (PM 32.6/34.1)*	NO
32164	1999	Jack McIlroy, Jack Meyer, Elaine-Maryse Solari, Grace H. Ziesing, Kimberly Esser, Maria Ribeiro, Adrian Praetzellis, and Mary Praetzellis	*Mandela Parkway Corridor Improvement Project: Archaeological Sensitivity Study and Survey Report, 04-Ala-880, KP 52.5/54.9 (PM 32.6/34.1), in the City of Oakland, California, Alameda County, EA No. 292360*	NO
33061	2006	-	*Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California*	NO
33061	2007	Nancy E. Sikes	*Final Report of Monitoring and Findings for the Qwest Network Construction Project (letter report)*	NO
33061	2006	Nancy Sikes, Cindy Arrington, Bryon Bass, Chris Corey, Kevin Hunt, Steve O'Neil, Catherine Pruett, Tony Sawyer, Michael Tuma, Leslie Wagner, and Alex Wesson	*Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California*	YES
33504	2007	Cameron Bauer and Heather Price	*Historic Property Survey Report, Seismic Retrofit of BART Aerial Structures and Stations Along Concord, Richmond, Daly City and Fremont Lines, Alameda, Contra Costa, and San Mateo Counties, STPLZ-6000 (25)*	NO
33504	2007	Heather Price	*Historical Resources Evaluation Report, Exhibit I of HPSR, Seismic Retrofit of BART Aerial Structures and Stations Along Concord, Richmond, Daly City and Fremont Lines, District 4, Alameda, Contra Costa, San Francisco, and San Mateo Counties, STPLZ-6000*	NO
33504	2007	Heather Price	*Archaeological Survey Report Exhibit II of HPSR, Seismic Retrofit of BART Aerial Structures and Stations along the Concord, Richmond, Daly City and Fremont Lines, District 4, Alameda, Contra Costa, San Francisco, and San Mateo Counties, STPLZ-6000 (25)*	NO
33504	2007	Jennifer Darcangelo and Milford Wayne Donaldson	*FHWA 070321A Determinations of Eligibility for the Proposed Seismic Retrofit of BART Aerial Stations and Structures along the Concord, Richmond, Daly City, and Fremont Lines*	NO
33596	2007	Mary L. Maniery and Cindy L. Baker	*Cultural Resource Inventory and Evaluation of United States Army Reserve 63D Regional Readiness Command Facilities; Contract No. W912C8-05-P-0052*	NO

Appendix A. Records Search Results.

Study No. (S-)	Year	Author(s)	Title	Intersects APE?
33596	2007	-	*Cultural Resources Inventory and Evaluation of the United States Army Reserve Heroic War Dead USAR Center/Area Maintenance Support Activity 85 (G), Oakland, California; P-01-[010831], 63D Regional Readiness Command Facility CA036, Contract No. W912C8-05-P*	NO
33596	2007	-	*Cultural Resources Inventory and Evaluation of the United States Army Reserve Oakland USAR Center #2, Oakland, California; P-01-01830, 63D Regional Readiness Command Facility CA-125, Contract No. W912C8-05-P-0052*	NO
33596	2007	-	*Cultural Resources Inventory and Evaluation of the United States Army Reserve PFC Bacciglieri Armed Forces Reserve Center, Concord, California; P-07-002752, 63 D Regional Readiness Command Facility CA007, Contract No. W912C8-P-0052*	NO
33596	2007	-	*Cultural Resources Inventory and Evaluation of the United States Army Reserve Col. Hunter Hall USAR Center, San Pablo, California; P-07-002753, 63D Regional Readiness Command Facility CA 070, Contract No. W912C8-05-P-0052*	NO
33596	2007	-	*Cultural Resources Inventory and Evaluation of the United States Army Reserve Fort Ord USAR Center, Marina, California; 63D Regional Readiness Command Facility CA012, Contract No. W912C8-05-P-0052*	NO
33596	2007	-	*Cultural Resources Inventory and Evaluation of the United States Army Reserve Moss Landing Local Training Area, Moss Landing, California; 63D Regional Readiness Command Facility CA189, Contract No. W912C8-05-P-0052*	NO
33596	2007	-	*Cultural Resources Inventory and Evaluation of the United States Army Reserve Jones Hall USAR Center, Mountain View, California; P-43-001836, 63D Regional Readiness Command Facility CA031, Contract No. W912C8-05-P-0052*	NO
33596	2007	-	*Cultural Resources Inventory and Evaluation of the United States Army Reserve Richey Hall USAR Center, San Jose, California; P-43-000728, 63D Regional Readiness Command Facility CA069, Contract No. W912C8-05-P-0052*	NO
33596	2007	-	*Cultural Resources Inventory and Evaluation of the United States Army Reserve Moffett USAR Center, Mountain View, California; P-43-001837, 63D Regional Readiness Command Facility CA120, Contract No. W912C8-05-P-0052*	NO
33596	2007	-	*Cultural Resources Inventory and Evaluation of the United States Army Reserve PFC Young USAR Center, Vallejo, California; P-[48-000752], 63D Regional Readiness Command Facility CA-090, Contract No. W912C8-05-P-0052*	NO
33596	2007	Milford Wayne Donaldson and James O. Anderson	*USA070613A; Inventory and Evaluation of Historic Resources at 63D Regional Readiness Command, US Army Reserve Center in California*	NO
34672	2007	E. Timothy Jones and Michael Hibma	*A Cultural and Paleontological Resources Study for the Macarthur Transit Village Project, Oakland, Alameda County, California*	NO
35189	2007	Michael Hibma and E. Timothy Jones	*A Cultural and Paleontological Resources Study for the 39th and Adeline Mixed-Use Project, Emeryville and Oakland, Alameda County, California*	NO
35988	2009	Brad Brewster and Heidi Koenig	*Alta Bates Summit Medical Center Project: Cultural Resources Survey Report*	NO
36528	2005	Brian Hatoff	*Colocation ("CO") Submission Packet, FCC Form 621*	NO
37362	1990	-	*Historic Property Survey Report for the Proposed I-880 Reconstruction Project in the Cities of Oakland and Emeryville, Alameda County, ALA-880 32.12/34.31; ALA-580 45.99/46.95; ALA-80 1.99/3.39; 04195-190271 MEQ85001*	YES
37362	1990	Donna M. Garaventa, Michael R. Fong, Sondra A. Jarvis, and Angela M. Banet	*Archaeological Survey Report, I-880/Cypress Replacement Project, 04-ALA-880 32.12/34.31, 04-ALA-580 45.99/46.95, 04-ALA-80 1.99/3.39, E.A. #04195-190271 MEQ 85001, Cities of Oakland and Emeryville, Alameda County, California*	NO
37362	1990	-	*Historic Architecture Survey Report for the Proposed Reconstruction of Interstate 880 Within the City Limits of Oakland and Emeryville, Alameda County, 04-ALA-880 32.12/34.31, 04-ALA-580 45.99/46.95, 04-ALA-80 1.99/3.79, 4195-190271 MEQ85001*	NO
37362	1990	Gary Knecht, Alex G. Chiappetta, Michael R. Corbett, Miriam Liskin, Gail G. Lombardi, Betty Marvin, Woodruff C. Minor, Donnalyn Polito, Christine Winans, and Aicha S. Woods	*Historic Architecture Survey Report, Part VII. A, Subarea A: City of Oakland*	NO

Appendix A. Records Search Results.

Study No. (S-)	Year	Author(s)	Title	Intersects APE?
37362	1990	Bonnie W. Parks, Denise O'Connor, and Stephen D. Mikesell	*Historic Architecture Survey Report Part VII. B, Subarea B: Emeryville and San Francisco-Oakland Bay Bridge Vicinity*	NO
37362	1990	John W. Snyder	*Historic Architecture Survey Report Part VII. C, Subarea C: Southern Pacific Railroad Property and Interurban Railway Structures*	NO
37362	1990	Kathryn Gualtieri	*FHWA900927X; I-880 Cypress structure, ER-1404 (1)*	NO
37362	1990	-	*First Addendum Historic Property Survey Report for the Proposed I-880 Reconstruction Project in the Cities of Oakland and Emeryville, Alameda County ALA-880 32.12/34.31; ALA-580 45.99/46.95; ALA-80 1.99/3.39 04195-190271 MEQ85001*	NO
37362	1990	Donna M. Garaventa and Sondra A. Jarvis	*First Addendum Archaeological Survey Report, I-880/Cypress Replacement Project 04-ALA-880 32.12/34.31, 04-ALA-580 45.99/46.95, 04-ALA-80 1.99/3.39, E.A.#04195-190271 MEQ 85001, Cities of Oakland and Emeryville, Alameda County, California*	NO
37362	1990	-	*First Addendum Historic Architecture Survey Report for the Proposed Reconstruction of Interstate 880 within the City Limits of Oakland and Emeryville, Alameda County 04-ALA-880 32.12/34.31, 04-ALA-580 45.99/46.95, 04-ALA-80 1.99/3.79, 4195-19027 MEQ85001*	NO
37362	1990	Gary Knecht, Alex G. Chiappetta, Michael R. Corbett, Miriam Liskin, Gail G. Lombardi, Betty Marvin, Woodruff C. Minor, Donnalynn Polito, Christine Winans, and Aicha S. Woods	*First Addendum Historic Architecture Survey Report Part VII, Subarea F: City of Oakland*	NO
37362	1991	-	*Second Addendum Historic Property Survey Report for the Proposed Reconstruction of Interstate 880 within the City Limits of Oakland and Emeryville, Alameda County 04-ALA-880 32.12/34.31, 04-ALA-580 45.99/46.95, 04-ALA-80 1.99/3.79 4195-190270*	NO
37362	1991	Gary Knecht, Miriam Liskin, Gail G. Lombardi, Betty Marvin, and Christine Winans	*Second Addendum Historic Architecture Survey Report Part VII Subarea G: City of Oakland*	NO
37453	2010	Carrie D. Wills and Kathleen A. Crawford	*Cultural Resources Records Search, Site Visit Results, and Direct APE Historic Architectural Assessment for AT&T Mobility, LLC Candidate CNU0110, 229 MacArthur Boulevard, Oakland, Alameda County, California (letter report)*	NO
38249	2010	Suzanne Baker	*Historic Property Survey Report, the Alameda County Transit District's East Bay Bus Rapid Transit Project in Berkeley, Oakland, and San Leandro*	YES
38249	2010	Suzanne Baker	*Addendum to Positive Archaeological Survey Report for the Alameda County Transit District's East Bay Bus Rapid Transit Project in Berkeley, Oakland, and San Leandro, California*	YES
38249	2010	Suzanne Baker	*Addendum Historic Property Survey Report, the Alameda County Transit Project in Berkeley, Oakland, and San Leandro*	YES
38249	2010	Suzanne Baker	*Second Addendum to Positive Archaeological Survey Report for Alameda County Transit District's East Bay Bus Rapid Transit Project in Berkeley, Oakland, and San Leandro, California*	YES
38249	2005	Suzanne Baker	*Positive Archaeological Survey Report for the Alameda-Contra Costa Transit District's East Bay Bus Rapid Transit Project in Berkeley, Oakland, and San Leandro*	YES
38249	2006	Milford Wayne Donaldson and Leslie T. Rogers	*FTA051227A; National Register of Historic Places Determination of Eligibility for Properties within the Area of Potential Effects for the Propsed AC Transit Bus Rapid Transit Project, Alameda County, California*	YES
38249	2005	-	*Finding of Effect for AC Transit East Bay Bus Rapid Transit Project*	YES
38251	2011	Jack Meyer	*Buried Archaeological Site Assessment and Extended Phase I Subsurface Explorations for the I-80 Integrated Corridor Mobility Project, Caltrans District 04, Alameda and Contra Costa Counties, California, 04-ALA-CC-80, P.M. ALA 1.99/P.M. ALA 8.04, P.M. CC 0.0/P.M. CC 13.49, EA 3A7761 / EA 3A7771*	YES
39693	2012	David R. Cohen and Kathleen A. Crawford	*Cultural Resources Records Search and Site Visit Results for Sprint Nextel Candidate FN03XC015 (3400 Broadway-Sawmill), 3400 Broadway, Oakland, Alameda County, California (letter report)*	NO

Appendix A. Records Search Results.

Study No. (S-)	Year	Author(s)	Title	Intersects APE?
39853	2012	Jessica Tudor and Kathleen A. Crawford	*Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC, Candidate BA02009A (Lakeshore), 2930 Lakeshore Avenue, Oakland, Alameda County, California*	NO
40287	2013	Wayne H. Bonner and Kathleen A. Crawford	*Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate BA02003A (PL003 Emeryville), 4053 Harlan Street, Emeryville, Alameda County, California (Letter Report)*	NO
40639	2012	Jeffrey E. Pearson and Kathleen A. Crawford	*Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC, Candidate BA02003A (PL003 Emeryville), 4053 Harlan Street, Emeryville, Alameda County, California (Letter Report)*	NO
40655	2012	Wayne H. Bonner and Kathleen A. Crawford	*Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate BA02009A (Lakeshore), 2930 Lakeshore Avenue, Oakland, Alameda County, California (Letter Report)*	NO
42629	2013	Carolyn Losee	*Cultural Resources Investigation for AT&T Mobility CCU2577 "Oakland Webster", 3400 Broadway, Oakland, Alameda County, California 94611 (letter report)*	NO
42629	2014	Carol Roland-Nawi	*FCC_2014_0131_004; CCU2577/Oakland Webster, 3400 Broadway, Oakland, Alameda County, Collocation*	NO
43428	2013	Carrie D. Wills and Kathleen A. Crawford	*Cultural Resources Records Search and Site Visit Results for AT&T Mobility, LLC Candidate CNU3980 (580 San Pablo), 3601 San Pablo Avenue, Oakland, Alameda County, California. PTN No. 3701014574*	NO
43428	2015	Carrie D. Wills and Kathleen Crawford	*Collocation ("CO") Submission Packet, FCC Form 621, 10087970 (CNU3980/580 San Pablo), 3601 San Pablo Avenue, Emeryville, CA 94608, Project No. 10087907*	NO
43428	2015	Dana DePietro and Kathleen A. Crawford	*Cultural Resources Records Search and Site Visit Results for AT&T Mobility LLC Candidate 10087907, Site Number CNU3980, Site Name 580 San Pablo, 3601 San Pablo Avenue, Emeryville, Alameda County, California*	NO
43428	2015	Carol Roland-Nawi	*FCC_2015_0311_002; 10087907 (CNU3980/580 San Pablo) 3601 San Pablo Avenue, Emeryville, Collocation*	NO
45212	2014	-	*Historic and Cultural Resources Evaluation, Historic Resources Evaluation for Section 106 Review, Mixed-Use Affordable Housing Project, 3706 San Pablo Avenue, Emeryville, CA 94608*	NO
45212	2014	Vicki R. Beard	*An Architectural Survey for a Mixed Use Affordable Housing Project at 3706 San Pablo Avenue, Emeryville, Alameda County, California*	NO
45212	2014	Kelly M. Thiemann and Carol Roland-Nawi	*HUD_2014_0514_003: Dev. Of Mixed Use Affordable Housing Project Located at 3706 San Pablo Avenue, Emeryville*	NO
45454	2014	Vicki R. Beard	*An Architectural Survey for a Mixed Use Affordable Housing Project at 3706 San Pablo Avenue, Emeryville, Alameda County, California*	NO
45454	2014	Vicki Beard	*Archival Search Results for 3706 San Pablo Avenue, Emeryville, Alameda County*	NO
47078	2015	Suzanne Baker	*Archaeological Survey Report, Martin Luther King Jr. Way Streetscape Project, From West Grand Avenue to 40th Street, City of Oakland, Alameda County, California, Federal Project No. CML 5012 (128)*	YES
47078	2015	Suzanne Baker	*Historic Property Survey Report, Streetscape Improvements to Martin Luther King Jr. Way between West Grand Avenue and 40th Street, Alameda County, California*	NO
47106	2015	Heidi Koenig	*Invasive Cordgrass Project, 2015-2016 Work Locations, Cultural Resources Assessment*	YES
47272	2015	Phil Fulton, Terry Brejla, Judith Marvin, and Casey Tibbet	*Cultural Resource Assessment Class III Inventory: Verizon Wireless Services, Kempton Fair Facility, City of Oakland, County of Alameda, California*	NO
48011	2015	Carrie D. Wills and Kathleen Crawford	*FCC Form 621, Collocation Submission Packet: SF71207M (SF1207 - 580/980), 650 34th Street, Oakland, Alameda County, CA 94602*	NO
48011	2015	Carrie D. Wills and Kathleen A. Crawford	*Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate SF71207M (SF1207-580/980), 650 34th Street, Oakland, Alameda County, California (letter report)*	NO
48011	2015	Julianne Polanco	*FCC_2015_0914_003; SF71207M (SF1207-580/) 650 34th Street, Oakland, Collocation*	NO
48816	2017	Carolyn Losée	*Cultural Resources Investigation for AT&T CNU0110/CNU4356 "Lake Merritt" 229 MacArthur Boulevard, Oakland, Alameda County, California 94610 (letter report)*	NO

Appendix A. Records Search Results.

