WEST OAKLAND LINK INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

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Appendices (see USB on back cover)

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Acronyms and Abbreviations

AB	Assembly Bill
AB 32	California's Global Warming Solutions Act
AB 939	California Integrated Waste Management Act of 1989
ABAG	Association of Bay Area Governments
AC Transit	Alameda-Contra Costa Transit District
ACCWP	Alameda Countywide Clean Water Program
ACTC	Alameda County Transportation Commission
ADA	Americans with Disability Act
APE	Area of Potential Effect
AR4	Fourth Assessment Report
ARB	California Air Resources Board
ASR	Archaeological Survey Report
ATCM	air toxic control measures
BAAQMD	Bay Area Air Quality Management District
Basin No. 2-9.04	Santa Clara Valley Groundwater Basin
basin plans	Water Quality Control Plans
BATA	Bay Area Toll Authority
Bay Area	San Francisco Bay Area
Bay Bridge Trail	existing bicycle/pedestrian path connecting to and on the Bay Bridge
BCDC	Bay Conservation and Development Commission
BFO	Bureau of Field Operations
bgs	below ground surface
Bike Lane	Class II Bikeway
Bike Path	Class I Bikeway
BMP	best management practices
BNSF	BNSF Railway
Board	Board of Forestry and Fire Protection
C&D	construction and demolition
C&D Recycling Ordinance	Construction and Demolition Debris Reduction and Recycling Ordinance
CAAQS	California ambient air quality standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emission Estimator Model
Cal-IPC	California Invasive Plant Council
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAS612008	City of Oakland's Alameda County Phase 1 NPDES Permit

CCR	California Code of Regulations
CDFA	California Department of Food and Agriculture
CE	categorical exclusion
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Department of Fish and Game Commission
CFR	Code of Federal Regulations
CH_4	methane
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CHSC	California Health and Safety Code
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNPPA	California Native Plant Protection Act
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CO-CAT	California Climate Action Team
CRHR	California Register of Historical Resources
CRLF	California red-legged frog
CTC	California Transportation Commission
CUPA	certified unified program agency
CWA	Clean Water Act
CWC	California Water Code
dB	decibel
dBA	A-weighted decibels
dbh	diameter at breast height
DEED	deed restriction listing
DPM	particulate matter from diesel-fueled engines
DRRP	Diesel Risk Reduction Plan
DSA	Disturbed Soil Area
DTSC	Department of Toxic Substances Control
EBCE	East Bay Community Energy
EBMUD	East Bay Municipal Utility District
EBRPD	East Bay Regional Park District
ECAP	Equitable Climate Action Plan
EMSD	Emergency Management Services Division
EO	Executive Order

EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FR	Federal Register
General Construction Permit	General Construction Activity Stormwater Permit
GHG	greenhouse gas
GSAs	groundwater sustainability agencies
GSPs	groundwater sustainability plans
GWP	global warming potential
HI	High Index
HM	hydromodification management
HRER	Historical Resources Evaluation Report
I-	Interstate
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Plan
IS	initial study
LED	light-emitting diode
Link	new bicycle/pedestrian path connection
LOS	level of service
LRA	Local Responsibility Area
MBTA	Migratory Bird Treaty Act
MEP	maximum extent practicable
mgd	million gallons per day
MMT	million metric tons
MND	mitigated negative declaration
MR	Map Reference
MS4	Municipal Separate Storm Sewer System
MT	metric ton
MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act

NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOA	naturally occurring asbestos
NOAA	National Oceanic and Atmospheric Administration
NO_X	Nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRC	National Research Council
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
O&M	operation and maintenance
OAB	Oakland Army Base
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OFD	Oakland Fire Department
OHP	Office of Historic Preservation
OMSS	Oakland Maritime Support Services
OPC	Ocean Protection Council
Order No. 2009-0009-DWQ, and amended by Order No. 2012-0006-DWQ	Construction General Permit
Order No. 2009-009-DWQ, as amended by 2012-0006-DWG	NPDES Construction General Permit
Order No. 2012-0011-DWQ	Statewide Stormwater Permit
Order No. 2018-0026	Groundwater General Permit
Order No. R2-2015-0049	San Francisco Bay Region Municipal Regional Stormwater NPDES Permit
Order No. R2-2017-0048	VOC and Fuel General Permit
OSCAR	Open Space, Conservation, and Recreation
PAHs	polyaromatic hydrocarbons
PCBs	polychlorinated biphenyls
PG&E	Pacific Gas and Electric
Phase I ISA	Phase I Initial Site Assessment, San Francisco-Oakland Bay Bridge Bicycle/Pedestrian Connection, Oakland, California
PM	particulate matter
PM10	particulate matter less than or equal to 10 microns in diameter
PM2.5	particulate matter less than or equal to 2.5 microns in diameter
Porter-Cologne Act	Porter Cologne Water Quality Control Act
PPDG	Project Planning and Design Guide
PPV	peak particle velocity
PRC	Public Resources Code

Project	Bicycle/Pedestrian Connection Project
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act of 1976
RECs	recognized environmental concerns
Regional Water Board	Regional Water Quality Control Board
RMP	Risk Management Plan
ROG	reactive organic gases
RPS	Renewable Portfolio Standard
San Francisco Bay MRP	San Francisco Bay Region Municipal Regional Stormwater NPDES Permit
SB	Senate Bill
SCA	Standard Conditions of Approval
sf	square feet
SF_6	sulfur hexafluoride
SFBAAB	San Francisco Bay Area Air Basin
SFHA	Special Flood Hazard Area
SFOBB	San Francisco-Oakland Bay Bridge
SGMA	Sustainable Groundwater Management Act of 2014
SHPO	State Historic Preservation Office
SLR	sea level rise
SO_2	sulfur dioxide
SR 24	California State Route 24
SRA	State Responsibility Area
State Water Board	State Water Resources Control Board
SVP	Society of Vertebrate Paleontology
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TACs	toxic air contaminants
TMDL	total maximum daily load
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDA	U.S. Department of Agriculture
U.S. EIA	U.S. Energy Information Administration
USGS	U.S. Geological Survey
v/c ratio	volume-to-capacity ratio
VOC	Volatile Organic Compound
WDRs	Waste Discharge Requirements
WOSP	West Oakland Specific Plan

Chapter 1
Proposed Project

1.1 Introduction

The proposed project is the West Oakland Link (Project or Link). It is a new bicycle/pedestrian path connection between West Oakland and the bike path leading to the East Span of the San Francisco Oakland Bay Bridge (Bay Bridge) in Oakland, California (**Figure 1-1**). The Link would connect to existing segments of the regional San Francisco Bay Trail. In addition, the Link would provide safe access to the newly constructed bicycle/pedestrian path connecting to and on the Bay Bridge (Bay Bridge Trail), as well as a connection between West Oakland and the Port via the Class I trail along the east side of Maritime Street.

The Class I Link would be approximately 6,030 feet (1.14 mile) in length. On the west end, the Link would connect to the Bay Bridge Trail near the Caltrans maintenance facility on the south side of the Bay Bridge toll plaza. On the east end, the Link would connect to the existing bicycle/pedestrian path on Mandela Parkway in West Oakland. In addition, at the east end, there would be 8,170 feet of Class II bike lanes on surface streets. There may also be a 100-space parking lot on Wood Street. There could be stormwater treatment areas on undeveloped land west of Wood Street and landscaping in the Mandela Parkway median and along the Class I Link. Refer to **Figures 1-2** and **1-3**.

The Link was originally proposed by the Gateway Park Working Group as an element of Gateway Park, which is now named Judge John Sutter Regional Shoreline. The Gateway Park Working Group includes the following nine local, regional and state agencies: The Bay Area Toll Authority (BATA), the California Department of Transportation (Caltrans), San Francisco Bay Conservation and Development Commission (BCDC), California Transportation Commission (CTC), East Bay Regional Park District (EBRPD), City of Oakland, Port of Oakland, East Bay Municipal Utility District (EBMUD), and Association of Bay Area Governments (ABAG's). Subsequently, the Link, with its own independent utility and logical termini, was bifurcated from the Judge John Sutter Regional Shoreline project to become a standalone project. The agency responsible for operation and maintenance of the Link is anticipated to be Caltrans with full financial contribution from BATA.

Caltrans is the lead agency under the National Environmental Policy Act (NEPA). BATA is the lead agency under the California Environmental Quality Act (CEQA). The environmental documents are a CEQA initial study/mitigated negative declaration (IS/MND) and a NEPA categorical exclusion (CE). BATA has been working in close cooperation with Caltrans during the development of the project and environmental document.

This IS has been prepared in compliance with CEQA to support the proposed MND, the NEPA CE, and other required permits and approvals.

1.2 Project Purpose

The purpose of the Project is to provide a safe connection for bicyclists and pedestrians to travel between West Oakland and the Bay Bridge Trail and the Class I trail along the east side of Maritime Street. The area in between is occupied by industry, roadways, railways and Interstate (I-) 880. Current access for bicyclists and pedestrians is on roadways extending through the industrial area that have heavy truck traffic, roadway intersections, and multiple at-grade rail crossings at Burma Road.

Project Location

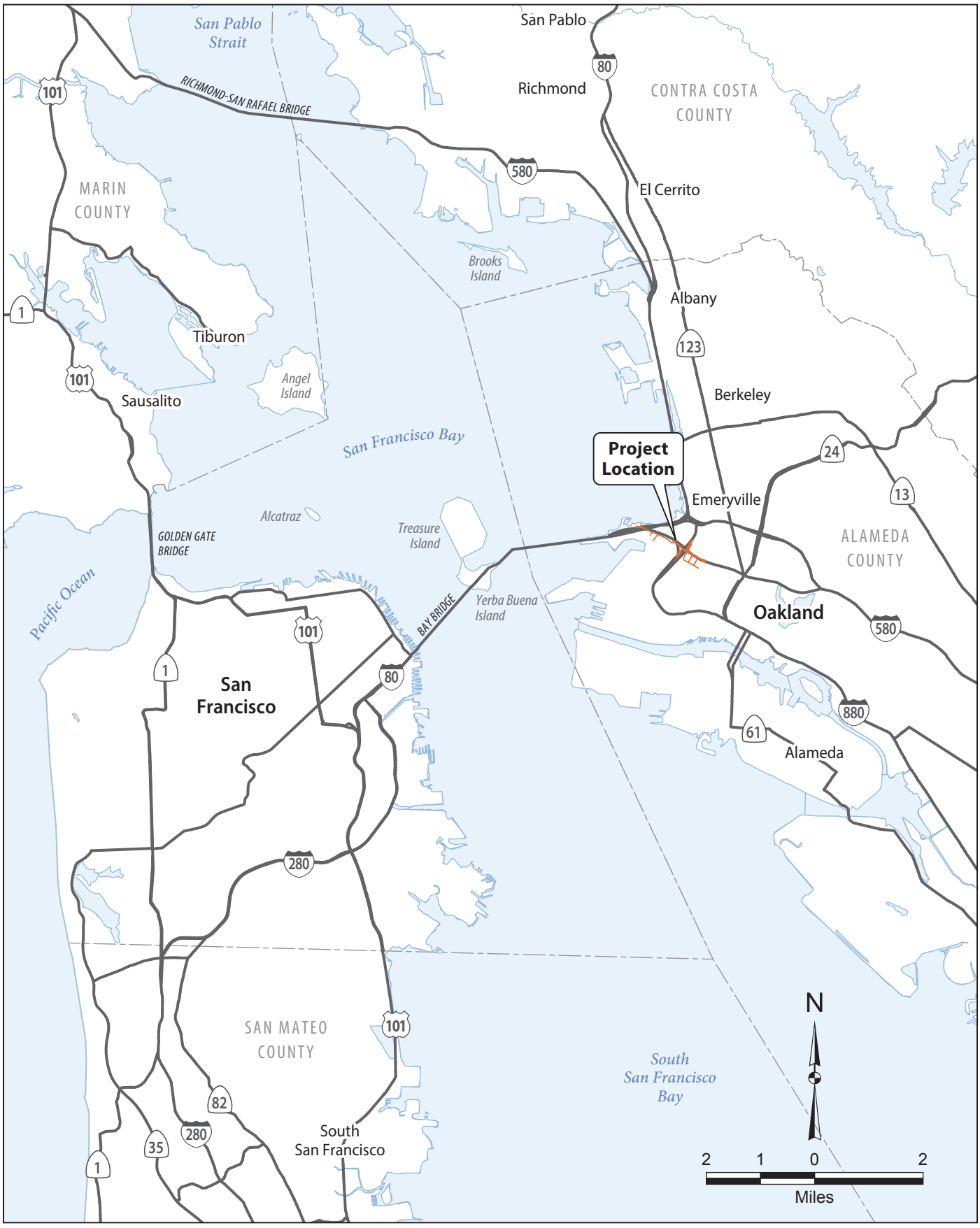


Figure 1-1

West Oakland Link

Project Area

Figure 1-2

West Oakland Link

Bike Path Segments

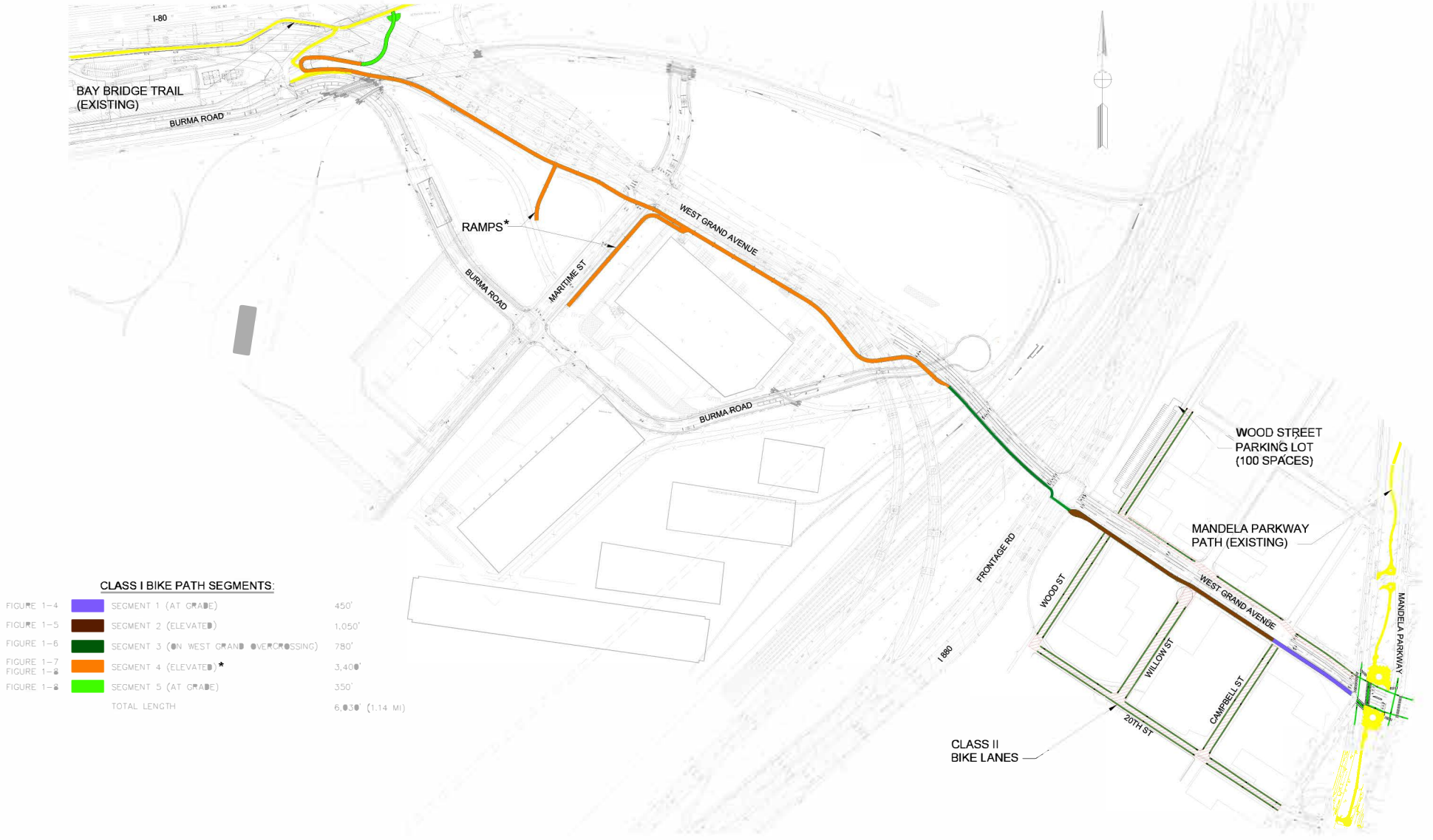


Figure 1-3

Path

1.3 Project Description

The Project is a new Class I bike path[1] on Wood Street located in the City of Oakland, Alameda County, near the I-880 and I-80 interchange and the East Span of the Bay Bridge (**Figures 1-1**, **1-2**, and **1-3**).