Study No. (S-)	Year	Author(s)	Title	Intersects APE?
51164	1996	Grace Ziesing	*Alameda County Seismic Retrofit Project, Results of Test Excavations at Bent SE91 (Caltrans reference: 4-ALA-24/580/980 I/C, PM R1.85/R2.2:44.9/45.2:1.7/2.0; EA 4257-13316K Seismic Retrofit #569) (letter results)*	YES
51937	2015	Carrie D. Wills and Kathleen A. Crawford	*Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate BA02376A (PL376-Kaiser Parking), 3800 Howe Street, Oakland, Alameda County, California*	NO
51937	2016	Carrie D. Wills and Kathleen A. Crawford	*Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate BA02376A (PL376-Kaiser Parking), 3800 Howe Street, Oakland, Alameda County, California*	NO
52207	2018	Dana E. Supernowicz	*Collocation ("CO") Submission Packet, FCC Form 621, NW-CA-DTOAKLAN-00001B, 00004A, 00008A, 00013A, 00014A, 00039A, 00040A, 00042A, 00071B, 00072A, 00073A, 00074A, 00075B, 00076B, and 00248A*	NO
52207	2018	Dana E. Supernowicz	*Historical Resource Analysis Study of the NW-CA-DTOAKLAN Project, Extenet Cellular Node Sites 00001B, 00004A, 00008A, 00013A, 00014A, 00035B, 00039A, 00040A, 00042A, 00071B, 00072A, 00073A, 00074A, 00075B, 00076B, AND 00248A, Oakland, Alameda County, California*	NO
52207	2018	Victoria Rojo and Julianne Polanco	*FCC_2018_0220_006, 15 Nodes at various locations, Oakland, Alameda County, Collocation*	NO

APPENDIX B

NATIVE AMERICAN CONSULTATION

Native American Outreach Communication Tracking Log

Name	Position	Affiliation	Email Sent	Follow-up Email	Phone Call	Response
Irene Zwierlein	Chairperson	Amah MutsunTribal Band of Mission San Juan Bautista	3/17/2022	9/30/2022	10/4/2022	Commented that anyone digging should go through cultural sensitivity training.
Tony Cerda	Chairperson	Costanoan Rumsen Carmel Tribe	3/17/2022	9/30/2022	10/4/2022	Phone # is disconnected
Ann Marie Sayers	Chairperson	Indian Canyon Mutsun Band of Costanoan	3/17/2022	9/30/2022	10/4/2022	Phone # kept ringing and no voicemail box set up.
Kanyon Sayers-Roods	MLD Contact	Indian Canyon Mutsun Band of Costanoan	3/17/2022	9/30/2022	10/4/2022	Voicemail box is full
Monica Arellano	Vice Chairwoman	Muwekma Ohlone Indian Tribe of the SF Bay Area	3/17/2022	9/30/2022	10/4/2022	Voicemail box is full
Katherine Perez	Chairperson	North Valley Yokuts Tribe	3/17/2022	9/30/2022	10/4/2022	Left voicemail
Timothy Perez		North Valley Yokuts Tribe	3/17/2022	9/30/2022	10/4/2022	No Response to Date
Andrew Galvan		The Ohlone Indian Tribe	3/17/2022	9/30/2022; 10/5,	10/4/2022	asked 1. What did the Sacred land search say? 2. Was a foot survey done? Responses were sent via email on 10/5/22
Kenneth Woodrow	Chairperson	Wuksache Indian Tribe/Eshom Valley Band	3/17/2022	9/30/2022	10/4/2022	Left voicemail
Corrina Gould	Chairperson	The Confederated Villages of Lisjan	3/17/2022	9/30/2022	10/4/2022	Left voicemail

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: The Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project

County: Alameda

USGS Quadrangle Name: Oakland West, CA

Township: 1S **Range:** 4W **Section(s):** 21, 22, 23, 24, 25, 26

Company/Firm/Agency: Far Western Anthropological Research Group

Street Address: 2727 Del Rio Place

City: Davis **Zip:** 95618

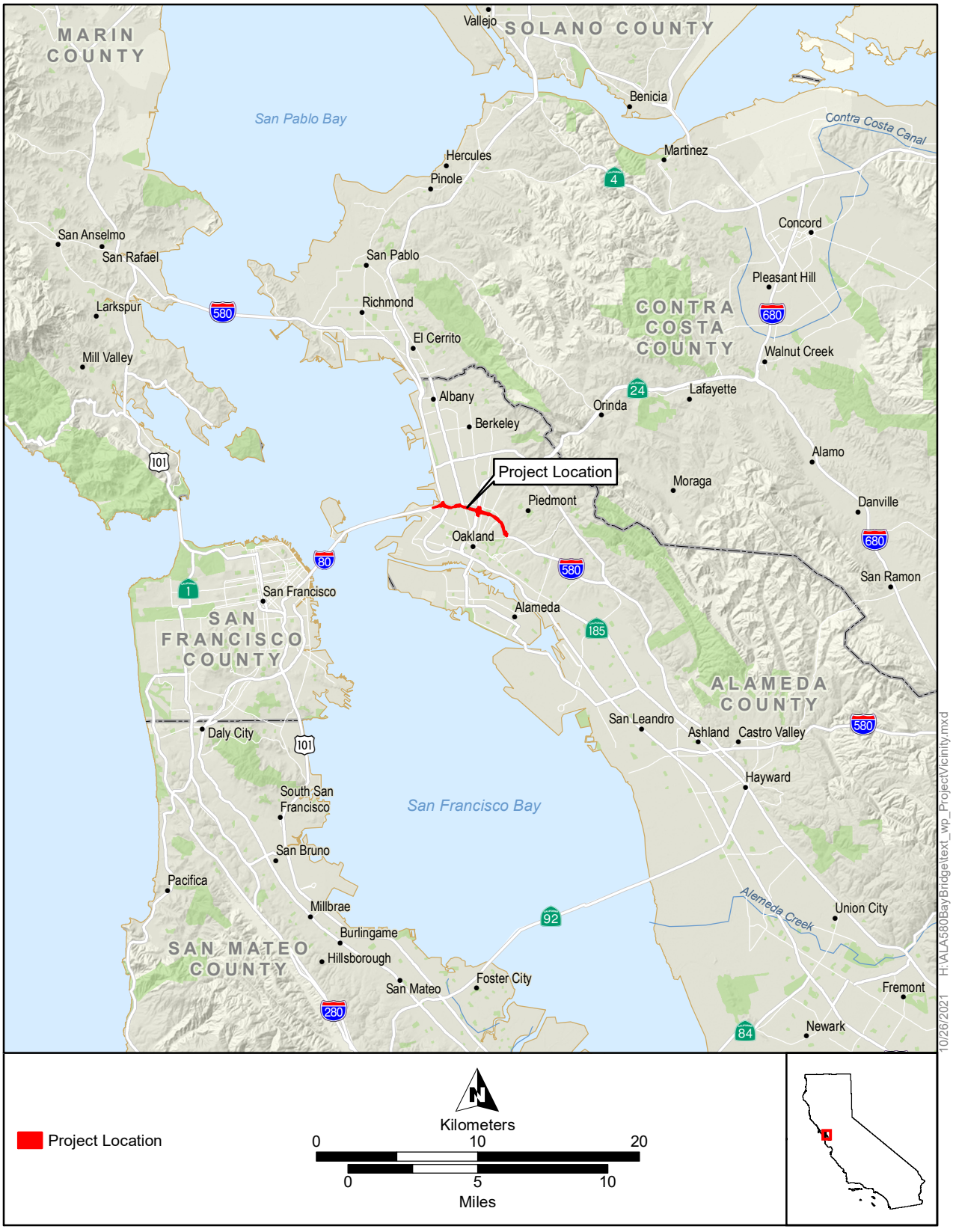
Phone: (530) 219-4866

Fax: (530) 756-0811

Email: alyssa@farwestern.com

Project Description:

The Interstate 580 (I-580) Westbound (WB) High Occupancy Vehicle (HOV) Lane Conversion Project (Project) is located in the Cities of Oakland and Emeryville within Alameda County, California. The Project sponsor and lead agency is the Metropolitan Transportation Commission. Project partners include the California Department of Transportation and the Alameda County Transportation Commission. The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to a HOV lane. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to the Telegraph Avenue Overpass (I-580 Post Mile 45.0). The Project limit extends further along I-580 WB from the Telegraph Avenue Overpass (I-580 Post Mile 45.0) to the Grand Avenue Overpass (I-580 PM 43.6) for the installation of HOV lane signs only. No HOV lane extension is proposed for this portion of the Project site.



Project Vicinity

From: Alyssa Scott
To: nahc@nahc.ca.gov
Subject: FW: Sacred Lands File Request
Date: Monday, January 31, 2022 12:02:00 PM
Attachments: image001.png

Dear Native American Heritage Commission,

I emailed a couple months ago about a search of the Sacred Lands File, and I just wanted to check in to see if you got my email and if any additional information is needed for the request. I've attached the map and request form as links just in case the files were too large to be received as attachments last time:

Map: Map.pdf
Sacred Lands File and Native American Contact Information Request Form: Sacred-Lands-File-NA-Contact-Form I-580 HOV.pdf

Thank you for your time! Let me know if you have any issues accessing the files or need any additional information!

Thank you,
Alyssa

From: Alyssa Scott
Sent: Friday, November 19, 2021 5:20 PM
To: nahc@nahc.ca.gov
Subject: Sacred Lands File Request

Dear Native American Heritage Commission,

We would like to request a search of the Sacred Lands File, and a list of Native American Contacts for further consultation. I have included a brief description of the project on the Sacred Lands File and Native American Contact Information Request Form and a map. Please let me know if I should provide any additional information!

Thank you,
Alyssa Scott

From:	Campagne, Cody@NAHC
To:	Alyssa Scott
Cc:	amahmutsuntribal@gmail.com; huskanam@gmail.com
Subject:	The Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project
Date:	Tuesday, February 15, 2022 2:12:11 PM
Attachments:	SLF Yes The Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project 2.15.2022.pdf The Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project 2.15.2022.pdf

Good Afternoon,

Attached is the response to the project referenced above. If you have any additional questions, please feel free to contact our office email at nahc@nahc.ca.gov.

Regards,

Cody Campagne
Native American Heritage Commission
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Cody.Campagne@nahc.ca.gov
Direct Line: (916) 573-1033
Office: (916) 373-3710

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

February 15, 2022

Alyssa Scott
Far Western Anthropological Research Group

Via Email to: alyssa@farwestern.com

Re: The Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County

Dear Ms. Scott

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information submitted for the above referenced project. The results were positive. Please contact the Amah Mutsun Tribal Band of Mission San Juan Bautista and the North Valley Yokuts Tribe on the attached list for information. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. A SLF search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with a project's geographic area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites, such as the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center for the presence of recorded archaeological sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. Please contact all of those listed; if they cannot supply information, they may recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Cody.Campagne@nahc.ca.gov.

Sincerely,

Cody Campagne

Cody Campagne
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Alameda County
2/15/2022

Amah MutsunTribal Band of Mission San Juan Bautista
Irene Zwierlein, Chairperson
3030 Soda Bay Road — Costanoan
Lakeport, CA, 95453
Phone: (650) 851 - 7489
Fax: (650) 332-1526
amahmutsuntribal@gmail.com

Costanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
244 E. 1st Street — Costanoan
Pomona, CA, 91766
Phone: (909) 629 - 6081
Fax: (909) 524-8041
rumsen@aol.com

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28 — Costanoan
Hollister, CA, 95024
Phone: (831) 637 - 4238
ams@indiancanyons.org

Indian Canyon Mutsun Band of Costanoan
Kanyon Sayers-Roods, MLD Contact
1615 Pearson Court — Costanoan
San Jose, CA, 95122
Phone: (408) 673 - 0626
kanyon@kanyonkonsulting.com

Muwekma Ohlone Indian Tribe of the SF Bay Area
Monica Arellano, Vice Chairwoman
20885 Redwood Road, Suite 232 — Costanoan
Castro Valley, CA, 94546
Phone: (408) 205 - 9714
marellano@muwekma.org

North Valley Yokuts Tribe
Katherine Perez, Chairperson
P.O. Box 717 — Costanoan
Linden, CA, 95236 — Northern Valley Yokut
Phone: (209) 887 - 3415
canutes@verizon.net

North Valley Yokuts Tribe
Timothy Perez,
P.O. Box 717 — Costanoan
Linden, CA, 95236 — Northern Valley Yokut
Phone: (209) 662 - 2788
huskanam@gmail.com

The Ohlone Indian Tribe
Andrew Galvan,
P.O. Box 3388 — Bay Miwok
Fremont, CA, 94539 — Ohlone
Phone: (510) 882 - 0527 — Patwin
Fax: (510) 687-9393 — Plains Miwok
chochenyo@AOL.com

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct. — Foothill Yokut
Salinas, CA, 93906 — Mono
Phone: (831) 443 - 9702
kwood8934@aol.com

The Confederated Villages of Lisjan
Corrina Gould, Chairperson
10926 Edes Avenue — Bay Miwok
Oakland, CA, 94603 — Ohlone
Phone: (510) 575 - 8408 — Delta Yokut
cvltribe@gmail.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed The Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County.

Bay Bridge Forward Interstate 580 Westbound
High Occupancy Vehicle Lane Extension Project
EA 04-1W160

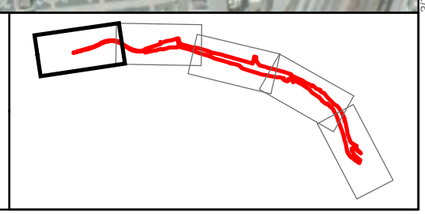
Area of Potential Effects

XX.XX Post Miles

Meters
0 150 300

0 300 600
Feet

1 inch = 300 feet



3/7/2022 H:\ALA580BayBridgetext_wp_APE.mxd

Bay Bridge Forward Interstate 580 Westbound
High Occupancy Vehicle Lane Extension Project
EA 04-1W160

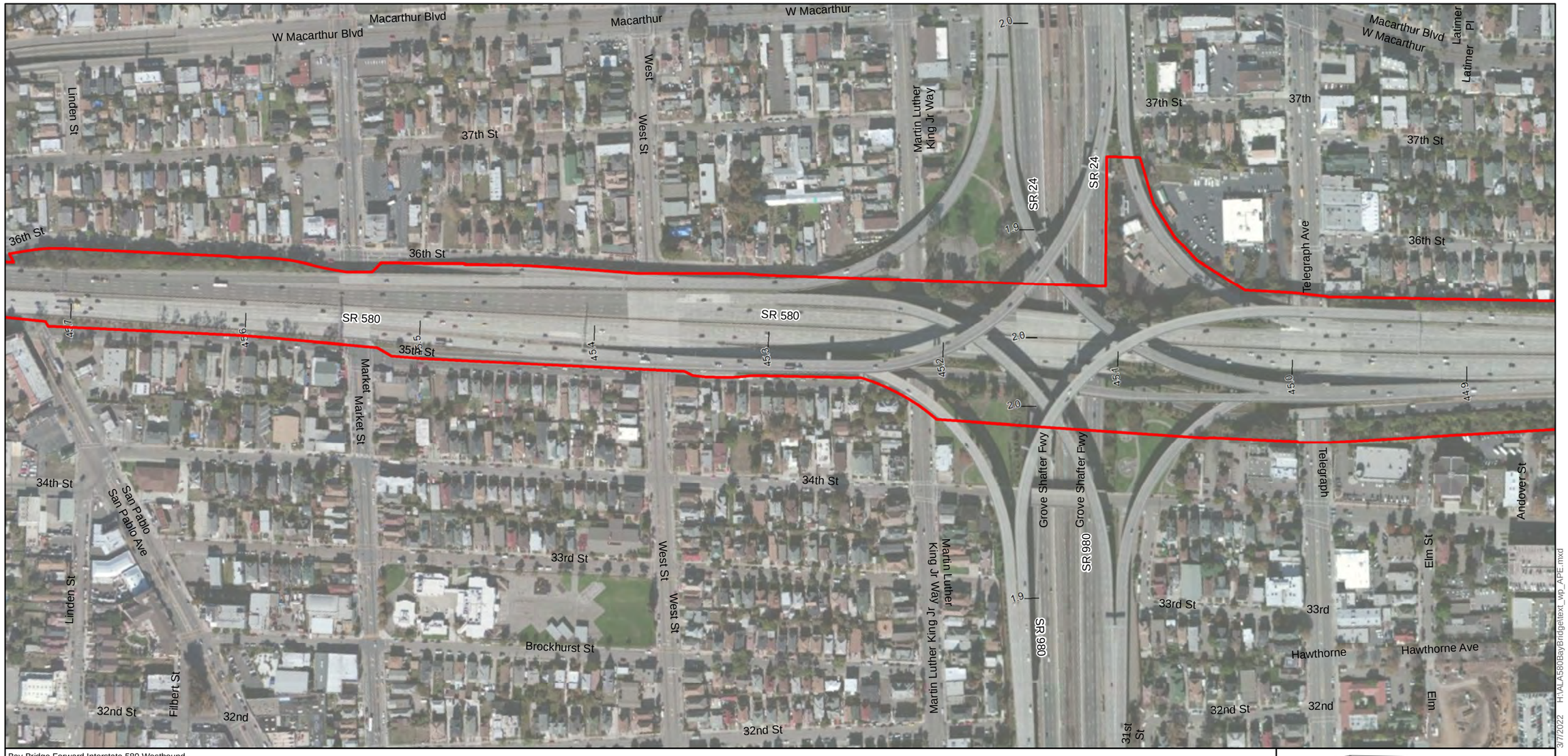
Area of Potential Effects

XX.XX Post Miles

Meters
0 150 300
0 300 600
Feet

1 inch = 300 feet

9/7/2022 H:\ALA580BayBridgetext_wp_APE.mxd



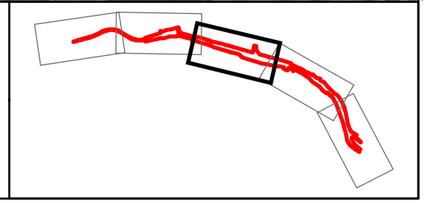
Bay Bridge Forward Interstate 580 Westbound
High Occupancy Vehicle Lane Extension Project
EA 04-1W160

Area of Potential Effects

XX.XX Post Miles

Meters
0 150 300
0 300 600
Feet

1 inch = 300 feet



3/7/2022 H:\ALA580BayBridge\text_wb_APE.mxd

Bay Bridge Forward Interstate 580 Westbound
High Occupancy Vehicle Lane Extension Project
EA 04-1W160

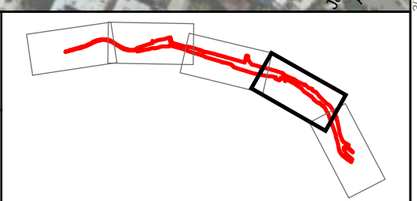
Area of Potential Effects

XX.XX Post Miles

Meters
0 150 300

0 300 600
Feet

1 inch = 300 feet



3/7/2022 H:\ALA\580BayBridge\text_wp_APE.mxd

Bay Bridge Forward Interstate 580 Westbound
High Occupancy Vehicle Lane Extension Project
EA 04-1W160

Area of Potential Effects

XX.XX Post Miles

Meters
0 150 300

0 300 600
Feet

1 inch = 300 feet

3/7/2022 H:\ALA580BayBridge\text_wp_APE.mxd

FAR WESTERN
ANTHROPOLOGICAL RESEARCH GROUP, INC.

March 17, 2022

Kanyon Sayers-Roods
1615 Pearson Court
San Jose, CA 95122

Re: *Metropolitan Transportation Commission Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California.*

Dear Ms. Sayers-Roods,

The Metropolitan Transportation Commission, with oversight from Caltrans District 4 proposes the Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California (04-ALA-580-PM 43.6/46.7). The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to a HOV lane. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to the Telegraph Avenue Overpass (I-580 Post Mile 45.0). The Project limit extends further along I-580 WB from the Telegraph Avenue Overpass (I-580 Post Mile 45.0) to the Grand Avenue Overpass (I-580 PM 43.6) for the installation of HOV lane signs only. No HOV lane extension is proposed for this portion of the Project site. Subsurface impacts will be limited to the installation of a single foundation for a sign gantry near Martin Luther King Jr. Drive in Oakland.

Far Western has been contracted to conduct cultural resource studies for the project. We have conducted a records search and reviewed previous studies in the area. There are no previously recorded ancestral Native American resources in the project area.

I am writing on behalf of MTA and Caltrans to ask for any information you may have on cultural resources in the project area (see attached map) or anything else related to the project that you would like me to pass along. Please feel free to contact me by email (adie@farwestern.com) or by telephone 530-574-4051. Thank you for your time and consideration.

Sincerely,

Adrian Whitaker
Principal Investigator

Encl. 1 - Project Area Location Map

March 17, 2022

Andrew Galvan
The Ohlone Indian Tribe
P.O. Box 3388
Fremont, CA 94539

Re: *Metropolitan Transportation Commission Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California.*

Dear Mr. Galvan,

The Metropolitan Transportation Commission, with oversight from Caltrans District 4 proposes the Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California (04-ALA-580-PM 43.6/46.7). The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to a HOV lane. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to the Telegraph Avenue Overpass (I-580 Post Mile 45.0). The Project limit extends further along I-580 WB from the Telegraph Avenue Overpass (I-580 Post Mile 45.0) to the Grand Avenue Overpass (I-580 PM 43.6) for the installation of HOV lane signs only. No HOV lane extension is proposed for this portion of the Project site. Subsurface impacts will be limited to the installation of a single foundation for a sign gantry near Martin Luther King Jr. Drive in Oakland.

Far Western has been contracted to conduct cultural resource studies for the project. We have conducted a records search and reviewed previous studies in the area. There are no previously recorded ancestral Native American resources in the project area.

I am writing on behalf of MTA and Caltrans to ask for any information you may have on cultural resources in the project area (see attached map) or anything else related to the project that you would like me to pass along. Please feel free to contact me by email (adie@farwestern.com) or by telephone 530-574-4051. Thank you for your time and consideration.

Sincerely,

Adrian Whitaker
Principal Investigator

Encl. 1 - Project Area Location Map

FAR WESTERN
ANTHROPOLOGICAL RESEARCH GROUP, INC.

March 17, 2022

Chairperson Ann Marie Sayers
Indian Canyon Mutsun Band of Costanoan
1615 Pearson Court
San Jose, CA 95122

Re: *Metropolitan Transportation Commission Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California.*

Dear Chairperson Sayers,

The Metropolitan Transportation Commission, with oversight from Caltrans District 4 proposes the Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California (04-ALA-580-PM 43.6/46.7). The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to a HOV lane. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to the Telegraph Avenue Overpass (I-580 Post Mile 45.0). The Project limit extends further along I-580 WB from the Telegraph Avenue Overpass (I-580 Post Mile 45.0) to the Grand Avenue Overpass (I-580 PM 43.6) for the installation of HOV lane signs only. No HOV lane extension is proposed for this portion of the Project site. Subsurface impacts will be limited to the installation of a single foundation for a sign gantry near Martin Luther King Jr. Drive in Oakland.

Far Western has been contracted to conduct cultural resource studies for the project. We have conducted a records search and reviewed previous studies in the area. There are no previously recorded ancestral Native American resources in the project area.

I am writing on behalf of MTA and Caltrans to ask for any information you may have on cultural resources in the project area (see attached map) or anything else related to the project that you would like me to pass along. Please feel free to contact me by email (adie@farwestern.com) or by telephone 530-574-4051. Thank you for your time and consideration.

Sincerely,

Adrian Whitaker
Principal Investigator

Encl. 1 - Project Area Location Map

FAR WESTERN
ANTHROPOLOGICAL RESEARCH GROUP, INC.

March 17, 2022

Vice Chairwoman Monica Arellano
Muwekma Ohlone Indian Tribe of the SF Bay Area
20885 Redwood Road, Suite 232
Castro Valley, CA 94546

Re: *Metropolitan Transportation Commission Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California.*

Dear Vice Chairwoman Arellano,

The Metropolitan Transportation Commission, with oversight from Caltrans District 4 proposes the Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California (04-ALA-580-PM 43.6/46.7). The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to a HOV lane. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to the Telegraph Avenue Overpass (I-580 Post Mile 45.0). The Project limit extends further along I-580 WB from the Telegraph Avenue Overpass (I-580 Post Mile 45.0) to the Grand Avenue Overpass (I-580 PM 43.6) for the installation of HOV lane signs only. No HOV lane extension is proposed for this portion of the Project site. Subsurface impacts will be limited to the installation of a single foundation for a sign gantry near Martin Luther King Jr. Drive in Oakland.

Far Western has been contracted to conduct cultural resource studies for the project. We have conducted a records search and reviewed previous studies in the area. There are no previously recorded ancestral Native American resources in the project area.

I am writing on behalf of MTA and Caltrans to ask for any information you may have on cultural resources in the project area (see attached map) or anything else related to the project that you would like me to pass along. Please feel free to contact me by email (adie@farwestern.com) or by telephone 530-574-4051. Thank you for your time and consideration.

Sincerely,

Adrian Whitaker
Principal Investigator

Encl. 1 - Project Area Location Map

FAR WESTERN
ANTHROPOLOGICAL RESEARCH GROUP, INC.

March 17, 2022

Chairperson Corrina Gould
Confederated Villages of Lisjan
10926 Edes Avenue
Oakland, CA 94603

Re: *Metropolitan Transportation Commission Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California.*

Dear Chairperson Gould,

The Metropolitan Transportation Commission, with oversight from Caltrans District 4 proposes the Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California (04-ALA-580-PM 43.6/46.7). The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to a HOV lane. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to the Telegraph Avenue Overpass (I-580 Post Mile 45.0). The Project limit extends further along I-580 WB from the Telegraph Avenue Overpass (I-580 Post Mile 45.0) to the Grand Avenue Overpass (I-580 PM 43.6) for the installation of HOV lane signs only. No HOV lane extension is proposed for this portion of the Project site. Subsurface impacts will be limited to the installation of a single foundation for a sign gantry near Martin Luther King Jr. Drive in Oakland.

Far Western has been contracted to conduct cultural resource studies for the project. We have conducted a records search and reviewed previous studies in the area. There are no previously recorded ancestral Native American resources in the project area.

I am writing on behalf of MTA and Caltrans to ask for any information you may have on cultural resources in the project area (see attached map) or anything else related to the project that you would like me to pass along. Please feel free to contact me by email (adie@farwestern.com) or by telephone 530-574-4051. Thank you for your time and consideration.

Sincerely,

Adrian Whitaker
Principal Investigator

Encl. 1 - Project Area Location Map

FAR WESTERN
ANTHROPOLOGICAL RESEARCH GROUP, INC.

March 17, 2022

Chairperson Katherine Perez
North Valley Yokuts Tribe
P.O. Box 717
Linden, CA 95236

Re: *Metropolitan Transportation Commission Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California.*

Dear Chairperson Perez,

The Metropolitan Transportation Commission, with oversight from Caltrans District 4 proposes the Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California (04-ALA-580-PM 43.6/46.7). The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to a HOV lane. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to the Telegraph Avenue Overpass (I-580 Post Mile 45.0). The Project limit extends further along I-580 WB from the Telegraph Avenue Overpass (I-580 Post Mile 45.0) to the Grand Avenue Overpass (I-580 PM 43.6) for the installation of HOV lane signs only. No HOV lane extension is proposed for this portion of the Project site. Subsurface impacts will be limited to the installation of a single foundation for a sign gantry near Martin Luther King Jr. Drive in Oakland.

Far Western has been contracted to conduct cultural resource studies for the project. We have conducted a records search and reviewed previous studies in the area. While there are no previously recorded ancestral Native American resources in the project area, the Sacred Lands file search with the NAHC identified positive results and instructed me to reach out to you for more information. Please let me know if this project has potential to impact the sacred land or resource identified by the NAHC.

I am writing on behalf of MTA and Caltrans to ask for any information you may have on cultural resources in the project area (see attached map) or anything else related to the project that you would like me to pass along. Please feel free to contact me by email (adie@farwestern.com) or by telephone 530-574-4051. Thank you for your time and consideration.

Sincerely,

Adrian Whitaker
Principal Investigator

Encl. 1 - Project Area Location Map

FAR WESTERN
ANTHROPOLOGICAL RESEARCH GROUP, INC.

March 17, 2022

Tony Cerda, Chairperson
Costanoan Rumsen Carmel Tribe
244 E. 1st Street
Pomoma, CA 91766

Re: *Metropolitan Transportation Commission Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California.*

Dear Chairperson Cerda,

The Metropolitan Transportation Commission, with oversight from Caltrans District 4 proposes the Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California (04-ALA-580-PM 43.6/46.7). The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to a HOV lane. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to the Telegraph Avenue Overpass (I-580 Post Mile 45.0). The Project limit extends further along I-580 WB from the Telegraph Avenue Overpass (I-580 Post Mile 45.0) to the Grand Avenue Overpass (I-580 PM 43.6) for the installation of HOV lane signs only. No HOV lane extension is proposed for this portion of the Project site. Subsurface impacts will be limited to the installation of a single foundation for a sign gantry near Martin Luther King Jr. Drive in Oakland.

Far Western has been contracted to conduct cultural resource studies for the project. We have conducted a records search and reviewed previous studies in the area. There are no previously recorded ancestral Native American resources in the project area.

I am writing on behalf of MTA and Caltrans to ask for any information you may have on cultural resources in the project area (see attached map) or anything else related to the project that you would like me to pass along. Please feel free to contact me by email (adie@farwestern.com) or by telephone 530-574-4051. Thank you for your time and consideration.

Sincerely,

Adrian Whitaker
Principal Investigator

Encl. 1 - Project Area Location Map

FAR WESTERN
ANTHROPOLOGICAL RESEARCH GROUP, INC.

March 17, 2022

Timothy Perez
North Valley Yokuts Tribe
North Valley
P.O. Box 717
Linden, CA 95236

Re: *Metropolitan Transportation Commission Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California.*

Dear Mr. Perez,

The Metropolitan Transportation Commission, with oversight from Caltrans District 4 proposes the Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California (04-ALA-580-PM 43.6/46.7). The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to a HOV lane. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to the Telegraph Avenue Overpass (I-580 Post Mile 45.0). The Project limit extends further along I-580 WB from the Telegraph Avenue Overpass (I-580 Post Mile 45.0) to the Grand Avenue Overpass (I-580 PM 43.6) for the installation of HOV lane signs only. No HOV lane extension is proposed for this portion of the Project site. Subsurface impacts will be limited to the installation of a single foundation for a sign gantry near Martin Luther King Jr. Drive in Oakland.

Far Western has been contracted to conduct cultural resource studies for the project. We have conducted a records search and reviewed previous studies in the area. While there are no previously recorded ancestral Native American resources in the project area, the Sacred Lands file search with the NAHC identified positive results and instructed me to reach out to you for more information. Please let me know if this project has potential to impact the sacred land or resource identified by the NAHC.

I am writing on behalf of MTA and Caltrans to ask for any information you may have on cultural resources in the project area (see attached map) or anything else related to the project that you would like me to pass along. Please feel free to contact me by email (adie@farwestern.com) or by telephone 530-574-4051. Thank you for your time and consideration.

Sincerely,

Adrian Whitaker
Principal Investigator

Encl. 1 - Project Area Location Map

FAR WESTERN
ANTHROPOLOGICAL RESEARCH GROUP, INC.

March 17, 2022

Kenneth Woodrow, Chairperson
Wuksache Indian Tribe/Eshom Valley Band
1179 Rock Haven Court
Salinas, CA 93906

Re: *Metropolitan Transportation Commission Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California.*

Dear Chairperson Woodrow,

The Metropolitan Transportation Commission, with oversight from Caltrans District 4 proposes the Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California (04-ALA-580-PM 43.6/46.7). The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to a HOV lane. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to the Telegraph Avenue Overpass (I-580 Post Mile 45.0). The Project limit extends further along I-580 WB from the Telegraph Avenue Overpass (I-580 Post Mile 45.0) to the Grand Avenue Overpass (I-580 PM 43.6) for the installation of HOV lane signs only. No HOV lane extension is proposed for this portion of the Project site. Subsurface impacts will be limited to the installation of a single foundation for a sign gantry near Martin Luther King Jr. Drive in Oakland.

Far Western has been contracted to conduct cultural resource studies for the project. We have conducted a records search and reviewed previous studies in the area. There are no previously recorded ancestral Native American resources in the project area.

I am writing on behalf of MTA and Caltrans to ask for any information you may have on cultural resources in the project area (see attached map) or anything else related to the project that you would like me to pass along. Please feel free to contact me by email (adie@farwestern.com) or by telephone 530-574-4051. Thank you for your time and consideration.

Sincerely,

Adrian Whitaker
Principal Investigator

Encl. 1 - Project Area Location Map

FAR WESTERN
ANTHROPOLOGICAL RESEARCH GROUP, INC.

March 17, 2022

Irene Zwierlein, Chairperson
Amah Mutsun Tribal Band of Mission San Juan Bautista
3030 Soda Bay Road
Lakeport, CA 95453

Re: *Metropolitan Transportation Commission Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California.*

Dear Chairperson Zwierlein,

The Metropolitan Transportation Commission, with oversight from Caltrans District 4 proposes the Interstate 580 Westbound High Occupancy Vehicle Lane Conversion Project, Alameda County, California (04-ALA-580-PM 43.6/46.7). The Project proposes to convert 1.7 miles of an existing general-purpose (GP) lane to a HOV lane. The proposed HOV lane would extend from the beginning of the existing HOV lane on I-580 WB at the Interstate 80 (I-80) WB connector (I-580 Post Mile 46.7) to the Telegraph Avenue Overpass (I-580 Post Mile 45.0). The Project limit extends further along I-580 WB from the Telegraph Avenue Overpass (I-580 Post Mile 45.0) to the Grand Avenue Overpass (I-580 PM 43.6) for the installation of HOV lane signs only. No HOV lane extension is proposed for this portion of the Project site. Subsurface impacts will be limited to the installation of a single foundation for a sign gantry near Martin Luther King Jr. Drive in Oakland.

Far Western has been contracted to conduct cultural resource studies for the project. We have conducted a records search and reviewed previous studies in the area. While there are no previously recorded ancestral Native American resources in the project area, the Sacred Lands file search with the NAHC identified positive results and instructed me to reach out to you for more information. Please let me know if this project has potential to impact the sacred land or resource identified by the NAHC.

I am writing on behalf of MTA and Caltrans to ask for any information you may have on cultural resources in the project area (see attached map) or anything else related to the project that you would like me to pass along. Please feel free to contact me by email (adie@farwestern.com) or by telephone 530-574-4051. Thank you for your time and consideration.

Sincerely,

Adrian Whitaker
Principal Investigator

Encl. 1 - Project Area Location Map

APPENDIX C

SITE RECORD
CONFIDENTIAL

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # **P-01-012011**
HRI #
Trinomial **CA-ALA-700H**
NRHP Status Code
Other Listings
Review Code Reviewer Date April 9, 2018

Page 1 **of** 12 ***Resource Name or #:** MacArthur-01H

P1. Other Identifier:
***P2. Location:** ☒ Not for Publication ■ Unrestricted ***a. County:** Alameda
***b. USGS 7.5' Quad:** Oakland West **Date:** 1993 **T1S** ; **R4W** ; **¼ of** **¼ of Sec** ; **M.D.B.M.**
c. Address: Caltrans Parcel adjacent to 3499 Ettie Street City: Oakland, CA Zip:
d. UTM: Zone: 10S; 562628 mE/ 4186779 mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) : The site is within gated Caltrans property directly beneath the MacArthur Maze (eastbound I-580 and the westbound I-580 to westbound I-80 connector). Closest access to the site is through Caltrans gate at north end of Ettie Street in Oakland. Street address adjacent to Caltrans gate is 3499 Ettie Street, Oakland, CA. Concentration 1 is 170 feet east of the gate entrance along southern boundary of Caltrans property; Concentration 2 is 475 feet east of the gate entrance also along southern boundary of Caltrans property.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
MacArthur-01H is a subsurface historic-era archaeological site comprised of two disturbed refuse deposits containing artifacts dating to the early 1930s. Historic Sanborn Fire Insurance maps show the presence of residential structures within the boundaries of MacArhtur-01H on historic blocks 797 and 798, but no historic-era buildings, structures, or objects remain on the surface. All structures were demolished in the 1930s in preparation for the construction of the raised MacArthur Maze freeway system. The historic-era artifacts found in concentrations 1 and 2 are likely from refuse deposits associated with former residences in the APE; however, the artifact concentrations were found in a displaced context and thus do not represent intact cultural deposits. The refuse materials appear to have been disturbed and redeposited by heavy equipment used to clear the surface and construct freeway foundations to support the MacArthur Maze.