The Class I portion of the Link would extend 6,030 feet (1.14 miles) between Mandela Parkway on the east and the Bay Bridge Trail on the west. The Link is an elevated structure for most of this distance to provide access across existing freeways, railways and industrial areas. It is an independent structure, except over the railroad tracks where it would be on the West Grand Avenue overcrossing structure. The elevated Link reaches a maximum height of 37 feet where it is on the overcrossing structure.

The Class I portion of the Link would be 17 feet wide (15 feet clear width and 2 feet for fencing), except on the West Grand Avenue overcrossing structure where it reduces to 14 feet wide (10 feet clear width and 4 feet for barrier and fencing). The Link would have a maximum grade of 5 percent. The Link would be open at all times and would have low level lighting (refer to Section 1.3.4.4).

The Project would also include 8,170 feet of Class II bike lanes. The Class II bike lanes constructed for the Link would extend along surface streets near the east touchdown of the Link, providing connections to Mandela Parkway and to the proposed Wood Street parking lot. A 100-space parking lot would be constructed at the east end of the Class I portion of the Link, if funding is available.

The Project could also include an innovative spur connection to the proposed Oakland Maritime Support Services (OMSS) building and is designed to land on the roof of this building. This connection would provide lookout areas for path users and access for first responders when attempting to reach path users in the event of an emergency.

The Class I portion of the Link at the Maritime Street area could also include a ramp that would tie in to the Class I path along the east side of Maritime Street and connect with the Port of Oakland.

The Project would require the conversion of roadway shoulders to bicycle path for the Link, and lane reduction at the West Grand Avenue/Mandela Parkway intersection.

1.3.1 Class I Link Segments

The Class I portion of the Link has been divided into the following five segments described below from east to west (**Figure 1-3**).

1. Segment 1: At-Grade Connection to Mandela Parkway
2. Segment 2: Separate Elevated Structure East
3. Segment 3: West Grand Avenue Overcrossing

[1] Bicycle Path Classifications:

- **Class I bikeways (bike paths)** are separate paths with exclusive right-of-way for bicycles and pedestrians, with minimal vehicular crossings.
- **Class II bikeways (bike lanes)** are striped lanes on streets, separating bicycles from vehicles, within the road right-of-way.
- **Class III bikeways** are lanes shared with motor vehicles.
- **Class IV bikeways (separated bikeways)** are bikeway for the exclusive use of bicycles.

Source: California Department of Transportation. Highway Design Manual. Chapter 1000 Bicycle Transportation Design. Last updated July 1, 2000. https://dot.ca.gov/-/media/dot-media/programs/design/documents/chp1000-a11y.pdf.

4. Segment 4: Separate Elevated Structure West
5. Segment 5: At-Grade Connection to Bay Bridge Trail
6. Ramp Connection to Class I Path along East Side of Maritime Street
7. Ramp Connection to OMSS Building

1.3.1.1 Segment 1: At-Grade Connection to Mandela Parkway

The Class I portion of the Link would be at-grade along the south side of West Grand Avenue, between Mandela Parkway and Campbell Street (**Figure 1-4**). This segment would be approximately 450 feet long and 15-feet wide since no fencing is required. There would be a landscaped island on the north side of the Link to separate the Link from vehicular traffic.

On the west side of the West Grand Avenue/Mandela Parkway intersection, the eastbound through lanes on West Grand Avenue would be reduced from three (existing) to two (future with Project).

Campbell Street and Willow Street would dead end or become a cul-de-sac where they intersect with the West Grand Avenue alley (the extension of West Grand Avenue that extends between Campbell Street and Wood Street) on the south side of West Grand Avenue. This would prevent regular vehicular traffic from crossing the new Class I portion of the Link because there would not be adequate vertical clearance under the Link structure for vehicles. The West Grand Avenue alley on the south side of the West Grand Avenue structure would be permanently closed to vehicular traffic or vacated. The north side of the West Grand Avenue alley would remain open.

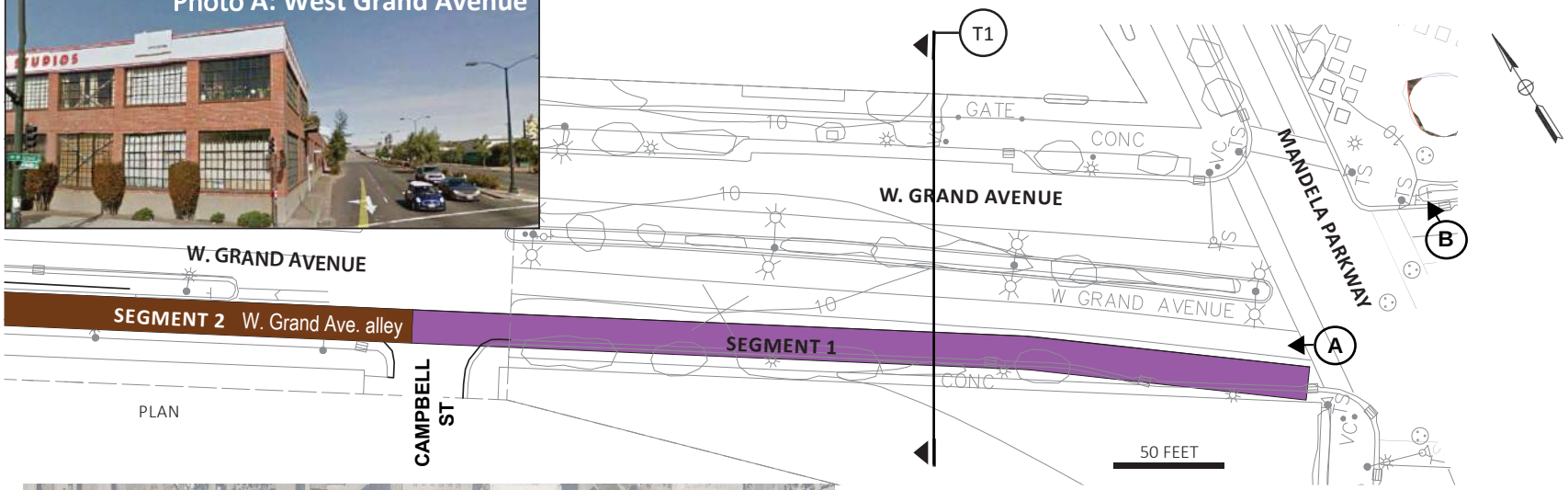
1.3.1.2 Segment 2: Separate Elevated Structure East

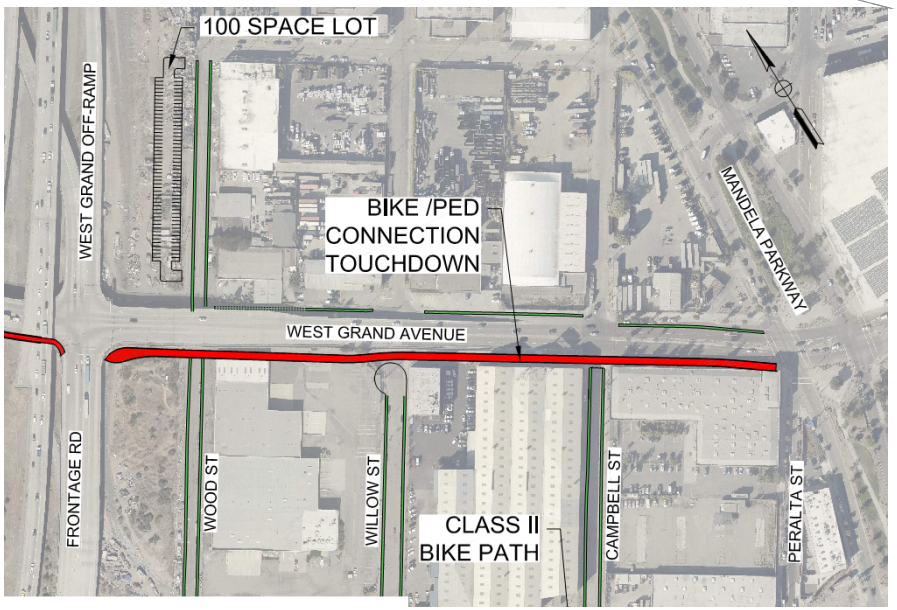
From Campbell Street, the Class I portion of the Link would continue for approximately 1,050 feet as a separate structure along the south side of West Grand Avenue (**Figure 1-5a**). The Link would increase in elevation with a gradient that would be Americans with Disability Act (ADA) compliant and then cross over Willow Street and Wood Street (**Figure 1-5b**). After the Wood Street crossing, the Link would connect to the existing West Grand Avenue overcrossing (refer to Segment 3, below) just east of Frontage Road. The West Grand Avenue/Frontage Road crosswalk would be improved. Construction of this segment would require modifications to the West Grand Avenue alley, Campbell Street, and Willow Street. The West Grand Avenue alley is the narrow one-way (eastbound) street on the south side of West Grand Avenue, between Mandela Parkway and Wood Street. The alley would be permanently closed to vehicular traffic or vacated. Where Campbell Street currently intersects with West Grand Avenue, bollards would be installed to allow emergency vehicles access to Campbell Street but prevent regular vehicular traffic from crossing the new Class I portion of the Link on the south side of West Grand Avenue. Where Willow Street currently intersects with West Grand Avenue, a cul-de-sac would be created on the south side to prevent vehicular traffic, other than emergency vehicles, from crossing the new Class I portion of the Link.

1.3.1.3 Segment 3: West Grand Avenue Overcrossing

After the Wood Street overcrossing, the Class I portion of the Link would continue on the West Grand Avenue overcrossing for approximately 780 feet (**Figure 1-6a**). It would cross over Frontage Road and narrow-gauge railroad tracks (or a spur line), under I-880 freeway structures, and over the Port of Oakland as well as BNSF Railway (BNSF) and Union Pacific Railroad (UPRR) tracks (**Figure 1-6b**). The width of the eastbound travel lanes would be reduced by 1 to 2 feet to provide enough width for the Link, using the existing West Grand Avenue structure. After crossing the railroad tracks, the Link would continue as a separate structure on the south side of West Grand Avenue (refer to Segment 4).

Bike Path Segment 1





X ▶ Direction and Location of Photo

Photo B: Mandela Parkway

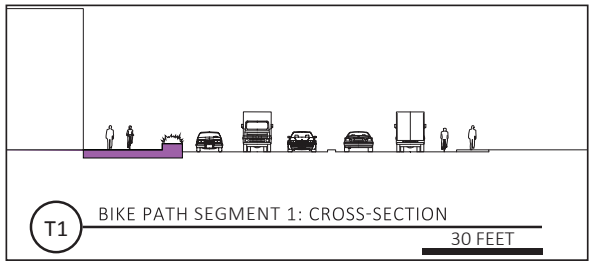


Figure 1-4

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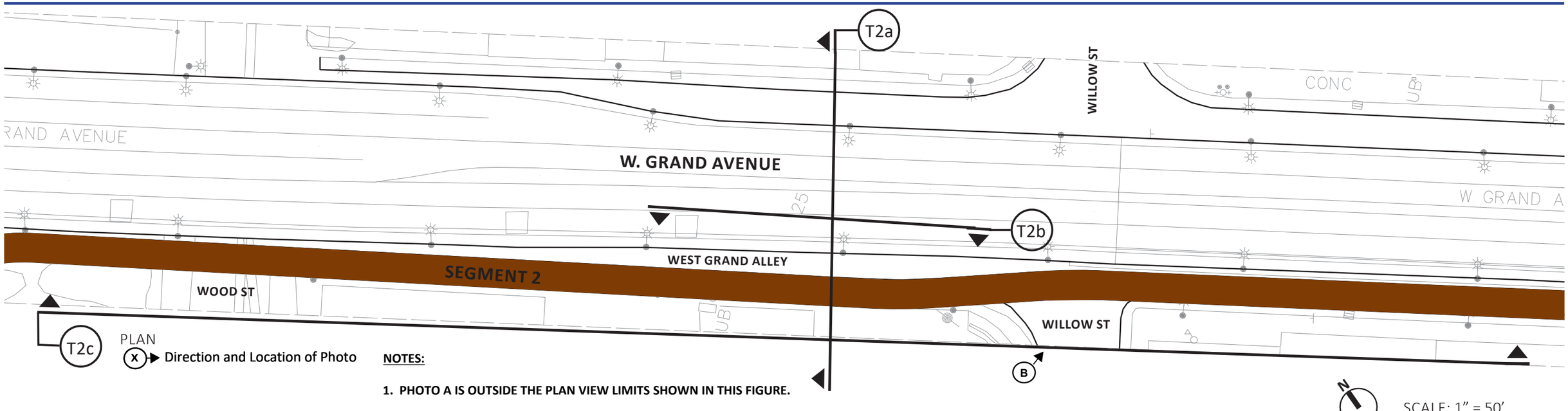
Bike Path Segment 2



NOTES:

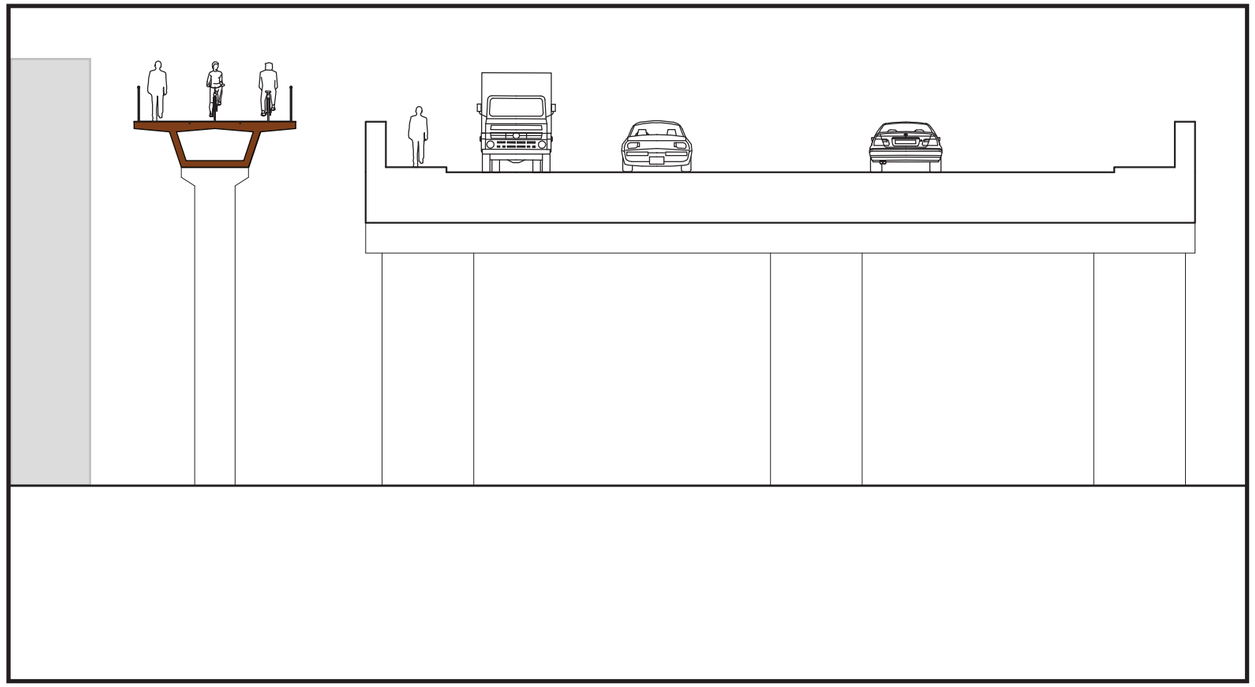
1. **PHOTO A IS OUTSIDE THE PLAN VIEW LIMITS SHOWN IN THIS FIGURE.**
2. **FOR LOCATION OF PHOTO A, SEE LOCATION OF SIMULATED KEY VIEW 4 IN FIGURE 2.1-1.**