***P3b. Resource Attributes: (List attributes and codes):** AH4

***P4. Resources Present:** ☐Building ☐Structure ☐Object ■Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #)

***P6. Date Constructed/Age and Sources:** ■Historic ☐Prehistoric ☐Both

***P7. Owner and Address:**
Caltrans District 4
111 Grand Street
Oakland, CA 94612

***P8. Recorded by:** (Name, affiliation, and address)
D. Ryan & J. McWaters
Garica and Associates
813 D Street
San Rafael, CA 94901
*P9. Date Recorded: 4-9-18

***P10. Survey Type: (Describe)**
Exploratory backhoe trenching

***P11. Report Citation: (Cite survey report and other sources, or enter "none.")** *Historical Resources Evaluation Report for the Proposed MacArthur Maze Vertical Clearnace Increase Project, Caltrans District 4*

***Attachments:** ☐NONE ☒Location Map ☒Sketch Map ☒Continuation Sheet ☐Building, Structure, and Object Record ☒Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

***A1. Dimensions: a. Length:** 400 feet east/west × **b. Width:** 100 feet north/south
Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ■ Other: measurement from one artifact concentration to the second concentration.
Method of Determination (Check any that apply.): ■ Artifacts ☐Features ☐ Soil ☐ Vegetation ☐Topography ☐ Cut bank ☐ Animal burrow ☐Excavation ☐ Property boundary ☐ Other (Explain):
Reliability of Determination: ☐ High ■ Medium ☐ Low Explain:
Limitations (Check any that apply): ☐ Restricted access ■ Paved/built over ☐ Site limits incompletely defined ■ Disturbances ☐ Veget: ation ☐ Other (Explain):

A2. Depth: 1.5- 3.0 feet below surface ☐ None ☐ Unknown Method of Determination: Inspection of backhoe trench sidewalls

***A3. Human Remains:** ☐ Present ■Absent ☐ Possible ☐ Unknown (Explain):

***A4. Features:** No features were identified, but two concentrations of artifacts are discussed in detail under A5 – Cultural Constituents.:

***A5. Cultural Constituents:** see Contination sheet

***A6. Were Specimens Collected?** ☐ No ☒ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated).

***A7. Site Condition:** ☐ Good ☐ Fair ■ Poor (Describe disturbances.): The historic residential landscape has been destroyed at the surface due to the construction of the overhead freeway. Pockets of disturbed historic refuse are present at Concentrations 1 and 2. Intact features, such as privy pits and structural remains may exist below the surface.

***A8. Nearest Water** (Type, distance, and direction.)**:** Shoreline of the San Francisco Bay is 0.40 mile away

***A9. Elevation:** 13 feet above mean sea level

A10. Environmental Setting: The site is in an urban environment on bare earth ground surface with numerous concrete highway footings beneath the raised freeway structures of the MacArthur Maze. Caltrans is the current property owner of the land beneath the MacArthur Maze and they, in turn, lease the land to an industrial tenant for a recycling operation. Dozens of shipping containers are on or adjacent to the site boundaries.

A11. Historical Information: The MacArthur Maze segment is situated on marshland that has been artificially filled for development throughout the late-19th to early 20h centuries. San Francisco Bay marshland at this location was historically shallow (<10 feet) westward from the shore for over two miles. Eastward, the marshland reached approximately to today's Mandela Parkway. Several online repositories were consulted to examine historical Sanborn Fire Insurance maps, City of Oakland directories, United States Census records, historical maps, and newspapers in order to gain information about the nature and dates of human occupation and activities that may have been associated with the creation of concentrations 1 and 2 and the potential significance of the deposits. United States Census records were useful in identifying those occupying the houses on Blocks 797 and 798 and, when combined with Sanborn maps, establishing a timeframe of habitation on the site, as well as addresses. Both house numbers and street names appear to have changed over the years: Hubbard Street became Hannah Street sometime between 1902 and 1910 and between 1910 and 1920, house numbers changed: 239 Hannah became 3459 Hannah, and 241 Hannah became 3463 Hannah.

***A12. Age:** ☐ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ■ 1880-1914 ■1914-1945 ■Post 1945 ☐ Undetermined:

A13. Interpretations:

A14. Remarks: Once part of a historic residential community of West Oakland with single-family houses on blocks 797 and 798, MacArthur-01H is visible today as a bare earth ground surface with numerous concrete highway footings beneath the raised freeway structures of the MacArthur Maze. Caltrans is the current property owner of the land beneath the MacArthur Maze and they, in turn, lease the land to an industrial tenant for a recycling operation. Today, MacArthur-01H no longer embodies any of the aspects of integrity, including location, design, setting, feeling, materials, workmanship, or association of the historic residential neighborhood that existed from the late 1800s through the 1930s as described in Section 4.0, Historic Overview and Archaeological Research Context. MacArthur-01H no longer retains integrity and is recommended as ineligible to the NRHP.

A15. References:

A16. Photographs: Attached to this site record

***A17. Form Prepared by:** D. Ryan **Date:** July 2, 2018
Affiliation and Address: Garcia and Associates, 813 D St, San Rafael, CA 94901

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

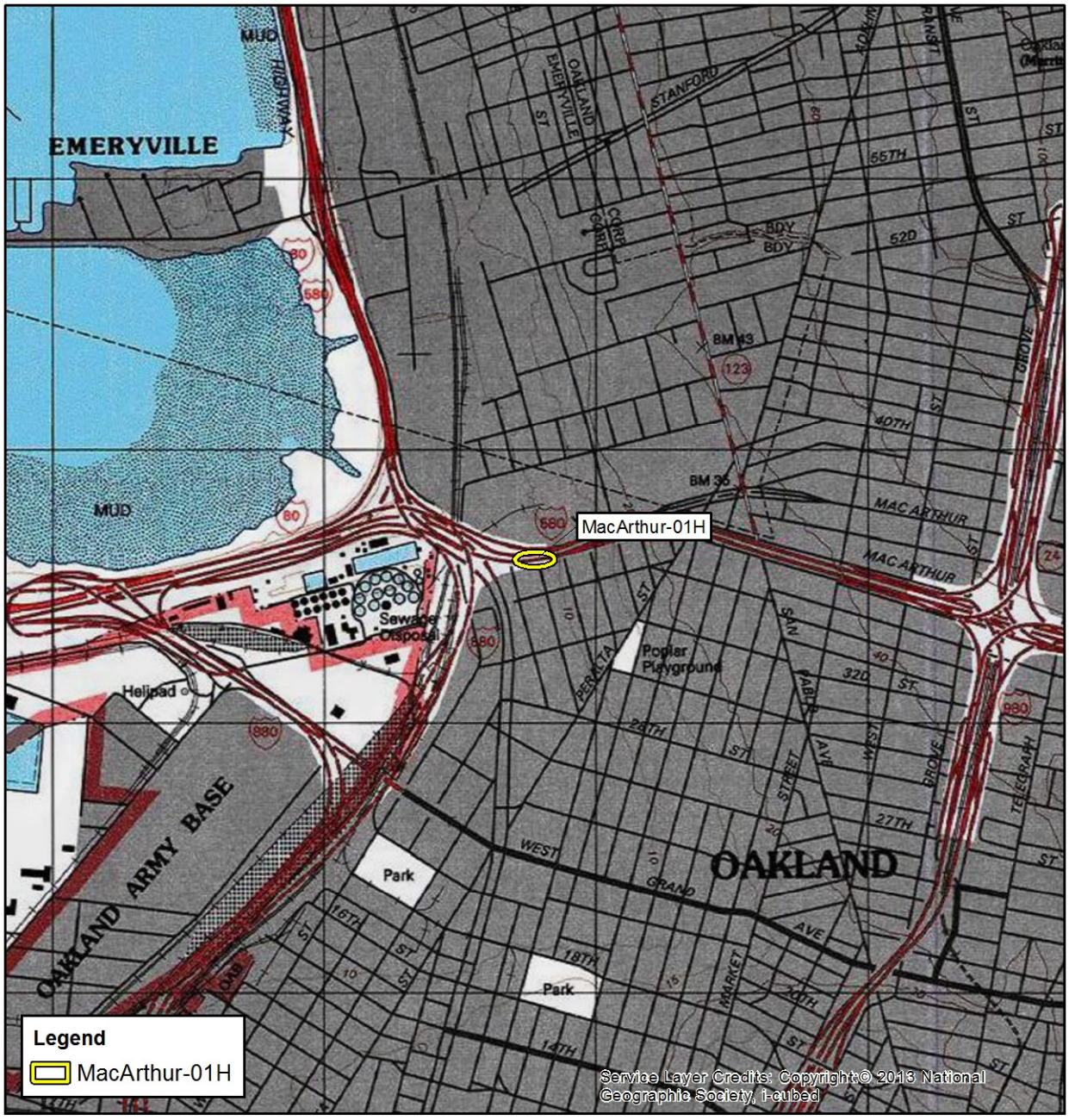
Primary # P-01-012011
HRI#
Trinomial CA-ALA-700H

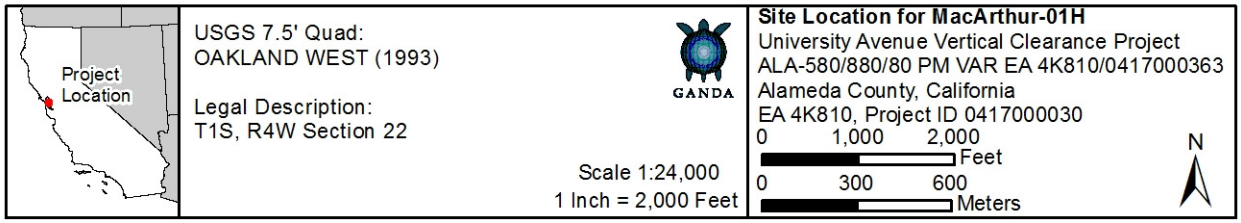
***Resource Name or #:** MacArthur-01H

***Map Name:**

***Scale:** 1:24,000

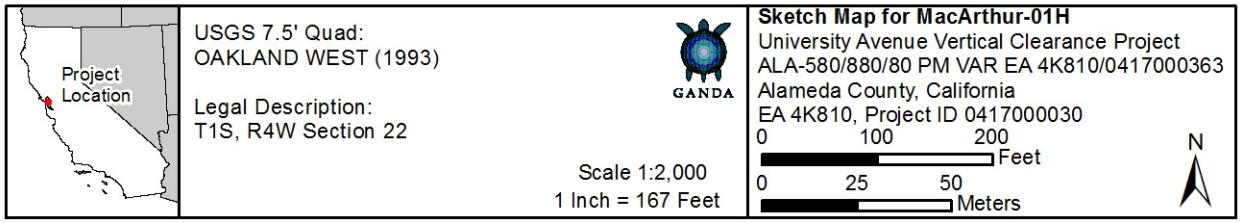
***Date of Map:** July 2018





*Required information


Yerba Buena Ave
Louise St
580
MacArthur-01H
580
Concentration 2
Concentration 1
Hannah St
Ettie St
Helen St
34th St
Legend
MacArthur-01H
Concentration
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community


Project Location
USGS 7.5' Quad:
OAKLAND WEST (1993)
Legal Description:
T1S, R4W Section 22
GANDA
Scale 1:2,000
1 Inch = 167 Feet
Sketch Map for MacArthur-01H
University Avenue Vertical Clearance Project
ALA-580/880/80 PM VAR EA 4K810/0417000363
Alameda County, California
EA 4K810, Project ID 0417000030
0 100 200
Feet
0 25 50
Meters
N

A5. Cultural Constituents:

Three backhoe trenches were excavated as part of the current HRER investigation on April 9, 2018 (Photos 1-3). The trenches were a continuation of the XPI investigation conducted in February 2018, at which time a refuse deposit was found at Concentration 1 in Trench 2a on Block 797. The XPI Trench 2a was re-opened and expanded by two feet in width and excavated to a depth of 4.25 feet to further explore the dimensions and characteristics of Concentration 1. Additional historic-era artifacts were recovered from Concentration 1 and collected for further analysis at GANDA's laboratory. The stratigraphy in Trench 2a was irregular and did not exhibit signs of natural deposition. A concrete slab surface was encountered at 4.25 feet below the surface, approximately six inches beneath the artifacts in Concentration 1. The full dimensions of the concrete slab were not observable in Trench 2a and it appears the concrete is a component of the MacArthur Maze's foundational structures that post-dates the artifacts in Concentration 1. Because the artifacts in Concentration 1 were grouped together, they were likely pushed *en masse* by heavy equipment (e.g. by bulldozer) and used to cover the concrete structure. Thus, the artifacts in Concentration 1 were not discovered in their original depositional context. After artifacts were collected for further identification and analysis, Trench 2a was backfilled and compacted. No other areas on Block 797 were safely accessible by the backhoe for further exploration.

Two additional trenches, Trenches 3 and 4, were excavated on Block 798 in an area accessible by the backhoe. Historic artifacts, including numerous ceramic-ware and glass bottle fragments, were encountered at the south end of Trench 3 at a depth of 1.5 feet below the surface and were labeled Concentration 2. Trench 4 was placed adjacent to the south end of Trench 3 in order to further expose the artifacts in Concentration 2. At a depth of 3.25 feet below the surface, the historic artifacts dissipated and modern glass fragments and modern metal refuse was encountered. The overall stratigraphy in both trenches 3 and 4 was irregular to a depth of 3.15 feet below the surface below and exhibited a combination of dark brown sandy loam and artificial (non-native) gravels and sands. From 3.15 feet to the bottoms of trenches 3 and 4, dark grayish brown young bay mud emerged in the stratigraphy confirming the presence of former marine marshland. The artifacts in Concentration 2 were collected for further identification and analysis at GANDA's laboratory and trenches 3 and 4 were backfilled and compacted.

Concentration 1 Assemblage: Concentration 1 was discovered within a disturbed context in Trench 2a and the Trench 2a expansion at 1.25 to 3.0 feet below surface. The artifact assemblage recovered from Concentration 1 amounted to a total of 336 artifacts comprising a minimum number of 166 individual items (MNI). The assemblage was divided into five functional groups: Domestic Artifacts (33.7% of MNI), Indefinite Use Artifacts (18.1%), Personal Artifacts (5.4%), Structural Artifacts (42.2%), and Undefined Use Artifacts (0.6%).

Domestic Artifacts make up the largest artifact grouping in Concentration 1 and are primarily composed of Food items (e.g. butchered beef bones, other animal bones, and Mason jars and lids) and Food Preparation and Consumption related artifacts (e.g. dishes and utensils), almost all of which are ceramic tableware and other food service dish fragments. A unique find in the Domestic group is a cast iron horse figurine, likely used for decorative purpose in the home (Photo 5). The second largest group, Indefinite Use, contained mainly metal and glass fragments, including miscellaneous containers and other artifacts of unknown or multiple functions. Two medicine bottles, fragmented pipe stems, two alcohol bottle fragments, three marbles, and a porcelain button comprise the Personal Artifacts group. Among the structural artifacts, wire nail fragments were the most abundant material type. Photographs of selected artifacts are included in Photos 4-7.

Concntration 1 Temporal Discussion: Concentration 1 is a secondary deposit of artifacts spanning many decades from the 19th to early 20th centuries likely deposited during construction activities of the MacArthur Maze. The most temporally specific artifact is 001-001, a medicine bottle made by the Owens Illinois glass company. 001-001 has a date mark of "7", meaning that it could date to either 1937 or, less likely, 1947 (Lockhart and Hoenig 2015). Other artifacts date to the early 20th century, and while several have open-ended dates reaching to the present, the lack of other artifacts that definitely post-date the mid-20th century, suggests an end point around this time. The earliest artifacts, 005-001 (a ceramic plate fragment dating sometime between 1847-1891) and 005-009 (an applied bottle finish dating from the 1840s-1870s) are likely present as a result of the long residential occupation of the area and are temporal outliers reflecting the disturbed nature of the concentration.

The early 20th century dates of the majority of artifacts seem to fit the demolition of 3459, 3463 Hannah Street as part of the construction of the original MacArthur Maze in 1933-1936. Perhaps before the deposit was disturbed by later construction of the overpass, Concentration 1 began life as a cleanout or destruction event during or after the property was vacated by Evald Brown and John Dennis.

A5. Cultural Constituents continued:

Concentration 2 Assemblage: Concentration 2 was found in Trenches 3 and 4, between 1.5 to 3.25 feet below the surface, and was in a similarly disturbed context as Concentration 1 in Trench 2a. The presence of artifacts at the intersection of Trenches 3 and 4 demonstrated a broad horizontal distribution of artifacts resulting from highway-related construction. The assemblage is comprised of 90 individual items with an MNI of 53 and is divided into five functional groups: Activities, Domestic, Indefinite Use, Personal, and Structural artifacts. The largest group is the Domestic Artifacts category at 62.3 percent of MNI. This group is largely comprised of ceramic tableware in the food preparation and consumption class. Most of these artifacts are characterized by white improved earthenware, popular throughout the United States from the 1830s into the mid-20th century. Canning jar fragments and lid liners comprise the Food Storage artifacts, and 15 bone and shell fragments make up the Food artifacts. The next largest group is Personal Artifacts, and included five medicine bottles, two beer bottles, and a single fragment of a porcelain doll head. Indefinite Use and Structural artifacts both make up 9.4 percent of Concentration 2. Indefinite Use Artifacts include two bottles of unknown use and miscellaneous metal fragments, including a small fire poker. Structural Artifacts included four nails and an insulator fragment. The final two artifacts belong to the Activities Artifacts group, including a .45-.70 casing, used by the U.S. military from 1873 to the present (although largely obsolete for infantry use by the 1890s), and a horseshoe Photo 7.