Photo A: West Grand Avenue

Photo B: Willow Street

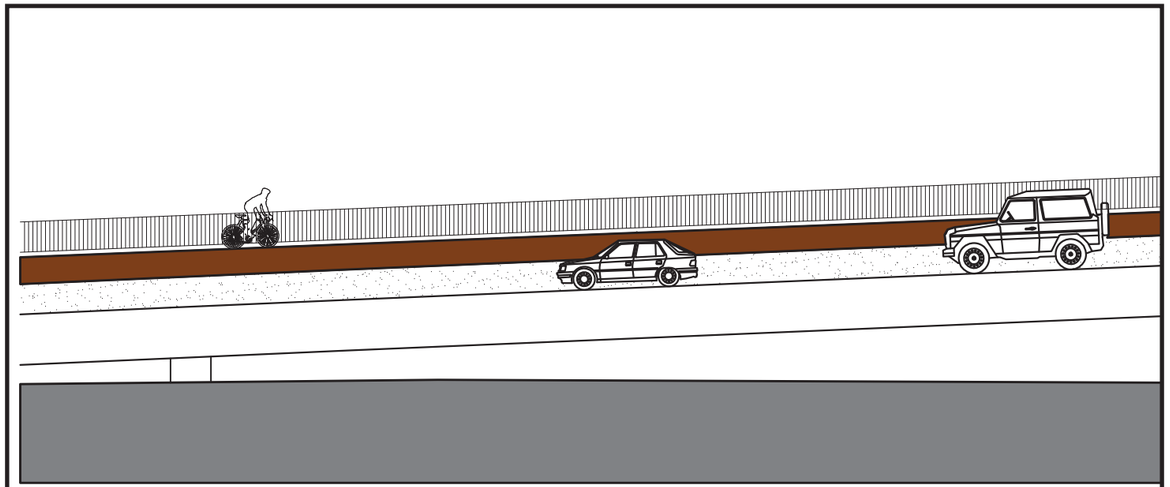
Figure 1-5a

Bike Path Segment 2



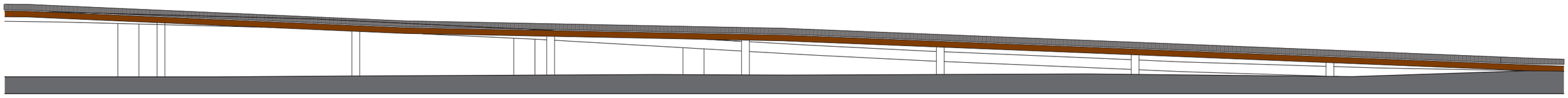
T2a SEGMENT 2: CROSS SECTION

SCALE: 1” = 15’



T2b SEGMENT 2: ELEVATION LOOKING SOUTH

SCALE: 1” = 15’

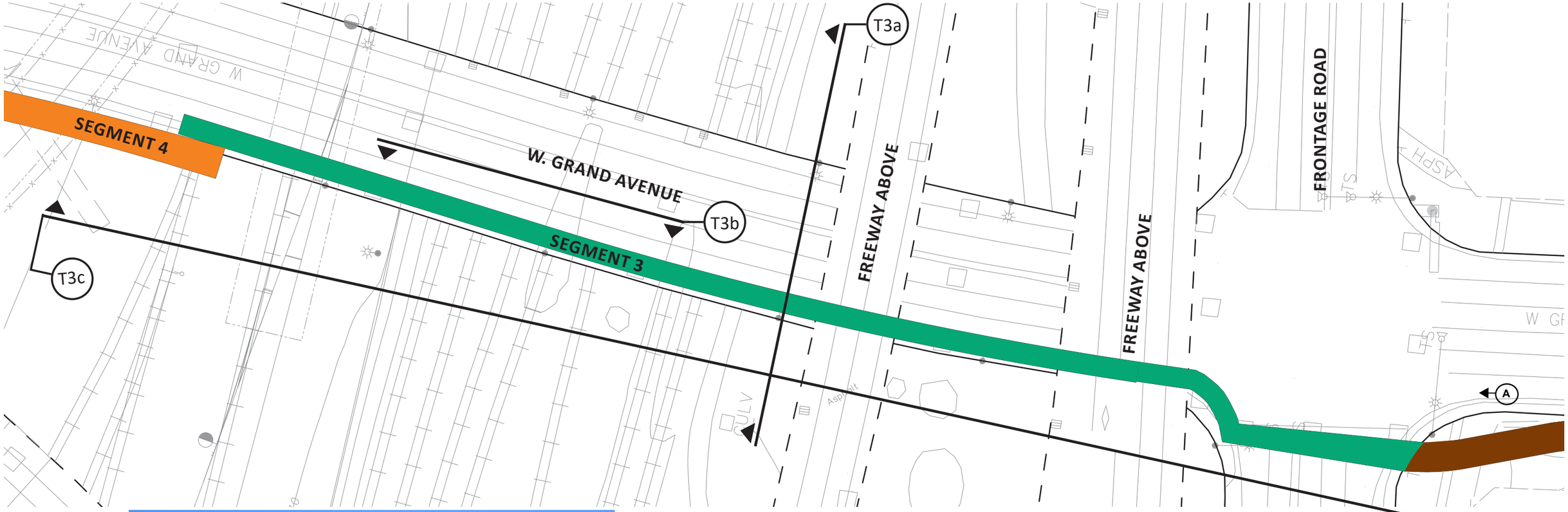


T2c BIKE PATH ELEVATION LOOKING NORTH

SCALE: 1” = 50’

Figure 1-5b

Bike Path Segment 3



PLAN

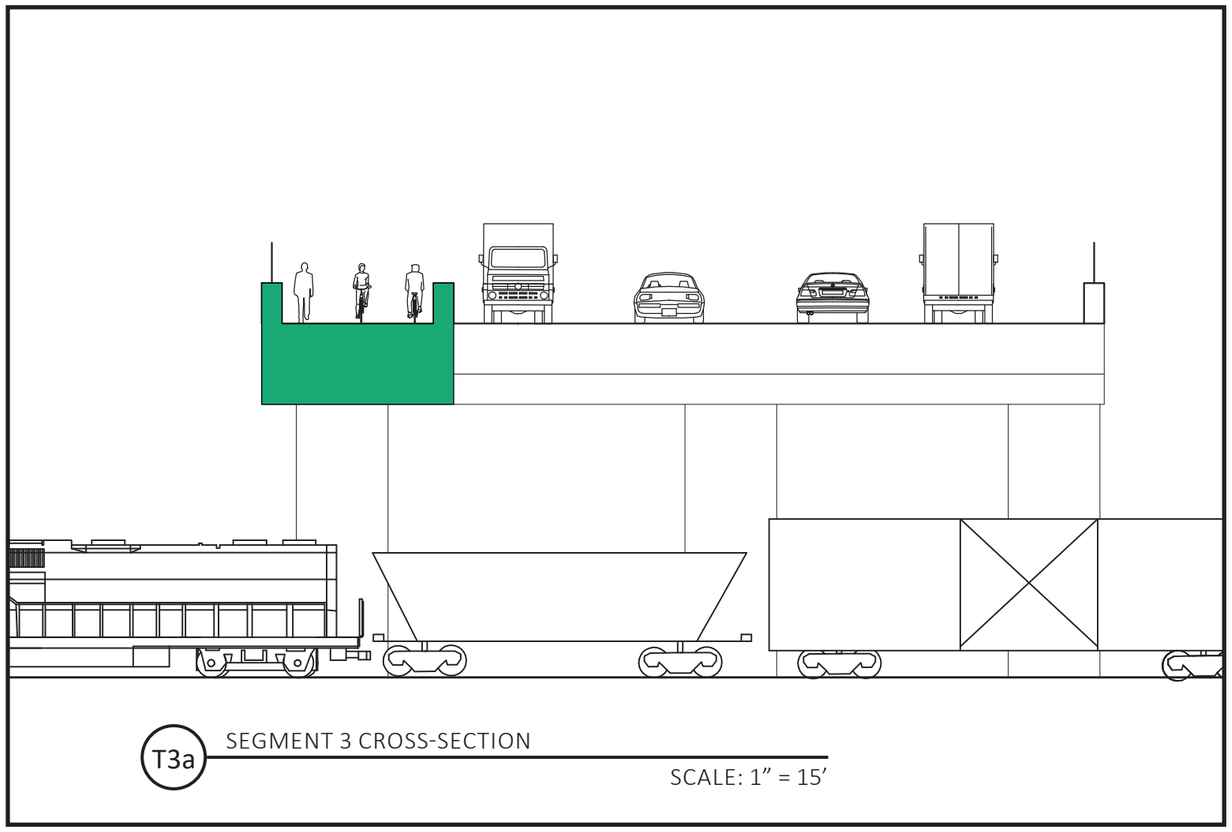
SCALE: 1” = 50’

Photo A: West Grand Avenue

X ▶ Direction and Location of Photo

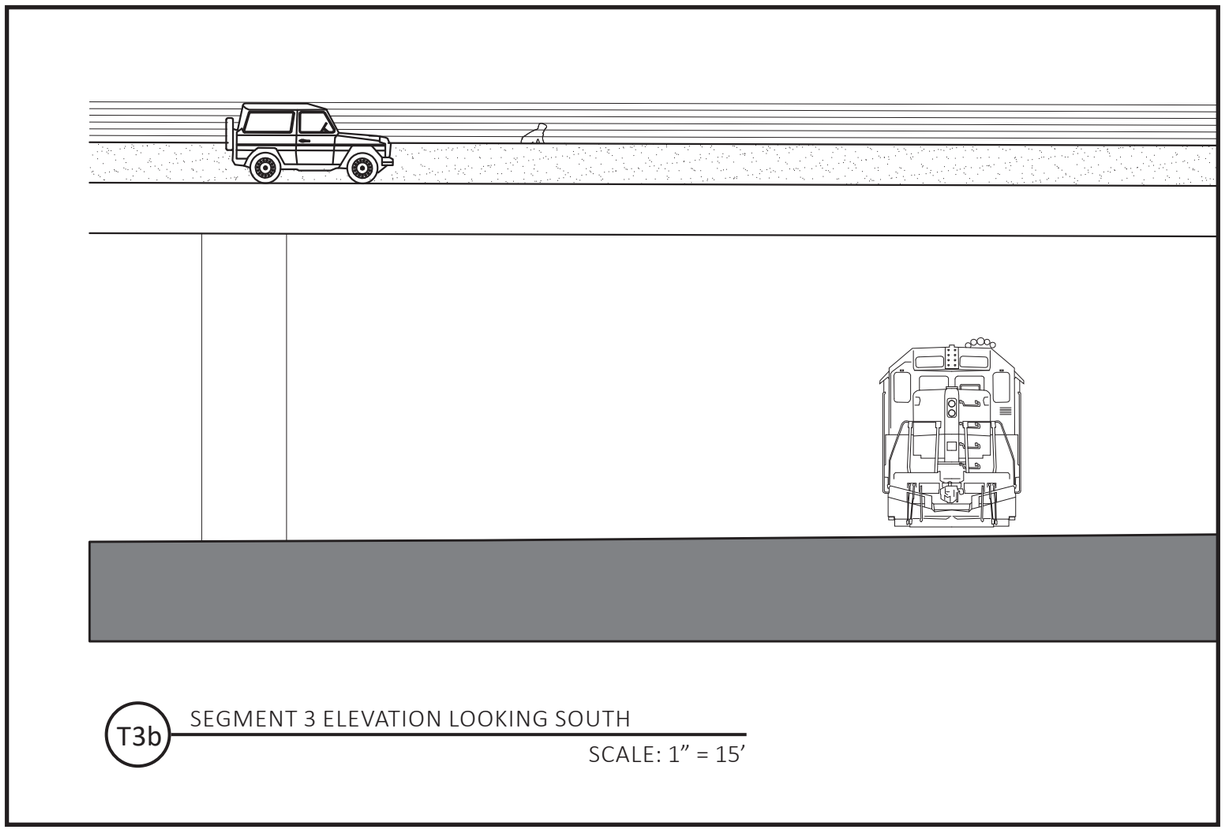
Figure 1-6a

Bike Path Segment 3



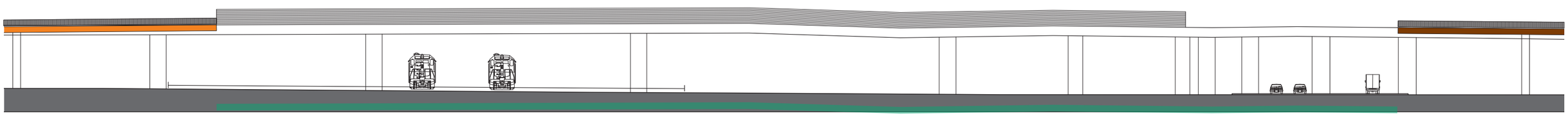
T3a SEGMENT 3 CROSS-SECTION

SCALE: 1” = 15’



T3b SEGMENT 3 ELEVATION LOOKING SOUTH

SCALE: 1” = 15’



T3c BIKE PATH ELEVATION LOOKING NORTH

SCALE: 1” = 50’

Figure 1-6b

1.3.1.4 Segment 4: Separate Elevated Structure West

After crossing railroad mainline and yard tracks, the Class I portion of the Link would continue for approximately 3,400 feet as a separate structure on the south side of West Grand Avenue and the I-880 outrigger structure. It would cross over Maritime Street and four at-grade rail crossings on Burma Road, then continue to the touchdown near the Caltrans maintenance facility (**Figures 1-7a and 7b** and **Figures 1-8a and 8b**). East of the Caltrans maintenance facility, the Link would descend with a switchback curve.

This segment could also include two ramps from the elevated structure to Maritime Street, which could be constructed if funding is available. On the east side of Maritime Street, there could be a 700-foot-long ramp, extending toward Admiral Toney Way. On the west side of Maritime Street, there could be a 250-foot-long ramp, extending to a roof-top landing and lookout area on the planned OMSS building. The maximum grade on the ramps would be 5 percent. The ramp and landing would be open at all times and would have low-level lighting (refer to Section 1.3.4.4). The completion date and operating hours for the OMSS building are not yet known.

1.3.1.5 Segment 5: At-Grade Connection to Bay Bridge Trail

From the west touchdown, the Class I portion of the Link would continue another 350 feet at grade level under the I-880/I-80 connection lanes, then connect to the existing Bay Bridge Trail (**Figures 1-8a and 1-8b**).

1.3.1.6 Ramp Connection to Class I Path along East Side of Maritime Street

The Class I portion of the Link at the Maritime Street area could also include a ramp that would tie in to the Class I path along the east side of Maritime Street to and from Admiral Toney Way. The tie-in at the Link segment would begin 600 feet east of Maritime Street, continue to the south, and touch down approximately 130 feet north of Admiral Toney Way. The tie-in would provide access to the Port of Oakland and additional access for first responders when attempting to reach path users in the event of an emergency.

1.3.1.7 Ramp Connection to OMSS Building

The Project could also include an innovative spur connection to the OMSS building; the spur would be designed to land on the roof of this building. The OMSS building would provide lookout areas, restroom facilities, and concessions for path users and access for first responders when attempting to reach path users in the event of an emergency.

1.3.2 Class II Bike Lanes

The Project also includes Class II bike lanes along surface streets near the east touchdown of the Link, providing connections to Mandela Parkway, the proposed Wood Street parking lot, and planned development along Wood Street (**Figure 1-3**). The width of the Class II bike lanes, extending along each side of the street, would be 5 feet. The Class II bike lanes, which cover approximately 8,170 feet in length, would be constructed after the Class I portion of the Link, if funding is available.

Class II bike lanes would extend along the following surface streets:

- West Grand Avenue alley (westbound), from Peralta Street to Wood Street
- 20th Street, from Peralta Street to Wood Street

- Wood Street, from 20th Street to 24th Street
- Willow Street, from 20th Street to West Grand Avenue
- Campbell Street, from 20th Street to West Grand Avenue
- Wood Street Parking Lot

The Project could include construction of a new 100-space parking lot located on the west side of Wood Street, north of West Grand Avenue, and beneath the east side of the I-880 freeway (**Figure 1-3**). The parking lot would cover 0.48 acre (21,217 sf).

The parking lot would include lighting to achieve a minimum of 1 foot-candle[2] at primary circulation areas. The parking lot would include landscaping, which could include drought-tolerant trees, shrubs and groundcover on an additional 6,000 sf. The purpose of the parking lot is (1) to provide a convenient way for some users of the Link to park and then walk/bicycle on the Link and (2) to provide an alternative way for some users of Judge John Sutter Regional Park to reach the park by bicycling or walking rather than driving to the park itself. The parking lot would increase the range of users for the Link and park, including people who are unable to access the Link by walking or bicycling because of distance or other obstacles. Some users with mobility challenges may not be able to walk or bicycle the entire distance to reach the Link (or do it safely) but could use the Link if they were to drive to the parking lot and then walk or bicycle along the Link to reach the park or other destinations. The Wood Street parking lot would be constructed after the Link, if funding is available.

The City of Oakland is presently planning to provide homeless support services for an undetermined duration on the property where the proposed Wood Street parking lot would be located. These services may include community cabins, RV parking, or other services. If the City of Oakland continues to have homeless services or housing on the property at the time of Project construction, then the Wood Street parking lot would not be constructed or its construction would be deferred until it would not displace City of Oakland homeless services or housing.

1.3.3 Mandela Parkway Median

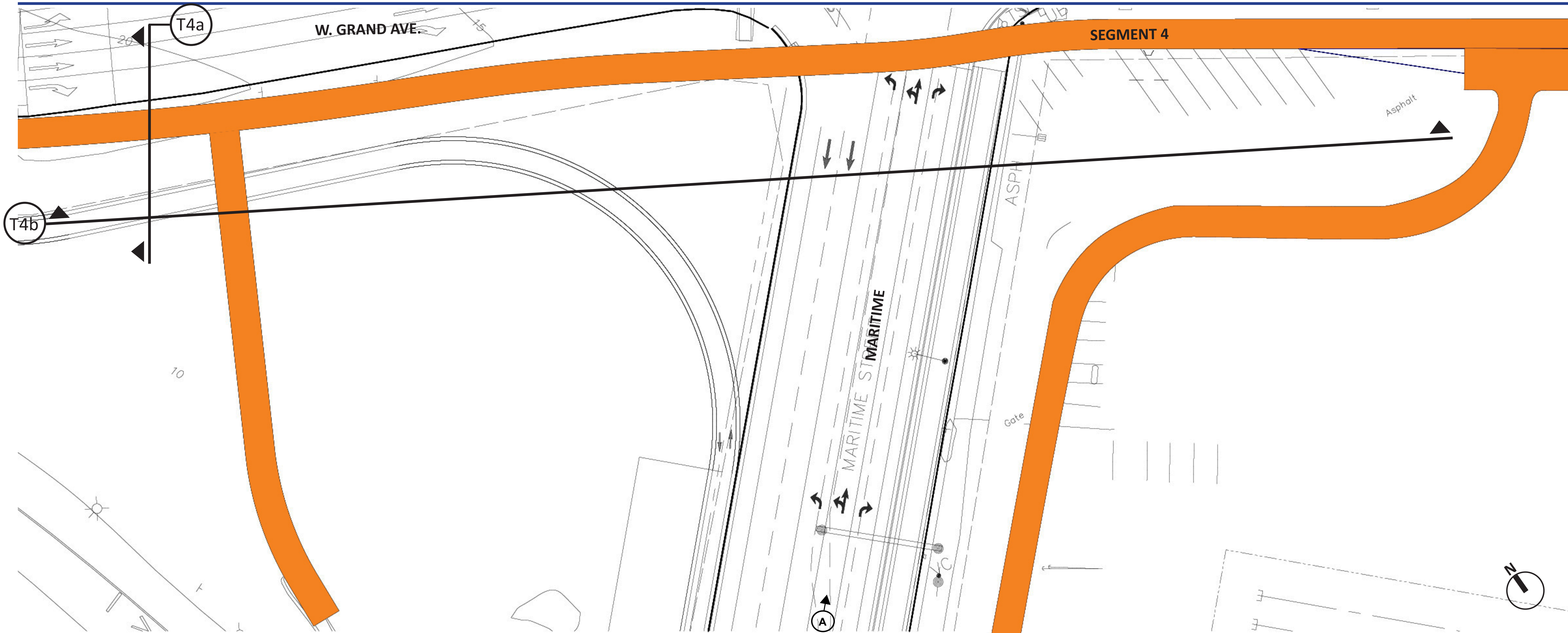
The Project could include streetscape improvements, such as landscaping and art work, on the Mandela Parkway median within one block of West Grand Avenue. The landscaping would enhance the existing landscaping and would not involve any major changes.

1.3.4 Project Features

Project features would include access points, fencing, lighting, rest areas, way-finding elements, landscaping, stormwater drainage infrastructure, safety measures, and operations and maintenance facilities. The final design process will include community workshops to solicit community input on project aesthetics and landscaping. The design will incorporate design elements desired by the community to instill a feeling of pride and project ownership that reflects the value and character of the community.

[2] The term foot-candle refers to a measurement of illumination. It is a unit of illumination, equivalent to the illumination produced by a source of one candle at a distance of one foot and equal to one lumen incident per square foot. http://en.wikipedia.org/wiki/foot-candle.

Bike Path Segment 4



PLAN

SCALE: 1" = 50'

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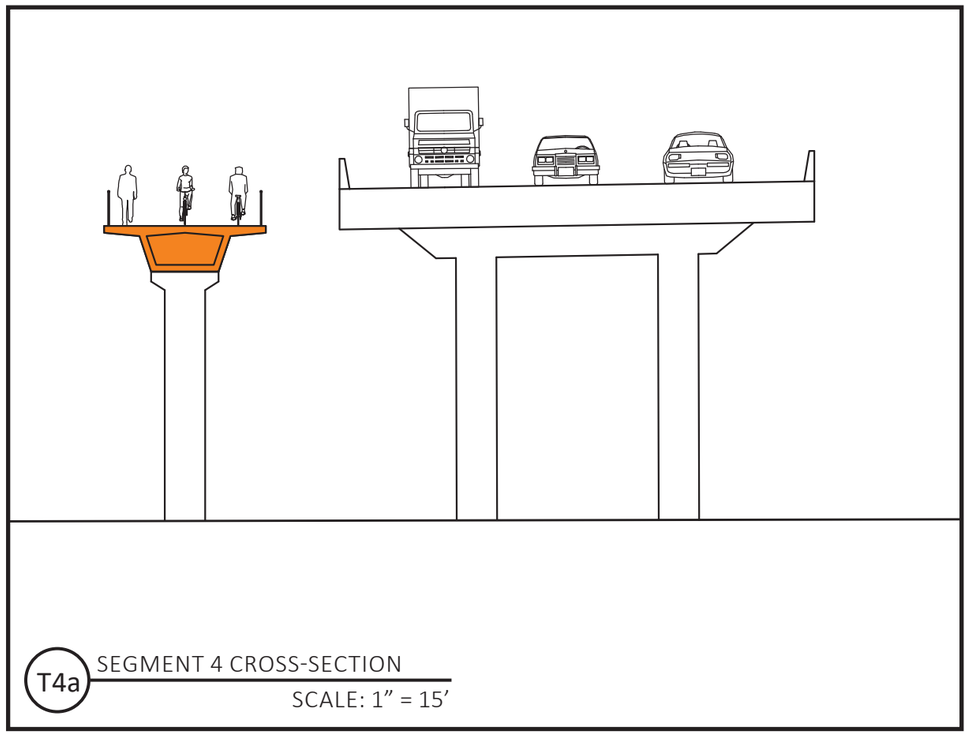
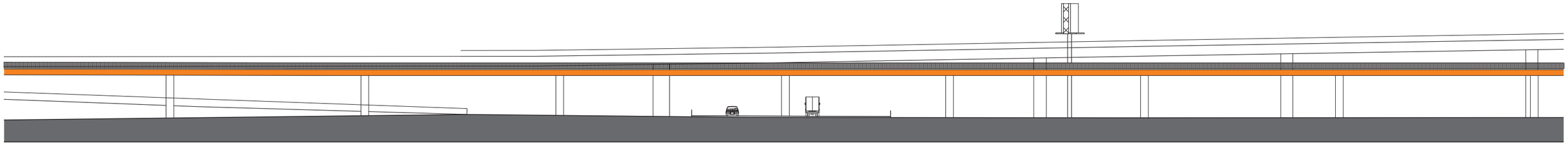
Ⓧ▶ Direction and Location of Photo

Figure 1-7a

Bike Path Segment 4



T4a SEGMENT 4 CROSS-SECTION
SCALE: 1” = 15’



T4b BIKE PATH ELEVATION LOOKING NORTH
SCALE: 1” = 50’

Figure 1-7b

Bike Path Segment 5

Photo A: Bay Bridge Trail

Photo B: View from I-80

BAY BRIDGE TRAIL

SEGMENT 5

W. GRAND AVE.

SEGMENT 4

T5a

T5b

NOTES:

1. PHOTOS A AND B ARE OUTSIDE THE PLAN VIEW LIMITS SHOWN IN THIS FIGURE.

2. FOR LOCATION OF PHOTO A, SEE LOCATION OF SIMULATED KEY VIEW 7 IN FIGURE 2.1-1.

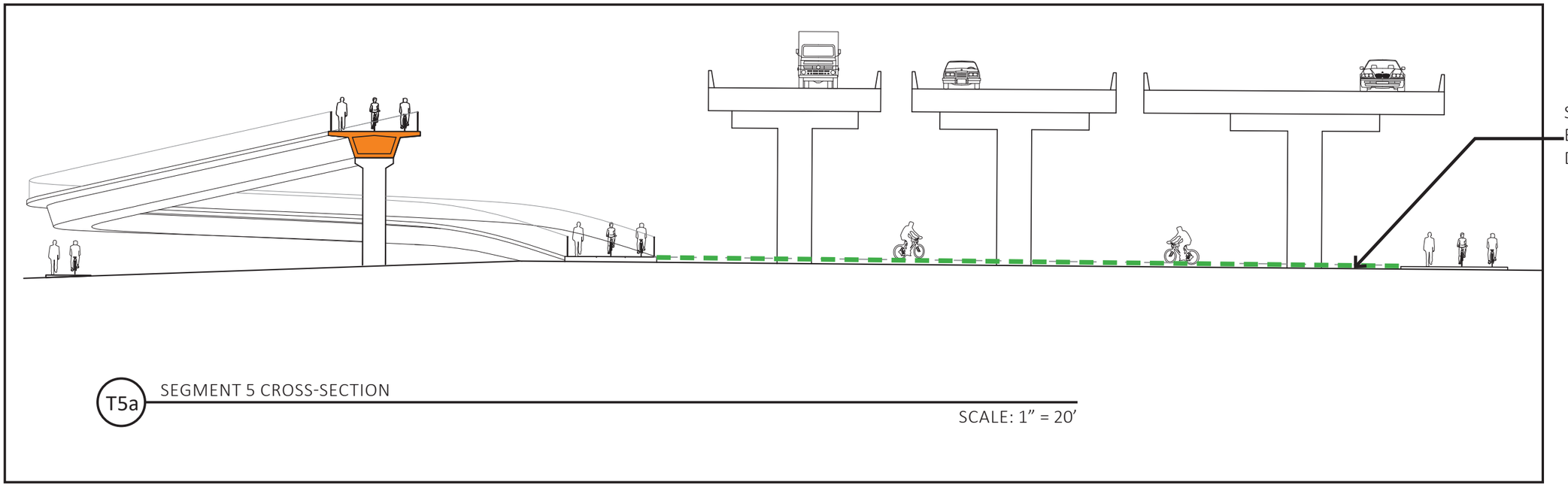
3. FOR LOCATION OF PHOTO B, SEE LOCATION OF SIMULATED KEY VIEW 8 IN FIGURE 2.1-1

N

SCALE: 1” = 50’

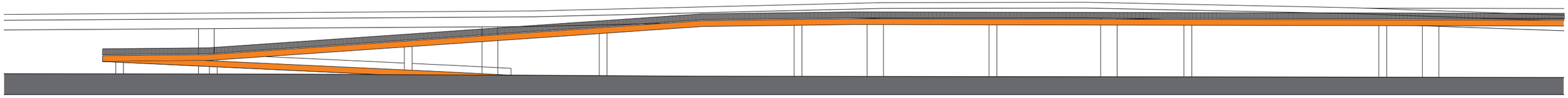
Figure 1-8a

Bike Path Segment 5



T5a SEGMENT 5 CROSS-SECTION

SCALE: 1” = 20’



T5b BIKE PATH ELEVATION LOOKING NORTH

SCALE: 1” = 50’

Figure 1-8b

1.3.4.1 Access

As described above for Segments 1 and 5, the Link would be accessible from Mandela Parkway at West Grand Avenue on the east end and from the Bay Bridge Trail on the west end (**Figure 1-3**). In addition, there could be access points on either side of Maritime Street, whereby the elevated portion of the Link could have ramps extending down to the east and/or west side of Maritime Street (**Figure 1-3**). On the west side of Maritime Street, the ramp would be approximately 250 feet in length and could include a landing on the roof top of the planned OMSS building. On the east side of Maritime Street, the ramp would be approximately 700 feet. Both ramps would have a maximum grade of 5 percent. As mentioned previously, the Link and landing would be open at all times and would include low level lighting. OMSS building hours are unknown at this time.

1.3.4.2 Design

The Class I portion of the Link would be multipurpose and accessible to bicyclists and pedestrians. It would be designed to comply with the Caltrans Highway Design Manual for paths. The elevated structure would be designed to comply with current Caltrans structural design requirements for pedestrian bridges, including Caltrans Standard Plans and 2018 Standard Specifications (or the most current). Ramps and curb cuts would comply with the ADA requirements. In addition, the abutment walls, columns, and possibly the outside edge of the bridge deck would have some texture.

1.3.4.3 Fencing and Barriers

The elevated portion of the Link would include fencing that is 8 feet in height above the finished surface. Fencing would be needed where the path crosses over a road or railroad; a metal guardrail barrier would be used over other areas. The fencing and barriers would comply with all relevant building, Caltrans, railroad, and safety codes. The fencing and metal guardrail barrier types have not been determined but would provide views. It is likely to be chain link fencing when the Link is on West Grand Avenue over the railroad tracks (Segment 3). For Segment 3, there would be a concrete barrier with a minimum height of 42 inches between the Link and vehicular traffic. The design for the fencing and metal guardrail barrier would meet the technical and safety requirements of the *Highway Design Manual*, following the project aesthetic theme and language developed during the community design workshops.

1.3.4.4 Lighting

The Link would be open at all times. Therefore, low-level lighting would be installed along the Link. It is anticipated that 1-foot-candle (minimum) light-emitting diode (LED) lights would be side mounted in the barrier along the elevated segments, although there could also be some overhead lights installed at the top of the fencing if deemed necessary for safety. Lighting along the at-grade segments would be provided by new or existing streetlights or pedestrian light standards and would be in conformance with the City of Oakland's Outdoor Lighting Standards and the Port of Oakland's Exterior Lighting Policy. The design of the lighting system would prioritize safety while preventing light pollution. The community can help develop creative design alternatives rather than the traditional cobra-head lighting option.

1.3.4.5 Lookout Areas

The elevated portion of the Link could have some wider areas that would serve as lookout areas, but their number and location has not been determined. It is anticipated that there would be up to three such lookout areas dispersed along the elevated segments.