Concentration 2 Temporal Discussion: Concentration 2 is comprised of artifacts spanning much of the 19th and early 20th centuries. The earliest artifacts were several whiteware fragments datable by the decorative colors of the transfer print design. Much of the later artifacts date between the 1870s-1880s to the 1920s. The relative lack of artifacts definitively post-dating the 1930s suggests that like Concentration 1, these artifacts were first deposited during destruction of houses during construction of the MacArthur Maze, and were subsequently redeposited during through construction activities related to one of the many upgrades to the interchange.

Photo 1. Excavating Trench 2a, view west

Photo 2. Concentration 2 visible in side wall of Trench 3

Photo 3. Excavating Trench 4, view west

Photo 4. Ceramics, bottles, and metal fork from Concentration 1, Catalog #001

Photo 5. Ceramics, bottles, ornamental metal horse, and marine shells from Concentration 1, Catalog #002

Photo 6. Ceramics and glass bottles from Concentration 2, Catalog #006

Photo 7. Ceramics, glass, horseshoe, metal bullet casing from Concentration 2, Catlaog #007

ATTACHMENT 2

CALTRANS HISTORIC BRIDGE INVENTORY SHEET

Structure Maintenance & Investigations

Historical Significance - State Agency Bridges

District 04

Alameda County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
33 0002	EDENVALE UNDERPASS	04-ALA-238-2.19-FMT	4. Historical Significance not determined	1921	1937
33 0003	ALAMEDA CREEK	04-ALA-238-3.46-FMT	5. Bridge not eligible for NRHP	1937	2006
33 0005	DRY CREEK	04-ALA-238-7.19-UNC	5. Bridge not eligible for NRHP	1929	1969
33 0007	SAN LEANDRO CREEK	04-ALA-580-R34.55-SLN	5. Bridge not eligible for NRHP	1964	
33 0009Z	LANDVALE SIDEHILL VIADUCT	04-ALA-013-R9.55-OAK	5. Bridge not eligible for NRHP	1934	1970
33 0012	ARROYO LAS POSITAS	04-ALA-580-13.82	5. Bridge not eligible for NRHP	1972	2011
33 0012S	ARROYO LAS POSITAS	04-ALA-580-13.86	5. Bridge not eligible for NRHP	2011	
33 0013	COTTONWOOD CREEK	04-ALA-580-15.63	5. Bridge not eligible for NRHP	1972	
33 0014	RANCHO DRAIN	04-ALA-580-17.57-PLE	5. Bridge not eligible for NRHP	1970	
33 0015L	TASSAJARA CREEK	04-ALA-580-18.32-PLE	5. Bridge not eligible for NRHP	1966	2015
33 0015R	TASSAJARA CREEK	04-ALA-580-18.32-PLE	5. Bridge not eligible for NRHP	1966	2015
33 0015Y	TASSAJARA CREEK	04-ALA-580-18.32-PLE	5. Bridge not eligible for NRHP	1965	
33 0016G	W580-N&S680 CONNECTOR	04-ALA-580-20.56-PLE	5. Bridge not eligible for NRHP	1965	1991
33 0016L	ALAMO CANAL	04-ALA-580-20.56-PLE	5. Bridge not eligible for NRHP	1952	1996
33 0016R	ALAMO CANAL	04-ALA-580-20.56-PLE	5. Bridge not eligible for NRHP	1952	1996
33 0020	POWELL STREET UC	04-ALA-080-3.79-EMV	5. Bridge not eligible for NRHP	1954	1998
33 0023	UNIVERSITY AVENUE OC	04-ALA-080-5.82-BER	5. Bridge not eligible for NRHP	1939	1956
33 0026L	GREENVILLE ROAD UC	04-ALA-580-R8.29	5. Bridge not eligible for NRHP	1969	
33 0026R	GREENVILLE ROAD UC	04-ALA-580-R8.29	5. Bridge not eligible for NRHP	1969	
33 0028	FIBREBOARD UC	04-ALA-080-3.96-EMV	5. Bridge not eligible for NRHP	1954	1997
33 0030	EAST NILES UNDERPASS	04-ALA-084-10.71-FMT	4. Historical Significance not determined	1937	
33 0034	ROSEWARNES UNDERPASS	04-ALA-084-12.10-FMT	2. Bridge is eligible for NRHP	1906	
33 0035	FARWELL UNDERPASS	04-ALA-084-13.03	2. Bridge is eligible for NRHP	1932	
33 0036	ALAMEDA CREEK (RICHMOND BRIDGE)	04-ALA-084-13.33	5. Bridge not eligible for NRHP	1928	
33 0039	ALAMEDA CREEK BOH	04-ALA-084-14.32	2. Bridge is eligible for NRHP	1947	
33 0041	FRUITVALE AVENUE OH	04-ALA-880-28.24-OAK	5. Bridge not eligible for NRHP	1947	1963
33 0042	SILVER SPRINGS UP AND OFF RAMP SEPARATION	04-ALA-084-16.93	5. Bridge not eligible for NRHP	1941	
33 0043	ARROYO DE LA LAGUNA	04-ALA-084-17.22	5. Bridge not eligible for NRHP	1939	
33 0046Y	ARROYO DE LA LAGUNA	04-ALA--	5. Bridge not eligible for NRHP	1941	1983
33 0047	ALAMEDA CREEK	04-ALA-680-R10.15	5. Bridge not eligible for NRHP	1927	1990
33 0051L	EL CERRITO SEPARATION & OH	04-ALA-080-R7.20-ALB	5. Bridge not eligible for NRHP	1960	1998
33 0051R	80/580 EL CERRITO SEPARATION OH	04-ALA-080-R7.20-ALB	5. Bridge not eligible for NRHP	1999	
33 0053	NILES JUNCTION UNDERPASS	04-ALA-084-10.63-FMT	4. Historical Significance not determined	1937	
33 0060	FOLGER AVENUE UNDERPASS	04-ALA-013-13.69-BER	4. Historical Significance not determined	1935	
33 0061L	DISTRIBUTION STRUCTURE	04-ALA-580-46.50L-OAK	5. Bridge not eligible for NRHP	1955	2007
33 0061R	DISTRIBUTION STRUCTURE	04-ALA-580-46.50R-OAK	5. Bridge not eligible for NRHP	1935	1999
33 0066	ARROYO SECO	04-ALA-580-11.04-LVMR	5. Bridge not eligible for NRHP	1954	2015
33 0082	MULFORD OVERHEAD	04-ALA-112-R0.06-SLN	5. Bridge not eligible for NRHP	1982	
33 0085	ARROYO LAS POSITAS	04-ALA-580-11.72	5. Bridge not eligible for NRHP	1972	2015
33 0086	SAN LEANDRO BAY	04-ALA-061-18.55-ALA	5. Bridge not eligible for NRHP	1953	
33 0086Z	SAN LEANDRO BAY BIKE BRIDGE	04-ALA---ALA	5. Bridge not eligible for NRHP	1996	
33 0088L	HEGENBERGER ROAD OC	04-ALA-880-25.50-OAK	5. Bridge not eligible for NRHP	1996	
33 0088R	HEGENBERGER ROAD OC	04-ALA-880-25.49-OAK	5. Bridge not eligible for NRHP	1976	

Structure Maintenance & Investigations

Historical Significance - State Agency Bridges

District 04

Alameda County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
33 0092	MOUNT EDEN OVERHEAD	04-ALA-092-R4.91-HAY	5. Bridge not eligible for NRHP	1966	2014
33 0093	ORCHARD AVENUE UNDERPASS	04-ALA-092-7.26-HAY	5. Bridge not eligible for NRHP	1962	
33 0094	JACKSON STREET UNDERPASS	04-ALA-092-8.02-HAY	5. Bridge not eligible for NRHP	1962	
33 0100	SAN LEANDRO BOH	04-ALA-880-24.18-SLN	5. Bridge not eligible for NRHP	1951	2014
33 0105L	CARSON STREET UC	04-ALA-013-5.01-OAK	5. Bridge not eligible for NRHP	1966	
33 0105R	CARSON STREET UC	04-ALA-013-5.01-OAK	5. Bridge not eligible for NRHP	1966	
33 0109	ARROYO VIEJO	04-ALA-185-8.64-OAK	5. Bridge not eligible for NRHP	1969	
33 0110	98TH AVENUE OC	04-ALA-880-24.74-OAK	5. Bridge not eligible for NRHP	1998	
33 0113	ELMHURST CREEK	04-ALA-880-25.97-OAK	5. Bridge not eligible for NRHP	1948	1995
33 0114	SAN LORENZO CREEK	04-ALA-185-1.61	5. Bridge not eligible for NRHP	1960	1974
33 0115	SAN LEANDRO CREEK	04-ALA-185-5.82-SLN	5. Bridge not eligible for NRHP	1901	
33 0117	SAN PABLO AVENUE SEPARATION 123/123	04-ALA-123-0.22-EMV	5. Bridge not eligible for NRHP	1936	
33 0121L	GREENVILLE OVERHEAD	04-ALA-580-R8.00	5. Bridge not eligible for NRHP	1969	
33 0121R	GREENVILLE OVERHEAD	04-ALA-580-R8.00	5. Bridge not eligible for NRHP	1938	1970
33 0123L	STONE CUT UNDERPASS	04-ALA-580-R3.99L	4. Historical Significance not determined	1938	
33 0123R	STONE CUT OVERHEAD	04-ALA-580-R3.98R	5. Bridge not eligible for NRHP	1969	
33 0124L	REDMOND OVERHEAD	04-ALA-580-R3.91L	5. Bridge not eligible for NRHP	1938	1970
33 0127	GILMAN STREET UC	04-ALA-080-6.62-BER	5. Bridge not eligible for NRHP	1955	1997
33 0131	LAKESHORE PARK UC	04-ALA-580-43.48-OAK	5. Bridge not eligible for NRHP	1962	
33 0132Y	GOLDEN GATE AVENUE UC	04-ALA-024-R4.43-OAK	3. Bridge is possibly eligible for NRHP	1934	
33 0134J	30TH STREET UC	04-ALA-980-1.68-OAK	5. Bridge not eligible for NRHP	1969	
33 0134T	30TH STREET UC	04-ALA-980-1.68-OAK	5. Bridge not eligible for NRHP	1969	
33 0137	16TH AVENUE OVERCROSSING	04-ALA-880-29.69-OAK	5. Bridge not eligible for NRHP	1997	
33 0142	DAMON SLOUGH	04-ALA-880-26.53-OAK	5. Bridge not eligible for NRHP	1948	1963
33 0142K	DAMON SLOUGH (SB ON RAMP)	04-ALA-880-26.53-OAK	5. Bridge not eligible for NRHP	1948	
33 0142S	DAMON SLOUGH (NB ON RAMP)	04-ALA-880-26.53-OAK	5. Bridge not eligible for NRHP	1968	
33 0143	EAST CREEK SLOUGH	04-ALA-880-27.23-OAK	5. Bridge not eligible for NRHP	1948	1968
33 0147	REDWOOD ROAD OC	04-ALA-013-5.39-OAK	5. Bridge not eligible for NRHP	1966	
33 0150L	DOUGHERTY UC	04-ALA-580-19.35-PLE	5. Bridge not eligible for NRHP	1994	
33 0150R	DOUGHERTY UC	04-ALA-580-19.35-PLE	5. Bridge not eligible for NRHP	1994	2015
33 0153	NORTH LIVERMORE AVENUE UC	04-ALA-580-12.53	5. Bridge not eligible for NRHP	1972	2016
33 0156	CERRITO CREEK	04-ALA-580-48.04-ALB	5. Bridge not eligible for NRHP	1991	
33 0159	PARK BOULEVARD OC	04-ALA-013-7.40-OAK	5. Bridge not eligible for NRHP	1956	
33 0160	LA SALLE AVENUE OC	04-ALA-013-7.76-OAK	5. Bridge not eligible for NRHP	1956	
33 0161	LEONA HEIGHTS PARK POC	04-ALA-013-4.85-OAK	5. Bridge not eligible for NRHP	1966	
33 0162	BROADWAY TERRACE UC	04-ALA-013-9.07-OAK	5. Bridge not eligible for NRHP	1951	
33 0164K	LAKE TEMESCAL PARK UC	04-ALA-013-R9.16-OAK	5. Bridge not eligible for NRHP	1951	
33 0166	WASHINGTON AVENUE OC	04-ALA-880-20.82-SLN	5. Bridge not eligible for NRHP	1952	
33 0169	WILLIAMS STREET OC	04-ALA-880-23.12-SLN	5. Bridge not eligible for NRHP	1994	
33 0170	HESPERIAN BLVD UC	04-ALA-880-20.16	5. Bridge not eligible for NRHP	1991	2010
33 0172	S880-S238 CONNECTOR UC	04-ALA-880-20.68-SLN	5. Bridge not eligible for NRHP	1952	1994
33 0173S	N880-N238 CONNECTOR UC	04-ALA-880-20.78-SLN	5. Bridge not eligible for NRHP	1994	
33 0174	PASEO GRANDE ROAD OC	04-ALA-880-19.76	5. Bridge not eligible for NRHP	1992	

Structure Maintenance & Investigations

Historical Significance - State Agency Bridges

District 04

Alameda County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
33 0175	SAN LORENZO CREEK	04-ALA-880-20.11	5. Bridge not eligible for NRHP	1953	1991
33 0175S	SAN LORENZO CREEK	04-ALA-880-20.11	5. Bridge not eligible for NRHP	1992	
33 0176	LEWELLING BLVD UC	04-ALA-880-20.32	5. Bridge not eligible for NRHP	1953	1991
33 0176G	N880-S238 CONNECTOR RAMP	04-ALA-880-20.32	5. Bridge not eligible for NRHP	1978	2008
33 0179	A STREET UC	04-ALA-880-18.35-HAY	5. Bridge not eligible for NRHP	1952	1991
33 0180	HACIENDA AVENUE OC	04-ALA-880-19.27	5. Bridge not eligible for NRHP	1992	
33 0181	WINTON AVENUE OC	04-ALA-880-17.60-HAY	5. Bridge not eligible for NRHP	1968	
33 0186	SATHER UNDERPASS	04-ALA-077-0.16-OAK	5. Bridge not eligible for NRHP	1954	
33 0189L	STROBRIDGE AVENUE UC	04-ALA-580-30.36	5. Bridge not eligible for NRHP	1988	2010
33 0189R	STROBRIDGE AVENUE UC	04-ALA-580-30.36	5. Bridge not eligible for NRHP	1989	
33 0190F	W80-S13 CONNECTOR OC	04-ALA-080-4.45-EMV	5. Bridge not eligible for NRHP	1954	
33 0191G	ROUTE 13/80 SEPARATION (NORTH)	04-ALA-013-13.92L-BER	5. Bridge not eligible for NRHP	1955	
33 0192L	SCHAEFER RANCH ROAD UC	04-ALA-580-R23.86	5. Bridge not eligible for NRHP	1976	
33 0192R	SCHAEFER RANCH ROAD UC	04-ALA-580-R23.86	5. Bridge not eligible for NRHP	1976	
33 0193L	REDWOOD ROAD UC	04-ALA-580-R29.37	5. Bridge not eligible for NRHP	1986	
33 0193R	REDWOOD ROAD UC	04-ALA-580-R29.37	5. Bridge not eligible for NRHP	1987	
33 0194	LAKE CHABOT POC	04-ALA-580-30.09	5. Bridge not eligible for NRHP	1991	
33 0195	MIDWAY ROAD UC	04-ALA-580-L0.92L	5. Bridge not eligible for NRHP	1953	2005
33 0196L	GRANT LINE ROAD UC	04-ALA-580-R1.48	5. Bridge not eligible for NRHP	1953	
33 0196R	GRANT LINE ROAD UC	04-ALA-580-R1.48	5. Bridge not eligible for NRHP	1969	1998
33 0198	MADISON STREET UC	04-ALA-880-31.07-OAK	5. Bridge not eligible for NRHP	1958	1985
33 0200	5TH & 6TH STREET VIADUCT	04-ALA-880-31.36-OAK	5. Bridge not eligible for NRHP	1953	1984
33 0202F	CASTRO VALLEY BLVD UC (S238-E580)	04-ALA-238-R14.47	5. Bridge not eligible for NRHP	1988	2010
33 0202R	CASTRO VALLEY BLVD UC	04-ALA-580-R30.56	5. Bridge not eligible for NRHP	1989	
33 0203	ARROYO LAS POSITAS	04-ALA-580-13.13	5. Bridge not eligible for NRHP	1972	2016
33 0211	SAN RAMON ROAD OC	04-ALA-580-R21.43-PLE	5. Bridge not eligible for NRHP	1977	
33 0212L	ROUTE 238/185 SEPARATION	04-ALA-238-14.93	5. Bridge not eligible for NRHP	1994	2010
33 0213	BAY STREET OC	04-ALA-013-13.71-BER	5. Bridge not eligible for NRHP	1954	
33 0214L	ROUTE 580/238 SEPARATION	04-ALA-580-R30.59	5. Bridge not eligible for NRHP	1988	
33 0216	HESPERIAN BOULEVARD UC	04-ALA-238-16.28	5. Bridge not eligible for NRHP	1956	2000
33 0216K	HESPERIAN BOULEVARD UC	04-ALA-238-16.28	5. Bridge not eligible for NRHP	2010	
33 0217L	KENT AVENUE OVERHEAD	04-ALA-238-15.41	5. Bridge not eligible for NRHP	1994	2010
33 0217R	KENT AVENUE OVERHEAD	04-ALA-238-15.41	5. Bridge not eligible for NRHP	1994	2010
33 0221	ASHLAND AVENUE UC	04-ALA-238-15.67	5. Bridge not eligible for NRHP	1956	2010
33 0225L	EDEN CANYON ROAD UC	04-ALA-580-R26.23	5. Bridge not eligible for NRHP	1986	
33 0225R	EDEN CANYON ROAD UC	04-ALA-580-R26.23	5. Bridge not eligible for NRHP	1986	
33 0227K	MORAGA AVENUE OC	04-ALA-013-8.32-OAK	5. Bridge not eligible for NRHP	1964	
33 0227L	MORAGA AVENUE UC	04-ALA-013-8.28-OAK	5. Bridge not eligible for NRHP	1964	
33 0227R	MORAGA AVENUE UC	04-ALA-013-8.27-OAK	5. Bridge not eligible for NRHP	1964	
33 0228L	SAN LORENZO CREEK UC	04-ALA-580-R27.53	5. Bridge not eligible for NRHP	1986	
33 0230L	SAN LORENZO CREEK UC	04-ALA-580-R27.69	5. Bridge not eligible for NRHP	1986	
33 0230R	SAN LORENZO CREEK UC	04-ALA-580-R27.53	5. Bridge not eligible for NRHP	1986	
33 0232K	CROW CREEK	04-ALA-580-R28.57	5. Bridge not eligible for NRHP	1988	

Structure Maintenance & Investigations

Historical Significance - State Agency Bridges

District 04

Alameda County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
33 0232L	CROW CREEK	04-ALA-580-R28.57	5. Bridge not eligible for NRHP	1988	
33 0232R	CROW CREEK	04-ALA-580-R28.57	5. Bridge not eligible for NRHP	1988	
33 0233L	CROW CANYON ROAD UC	04-ALA-580-R28.41	5. Bridge not eligible for NRHP	1988	
33 0233R	CROW CANYON ROAD UC	04-ALA-580-R28.41	5. Bridge not eligible for NRHP	1988	
33 0234	SAN LORENZO CREEK	04-ALA-580-R27.16	5. Bridge not eligible for NRHP	1957	1977
33 0235L	EAST CASTRO VALLEY BLVD UC	04-ALA-580-R27.00	5. Bridge not eligible for NRHP	1986	
33 0235R	EAST CASTRO VALLEY BLVD UC	04-ALA-580-R27.00	5. Bridge not eligible for NRHP	1986	
33 0236	TENNYSON ROAD OC	04-ALA-880-15.65-HAY	5. Bridge not eligible for NRHP	1958	
33 0237	FREMONT BOULEVARD OC	04-ALA-880-3.25-FMT	5. Bridge not eligible for NRHP	1995	
33 0239	ORA LOMA DITCH	04-ALA-880-20.95-SLN	5. Bridge not eligible for NRHP	1951	1956
33 0240	ALAMEDA CREEK	04-ALA-880-12.78	5. Bridge not eligible for NRHP	1957	1998
33 0242	SCOTT CREEK	04-ALA-880-R0.26-FMT	5. Bridge not eligible for NRHP	1952	2003
33 0243	DECOTO ROAD SEPARATION	04-ALA-084-R5.98-FMT	5. Bridge not eligible for NRHP	1984	1990
33 0244	BRUNS DRIVE POC	04-ALA-013-7.91-OAK	5. Bridge not eligible for NRHP	1956	
33 0245	WHIPPLE ROAD UC	04-ALA-880-13.67-HAY	5. Bridge not eligible for NRHP	1956	1993
33 0245K	WHIPPLE ROAD UC	04-ALA-880-13.67-HAY	5. Bridge not eligible for NRHP	1993	
33 0245S	WHIPPLE ROAD UC	04-ALA-880-13.67-HAY	5. Bridge not eligible for NRHP	1993	
33 0246	ALQUIRE ROAD OH	04-ALA-880-13.81-UNC	5. Bridge not eligible for NRHP	1957	1993
33 0246S	ALQUIRE ROAD OH	04-ALA-880-13.84-UNC	5. Bridge not eligible for NRHP	1993	
33 0247	LINCOLN AVENUE OC	04-ALA-013-6.47-OAK	5. Bridge not eligible for NRHP	1956	
33 0250	PATTERSON SLOUGH	04-ALA-880-11.80-FMT	5. Bridge not eligible for NRHP	1957	1989
33 0251	WARD CREEK	04-ALA-880-14.18-UNC	5. Bridge not eligible for NRHP	1958	1993
33 0261L	CENTRAL AVENUE OC	04-ALA-880-8.25-FMT	5. Bridge not eligible for NRHP	1993	
33 0261R	CENTRAL AVENUE OC	04-ALA-880-8.24-FMT	5. Bridge not eligible for NRHP	1993	
33 0262	EAST NEWARK UP	04-ALA-880-8.54-FMT	5. Bridge not eligible for NRHP	1995	
33 0264	THORNTON AVENUE (84/880) SEPARATION	04-ALA-084-6.93-FMT	5. Bridge not eligible for NRHP	1997	
33 0267L	MOWRY AVENUE OC	04-ALA-880-7.19-FMT	5. Bridge not eligible for NRHP	1994	
33 0267R	MOWRY AVENUE OC	04-ALA-880-7.18-FMT	5. Bridge not eligible for NRHP	1994	
33 0268	AUTO MALL PARKWAY OC	04-ALA-880-4.71-FMT	5. Bridge not eligible for NRHP	1994	
33 0272	HETCH HETCHY AQUEDUCT	04-ALA-880-7.32-FMT	5. Bridge not eligible for NRHP	1958	1993
33 0272K	HETCH HETCHY AQUEDUCT	04-ALA-880-7.34-NWK	5. Bridge not eligible for NRHP	1994	
33 0273	CRANDALL CREEK	04-ALA-880-10.66-FMT	5. Bridge not eligible for NRHP	1958	1988
33 0277	SEQUOIA LODGE ROAD PUC	04-ALA-013-6.94-OAK	5. Bridge not eligible for NRHP	1958	
33 0278	TEMESCAL CREEK	04-ALA-080-3.49-EMV	5. Bridge not eligible for NRHP	1936	1997
33 0280L	ADELINE STREET UC	04-ALA-580-45.74-OAK	5. Bridge not eligible for NRHP	1961	
33 0280R	ADELINE STREET UC	04-ALA-580-45.74-OAK	5. Bridge not eligible for NRHP	1961	
33 0281R	MACARTHUR BLVD SEPARATION 580/123	04-ALA-580-45.99-OAK	5. Bridge not eligible for NRHP	1961	
33 0283	MELROSE UNDERPASS	04-ALA-077-0.32-OAK	4. Historical Significance not determined	1950	
33 0284	SAN LEANDRO OVERCROSSING	04-ALA-077-0.29-OAK	5. Bridge not eligible for NRHP	1950	
33 0285	BROADWAY-RICHMOND BLVD UC	04-ALA-580-44.51-OAK	5. Bridge not eligible for NRHP	1961	
33 0286	PG&E PIPELINE OC	04-ALA-880-8.52-FMT	4. Historical Significance not determined	1958	
33 0287	MACARTHUR BOULEVARD OC	04-ALA-580-44.32-OAK	5. Bridge not eligible for NRHP	1961	
33 0288	OAKLAND AVENUE UC	04-ALA-580-44.28-OAK	5. Bridge not eligible for NRHP	1961	

Structure Maintenance & Investigations

Historical Significance - State Agency Bridges

District 04

Alameda County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
33 0289K	HARRISON STREET UC OFF-RAMP	04-ALA-580-44.33-OAK	5. Bridge not eligible for NRHP	1961	
33 0289S	HARRISON STREET UC (ON-RAMP)	04-ALA-580-44.33-OAK	5. Bridge not eligible for NRHP	1961	
33 0290	CHETWOOD STREET OC	04-ALA-580-44.07-OAK	5. Bridge not eligible for NRHP	1961	
33 0291	ARROYO DE LA LAGUNA CREEK	04-ALA-880-3.67-FMT	5. Bridge not eligible for NRHP	1958	
33 0292	AGUA CALIENTE CREEK	04-ALA-880-2.77-FMT	5. Bridge not eligible for NRHP	1958	2006
33 0293	FLORESTA BLVD OC	04-ALA-880-21.56-SLN	5. Bridge not eligible for NRHP	1993	
33 0294	MISSION SAN JOSE (680/238) SEPARATION	04-ALA-680-R6.38-FMT	5. Bridge not eligible for NRHP	1963	2010
33 0295	ANDRADE ROAD OC	04-ALA-680-R9.71	5. Bridge not eligible for NRHP	1963	
33 0296	WEBSTER STREET UC	04-ALA-580-44.81-OAK	5. Bridge not eligible for NRHP	1961	
33 0296K	WEBSTER STREET UC	04-ALA-580-44.81-OAK	5. Bridge not eligible for NRHP	1961	
33 0297	TELEGRAPH AVENUE UC	04-ALA-580-45.03-OAK	5. Bridge not eligible for NRHP	1961	1969
33 0297K	TELEGRAPH AVENUE UC OFF-RAMP	04-ALA-580-45.03-OAK	5. Bridge not eligible for NRHP	1961	
33 0298	OAKLAND SEPARATION 580/24-980	04-ALA-580-45.15-OAK	5. Bridge not eligible for NRHP	1961	1969
33 0299	MARTIN LUTHER KING JR UC	04-ALA-580-45.25-OAK	5. Bridge not eligible for NRHP	1961	
33 0299K	MARTIN LUTHER KING JR UC ON-RAMP	04-ALA-580-45.25-OAK	5. Bridge not eligible for NRHP	1961	
33 0299S	MARTIN LUTHER KING JR UC OFF-RAMP	04-ALA-580-45.25-OAK	5. Bridge not eligible for NRHP	1961	
33 0300	WEST STREET UC	04-ALA-580-45.39-OAK	5. Bridge not eligible for NRHP	1961	
33 0301	MARKET STREET UC	04-ALA-580-45.56-OAK	5. Bridge not eligible for NRHP	1961	
33 0302H	NORTH CONNECTOR OC (E&W580-E24)	04-ALA-580-45.23-OAK	5. Bridge not eligible for NRHP	1970	
33 0303H	SOUTH CONNECTOR OC (E&W580-W980)	04-ALA-580-45.14-OAK	5. Bridge not eligible for NRHP	1970	
33 0304G	EAST CONNECTOR OC (E980-E&W580)	04-ALA-980-1.98-OAK	5. Bridge not eligible for NRHP	1970	
33 0305F	W24-E&W580 CONNECTOR OC	04-ALA-024-R1.88-OAK	5. Bridge not eligible for NRHP	1970	
33 0306	VARGAS ROAD UC	04-ALA-680-R7.48-FMT	5. Bridge not eligible for NRHP	1963	2010
33 0306K	VARGAS ROAD UC	04-ALA-680-R7.46-FMT	5. Bridge not eligible for NRHP	2010	
33 0308	ARDLEY AVENUE OC	04-ALA-580-R41.93-OAK	5. Bridge not eligible for NRHP	1963	
33 0309K	14TH AVENUE UC ON-RAMP	04-ALA-580-R42.07-OAK	5. Bridge not eligible for NRHP	1963	
33 0309L	14TH AVENUE UC	04-ALA-580-R42.07-OAK	5. Bridge not eligible for NRHP	1963	
33 0309R	14TH AVENUE UC	04-ALA-580-R42.07-OAK	5. Bridge not eligible for NRHP	1963	
33 0309S	14TH AVENUE UC OFF-RAMP	04-ALA-580-R42.07-OAK	5. Bridge not eligible for NRHP	1963	
33 0310L	BEAUMONT AVENUE UC	04-ALA-580-R42.18-OAK	5. Bridge not eligible for NRHP	1963	
33 0310R	BEAUMONT AVENUE UC	04-ALA-580-R42.18-OAK	5. Bridge not eligible for NRHP	1963	
33 0311	13TH AVENUE OVERCROSSING	04-ALA-580-R42.37-OAK	5. Bridge not eligible for NRHP	1963	
33 0312	SANTA CLARA AVENUE POC	04-ALA-580-43.76-OAK	5. Bridge not eligible for NRHP	1962	
33 0313	VAN BUREN AVENUE POC	04-ALA-580-43.75-OAK	5. Bridge not eligible for NRHP	1962	
33 0314	LAKE PARK AVENUE OC	04-ALA-580-43.23-OAK	5. Bridge not eligible for NRHP	1962	
33 0315L	PARK BOULEVARD UC	04-ALA-580-42.67-OAK	5. Bridge not eligible for NRHP	1962	
33 0315R	PARK BOULEVARD UC	04-ALA-580-42.67-OAK	5. Bridge not eligible for NRHP	1962	
33 0316	MACARTHUR BOULEVARD UC	04-ALA-580-R39.77-OAK	5. Bridge not eligible for NRHP	1965	
33 0317	MACARTHUR BOULEVARD UC	04-ALA-580-R39.91-OAK	5. Bridge not eligible for NRHP	1964	
33 0318	HIGH STREET UC	04-ALA-580-R40.08-OAK	5. Bridge not eligible for NRHP	1963	
33 0319	38TH AVENUE OVERCROSSING	04-ALA-580-R40.39-OAK	5. Bridge not eligible for NRHP	1963	
33 0320	35TH AVENUE OVERCROSSING	04-ALA-580-R40.65-OAK	5. Bridge not eligible for NRHP	1963	
33 0321	MAPLE AVENUE UC	04-ALA-580-R40.93-OAK	5. Bridge not eligible for NRHP	1963	

Structure Maintenance & Investigations

Historical Significance - State Agency Bridges

District 04

Alameda County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
33 0322	COOLIDGE AVENUE UC	04-ALA-580-R41.14-OAK	5. Bridge not eligible for NRHP	1963	
33 0323	BOSTON AVENUE OC	04-ALA-580-R41.33-OAK	5. Bridge not eligible for NRHP	1963	
33 0324	FRUITVALE AVENUE UC	04-ALA-580-R41.43-OAK	5. Bridge not eligible for NRHP	1963	
33 0325	SHEFFIELD AVENUE OC	04-ALA-580-R41.75-OAK	5. Bridge not eligible for NRHP	1963	
33 0326	MACARTHUR BOULEVARD OC	04-ALA-580-42.80-OAK	5. Bridge not eligible for NRHP	1962	
33 0328	BIRDSALL AVENUE POC	04-ALA-580-R39.93-OAK	5. Bridge not eligible for NRHP	1964	
33 0329	EAST 12TH STREET OC	04-ALA-077-0.37-OAK	5. Bridge not eligible for NRHP	1962	
33 0330	GRAND AVENUE OC	04-ALA-580-R33.94-SLN	5. Bridge not eligible for NRHP	1964	
33 0331	JOAQUIN AVENUE UC	04-ALA-580-R34.40-SLN	5. Bridge not eligible for NRHP	1964	
33 0332	ESTUDILLO AVENUE UC	04-ALA-580-R34.48-SLN	5. Bridge not eligible for NRHP	1964	
33 0333	DUTTON AVENUE UC	04-ALA-580-R34.81-SLN	5. Bridge not eligible for NRHP	1964	
33 0334K	FOOTHILL BOULEVARD UC	04-ALA-580-R35.00-SLN	5. Bridge not eligible for NRHP	1964	
33 0335	FOOTHILL BOULEVARD UC	04-ALA-580-R35.10-OAK	5. Bridge not eligible for NRHP	1964	
33 0335K	FOOTHILL BOULEVARD UC	04-ALA-580-R35.10-OAK	5. Bridge not eligible for NRHP	1964	
33 0336	150TH AVENUE OC	04-ALA-580-R32.84	5. Bridge not eligible for NRHP	1965	
33 0337	FAIRMONT DRIVE OC	04-ALA-580-R32.72	5. Bridge not eligible for NRHP	1965	
33 0338	159TH AVENUE OC	04-ALA-580-R32.32	5. Bridge not eligible for NRHP	1965	
33 0339	FONTAINE STREET OC	04-ALA-580-R37.34-OAK	5. Bridge not eligible for NRHP	1965	
33 0340	KELLER AVENUE OC	04-ALA-580-R37.80-OAK	5. Bridge not eligible for NRHP	1965	
33 0341	EDWARDS AVENUE UC	04-ALA-580-R38.31-OAK	5. Bridge not eligible for NRHP	1965	
33 0342	KUHNLE AVENUE UC	04-ALA-580-R38.92-OAK	5. Bridge not eligible for NRHP	1965	
33 0343	DAVENPORT AVENUE UC	04-ALA-580-R39.37-OAK	5. Bridge not eligible for NRHP	1965	
33 0344F	S13-E580 CONNECTOR OC	04-ALA-013-4.27-OAK	5. Bridge not eligible for NRHP	1965	
33 0345R	MIDWAY ROAD UC	04-ALA-580-L1.04R	5. Bridge not eligible for NRHP	1966	
33 0346R	ROUTE 580/205 SEPARATION	04-ALA-580-0.39R	5. Bridge not eligible for NRHP	1966	
33 0347S	ROUTE 580 ON-RAMP/13 SEPARATION	04-ALA-580-R39.15-OAK	5. Bridge not eligible for NRHP	1965	
33 0348R	CALAVERAS AVENUE UC	04-ALA-013-4.32-OAK	5. Bridge not eligible for NRHP	1965	
33 0349L	29TH STREET UC	04-ALA-980-1.64-OAK	5. Bridge not eligible for NRHP	1969	
33 0349R	29TH STREET UC	04-ALA-980-1.64-OAK	5. Bridge not eligible for NRHP	1969	
33 0350G	30TH STREET UC	04-ALA-980-1.68-OAK	5. Bridge not eligible for NRHP	1969	
33 0350H	30TH STREET UC	04-ALA-580-45.22-OAK	5. Bridge not eligible for NRHP	1969	
33 0350L	30TH STREET UC	04-ALA-980-1.68-OAK	5. Bridge not eligible for NRHP	1969	
33 0350R	30TH STREET UC	04-ALA-980-1.68-OAK	5. Bridge not eligible for NRHP	1969	
33 0351	CALAVERAS ROAD SEPARATION 680/84	04-ALA-680-R11.03	5. Bridge not eligible for NRHP	1963	2019
33 0352	SCOTTS CORNER SEPARATION 680/84	04-ALA-680-R11.81	5. Bridge not eligible for NRHP	1967	1990
33 0353	OAK KNOLL BOULEVARD OC	04-ALA-580-R36.76-OAK	5. Bridge not eligible for NRHP	1965	
33 0354	GOLF LINKS ROAD UC	04-ALA-580-R36.34-OAK	5. Bridge not eligible for NRHP	1965	
33 0355	106TH AVENUE UC	04-ALA-580-R35.71-OAK	5. Bridge not eligible for NRHP	1965	
33 0356	AMADOR VALLEY BLVD UC	04-ALA-680-R20.73	5. Bridge not eligible for NRHP	1965	2000
33 0357	34TH STREET OVERCROSSING	04-ALA-980-1.95-OAK	5. Bridge not eligible for NRHP	1969	
33 0358L	MACARTHUR BOULEVARD UC	04-ALA-024-R2.02-OAK	5. Bridge not eligible for NRHP	1969	
33 0358R	MACARTHUR BOULEVARD UC	04-ALA-024-R2.02-OAK	5. Bridge not eligible for NRHP	1969	
33 0359K	40TH STREET UC	04-ALA-024-R2.20-OAK	5. Bridge not eligible for NRHP	1970	