1.3.4.6 Way-Finding and Interpretive Elements

The Link would include centerline striping and way-finding signage. There could also be safety signage, such as signs indicating the bicycle speed limit. In addition, the Link could include *way-finding and interpretive elements*, which may include topics of community interest such as old Bay Bridge artifacts, to help guide users to the existing paths and to the new East Span of the Bay Bridge. Proposed signage on West Grand Avenue would adhere to Caltrans's Gateway Monument Policy.

1.3.4.7 Landscaping

The elevated portion of the Link could include planters in the wider lookout areas or attached to the exterior sides of the structure. There could also be some landscaping under the structure at the west end touchdown (where the Link makes a switchback curve and descends) and at the east end (between Wood Street and Campbell Street).

1.3.4.8 Stormwater Drainage

Stormwater on the elevated structure would likely drain off at downspouts at the columns and continue as surface flows or be conveyed to an existing drainage system, depending on the existing drainage patterns and facilities at each location. There would be no stormwater flowing directly into existing wetlands or drainages.

The Project includes provision of approximately 0.93 acres (40,510 sf) of stormwater treatment because the Project would add approximately 1.68 acres (73,180 sf) of new impervious surfaces (WRECO 2014a). This represents a treatment ratio of 1:1.8. Stormwater treatment options include vegetated flow-through treatment areas or bio-treatment basins beneath the elevated Link and/or in vacant areas next to or adjacent to freeways and the proposed Wood Street parking lot (**Figure 1-9**).

1.3.4.9 Safety

In addition to the fencing and lighting described above, the elevated portion of the Link would include solar call boxes and security cameras. It is anticipated that the Link would be patrolled periodically by California Highway Patrol (CHP) or City of Oakland officers on bicycles. Closed-circuit television would record and retain images for up to four weeks; this information would be available to law enforcement for public safety reasons.

1.3.5 Operation & Maintenance

The Link would be open 24 hours per day, seven days per week. Maintenance would include weekly trash removal, monthly sweeping, and bi-annual inspections for restriping, resurfacing, repairs, and bridge inspection and maintenance per state requirements. BATA would be financially responsible for maintenance of the completed project, including any installed landscaping. BATA is currently in discussions with Caltrans regarding operations and maintenance responsibilities. An agreement is expected to be concluded before the start of construction.

1.4 Interaction with the Bay Bridge Forward Projects

The first phase of the Bay Bridge Forward projects, Phase 1, completed in January of 2019, converted the existing shoulder at the West Grand Avenue on-ramp to the Bay Bridge to an high-occupancy vehicle (HOV)/bus lane. Phase 2, expected to open in late 2023, will provide additional access and operational

Potential Stormwater Treatment Areas

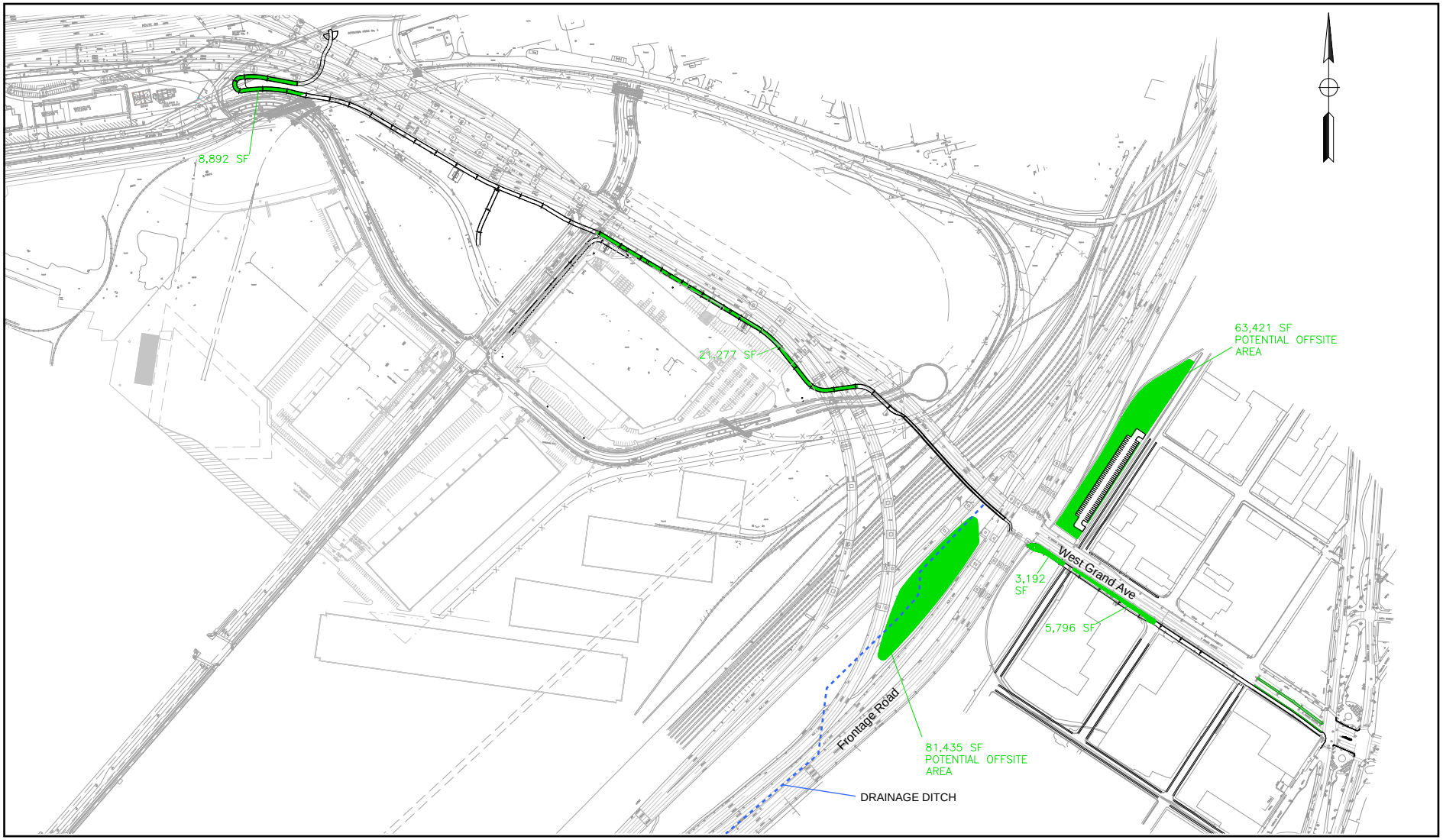


Figure 1-9

improvements for carpools and buses by converting the existing westbound right shoulder on West Grand Avenue between the I-580 eastbound on-ramp and the intersection of West Grand Avenue with Frontage Road to an HOV/bus lane. A multi-use path for bicyclists and pedestrians, separated from vehicle traffic with a barrier, is planned for construction on the south side of West Grand Avenue between Maritime Street and Mandela Parkway under Bay Bridge Forward Phase 2. The West Oakland Link would provide a 15-foot Class I path for the majority of its length, the majority of which would be constructed on an independent structure. In contrast, the Bay Bridge Forward Phase 2 would provide an 8- to 10-foot Multi-use Path (MUP) which would be separated from the roadway by a barrier.

1.5 Project Phasing

The Link may be implemented in more than one phase to respond to timing and availability of funds and to the schedule for related projects. The following section discusses possible phasing options.

All Class II lanes and bicycle boxes would be installed as part of the initial period of construction, regardless of Phasing Option.

1.5.1 Phasing Option 1

Phasing Option 1 would construct approximately 2,900 feet of Class I path structure, beginning approximately 600 feet east of Maritime Street and continuing to the Bay Bridge Trail. Starting from the east, the structure would begin approximately 600 feet east of Maritime Street with an interim connection to the multi-use path (MUP), which was installed as part of the high-occupancy vehicle/bus extension project. Under Phasing Option 1, the West Oakland Link profile would be lowered to tie in to West Grand Avenue. The structure would continue west, parallel to West Grand Avenue. The elevated Link structure would span Maritime Street and the existing at-grade railroad crossings near Burma Road. The structure would then continue under the I-80 ramps and tie in at the connection to the Bay Bridge Trail. Construction under the initial build portion of Phasing Option 1 would correspond to a portion of Segment 4 and all of Segment 5.

When additional funding for construction is available, the Link would be extended eastward to Mandela Parkway. The interim connection to West Grand Avenue could either be demolished or retained as an emergency access point. The remaining easterly portion of Segment 4 would be constructed with a slightly revised vertical profile. Segments 1 through 3 as well as the ramps to Maritime Street and Oakland Maritime Support Services (OMSS) (the remainder of Segment 4) would also be constructed.

1.5.2 Phasing Option 2

Phasing Option 2 would be similar to Phasing Option 1. However, a 600-foot segment on the east side of Maritime Street would be designed and constructed so that the bridge deck could be raised during a future phase of the project, providing a smooth profile and minimizing elevation changes for the Link under the full build condition. Construction under the initial build portion of Phasing Option 2 would correspond to a portion of Segment 4 and all of Segment 5.

When additional funding for construction becomes available, the Link would be extended eastward to Mandela Parkway. The above-mentioned 600 feet of the bridge deck could be raised to its final elevation by extending the bridge columns. Segments 1 through 3, the remaining easterly portion of Segment 4, and the ramps to Maritime Street and OMSS would also be constructed.

1.5.3 Phasing Option 3

Phasing Option 3 would construct Segment 4, except for the ramps to Maritime Street, OMSS, and Segment 5 of the Link project.

When additional funding for construction is available, Segments 1 through 3 and the ramps to Maritime Street and OMSS could be constructed.

1.6 Project Construction

1.6.1 Excavation and Grading

Project construction would require excavation, grading and new pavement as follows:

- Excavation up to 5 feet deep for 45 column footings for the elevated portion of the Link (note that supporting piles would be driven 50–60 feet deep);
- Excavation up to 3 feet deep for at-grade modifications at the west end touch down near the Caltrans maintenance facility and the east touch down at Campbell Street and Willow Street, where there would be intersection modifications to create cul-de-sacs;
- Excavation up to 3 feet deep for at-grade modifications along City streets for new pavement sections, sidewalks and driveways; and
- Excavation up to 3 feet deep and grading for gravel and asphalt pavement at the Wood Street parking lot.

It is estimated that the Project would result in up to approximately 2,600 cubic yards of cut material.

During excavation, soils would be tested for contamination. Clean soils would be used or sold for reuse at nearby construction sites. Contaminated soils would be disposed of at an appropriate facility.

It is estimated that approximately 44 trees could be removed along the alignment, based on review of an aerial photo and a site visit. Replacement planting would proceed consistent with City of Oakland municipal code.

1.6.2 Construction Hours and Duration

Construction is anticipated to occur between the hours of 7:00 a.m. and 6:00 p.m., Monday through Friday. It is possible that evening work will be required for construction over Maritime Street and Burma Road. There would be no construction after 7:00 p.m. or on weekends or national holidays without special permission from the City of Oakland.

If the project is constructed as a single contract, project construction is estimated to occur over 24 months from October 2024 to October 2026. However, as discussed above, the project may be constructed in phases:

- Phasing Option 1 would take 21 months for the initial build and the remaining construction would take an additional 18 months.
- Phasing Option 2 would take 21 months for the initial build and the remaining construction would take an additional 18 months.
- Phasing Option 3 would take 21 months for the initial build and the remaining construction would take an additional 15 months.

1.6.3 Vehicle Access

Construction truck activity and haul routes would be limited to key collector roads, including West Grand Avenue, Maritime Street, Frontage Parkway, and Wood Street. Construction vehicles may also use Burma Road, Mandela Parkway, Campbell Street, Willow Street, Peralta Street, and 20th Street.

Construction activities are not anticipated to result in any long-term road closures, except for eastbound West Grand Avenue alley and its intersections with Willow Street and Campbell Street West. Temporary road closures could include Campbell Street and Willow Street for intersection modifications at West Grand Avenue, West Grand Avenue alley to allow for footing construction and excavation, and Maritime Street to place falsework over Maritime Street for the new elevated structure.

Construction vehicles and equipment would not park or stop along key collector roads, such that they would block emergency vehicle access or hinder emergency response.

Temporary lane closures could occur on West Grand Avenue, Maritime Street, Wood Street, Willow Street, Engineers Road, Peralta Street, Campbell Street, and 20th Street. In those instances, detours will be provided.

1.6.4 Construction Equipment

Construction equipment and vehicles could include backhoes, loaders, excavators, tractors, cranes, lifts, pile drivers, concrete trucks and pump, paving machine, compactors/rollers, and trucks for demolition, grading, and materials delivery.

Construction equipment and power tools could include jackhammers, air compressors, generators, concrete saws, power drills, welding equipment, sandblasting equipment, painting equipment, power and impact wrenches, and the like.

Piles for the 45 footings (estimated amount to support the elevated portion of the Link) could be driven piles (precast concrete or steel) or cast-in-drilled-hole concrete piles, or a combination depending on the specific site conditions along the structure.

1.6.5 Staging

Construction staging would be on a disturbed or paved area, away from drainages. Options include using the Wood Street parking lot area before parking lot construction begins and/or renting a nearby parcel, possibly along Maritime Street or Burma Road.

1.7 Avoidance and Minimization Measures

As part of the Project, standard avoidance and minimization measures (AMMs) would be implemented, as listed below.

AMM AES-1: Apply Textured Surfaces

Community input will ultimately drive the design on aesthetics and finishes used for support columns, elevated structures, and abutment walls so that they incorporate design elements desired by the community. However, at a minimum, a roughened, textured surface shall be used for support columns, elevated structures, and retaining walls. This will soften the verticality of surfaces by providing visual

texture and will reduce the amount of smooth surfaces that can reflect light, reducing glare, and be attractive for graffiti. A different texture than the minimum requirement may be used if community input favors such a change.

AMM AES-2: Replace Vegetation

Vegetation that is destroyed, damaged, or removed by the Project or through incidental construction activities will be replaced, irrigated, and maintained during a plant establishment period. The plant establishment period for plants installed as part of the Project will be 3 years; 5 years for plants installed through mitigation. In addition, all disturbed areas shall be restored to their previous condition or better. Disturbed areas will be hydroseeded to blend the area into the surrounding context. In addition, tree and shrub plantings may be feasible in disturbed areas, where necessary.

AMM CUL-1: Stop Work if Buried Cultural Resources Are Discovered

During Project construction, the Bay Area Toll Authority (BATA)/Caltrans, or construction contractor, will ensure that work is stopped work if buried cultural resources are inadvertently discovered during ground-disturbing activities. Buried cultural resources include, but are not limited to, chipped or ground stone, historic debris, building foundations, or human bones. If there is evidence of such resources, work will stop in that area and within 100 feet of the find until a qualified professional archaeologist can assess the significance of the find and develop appropriate treatment measures in consultation with BATA/Caltrans. BATA/Caltrans will be responsible for ensuring that treatment measures are implemented prior to the resumption of construction on that portion of the site. If discovered resources include human bones, implementation of **AMM CUL-2** is also required.

AMM CUL-2: If Human Remains Are Discovered, Comply with State Laws Relating to Human Remains.

If human bones or remains are inadvertently discovered during Project construction, BATA/Caltrans, or construction contractor, will ensure that work is stopped work if buried cultural resources are inadvertently discovered during ground-disturbing activities. Consequently, if any human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains (1) until the County Coroner has been informed and has determined that no investigation as to the cause of death is required and (2), if the remains are of Native American origin:

- The coroner will then contact the Native American Heritage Commission, and the Commission will then designate a Most Likely Descendant (MLD).
- The MLD has made a recommendation to the landowner or the person responsible for the excavation work regarding the means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, as provided in PRC Section 5097.98.

1.8 Right-of-Way and Permits/Approvals Needed

1.8.1 Right-of-Way

The right-of-way along the Class I portion of the Link is primarily owned by Caltrans or the City of Oakland, with the exception of up to five privately owned parcels between Wood Street and Frontage Road where there would be minor ROW acquisitions. The right-of-way along the Class II bike lanes is owned by the City. The right-of-way for the Wood Street parking lot is owned by BNSF. The City of

Oakland has committed to granting a highway or structure easement where the Link goes over City-owned property that might have been leased to third parties.