Structure Maintenance & Investigations

Historical Significance - State Agency Bridges

District 04

Alameda County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
33 0359L	40TH STREET UC	04-ALA-024-R2.20-OAK	5. Bridge not eligible for NRHP	1970	
33 0359R	40TH STREET UC	04-ALA-024-R2.20-OAK	5. Bridge not eligible for NRHP	1970	
33 0359S	40TH STREET UC	04-ALA-024-R2.20-OAK	5. Bridge not eligible for NRHP	1970	
33 0360	PALM AVENUE OC	04-ALA-680-M5.91-FMT	5. Bridge not eligible for NRHP	1971	
33 0361	WASHNGTON BOULEVARD OC	04-ALA-680-M5.37-FMT	5. Bridge not eligible for NRHP	1971	
33 0362	KAY OVERCROSSING	04-ALA-024-R5.47-OAK	5. Bridge not eligible for NRHP	1965	
33 0363K	42ND STREET UC	04-ALA-024-R2.33-OAK	5. Bridge not eligible for NRHP	1970	
33 0363L	42ND STREET UC	04-ALA-024-R2.33-OAK	5. Bridge not eligible for NRHP	1970	
33 0363R	42ND STREET UC	04-ALA-024-R2.33-OAK	5. Bridge not eligible for NRHP	1970	
33 0363S	42ND STREET UC	04-ALA-024-R2.33-OAK	5. Bridge not eligible for NRHP	1970	
33 0364K	45TH STREET UC	04-ALA-024-R2.47-OAK	5. Bridge not eligible for NRHP	1970	
33 0364L	45TH STREET UC	04-ALA-024-R2.47-OAK	5. Bridge not eligible for NRHP	1970	
33 0364R	45TH STREET UC	04-ALA-024-R2.47-OAK	5. Bridge not eligible for NRHP	1970	
33 0364S	45TH STREET UC	04-ALA-024-R2.47-OAK	5. Bridge not eligible for NRHP	1970	
33 0365K	MARTIN LUTHER KING JR WAY OFF-RAMP UC	04-ALA-024-R2.59-OAK	5. Bridge not eligible for NRHP	1970	
33 0365L	MARTIN LUTHER KING JR WAY UC	04-ALA-024-R2.59-OAK	5. Bridge not eligible for NRHP	1970	
33 0365R	MARTIN LUTHER KING JR WAY UC	04-ALA-024-R2.59-OAK	5. Bridge not eligible for NRHP	1970	
33 0368	AUTO MALL PARKWAY OC	04-ALA-680-M4.02-FMT	5. Bridge not eligible for NRHP	1971	
33 0370	INDUSTRIAL BOULEVARD UC	04-ALA-092-R5.12-HAY	5. Bridge not eligible for NRHP	1966	2001
33 0371	ROUTE 680/580 SEPARATION	04-ALA-680-R20.03-PLE	5. Bridge not eligible for NRHP	1965	2002
33 0371G	ROUTE 680/580 SEPARATION (N680-W580 & E580-N680)	04-ALA-680-R20.03-PLE	5. Bridge not eligible for NRHP	1965	
33 0372	CLAWITER ROAD OC	04-ALA-092-R4.48-HAY	5. Bridge not eligible for NRHP	1966	
33 0373	DUBLIN BOULEVARD UC	04-ALA-680-R20.39	5. Bridge not eligible for NRHP	1965	2001
33 0376	BROADWAY OVERCROSSING	04-ALA-013-R9.58-OAK	5. Bridge not eligible for NRHP	1998	
33 0377G	N13-E24 CONNECTOR OC	04-ALA-013-R9.57-OAK	5. Bridge not eligible for NRHP	1970	
33 0378	EAST TEMESCAL SEPARATION	04-ALA-024-R5.08-OAK	5. Bridge not eligible for NRHP	1970	
33 0380	PLEASANT0N INDUSTRIAL PARK OH	04-ALA-680-R15.89-PLE	5. Bridge not eligible for NRHP	1967	1990
33 0381	LAGUNA CREEK LANE UC	04-ALA-680-R15.98-PLE	5. Bridge not eligible for NRHP	1967	1990
33 0382	ARROYO DE LA LAGUNA	04-ALA-680-R17.19-PLE	5. Bridge not eligible for NRHP	1967	1990
33 0383	BERNAL AVENUE UC	04-ALA-680-R16.75	5. Bridge not eligible for NRHP	1967	1990
33 0383K	BERNAL AVENUE UC	04-ALA-680-R16.75-PLE	5. Bridge not eligible for NRHP	1967	
33 0385	HAPPY VALLEY ROAD UC	04-ALA-680-R15.04-PLE	5. Bridge not eligible for NRHP	1967	1990
33 0386L	KOOPMANN ROAD UC	04-ALA-680-R12.44	5. Bridge not eligible for NRHP	1967	1990
33 0386R	KOOPMANN ROAD UC	04-ALA-680-R12.44	5. Bridge not eligible for NRHP	1967	1990
33 0387	PLEASANTON-SUNOL ROAD UC	04-ALA-680-R15.26-PLE	5. Bridge not eligible for NRHP	1967	1990
33 0387K	PLEASANTON-SUNOL ROAD UC	04-ALA-680-R15.26-PLE	5. Bridge not eligible for NRHP	1967	
33 0388	SOUTH PLEASANTON OH	04-ALA-680-R15.62-PLE	5. Bridge not eligible for NRHP	1967	1990
33 0389	FIRST STREET OC	04-ALA-580-10.69-LVMR	5. Bridge not eligible for NRHP	1965	
33 0390	LAS COLINAS ROAD OC	04-ALA-580-11.53	5. Bridge not eligible for NRHP	1972	
33 0392L	46TH STREET TUNNEL OH	04-ALA-024-R2.50-OAK	5. Bridge not eligible for NRHP	1969	
33 0395K	164TH AVENUE UC	04-ALA-580-R31.71	5. Bridge not eligible for NRHP	1965	
33 0395L	164TH AVENUE UC	04-ALA-580-R31.71	5. Bridge not eligible for NRHP	1965	
33 0395R	164TH AVENUE UC	04-ALA-580-R31.71	5. Bridge not eligible for NRHP	1965	

Structure Maintenance & Investigations

Historical Significance - State Agency Bridges

District 04

Alameda County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
33 0396L	167TH AVENUE UC	04-ALA-580-R31.34	5. Bridge not eligible for NRHP	1965	
33 0396R	167TH AVENUE UC	04-ALA-580-R31.34	5. Bridge not eligible for NRHP	1965	
33 0398	INDUSTRIAL PARK OC	04-ALA-880-14.54-HAY	5. Bridge not eligible for NRHP	1968	
33 0399S	WARD CREEK	04-ALA-880-14.56-HAY	5. Bridge not eligible for NRHP	1968	
33 0400	VASCO ROAD OVERCROSSING	04-ALA-580-9.68	5. Bridge not eligible for NRHP	1970	
33 0402	CALIFORNIA AQUEDUCT - PM 009.36	04-ALA-205-0.28	5. Bridge not eligible for NRHP	1966	1997
33 0405	PASEO PADRE PARKWAY OC	04-ALA-680-M5.67-FMT	5. Bridge not eligible for NRHP	1971	
33 0406	ALTAMONT SIDEHILL VIADUCT	04-ALA-580-R6.92	5. Bridge not eligible for NRHP	1969	
33 0407	NORTH FLYNN ROAD OC	04-ALA-580-R5.93L	5. Bridge not eligible for NRHP	1969	
33 0408L	AIRWAY BLVD SB OC	04-ALA-580-14.98	5. Bridge not eligible for NRHP	1972	
33 0408R	AIRWAY BLVD NB OC	04-ALA-580-14.95-LVMR	5. Bridge not eligible for NRHP	1999	
33 0411L	SHATTUCK AVENUE UC	04-ALA-024-R2.90-OAK	5. Bridge not eligible for NRHP	1970	
33 0411R	SHATTUCK AVENUE UC	04-ALA-024-R2.90-OAK	5. Bridge not eligible for NRHP	1970	
33 0412L	55TH STREET UC	04-ALA-024-R2.99-OAK	5. Bridge not eligible for NRHP	1970	
33 0412R	55TH STREET UC	04-ALA-024-R2.99-OAK	5. Bridge not eligible for NRHP	1970	
33 0413L	TELEGRAPH AVENUE UC	04-ALA-024-R3.06-OAK	5. Bridge not eligible for NRHP	1970	
33 0413R	TELEGRAPH AVENUE UC	04-ALA-024-R3.06-OAK	5. Bridge not eligible for NRHP	1970	
33 0413S	TELEGRAPH AVENUE UC	04-ALA-024-R3.06-OAK	5. Bridge not eligible for NRHP	1970	
33 0414K	CLAREMONT AVENUE UC	04-ALA-024-R3.38-OAK	5. Bridge not eligible for NRHP	1970	
33 0414L	CLAREMONT AVENUE UC	04-ALA-024-R3.32-OAK	5. Bridge not eligible for NRHP	1970	
33 0414R	CLAREMONT AVENUE UC	04-ALA-024-R3.30-OAK	5. Bridge not eligible for NRHP	1970	
33 0416K	52ND STREET UC	04-ALA-024-R2.77-OAK	5. Bridge not eligible for NRHP	1970	
33 0416L	52ND STREET UC	04-ALA-024-R2.77-OAK	5. Bridge not eligible for NRHP	1970	
33 0416R	52ND STREET UC	04-ALA-024-R2.77-OAK	5. Bridge not eligible for NRHP	1970	
33 0417L	COLLEGE AVENUE UC	04-ALA-024-R3.55-OAK	5. Bridge not eligible for NRHP	1970	
33 0417R	COLLEGE AVENUE UC	04-ALA-024-R3.54-OAK	5. Bridge not eligible for NRHP	1970	
33 0418L	PRESLEY WAY UC	04-ALA-024-R3.97-OAK	5. Bridge not eligible for NRHP	1970	
33 0418R	PRESLEY WAY UC	04-ALA-024-R3.97-OAK	5. Bridge not eligible for NRHP	1970	
33 0419K	PATTON STREET UC	04-ALA-024-R4.21-OAK	5. Bridge not eligible for NRHP	1970	
33 0419L	PATTON STREET UC	04-ALA-024-R4.17-OAK	5. Bridge not eligible for NRHP	1970	
33 0419R	PATTON STREET UC	04-ALA-024-R4.15-OAK	5. Bridge not eligible for NRHP	1970	
33 0420L	GOLDEN GATE AVENUE UC	04-ALA-024-R4.44-OAK	5. Bridge not eligible for NRHP	1970	
33 0420R	GOLDEN GATE AVENUE UC	04-ALA-024-R4.44-OAK	5. Bridge not eligible for NRHP	1970	
33 0421L	27TH STREET UC	04-ALA-980-1.40-OAK	5. Bridge not eligible for NRHP	1969	
33 0421R	27TH STREET UC	04-ALA-980-1.33-OAK	5. Bridge not eligible for NRHP	1969	
33 0422	CENTER STREET OC	04-ALA-580-R28.75	5. Bridge not eligible for NRHP	1986	
33 0423L	FUTURE 680/237 SEPARATION	04-ALA-680-M0.06-FMT	5. Bridge not eligible for NRHP	1971	1997
33 0423R	FUTURE 680/237 SEPARATION	04-ALA-680-M0.04-FMT	5. Bridge not eligible for NRHP	1971	1997
33 0424L	SCOTT CREEK ROAD UC	04-ALA-680-M0.13-FMT	5. Bridge not eligible for NRHP	1971	1997
33 0424R	SCOTT CREEK ROAD UC	04-ALA-680-M0.13-FMT	5. Bridge not eligible for NRHP	1971	1997
33 0427L	EAST WARREN AVENUE UC	04-ALA-680-M1.96-FMT	5. Bridge not eligible for NRHP	1971	2010
33 0427R	EAST WARREN AVENUE UC	04-ALA-680-M1.97-FMT	5. Bridge not eligible for NRHP	1971	1997
33 0428L	MISSION BLVD (680/262) SEPARATION	04-ALA-680-M2.38-FMT	5. Bridge not eligible for NRHP	1971	1997

Structure Maintenance & Investigations

Historical Significance - State Agency Bridges

District 04

Alameda County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
33 0428R	MISSION BLVD (680/262) SEPARATION	04-ALA-680-M2.38-FMT	5. Bridge not eligible for NRHP	1971	1997
33 0429L	GRIMMER BOULEVARD UC	04-ALA-680-M3.35-FMT	5. Bridge not eligible for NRHP	1971	2001
33 0429R	GRIMMER BOULEVARD UC	04-ALA-680-M3.35-FMT	5. Bridge not eligible for NRHP	1971	
33 0431	EL CHARRO ROAD OC	04-ALA-580-16.70	5. Bridge not eligible for NRHP	1972	2010
33 0432G	CASTRO VALLEY BLVD UC (N238-W580)	04-ALA-238-R14.47	5. Bridge not eligible for NRHP	1988	
33 0434T	DAMON SLOUGH (NB OFF-RAMP)	04-ALA-880-26.54-OAK	5. Bridge not eligible for NRHP	1968	
33 0435	66TH AVENUE OVERCROSSING	04-ALA-880-26.61-OAK	5. Bridge not eligible for NRHP	1968	
33 0436F	E580-S238 CONNECTOR OC	04-ALA-580-M31.10	5. Bridge not eligible for NRHP	1988	
33 0438L	SOUTH D. W. R. UC	04-ALA-680-M0.79-FMT	5. Bridge not eligible for NRHP	1971	2010
33 0438R	SOUTH D. W. R. UC	04-ALA-680-M0.77-FMT	5. Bridge not eligible for NRHP	1971	1997
33 0439L	NORTH D. W. R. UC	04-ALA-680-M1.46-FMT	5. Bridge not eligible for NRHP	1971	2010
33 0439R	NORTH D. W. R. UC	04-ALA-680-M1.47-FMT	5. Bridge not eligible for NRHP	1971	1997
33 0440	SAN PABLO AVENUE UC	04-ALA-980-1.11-OAK	5. Bridge not eligible for NRHP	1973	1981
33 0441	FRAGER ROAD UC	04-ALA-680-R14.36-PLE	5. Bridge not eligible for NRHP	1967	
33 0443	CASTRO VALLEY BLVD OC	04-ALA-238-R14.47	5. Bridge not eligible for NRHP	1990	
33 0445	HESPERIAN BOULEVARD OC	04-ALA-092-R5.76-HAY	5. Bridge not eligible for NRHP	1975	
33 0448	JACKSON STREET UP (BARTD)	04-ALA-092-8.03-HAY	5. Bridge not eligible for NRHP	1969	
33 0456	MELROSE AERIAL (BARTD)	04-ALA-077-0.33-OAK	5. Bridge not eligible for NRHP	1969	
33 0457	MARTINEZ STREET AERIAL (BARTD)	04-ALA-112-1.36-SLN	5. Bridge not eligible for NRHP	1969	
33 0460	18TH STREET OVERCROSSING	04-ALA-980-0.90-OAK	5. Bridge not eligible for NRHP	1973	
33 0465M	GOLDEN GATE AVENUE TUNNEL OH	04-ALA-024-R4.38-OAK	5. Bridge not eligible for NRHP	1970	
33 0473	DOUGHERTY DRAIN	04-ALA-580-19.62-PLE	5. Bridge not eligible for NRHP	1970	
33 0474	CHABOT CANAL	04-ALA-580-19.72-PLE	5. Bridge not eligible for NRHP	1994	
33 0475	PERALTA UP (BARTD)	04-ALA-084-9.66-FMT	5. Bridge not eligible for NRHP	1970	
33 0476	17TH STREET OVERCROSSING	04-ALA-980-0.86-OAK	5. Bridge not eligible for NRHP	1981	
33 0477K	17TH STREET RAMP SEPARATION	04-ALA-980-0.79-OAK	5. Bridge not eligible for NRHP	1981	
33 0478	14TH STREET OC	04-ALA-980-0.70-OAK	5. Bridge not eligible for NRHP	1981	
33 0479S	12TH STREET RAMP SEPARATION	04-ALA-980-0.62-OAK	5. Bridge not eligible for NRHP	1981	
33 0480	12TH STREET OC	04-ALA-980-0.60-OAK	5. Bridge not eligible for NRHP	1981	
33 0481	11TH STREET OC	04-ALA-980-0.54-OAK	5. Bridge not eligible for NRHP	1981	
33 0483F	ROUTE 980 SB CONNECTOR OC	04-ALA-980-0.02-OAK	5. Bridge not eligible for NRHP	1985	1990
33 0484G	N880-E980 CONNECTOR OC	04-ALA-880-R31.82-OAK	5. Bridge not eligible for NRHP	1985	
33 0485K	ROUTE 980/260 SEPARATION	04-ALA-980-0.01-OAK	5. Bridge not eligible for NRHP	1985	
33 0487	PERALTA STREET OC	04-ALA-123-0.15-EMV	5. Bridge not eligible for NRHP	1936	
33 0499	SUNNYSLOPE AVENUE OC	04-ALA-580-R26.66	5. Bridge not eligible for NRHP	1986	
33 0501	COLLIER CANYON CREEK	04-ALA-580-14.44	5. Bridge not eligible for NRHP	1972	
33 0507	STONERIDGE DRIVE OC	04-ALA-680-R19.30-PLE	5. Bridge not eligible for NRHP	1980	1991
33 0508	THORNTON AVENUE OC	04-ALA-084-R3.75-NWK	5. Bridge not eligible for NRHP	1983	1990
33 0509L	NEWARK OVERHEAD	04-ALA-084-R4.66-NWK	5. Bridge not eligible for NRHP	1983	
33 0509R	NEWARK OVERHEAD	04-ALA-084-R4.66-NWK	5. Bridge not eligible for NRHP	1983	
33 0510L	NEWARK BOULEVARD UC	04-ALA-084-R4.88-NWK	5. Bridge not eligible for NRHP	1983	
33 0510R	NEWARK BOULEVARD UC	04-ALA-084-R4.88-NWK	5. Bridge not eligible for NRHP	1983	
33 0511	LAKE BOULEVARD OC	04-ALA-084-R5.39-NWK	5. Bridge not eligible for NRHP	1983	

Structure Maintenance & Investigations

Historical Significance - State Agency Bridges

District 04

Alameda County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
33 0512M	NEWARK SEAL SLAB	04-ALA-084-R5.33-NWK	5. Bridge not eligible for NRHP	1983	
33 0513K	CONSTITUTION WAY OC	04-ALA-260-R0.86L-ALA	5. Bridge not eligible for NRHP	1985	
33 0515	PASEO PADRE PARKWAY OC	04-ALA-880-10.93-FMT	5. Bridge not eligible for NRHP	1981	1988
33 0516	WEST LAS POSITAS BLVD OC	04-ALA-680-R18.40-PLE	5. Bridge not eligible for NRHP	1984	
33 0518	DUMBARTON TOLL PLAZA POC	04-ALA-084-R3.21-FMT	5. Bridge not eligible for NRHP	1986	
33 0519	DUMBARTON TOLL PLAZA TUNNEL	04-ALA-084-R3.22-FMT	5. Bridge not eligible for NRHP	1986	
33 0520L	WEST PORTAL SERVICE ROAD OC 1	04-ALA-024-R5.85-OAK	5. Bridge not eligible for NRHP	1964	
33 0521	WEST PORTAL ROAD OC	04-ALA-024-R5.97-OAK	5. Bridge not eligible for NRHP	1964	
33 0522L	WEST PORTAL BLDG BR	04-ALA-024-R5.89-OAK	5. Bridge not eligible for NRHP	1964	
33 0523K	STROBRIDGE AVENUE OFF-RAMP	04-ALA-580-R30.80	5. Bridge not eligible for NRHP	1988	
33 0524F	EAST CONNECTOR SEPARATION (S238-E580)	04-ALA-238-R14.58	5. Bridge not eligible for NRHP	1988	
33 0525G	W580-N238 CONNECTOR SEPARATION	04-ALA-580-R30.80	5. Bridge not eligible for NRHP	1991	
33 0526G	NORTH CONNECTOR SEPARATION (N238-W580)	04-ALA-238-R14.49	5. Bridge not eligible for NRHP	1988	
33 0530	SFOBB TOLL PLAZA METERING LIGHTS BRIDGE	04-ALA-080-1.80-OAK	5. Bridge not eligible for NRHP	1974	
33 0540G	N238-S880 CONNECTOR OC	04-ALA-238-16.03-SLN	5. Bridge not eligible for NRHP	1991	
33 0543L	SFOBB TOLL PLAZA UTILITY TUNNEL & PUC	04-ALA-080-2.00-OAK	5. Bridge not eligible for NRHP	1949	1981
33 0543R	SFOBB TOLL PLAZA UTILITY TUNNEL & PUC	04-ALA-080-2.00-OAK	5. Bridge not eligible for NRHP	1939	1981
33 0544L	SAN MATEO-HAYWARD TOLL PLAZA TUNNEL	04-ALA-092-R2.59-HAY	5. Bridge not eligible for NRHP	1965	1989
33 0544M	SAN MATEO-HAYWARD TOLL PLAZA TUNNEL	04-ALA---HAY	5. Bridge not eligible for NRHP	1965	
33 0544R	SAN MATEO-HAYWARD TOLL PLAZA TUNNEL	04-ALA-092-R2.59-HAY	5. Bridge not eligible for NRHP	1965	
33 0551	HOPYARD DOUGHERTY ROAD OC	04-ALA-580-19.86-PLE	5. Bridge not eligible for NRHP	1988	1994
33 0553F	S880-W84 CONNECTOR PUC	04-ALA-880-10.31-FMT	5. Bridge not eligible for NRHP	1990	
33 0580S	ALAMO CANAL	04-ALA-680-R19.07-PLE	5. Bridge not eligible for NRHP	1991	
33 0581S	ALAMO CANAL	04-ALA-680-R19.18-PLE	5. Bridge not eligible for NRHP	1991	
33 0582S	ALAMO CANAL	04-ALA-680-R19.32-PLE	5. Bridge not eligible for NRHP	1991	
33 0583	DAVID S KARP OC	04-ALA-880-22.40-SLN	5. Bridge not eligible for NRHP	1994	
33 0584	HACIENDA DRIVE OC	04-ALA-580-18.82-PLE	5. Bridge not eligible for NRHP	1993	
33 0585	TASSAJARA/SANTA RITA ROAD OC	04-ALA-580-17.96-PLE	5. Bridge not eligible for NRHP	1993	2004
33 0591	STEVENSON BOULEVARD OC	04-ALA-880-6.24-FMT	5. Bridge not eligible for NRHP	1997	
33 0601	BAY BRIDGE HOV SEPARATION	04-ALA-080-3.14-EMV	5. Bridge not eligible for NRHP	1998	
33 0606L	ROUTE 13 CONNECTOR SEPARATION	04-ALA-013-R9.69-OAK	5. Bridge not eligible for NRHP	1996	
33 0607F	W24-S13 CONNECTOR SEPARATION	04-ALA-024-R4.90-BER	5. Bridge not eligible for NRHP	1998	
33 0609L	7TH STREET UNDERCROSSING	04-ALA-880-R33.50-OAK	5. Bridge not eligible for NRHP	1997	
33 0609R	7TH STREET UNDERCROSSING	04-ALA-880-R33.50-OAK	5. Bridge not eligible for NRHP	1997	
33 0610M	7TH STREET SEAL SLAB	04-ALA-880-R33.52-OAK	5. Bridge not eligible for NRHP	1997	
33 0611K	EAST BAY VIADUCT OFF-RAMP	04-ALA-880-R34.50L	5. Bridge not eligible for NRHP	1994	
33 0611L	EAST BAY VIADUCT	04-ALA-880-R34.50L-OAK	5. Bridge not eligible for NRHP	1998	
33 0611R	EAST BAY VIADUCT	04-ALA-880-R34.00R-OAK	5. Bridge not eligible for NRHP	1998	
33 0611S	EAST BAY VIADUCT ON-RAMP	04-ALA-880-R34.50R-OAK	5. Bridge not eligible for NRHP	1997	
33 0612E	PORT OF OAKLAND CONNECTOR VIADUCT	04-ALA-080-2.44-OAK	5. Bridge not eligible for NRHP	1996	
33 0613L	W80 HOV-TOLL PLAZA OC	04-ALA-080-2.39-OAK	5. Bridge not eligible for NRHP	1997	
33 0616L	5TH & 6TH STREET VIADUCT	04-ALA-880-R32.20-OAK	5. Bridge not eligible for NRHP	1998	

Structure Maintenance & Investigations

Historical Significance - State Agency Bridges

District 04

Alameda County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
33 0616R	5TH & 6TH STREET VIADUCT	04-ALA-880-R32.20-OAK	5. Bridge not eligible for NRHP	1998	
33 0618	FREMONT BOULEVARD OC	04-ALA-880-11.50-FMT	5. Bridge not eligible for NRHP	1998	
33 0619R	SAN LEANDRO BARTD OH	04-ALA-238-15.30-SLN	5. Bridge not eligible for NRHP	1994	
33 0620	MISSION BLVD UP (BARTD)	04-ALA-185-1.99-SLN	5. Bridge not eligible for NRHP	1986	
33 0623S	MARITIME OFF-RAMP	04-ALA-080-2.30-OAK	5. Bridge not eligible for NRHP	1995	
33 0624S	MARITIME-E80 ON-RAMP OC	04-ALA-080-2.55-OAK	5. Bridge not eligible for NRHP	1996	
33 0628F	S680-E580 CONNECTOR SEPARATION	04-ALA-680-R20.72-PLE	5. Bridge not eligible for NRHP	2001	
33 0630	JONES AVENUE POC	04-ALA-880-24.90-OAK	5. Bridge not eligible for NRHP	1998	
33 0631	ALVARADO-NILES ROAD OC	04-ALA-880-13.00	5. Bridge not eligible for NRHP	1998	
33 0638	RADIO STATION ROAD BRIDGE	04-ALA-080-2.36-OAK	5. Bridge not eligible for NRHP	1997	
33 0641R	CASTRO VALLEY PUC (BART)	04-ALA-580-R29.49	5. Bridge not eligible for NRHP	1993	
33 0642K	ALAMO CANAL	04-ALA-580-20.56-PLE	5. Bridge not eligible for NRHP	2002	
33 0643G	N680-E580 CONNECTOR	04-ALA-680-R20.01-PLE	5. Bridge not eligible for NRHP	2001	
33 0644F	S680-W580 CONNECTOR OC	04-ALA-680-R20.22-PLE	5. Bridge not eligible for NRHP	2001	
33 0645S	BIG CANYON CREEK	04-ALA-680-R20.32-DBLN	5. Bridge not eligible for NRHP	2000	
33 0649	BARTD AERIAL (M3002) @ 7TH ST	04-ALA-880-R33.48-OAK	5. Bridge not eligible for NRHP	1995	
33 0655	BREAKWATER AVENUE POC	04-ALA-092-R3.88-HAY	5. Bridge not eligible for NRHP	2002	
33 0659	ELDRIDGE AVENUE POC	04-ALA-880-16.03-HAY	5. Bridge not eligible for NRHP	2010	
33 0660	AIRPORT DRIVE UC	04-ALA-061-15.90-OAK	5. Bridge not eligible for NRHP	2001	
33 0661	EASTSHORE POC	04-ALA-080-5.70-BER	5. Bridge not eligible for NRHP	2002	
33 0662	52ND STREET ON-RAMP UP	04-ALA-024-R2.80-OAK	5. Bridge not eligible for NRHP	1968	
33 0665F	WB262-SB880/880 CONNECTOR/SEPARATION	04-ALA-880-2.48-FMT	5. Bridge not eligible for NRHP	2008	
33 0666F	S 880 - E 262 CONNECTOR SEPARATION	04-ALA-880-2.55-FMT	5. Bridge not eligible for NRHP	2009	
33 0667	WARREN AVENUE OC	04-ALA-880-2.51-FMT	5. Bridge not eligible for NRHP	2009	
33 0668	WARREN AVE OC (N880-E262)	04-ALA-880-2.29-FMT	5. Bridge not eligible for NRHP	2009	
33 0669	KATO ROAD OVERCROSSING	04-ALA-262-R0.28	5. Bridge not eligible for NRHP	2008	
33 0673	ARROYO LAS POSITAS	04-ALA-580-R9.40-LVMR	5. Bridge not eligible for NRHP	1969	
33 0674Y	EBMUD SEWER OUTFALL	04-ALA-080-2.01-OAK	5. Bridge not eligible for NRHP	1997	
33 0675	LAKE CHABOT CULVERT	04-ALA-580-30.10	5. Bridge not eligible for NRHP	1980	
33 0676G	N 880-W 92 / E 92-N 880 CONNECTOR SEPARATION	04-ALA-880-16.79-HAY	5. Bridge not eligible for NRHP	2011	
33 0677	SR 92 / I 880 SEPARATION	04-ALA-092-6.35-HAY	5. Bridge not eligible for NRHP	2011	
33 0678F	W 92-S 880 / I 880 SEPARATION	04-ALA-092-6.37-HAY	5. Bridge not eligible for NRHP	2010	
33 0679G	E 92-N 880 / I 880 & S 880-E 92 SEPARATION	04-ALA-092-6.27-HAY	5. Bridge not eligible for NRHP	2009	
33 0680	UNION STREET RAMP UP	04-ALA-880-R32.58-OAK	5. Bridge not eligible for NRHP	1968	
33 0681S	ROUTE 880 ON-RAMP OC	04-ALA-880-27.70-OAK	5. Bridge not eligible for NRHP	2013	
33 0693R	ROUTE 580/205 SEPARATION	04-ALA-580-0.40R	5. Bridge not eligible for NRHP	2009	
33 0710	ARROYO DEL VALLE	04-ALA-084-R25.45-LVMR	5. Bridge not eligible for NRHP	1983	2019
33 0711	STANLEY BLVD OC	04-ALA-084-R26.98-LVMR	5. Bridge not eligible for NRHP	2003	
33 0712	ISABEL AVENUE UP	04-ALA-084-R27.00-LVMR	5. Bridge not eligible for NRHP	2003	
33 0713	ARROYO MOCHO	04-ALA-084-R27.10-LVMR	5. Bridge not eligible for NRHP	2003	2014
33 0722	ARROYO LAS POSITAS OC	04-ALA-580-13.22	5. Bridge not eligible for NRHP	2011	

Structure Maintenance & Investigations

Historical Significance - State Agency Bridges

District 04

Alameda County

Bridge Number	Bridge Name	Location	Historical Significance	Year Built	Year Wid/Ext
33 0723	84/580 SEPARATION (ISABEL AVE)	04-ALA-084-N28.15-LVMR	5. Bridge not eligible for NRHP	2011	
33 0724	ARROYO LAS POSITAS	04-ALA-084-M27.74-LVMR	5. Bridge not eligible for NRHP	2011	
33 0725	PATTON STREET UP	04-ALA-024-R4.16-OAK	5. Bridge not eligible for NRHP	1970	
33 0726R	NB ROUTE 238/185 SEPARATION	04-ALA-238-14.93	5. Bridge not eligible for NRHP	2010	
33 0727	NORTH NILES UNDERPASS	04-ALA-238-3.77-FMT	5. Bridge not eligible for NRHP	2006	
33 0728	SOUTH NILES UNDERPASS	04-ALA-238-3.40-FMT	5. Bridge not eligible for NRHP	2006	
33 0729	PLEASANTON BART WB POC	04-ALA-580-20.98-PLE	5. Bridge not eligible for NRHP	2015	
33 0730	PLEASANTON BART EB POC	04-ALA-580-20.98-PLE	5. Bridge not eligible for NRHP	2015	
33 0732L	HIGH STREET SEPERATION & OH	04-ALA-880-27.63-OAK	5. Bridge not eligible for NRHP	2013	
33 0732R	HIGH STREET SEPARATION&OH	04-ALA-880-27.63-OAK	5. Bridge not eligible for NRHP	2013	
33 0733	ACFC CHANNEL LINES I & J	04-ALA-580-R29.23-CAVA	5. Bridge not eligible for NRHP	2011	
33 0735	MARINA BLVD OC	04-ALA-880-22.84-SLN	5. Bridge not eligible for NRHP	2016	
33 0736	ROUTE 112/880 SEPARATION	04-ALA-112-R0.47-SLN	5. Bridge not eligible for NRHP	2016	
33 0739	CLARK AVENUE OH	04-ALA-238-16.14	5. Bridge not eligible for NRHP	2010	
33 0740	HEGENBERGER UP (BARTD AERIAL)	04-ALA-880-25.54-OAK	5. Bridge not eligible for NRHP	2014	
33 0742Y	EBMUD SEWER OUTFALL, WEST END	04-ALA-080-1.71-OAK	5. Bridge not eligible for NRHP	2019	
33 0750	CALAROGA AVENUE OC	04-ALA-092-R6.03-HAY	5. Bridge not eligible for NRHP	2011	
33 0751	29TH AVENUE OVERCROSSING	04-ALA-880-28.69-OAK	5. Bridge not eligible for NRHP	2020	
33 0752S	29 TH AVENUE OFF-RAMP	04-ALA-880-28.69	5. Bridge not eligible for NRHP	2020	
33 0753	23RD AVENUE OC	04-ALA-880-28.95-OAK	5. Bridge not eligible for NRHP	2020	
33 0754	5TH AVENUE OVERHEAD	04-ALA-880-30.38-ALA	5. Bridge not eligible for NRHP	2013	
33 0755	DOOLITTLE BRIDGE OVERHEAD	04-ALA-061-R15.61-OAK	5. Bridge not eligible for NRHP	2014	
33 0756	ESTUDILLO CANAL	04-ALA-880-20.96-SLN	5. Bridge not eligible for NRHP	1995	
33 0756Y	ESTUDILLO CANAL	04-ALA-000-20.96-SLN	5. Bridge not eligible for NRHP	1996	
33 0757Y	BEARD CREEK	04-ALA-084-R3.63	5. Bridge not eligible for NRHP	2018	
33 0758	SHERIDAN ROAD OC	04-ALA-680-R8.32	5. Bridge not eligible for NRHP	2020	
33 0760L	SAN MATEO-HAYWARD MAIN TOLL PLAZA CANOPY	04-ALA-092-R2.59	5. Bridge not eligible for NRHP	1992	
33 0761L	SAN MATEO-HAYWARD MINI TOLL PLAZA CANOPY	04-ALA-092-R2.69	5. Bridge not eligible for NRHP	2003	
33 0762Z	OAKLAND SHORE OBSERVATION DECK	04-ALA---OAK	5. Bridge not eligible for NRHP	2020	

Attachment C: Phase I Initial Site Assessment

Attachment D: Noise Technical Memorandum

Attachment E: Air Quality Conformity Analysis

Attachment F: Water Quality Assessment Report

Attachment G: Visual Impact Assessment Memorandum

Attachment H: Historic Property Survey Report and Archaeological Survey Report