1.8.2 Permits/Approvals

The Project may require permits or approvals or may obtain funding from the following agencies:

- Federal Highway Administration (FHWA) – Funding
- California Department of Transportation (Caltrans) – Encroachment Permit, National Pollutant Discharge Elimination System (NPDES) Statewide Stormwater Permit (Order No. 2012-0011-DWQ), funding
- City of Oakland – Encroachment, grading, and tree permits
- Port of Oakland – Port Development permit
- Alameda County Transportation Commission – Funding
- Bay Area Toll Authority – Board Approval, Funding
- City of Oakland and California Department of Toxic Substances Control (DTSC) - Approval of use not identified in the Oakland Army Base Reuse Plan and incorporated into the Remedial Action Plan/Risk Management Plan (RAP/RMP).

The following permits would also be required if the existing earthen drainage ditch under I-880 is impacted by the potential stormwater treatment area that may be located there (**Figure 1-9**).

- U.S. Army Corps of Engineers – Section 404 Nationwide Permit
- California Department of Fish and Wildlife – Section 1602 Streambed Alteration Agreement
- California Regional Water Quality Control Board – Section 401 Water Quality Certification

The City of Oakland adopted *Conditions of Approval & Uniformly Applied Development Standards Imposed as Standard Conditions of Approval* (SCA) on November 3, 2008 (Ordinance No. 12899 C.M.S.). The SCA includes general conditions of approval for all projects, general conditions for major permits, and uniformly applied development standards, imposed as standard conditions of approval. (City of Oakland 2008, as amended 2013, 2014, 2018, and 2020) The Oakland SCA is discussed as relevant in the Regulatory Setting sections of Chapter 2, *CEQA Environmental Checklist*.

In compliance with the Oakland SCA, the Project will include compliance measures established as part of the Caltrans NPDES Statewide Stormwater Permit (Order No. 2012-0011-DWQ), which regulates all discharges from Caltrans Municipal Separate Storm Sewer Systems (MS4s) and maintenance facilities. The Project will also implement construction BMPs and other measures and as part of the Caltrans' Storm Water Management Plan (SWMP). This Project involves more than 1 acre of land disturbance. Therefore, applicable information will be described regarding compliance with requirements of the Construction General Permit (Order No. 2009-0009-DWQ, and amended by Order No. 2012-0006-DWQ), as well as any other applicable related permits and regulations. Refer to Section 2.10, *Hydrology and Water Quality*, for additional information.

Chapter 2
CEQA Environmental Checklist

2.1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐

2.1.1 Environmental Setting

Information in this section is based on the visual impact assessment (ICF 2022) prepared for the Project.

2.1.1.1 Existing Conditions

Regional Setting

The Project area is located in the San Francisco Bay Area (Bay Area), approximately 1.3 miles northwest of downtown Oakland and approximately 5.5 miles east of the San Francisco Bay (Bay) shoreline. The Project area has views of both city skylines.

The regional visual setting of the Bay Area is scenic, with water, islands, bridges, mountains, and urban skylines. The Bay is a rich marine resource, providing navigable waterways for commerce and recreation and habitat for numerous species. The Bay includes four major islands: Alcatraz, Angel Island, Treasure Island, and Yerba Buena Island.

Seven bridges span the Bay, connecting communities and constituting significant *scenic resources* in their respective areas. The seven bridges include the Golden Gate Bridge, Bay Bridge, Richmond-San Rafael Bridge, San Mateo Bridge, Dumbarton Bridge, Benicia Bridge, and Carquinez Bridge. The bridges span significant stretches of open water and are highly visible from vantage points around the Bay. The bridges also provide views out and around to the scenic resources associated with the Bay Area landscape. These include Mount Tamalpais and the hills of the Marin headlands to the northwest, the East Bay Hills of Oakland and Berkeley to the east, and the Santa Cruz Mountain Range along the Peninsula to the southwest.

The city skylines of Oakland and San Francisco also complement the region's natural and urban setting. Regional urban development in the cities of Berkeley, Emeryville, Oakland, and Alameda is also visible. These cities are largely concentrated between the Bay to the west and the East Bay Hills to the east, which is the dominant topographic feature in the area.

The Bay Trail is an important recreational feature in the region. It parallels a significant portion of the Bay shoreline in all nine Bay Area counties. The Bay Trail is a series of existing and planned regional hiking and bicycle trails. When complete, it will provide a 500-mile connected trail network around San Francisco Bay and San Pablo Bay (ABAG 1999; San Francisco Bay Trail 2014). The closest existing Bay Trail segments to the Project area are (1) the off-street paved trail from Emeryville to the Bay Bridge Trail; (2) the off-street paved trail along Burma Road from Maritime Street to the Bay Bridge Trail; and (3) the off-street and on-street paved trails along Mandela Parkway. Each of these segments extends adjacent to and within the Link Project area. Also refer to Section 2.16, *Recreation*.

Transportation corridors are also a notable feature within the region. Interstate freeways include I-80, I-880, and I-580. There are numerous state routes and local roadways. There are also several rail corridors. These can be seen on **Figures 1-1, 1-2,** and **1-3**.

Vicinity Setting

The Project vicinity is composed primarily of transportation facilities and industrial land uses. The transportation land uses include freeways (I-880, I-80, I-580) and local roadways. The industrial land uses include the Port of Oakland (Port), the East Bay Municipal Utility District (EBMUD) wastewater treatment plant, the California Department of Transportation (Caltrans) maintenance facility, and other industrial facilities. **Figures 2.1-1** and **2.1-2a–f** include representative photos of locations within the Project vicinity. The remainder of this section describes the transportation facilities and industrial land uses.

The Project is adjacent to I-880 and approximately 0.5 mile south of the I-80/I-880/I-580 interchange, known as the "MacArthur Maze" (**Figure 1-2**). A portion of I-80 is an eligible state scenic highway and local scenic route, as described below. Views of the Project area from these roadways are fleeting because of the speed and volume of vehicles.

I-80 is an eight- to 10-lane freeway that serves San Francisco and the East Bay. North of the MacArthur Maze, I-80 extends in a north–south direction. West of the MacArthur Maze, I-80 extends in an east–west direction between Oakland and San Francisco. This segment of I-80 is an eligible state scenic highway but not officially designated (Caltrans 2019). However, this segment is a City of Oakland–designed scenic route, as described in the *Regulatory Setting*, below (City of Oakland 1974).

West Grand Avenue is a major local roadway, extending in an east–west direction through Oakland and the Project area. The Link would be on the south side of West Grand Avenue, beneath I-880. In addition, the path would provide two connections to the existing Bay Trail in proximity to Maritime Street, Burma Road, and Admiral Toney Way. West Grand Avenue has an intersection and on-ramps at Maritime Street, which are used primarily by trucks for Port operations. Just south of the intersection, Burma Road extends westward from Maritime Street on the south side of I-80, providing access to the Caltrans maintenance facility and Port facilities. In this area, the existing Bay Trail travels under the many elevated ramps and roadway structures that connect West Grand Avenue and Maritime Street to I-80. The trail has one connection to Burma Road. A large portion of the Bay Trail near the connection to Burma Road is shaded because of elevated roadway infrastructure that casts shadows on the trail. Admiral Toney Way also starts at Maritime Street but extends eastward to the point where it terminates in a cul-de-sac just east of West Grand Avenue, providing access to that portion of the Port.

Locations of Project Areas and Photo Simulations

Figure 2.1-1

West Oakland Link

Project Area Photographs

Photo 1. Looking southeast toward the Link project area from the Bay Bridge Toll Plaza.
Source: Google Earth

Photo 2. Looking northwest from Burma Road toward Port storage yards and West Grand Avenue.

Figure 2.1-2a

Project Area Photographs

Photo 3. Looking east at the Maritime Street.
Source: Google Earth

Photo 4. Looking northwest toward Frontage Road and I-80 connection overpass from West Grand Avenue.

Figure 2.1-2b

Project Area Photographs

Photo 5. Looking northeast toward the rail line, elevated freeway connectors, and the Berkeley Hills from West Grand Avenue.

Photo 6. Looking north toward the EBMUD wastewater treatment facility at the Frontage Road and West Grand Avenue intersection.

Figure 2.1-2c

Project Area Photographs

Photo 7. Looking northeast toward elevated freeway connectors, the rail line, western edge of Oakland, and Berkeley Hills from West Grand Avenue.

Photo 8. Looking northeast toward the rail line and elevated freeway connectors from Wood Street.

Figure 2.1-2d

Project Area Photographs

Photo 9. Looking northwest toward West Grand Avenue and elevated freeway connectors from Mandela Parkway.

Photo 10. Looking southwest toward the landscaped median of Mandela Parkway from the Bay Trail Bike Path.

Figure 2.1-2e

Project Area Photographs

Photo 11. Looking southwest toward the landscaped median of Mandela Parkway at the Bay Trail way-finding sign.

Figure 2.1-2f

The Port of Oakland, Bay Bridge Toll Plaza, and Caltrans' District 4 San Francisco–Oakland Bay Bridge (SFOBB) complex are south of the Link; the EBMUD wastewater treatment facility is to the north. From the toll plaza administration building site, the Link site is largely obscured by Caltrans' District 4 SFOBB complex and the elevated West Grand Avenue/Maritime Street exit ramp from westbound I-80 (**Figure 2.1-2a, Photo 1**). On the west side of I-880, most of West Grand Avenue is grade separated, allowing views of the Port and the EBMUD wastewater treatment facility (**Figure 2.1-2a**, **Photo 2**). The Port is an industrial environment with little or no vegetation. Views of the Port include warehouses, chain-link fencing, streetlights, and utility poles and wires, similar to the ground-level views on **Figure 2.1-2b**, **Photo 3**. Most of the industrial facilities are older, except along Maritime Street, near its intersection with Admiral Toney Way, where long, linear distribution warehouses and older buildings have been removed. In their place, large-scale, modern distribution warehouse facilities have been constructed, retaining the industrial nature of the Project area. These views are typical of views from Maritime Street, Burma Road, and Admiral Toney Way, which provide access to the Port.

West Grand Avenue has an at-grade intersection and on-ramps at Maritime Street, which is used primarily by trucks for Port operations. Just south of the intersection, Burma Road extends westward from Maritime Street on the south side of I-80, providing access to the Caltrans maintenance facility and Port facilities.

Although portions of West Grand Avenue are elevated through the Port, views are limited by adjacent elevated transportation structures. Most views are not considered scenic because they consist primarily of the surrounding transportation infrastructure and industrial land uses (**Figure 2.1-2b**, **Photo 4)**. However, there are limited views of the Bay, East Bay Hills, and city skylines (**Figure 2.1-2c**, **Photos 5** and **6** and **Figure 2.1-2d**, **Photo 7**). The West Grand Avenue connection to I-80 is the primary location where scenic views are available. This area is elevated and has views of the Bay. The EBMUD wastewater treatment facility is also somewhat visible (**Figure 2.1-2c**, **Photo 6**).

I-880, BNSF Railway (BNSF) and Union Pacific Railroad (UPRR) tracks, and Frontage Road extend north–south through the Project area. These transportation facilities separate Port land uses on the west side from other industrial/warehouse land uses on the east side (**Figure 2.1-2d**, **Photo 7**). I-880 extends between the railroad tracks and Frontage Road. The railroad tracks and I-880 are surrounded by a chain-link fence and inaccessible to the public (**Figure 2.1-2d**, **Photo 8**). The area is flat, with a combination of paved surfaces and ruderal vegetation growing in small unpaved areas. Massive concrete pillars (some with graffiti) are evenly spaced throughout this area, supporting the I-880 aerial structure. The freeway overcrossing creates a visual barrier and separates the Port from the western edge of Oakland.

On the east side of I-880, West Grand Avenue is grade separated. However, it descends to ground level at Campbell Street and continues at grade to Mandela Parkway (**Figure 2.1-2e**, **Photo 9**). Mandela Parkway is the eastern terminus of the Link alignment. The local surface streets in this area form a grid-like pattern. The land uses include warehouses, storage facilities, expansive paved areas, and a neighborhood park (Raimondi Park). All buildings are generally one or two stories in height, with little to no exterior features. The exception is the Peralta building, which is located between Mandela Parkway and Campbell Street. The building is made of brick and has windows along West Grand Avenue. Although the Peralta building has a great visual appeal compared to other buildings in the area, it does not stand out as overly unique. In addition, there is little separation between busy West Grand Avenue and the building, and the existing landscaping along the roadway is very sparse and does little to improve the aesthetics associated with the building.

East of Campbell Street, the elevated West Grand Avenue acts to segment this area and create a distinct separation between the buildings north and south of the roadway. Businesses north of West Grand Avenue do not have views toward the West Grand Avenue alley, where Segment 2 would be located, either

because the elevated West Grand Avenue acts as a physical barrier to views to the south or the businesses do not have windows facing West Grand Avenue. Near the West Grand Avenue touchdown at Campbell Street, the building north of West Grand Avenue could have views toward the Project corridor. However, this building does not have south-facing windows, and privacy fencing drastically limits views toward the Project from within the property bounds. Buildings located immediately next to Segment 2, south of West Grand Avenue, include large warehouse structures that do not have windows that face the Project. However, the Lyft Oakland Hub building does have a windowed corner that is largely screened by security fencing with wide vertical rails. Therefore, there may be partial views toward the Project from this portion of the building. In addition, the Lyft Oakland Hub parking lot and adjacent sidewalks and roadways have fairly open views toward the Project. In the morning, West Grand Avenue casts a slight shadow on the West Grand Avenue alley as the roadway elevates westward from its touchdown at Campbell Street. Although the alley is not shaded when the sun is at solar noon, buildings along the West Grand Avenue alley cast shadows in the afternoon, leaving the alley mostly shaded. Although Lyft has invested in improving the visual quality of the buildings associated with its facility (e.g., by painting the warehouses and operations building and planting trees along the sidewalk), this portion of the Project remains visually degraded. This is because of a lack of maintenance for the remaining sidewalks and roadsides; tall weeds, trash, and graffiti are common. However, the elevated portion of West Grand Avenue offers highly channelized views of the East Bay Hills to the east.

Mandela Parkway extends in a north–south direction, with a wide median in the middle. The Mandela Parkway median is a designated open space, extending 1.25 miles between 32nd Street on the north and 8th Street on the south. Mandela Parkway provides attractive amenities in a highly industrialized setting. These include a wide bicycle/pedestrian path, manicured lawns, maintained shrubs and trees, ornamental light fixtures, benches, and drinking fountains (**Figure 2.1-2e**, **Photo 10**). As shown on **Figure 2.1-2f**, **Photo 11**, Mandela Parkway also serves as a spur of the Bay Trail. Mandela Parkway is owned and operated by the City of Oakland (City) Parks and Recreation Department.

On the east side of I-880, the sidewalks and center median on West Grand Avenue are landscaped with street trees and ornamental grasses (**Figure 2.1-2e**, **Photo 9)**. Views of West Grand Avenue from Mandela Parkway are somewhat obscured by the trees.

Overall, the Project vicinity is highly industrialized. It comprises large parcels of land with paved surfaces; aerial transportation structures; concrete pillars, some with graffiti; utility poles; and lights. The limited vegetation is ruderal vegetation, except for the landscaping along Mandela Parkway and the eastern portion of West Grand Avenue. In the Project vicinity, the vividness is low. Intactness is moderate. Unity is low to moderate. The resulting visual quality is moderately low.

Viewers

In the Project vicinity, viewers of the Project include roadway users along transportation corridors; business viewers, including workers and visitors at the Port and other businesses; and recreationists on Mandela Parkway and other local surface streets and sidewalks. Recreationists typically include pedestrians, joggers, and bicyclists. The Project team participated in two virtual local community meetings to provide information on the Project and solicit community input during the summer of 2020. A virtual public meeting was conducted on December 17, 2020, for the Project. Verbal and email comment-card submissions received from the public during this process expressed positive support for the Project (BATA 2020). This information was factored in when determining viewer sensitivity.

Roadway users would have low sensitivity to changes resulting from the Project because of their focus on driving in an area with complex driving patterns. In addition, views would be limited because the high rates of speed, which would not allow extended views of the Project area. Similarly, workers within the businesses would have low sensitivity because of their focus on work activities. Extended views of the Project area would be limited.

Recreationists would have moderately low sensitivity to changes resulting from the Project. Although Mandela Parkway offers a pleasant viewer experience, recreational viewers are transient. They do not spend extended times in one place and pass by the Project area fairly quickly. Recreational viewers on local roadways are also transient.

2.1.1.2 Regulatory Setting

Federal and State

There are no roadways within or near the Project area that are designated in federal or state plans as scenic highways or routes that are worthy of protection to maintain and enhance scenic viewsheds. The segment of I-80 passing near the Project area is an eligible state scenic highway but is not officially designated (Caltrans 2019). No state regulations apply to visual resources in the Project area.

Regional and Local

City of Oakland General Plan

Land Use and Transportation Element

The *City of Oakland General Plan, Land Use and Transportation Element* (City of Oakland 1998), contains the following policies relevant to the Project and aesthetics:

- **Policy l/C4.1: Protecting Existing Activities.** Existing industrial, residential, and commercial activities and areas that are consistent with long-term land use plans for the city should be protected from the intrusion of potentially incompatible land uses.
- **Policy T3.5: Including Bikeways and Pedestrian Walks.** The City should include bikeways and pedestrian walks in the planning of new, reconstructed, or realized streets, wherever possible.
- **Policy T6.2: Improving Streetscapes.** The City should make major efforts to improve the visual quality of streetscapes. Design of the streetscape, particularly in neighborhoods and commercial centers, should be pedestrian oriented and include lighting, directional signs, trees, benches, and other support facilities.
- **Policy T6.3: Making the Waterfront Accessible.** The waterfront should be made accessible to pedestrians and bicyclists throughout Oakland.
- **Policy T6.5: Protecting Scenic Routes.** The City should protect and encourage enhancement of the distinctive character of scenic routes within the city through prohibition of billboards, design review, and other means.
- **Policy N9.5: Marking Significant Sites.** Identify locations of interest and historic significance by markers, signs, public art, landscape, installations, or other means.
- **Policy N10.1: Identifying Neighborhood "Activity Centers."** Neighborhood activity centers should become identifiable commercial, activity and communication centers for the surrounding neighborhood. The physical design of neighborhood activity centers should support social interaction

and attract persons to the area. Some of the attributes that may facilitate this interaction include plazas, pocket parks, outdoor seating on public and private property, ample sidewalk width, street amenities such as trash cans and benches, and attractive landscaping.

- **Policy N12.4: Undergrounding Utility Lines.** Electrical, telephone, and related distribution lines should be undergrounded in commercial and residential areas, except where special local conditions such as limited visibility of the poles and wires make this unneeded. They should also be underground in appropriate institutional, industrial, and other areas and generally along freeways, scenic routes, and heavily traveled streets. Programs should lead systematically toward the eventual undergrounding of all existing lines in such places. Where significant utility extensions are taking place in these areas, such as in new subdivisions, utilities should be installed underground from the start.

Open Space, Conservation, and Recreation Element

The *City of Oakland General Plan, Open Space, Conservation, and Recreation Element* (OSCAR) (City of Oakland 1996), contains the following policies relevant to the Project and aesthetics:

- **Policy OS-2.1: Protection of Park Open Space.** Manage Oakland's urban parks to protect and enhance their open space character while accommodating a wide range of outdoor recreational activities.
- **Policy OS-2.6: Street Closures for Parks, Plazas, and Gardens.** Where there is broad community and local support and where legally permissible, allow local street closures as a way of creating new parks, plazas, and garden sites in urban neighborhoods.
- **Policy OS-3.6: Open Space Buffers along Freeways.** Maintain existing open space buffers along Oakland's freeways to absorb noise and emissions and enhance the scenic quality of the roadways. Manage steeply sloping or wooded parcels adjacent to highways owned by the State of California (Caltrans) to conserve natural resources and protect open space. Where compatible with adjacent land uses, support the use of land along, under, or over freeways in urban settings for greenbelts, recreation, public art, or other activities that enhance the usefulness and appearance of such land.
- **Policy OS-5.1: Priorities for Trail Improvement.** Improve trail connections within Oakland, emphasizing connections between the flatlands and the hill and shoreline parks; lateral trail connections between the hill area parks; and trails along the waterfront.
- **Policy OS-5.2: Joint Use of Rights-of-Way.** Promote the development of linear parks or trails within utility or transportation corridors, including transmission line rights-of-way, abandoned railroad rights-of-way, and areas under the elevated BART [Bay Area Rapid Transit] tracks.
- **Policy OS-5.3: Trail Design Principles.** Plan and design all new trails in a manner that (a) minimizes environmental impacts, (b) fully considers neighbor privacy and security issues, (c) involves the local community in alignment and design, and (d) considers the needs of multiple users, including pedestrians, bicycles, and wheelchairs.
- **Policy OS-7.5: Lateral Access and Links to the Flatlands.** Improve lateral access along the Oakland shoreline and linkages between the shoreline and nearby neighborhoods by creating a "Bay Trail" along the length of the Oakland waterfront. Where an alignment immediately along the waterfront is not possible, site the trail as close to the water as possible, with spur trails leading to the water's edge. In the transitional areas between Jack London Square and High Street, interim alignments may be designated along local streets, but the ultimate goal should be an unbroken trail along the water's edge between Jack London Square and Martin Luther King, Jr. Regional Shoreline.

- **Policy OS-9.2: Use of Natural Features to Define Communities.** Use open space and natural features to define city and neighborhood edges and give communities within Oakland a stronger sense of identity. Maintain and enhance city edges, including the greenbelt on the eastern edge of the city, the shoreline, and San Leandro Creek. Use creeks, parks, and topographical features to help define neighborhood edges and create neighborhood focal points.
- **Policy OS-9.3: Gateway Improvements.** Enhance neighborhood and city identity by maintaining or creating gateways. Maintain view corridors and enhance the sense of arrival at the major entrances to the city, including freeways, BART lines, and the airport entry. Use public art, landscaping, and signage to create stronger city and neighborhood gateways.
- **Policy OS-10.1: View Protection.** Protect the character of existing scenic views in Oakland, paying particular attention to (a) views of the Oakland Hills from the flatlands, (b) views of downtown and Lake Merritt, (c) views of the shoreline, and (d) panoramic views from Skyline Boulevard, Grizzly Peak Road, and other hillside locations.
- **Policy OS-10.2: Minimizing Adverse Visual Impacts.** Encourage site planning for new development that minimizes adverse visual impacts and takes advantage of opportunities for new vistas and scenic enhancement.
- **Policy OS-10.3: Underutilized Visual Resources.** Enhance Oakland's underutilized visual resources, including the waterfront, creeks, San Leandro Bay, architecturally significant buildings or landmarks, and major thoroughfares.
- **Policy OS-10.4: Retention of City-Owned Open Space in Scenic Corridors.** Retain City-owned parcels adjacent to Skyline Boulevard, Shepherd Canyon Road, and other scenic roadways to preserve panoramic views, vegetation, and natural character.
- **Policy OS-11.3: Public Art Requirements.** Continue to require public art as a part of new public buildings or facilities. Consider expanding the requirement or creating voluntary incentives to private buildings with substantial public spaces.
- **Policy OS-11.4: Siting Public Art.** Site public art with sensitivity to its surroundings. Locate public art in a manner that does not reduce useable open space in City parks or impede recreational activities.
- **Policy OS-12.1: Street Tree Selection.** Incorporate a broad and varied range of tree species that is reflected on a City-maintained list of approved trees. Street tree selection should respond to the general environmental conditions at the planting site, including climate and micro-climate, soil types, topography, existing tree planting, maintenance of adequate distance between street trees and other features, the character of existing development, and the size and context of the tree planting area.
- **Policy OS-12.3: Street Tree Removal.** Remove street trees only if they are hazardous, severely and incurably infested with insects or blight, or are severely and irreversibly damaged and deformed. Provide replacement trees in all cases where the site is suitable for street trees.
- **Policy CO-4.2: Landscaping and Drought-Tolerant Plants.** Require use of drought-tolerant plants to the greatest extent possible and encourage the use of irrigation systems that minimize water consumption.
- **Policy CO-7.4: Tree Removal.** Discourage the removal of large trees on already developed sites unless removal is required for biological, public safety, or public works reasons.
- **Policy REC-3.3: Park Location Factors.** Consider a range of factors when locating new parks or recreational facilities, including local recreational needs, projected operating and maintenance costs, budgetary constraints, surrounding land uses, citizen wishes, accessibility, the need to protect or enhance a historic resource, and site visibility.

- **Policy REC-6.3: Use of Surplus or Underutilized Properties.** In areas where park deficiencies exist, pursue recreational use of open space at surplus schools, military bases, utility and watershed properties, and transmission and transportation corridors. Recreational uses in such locations should not conflict with the functional use of the property and should be compatible with prevailing environmental conditions.
- **Policy REC-7.6: Recognition of Local History.** Promote programs, events, and markers at local parks that increase public awareness of local history and provide a sense of continuity with the past.

West Oakland Planning Area Strategy

The West Oakland Planning Area Strategy within the OSCAR recommends the following to improve visual access:

- Improve access to the shoreline. This should include construction of the Bay Trail, along with spur trails along Maritime and 7th Street/Middle Harbor Road.
- Where feasible, incorporate connections (arcades, landscaped easements, etc.) to parks in West Oakland (i.e., De Fremery, Lowell, Raimondi) as old industrial sites along Mandela Parkway are redeveloped.
- Continue street tree planting efforts and other programs to "green" West Oakland.

Scenic Highways Element

As described in the *City of Oakland General Plan, Scenic Highways Element* (City of Oakland 1974), the MacArthur Freeway scenic corridor is a City-designated scenic route from the San Leandro city limits to the SFOBB approach. Although I-580 is also known as the MacArthur Freeway, the City-designated scenic route includes a segment of I-80 from its intersection with I-580 to the SFOBB approach (refer to Map 2 in the *Scenic Highways Element*). The *Scenic Highways Element* contains the following policies pertaining to aesthetic resources:

- **General Policy 2.** All or portions of visually significant trafficways are eligible for future designation as scenic routes and for the protective restrictions that may be appropriate thereto.
- **General Policy 3.** Urban development should be related sensitively to the natural setting.
- **General Policy 4.** High standards for preserving and enhancing natural landforms and vegetation should be established and maintained to regulate all activities related to earthwork and the removal of trees, shrubs, or ground cover.
- **General Policy 5.** Budgets for street improvements will, as a matter of course, include items for landscaping and tree planting, and the City budget should reflect the need for continued maintenance.
- **General Policy 6.** Overhead utilities should be undergrounded along all freeways, scenic routes, and major streets. Programs should be developed to increase the present rate of undergrounding for existing overhead utilities.
- **General Policy 7.** Billboards should be prohibited and other signs should be controlled along freeways and parkways.
- **MacArthur Freeway Policy 1.** The signs within the scenic corridor that are visible from the freeway should be for identification purposes only; no advertising should be permitted.
- **MacArthur Freeway Policy 2.** Visual intrusions within the scenic corridor should be removed, converted, buffered, or screened from the motorist's view.

- **MacArthur Freeway Policy 3.** Panoramic vistas and interesting views now available to the motorist should not be obliterated by new structures.
- **MacArthur Freeway Policy 4.** New construction within the scenic corridor should demonstrate architectural merit and a harmonious relationship with the surrounding landscape.

City of Oakland Standard Conditions of Approval

The following Standard Condition of Approval (SCA) may be considered relevant because the Project would be subject to trash and blight removal and graffiti control. In addition, the Project would include landscaping and new exterior lighting along the Link and in the Wood Street parking lot.

16. **Trash and Blight Removal.** The project applicant and his/her successors shall maintain the property free of blight, as defined in chapter 8.24 of the Oakland Municipal Code. For nonresidential and multifamily residential projects, the project applicant shall install and maintain trash receptacles near public entryways as needed to provide sufficient capacity for building users.

17. **Graffiti Control.**

    a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation:

        i. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces.

        ii. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces.

        iii. Use of paint with anti-graffiti coating.

        iv. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED).

        v. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement.

    b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following:

        i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system.

        ii. Covering with new paint to match the color of the surrounding surface.

        iii. Replacing with new surfacing (with City permits if required).

18. **Landscape Plan.**

    a. *Landscape Plan Required.* The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of Chapter 17.124 of the Planning Code. Proposed plants shall be predominantly drought-tolerant species. Specification of any street trees shall comply with the Master Street Tree List and Tree Planting Guidelines, which can be viewed at http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf and http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf, respectively, and with any applicable streetscape plan.

b. *Landscape Installation.* The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit, or other equivalent instrument acceptable to the Director of City Planning is provided. The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan, based on a licensed contractor's bid.

c. *Landscape Maintenance.* All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.

19. **Lighting Plan.** Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties.

City of Oakland Outdoor Lighting Standards

The City of Oakland's adopted Outdoor Lighting Standards provides lighting design and specification standards for private development projects on public right of ways or City properties. The standards direct that "all lighting equipment used in the City of Oakland will be standardized for energy efficiency, low glare and light pollution features, and the effective operation and maintenance of the lighting system City-wide" (Section D, *Lighting Equipment Guide*). In addition, Section C of the standards, Reduce Glare and Light Pollution, includes the following measures, which prevent light pollution from up-lighting (City of Oakland 2021):

8. Forbid the installation of luminaries with open bulbs.
9. Use up-light limiting shields to minimize up-light components. The shields will direct the lights to the roadways.
10. Use Light Emitting Diode (LED) up-light because it is not as powerful as other sources of light.
11. Use full-cut-off luminaries wherever such equipment is available. Use semi-cut-off luminaries if the full-cut-off luminaries are not available.
12. Forbid the lighting of building facade.
13. Forbid the use of decorating lighting, and lighting for signs, billboards, etc.

Port of Oakland Exterior Lighting Policy

The Port of Oakland's Exterior Lighting Policy prescribes measures to prevent light pollution from development and operations in all areas under the jurisdiction of the Port. The General Mitigation Measures and Practices of the policy identify that the design of exterior lighting shall generally follow Illuminating Engineering Society of North America's *Recommended Lighting Levels for Exterior Lighting*. The *Dark-Sky Association* further recommends that lighting designers minimize illumination levels, pole height and spacing, glare, lighting system depreciation and life-cycle cost. In addition, lighting pollution mitigation measures include specifying full cutoff light fixtures, horizontally oriented lamps (bulb), and low-reflectivity architectural surfaces.

2.1.2 Discussion of Potential Impacts

a. The Project would have a less-than-significant impact on scenic vistas.

Most elevated views from West Grand Avenue are very limited, industrial in nature, and not considered scenic. However, there are scenic views from West Grand Avenue near its intersection with I-80. This location is closer to the Bay and has views of the Bay and surrounding hills and city skylines. The Project would not impede views, including those that are scenic, because the elevated segments of the Link would generally be even with West Grand Avenue or slightly lower (refer to the cross sections shown on **Figures 1-4**, **1-6b**, **1-7b**, and **1-8b**).

Although Segment 2 is slightly higher than West Grand Avenue, as shown on **Figure 1-5b**, this portion of the roadway does not have scenic views. Where visible, the Link would blend with views available from roadways, including those views that are scenic. The Project would provide an elevated vantage from which viewers could have views from the elevated portions of the Link and pause in safety to enjoy those views. It is likely that new views provided by the Link would be scenic, depending on the viewer's location along the Link. This experience is currently not provided along West Grand Avenue in the Project area because it is a very busy roadway. Overall visual impacts on existing scenic views would be less than significant.

b. The Project would have a less-than-significant impact on scenic highways.

In the Project area, I-80 is an eligible state scenic highway but is not officially designated. Therefore, there would be no impact on state scenic highways. However, I-580 (the MacArthur Freeway) is a City-designated scenic route from the San Leandro city limits to the SFOBB approach, which includes I-80 in the Project area. Views of the Link from I-80 would be obscured by elevated transportation structures and industrial uses. In particular, views of the Link from the I-80 eastbound lanes, which would face the Link, would be obscured by the West Grand Avenue/Maritime Street flyover, which is the horseshoe-shaped elevated structure extending from westbound I-80 to eastbound West Grand Avenue and Maritime Street (**Figure 1-2**). The Link would not be visible on approach from westbound lanes because West Grand Avenue would block views of the Link, which is located on the other side of the roadway. The Link could be somewhat visible from this flyover and from the eastbound I-80 connector ramp to I-880 southbound, but the views would be fleeting and somewhat obstructed. An example of how the elevated portion of the Link would blend with existing roadways is shown on **Figure 2.1-3**, (Simulation 1, *View of West Grand Avenue from Maritime Street*). Because the Link would be mostly obscured from view and would blend with views, in areas where views are available, impacts on scenic highways would be less than significant.

c. The Project would have a less-than-significant impact on applicable zoning and other regulations governing scenic quality in an urbanized area.

The Project would be located entirely within an urbanized area. Therefore, no rural areas would be affected by the Project.

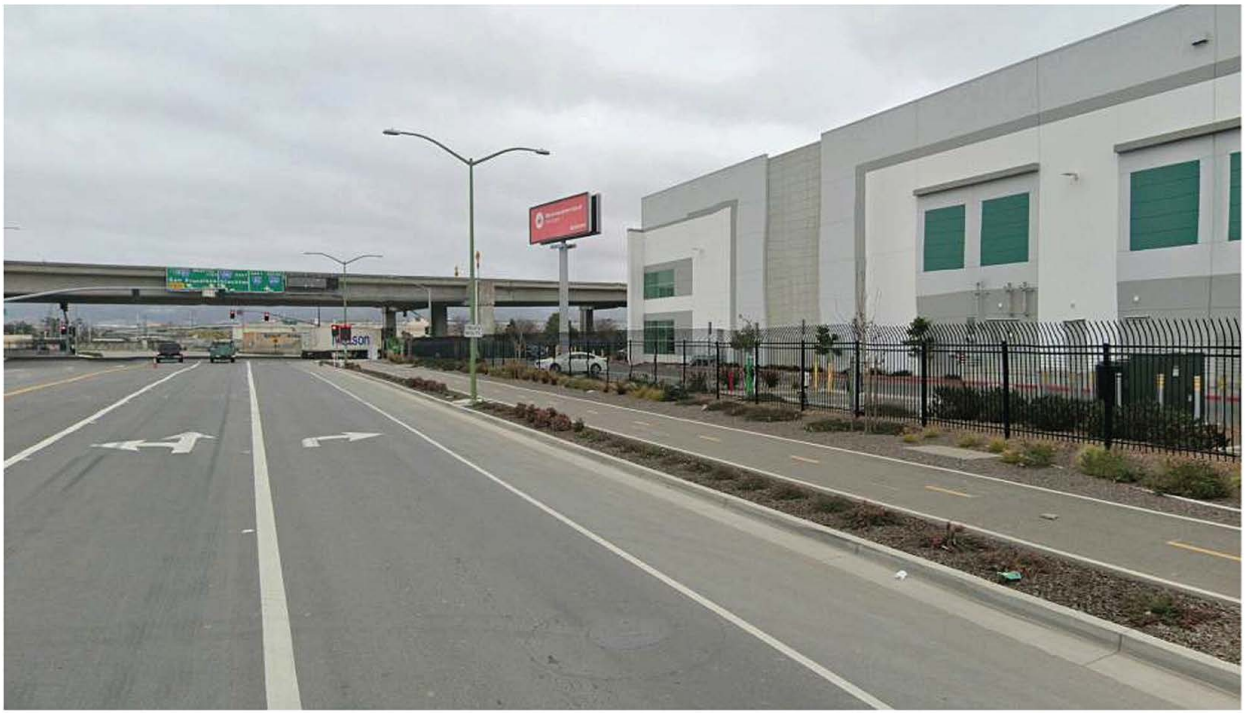
Construction of the Project would occur in an industrial area that lacks highly sensitive viewers. It would occur between 7:00 a.m. and 6:00 p.m. Monday through Saturday over a two-year period. Therefore, construction would occur during daylight hours, would not require disruptive high-intensity lighting for nighttime construction, would be short term and temporary in nature, and would not affect sensitive viewers. Temporary construction impacts would also be experienced by recreational viewers who use the Bay Trail connection to Burma Road during construction of the Segment 4 switchback and Segment 5 connection to the Bay Trail (see **Figure 1-8a**). Viewers would see heavy equipment, the erection of falsework, and construction of switchback and touchdown. No closures would be anticipated to construct the Link connection and touchdown to the Bay Trail. However, recreational viewers would either be

restricted from using the Bay Trail connection to Burma Road for a short period of time or, to avoid trail closures, be rerouted to the adjacent paved roadway with a temporary trail realignment during construction of the temporary falsework for the switchback. Trail closures, if needed, would be minimized and all efforts would be made to keep the trail operationally safe at all times. Visual impacts resulting from Project construction would be less than significant.

As described in the 2022 VIA (ICF 2022), the existing visual character of the Project vicinity would not be degraded or substantially altered by the Project. As noted in the project description, the final design process would include community workshops to solicit community input on Project aesthetics and landscaping, ensuring that the Project would incorporate design elements desired by the community. This would instill a feeling of pride and project ownership and ensure that the Project would reflect the values and character of the community. The Project would introduce an elevated structure adjacent to West Grand Avenue (see **Figures 1-4 to 1-8)**, be made of materials similar to those used for many elevated roadways in the vicinity, and would blend very well with the existing visual landscape of the area, which lacks highly sensitive viewers (**Figure 2.1-3**, Simulation 1).

Class II bike lanes on local surface streets would not greatly affect the visual environment because they would blend in, appearing as a visual extension of the roadways. Some existing landscaping in the Project area may be removed, but removals would be minimized to the degree possible (**Figure 2.1-4**, Simulation 2). In addition, proposed landscaping would aid in retaining the existing visual character, even though the final design of the landscaping, including a seat wall, and signage options may vary (**Figure 2.1-4**, Simulation 2, and **Figure 2.1-5**, Simulation 3). Supplemental landscaping and landscape features (e.g., signage, seat wall, artwork) would improve the visual appearance of the Project area, in combination with the existing streetscape, and reduce the appearance of any streetscape removed as a result of the Project. For example, landscaping would help improve views from within the Peralta building by softening the visible landscape outside. Landscaping would also help improve views of the building by providing aesthetic appeal through a unified design, with greater separation between the building and the busy roadway. Such features may also be perceived as beneficial because signage at the Link entry, the Link itself, and new landscaping would provide visual interest, contribute to a creating a sense of place and destination, and enhance the existing visual landscape of the Project area. Green pavement markings, delineating the pathway, would not reduce the existing visual character of the industrial and commercial environment but would make the area more pedestrian friendly. Overall, the changes at the point of connection to Mandela Parkway, an area where there is a higher concentration of residential, recreational, and commercial viewers, are likely to be viewed positively by the community and adjacent neighbors, especially because the final design process would include community workshops to solicit community input on Project aesthetics and landscaping. This would ensure that the Project would incorporate design elements that reflect the values and character desired by the community, which would instill a feeling of pride and project ownership. In addition, views of Segment 2, in the area where the elevated structure starts to ramp up from the end of Segment 1, would not greatly affect neighboring viewers. Buildings located immediately next to Segment 2, south of West Grand Avenue, include large warehouse structures that do not have windows that face the Project. Businesses north of West Grand Avenue also do not have windows that face the Project. Furthermore, these businesses have privacy fencing that limits views to the Project or limited ground-level views because of the elevated West Grand Avenue (**Figure 2.1-6**, Simulation 4). Therefore, businesses to the north would have limited or no views of the Link. The primary viewers who would see the new elevated Link would be those in the Lyft Oakland Hub parking lot along West Grand Avenue, pedestrians on adjacent sidewalks, and roadway users. As seen on **Figure 2.1-6**, Simulation 4, the Link would not detract from views and would appear to be a visual extension of West Grand Avenue. The Link would result in closure of the West Grand Avenue alley; Willow Street would dead end into the structure, although sidewalk access would be retained for pedestrians. However, as seen

Simulation 1



Existing Conditions. View of West Grand Avenue from Maritime Street.

Simulated Conditions.

Figure 2.1-3

Simulation 2

Existing Conditions. View westward of West Grand Avenue from Mandela Parkway.

Simulated Conditions.
Note: Figures 2.1-4 and 2.1-5 show the types of landscaping and signage under consideration.

Figure 2.1-4

Simulation 3

Existing Conditions. View westward of West Grand Avenue from Mandela Parkway.

Simulated Conditions.
Note: Figures 2.1-4 and 2.1-5 show the types of landscaping and signage under consideration.

Figure 2.1-5

Simulation 4

Existing Conditions. View of warehouse on West Grand Avenue alley.

Simulated Conditions.

Figure 2.1-6

on **Figure 2.1-6**, Simulation 4, and **Figure 2.1-7**, Simulation 5, the new structure would be in keeping with the existing structure that elevates West Grand Avenue, would cover up the existing graffiti, and would remove a section of the alley between Willow Street and Wood Street where illegal dumping occurs. As described above, viewers would not be negatively affected by the Project because community design input would ensure that the Project would incorporate design elements that reflect the values and character desired by the community, which would instill a feeling of pride and Project ownership.

The Link would not detract from views and would appear to be a visual extension of West Grand Avenue from most locations (**Figure 2.1-8**, Simulation 6). The Link would require fencing for safety; however, the type of fencing, as well as color, has not been determined. Fencing may be white, as in the simulations, if community input is favorable. This would create a sense of connectivity and tie in to the theme of the fencing along the Bay Trail. As shown in the simulations, the pathway would blend very well with the existing environment, even with white fencing, which tends to attract views. Furthermore, the pathway would not detract from the existing visual character and quality of views along the roadways. Travelers and pedestrians on Frontage Road and West Grand Avenue would not experience a notable difference in views. In addition, pedestrians along West Grand Avenue would be able to use the pathway, which would be a safer travel route and most likely perceived to be beneficial. The Link would also include a switchback ramp that would connect to the touchdown at Segment 5, which ends at the Bay Trail. The switchback and touchdown would not detract from views because this area is already dominated by transportation structures and industrial uses. The scale of the Link structure would be smaller than that of the surrounding freeway infrastructure (**Figure 2.1-9,** Simulation 7). However, the new structure would be similar in form and color and therefore in keeping with existing elevated transportation structures in the area. The addition of this new structure would not detract from views seen by recreationists, roadway travelers, or people within businesses in the area.

Lookout areas along the elevated portions of the Link would not stand out as visually separate structures, and associated landscaping would soften the visual appearance of an area that is dominated by hardscape and large, elevated transportation structures. The proposed ramp on the east side of Maritime Street would introduce a new structure into the viewshed that would result in the removal of immature streetscaping along the affected segment of Maritime Street, but views from this vantage point would not be greatly affected because this area is heavily industrialized and already dominated by transportation structures (**Figure 2.1-3**, Simulation 1). In addition, any vegetation removed as part of the project would be replaced elsewhere along the project corridor. The proposed fencing would not be different enough to stand out visually and contrast with the existing visual environment. The Link would not result in notable changes in views from local scenic roadways **(Figure 2.1-10**, Simulation 8). Although the switchback structure would be visible, it would be part of a view that is dominated by freeway infrastructure and industrial land uses in an area that is undergoing extensive redevelopment, which travelers along I-80 are accustomed to seeing. In addition, travelers along I-80 would pass by the Link at a high rate of speed. This segment of the freeway requires considerable attention because of merging traffic patterns. Therefore, views would be fleeting. In addition, although not currently built, the 2011–2195 Wood Street project would construct a multi-level, mixed-use development with 235 residential units, if that project moves forward. That project would introduce additional residential and commercial viewers. This has the potential to affect future residences. However, residents would be aware of the Link and West Grand Avenue, which is already an elevated transportation structure, lit with overhead streetlights, and adjacent to the future development site. Therefore, it is not anticipated that residents would be negatively affected. The Link would also travel over tracks. As seen on **Figure 2.1-8**, Simulation 6, the Link would not detract from views and would appear to be a visual extension of West Grand Avenue from most locations. As seen on **Figure 2.1-6**, Simulation 4, the pathway would blend very well with the existing environment, even with white fencing, which tends to attract views. Furthermore, the pathway would not detract from the existing visual character and quality of

Simulation 5

Existing Conditions. View of West Grand Avenue alley from Willow Street.

Simulated Conditions.

Figure 2.1-7

Simulation 6

Existing Conditions. View of West Grand Avenue from Frontage Road.

Simulated Conditions.

Figure 2.1-8

Simulation 7

Existing Conditions. View northward from Burma Road.

Simulated Conditions.

Figure 2.1-9

Simulation 8

Existing Conditions. View eastward from I-80.

Simulated Conditions.

Figure 2.1-10

views along the roadways. Travelers and pedestrians on Frontage Road and West Grand Avenue would not experience a notable difference in views. In addition, pedestrians along West Grand Avenue would be able to use the pathway, which would be a safer travel route and most likely perceived to be beneficial. Therefore, overall visual changes to the existing visual character and quality of the Project area would be low, if not beneficial, and would provide a linkage to the Bay Trail, Bay Bridge, and shoreline areas. As a result, the proposed Project would be highly compatible with the local regulations governing scenic quality set forth in the City's general plan.

Trash removal and graffiti control would be required to meet Oakland SCAs, which would aid in improving portions of the Project area. In addition, the Project would be required to meet Oakland SCAs regarding landscaping and new exterior lighting.

The proposed Project would include bikeways and pedestrian walks (Policy T3.5). Existing utilities are already underground (Policy N12.4) in much of this area; the Project does not propose aboveground utilities. The design of the proposed Project and its effects on the existing visual character and quality of the site, summarized above from the 2015 VIA, would ensure that it would protect existing activities (Policy l/C4.1), improve streetscapes (Policy T6.2), make the waterfront accessible (Policy T6.3), protect scenic routes (Policy T6.5), mark significant sites (Policy N9.5), and support neighborhood "activity centers" (Policy N10.1). Therefore, the proposed Project would not conflict with the Land Use and Transportation Element of the City's General Plan.

The proposed Project would protect park open space (Policy OS-2.1), aid in creating a linear parkway through local street closures (Policy OS-2.6), maintain open space buffers along freeways (Policy OS-3.6), improve trail connections within Oakland (Policy OS-5.1), use joint rights-of-way (Policy OS-5.2), follow the City's trail design principles (Policy OS-5.3), improve lateral access and linkages to the Oakland shoreline (Policy OS-7.5), maintain and enhance the city's edge (Policy OS-9.2), improve city gateways (Policy OS-9.3), protect the character of existing scenic views in Oakland (Policy OS-10.1), minimize adverse visual impacts (Policy OS-10.2), enhance Oakland's visual resources (Policy OS-10.3), retain City-owned open space in scenic corridors (Policy OS-10.4), include public art that would be sited appropriately (Policies OS-11.3 and OS-11.4), locate the Link in an appropriate area (Policy REC-3.3), make use of underutilized areas (Policy REC-6.3), and be respectful of local history (Policy REC-7.6). In addition, the proposed Project's final landscaping plans would be reviewed by the City for compliance with City permit requirements regarding tree type, spacing, setback, and required maintenance. This would ensure compliance with Policies OS-12.1, OS-12.3, CO-4.2, and CO-7.4. Therefore, the proposed Project would not conflict with the OSCAR Element of the City's General Plan and would be consistent with the West Oakland Planning Area Strategy within the OSCAR because the proposed Project would improve shoreline access, create connections to parks in West Oakland, and include street tree planting to help "green" the city.

Because the Link would be mostly obscured from view and blend with views, where available, impacts on scenic highways would be low. Any impacts from potential glare related to Project surfaces and the removal of vegetation would be remediated with implementation of the proposed avoidance or minimization measures. Therefore, the proposed Project would not conflict with the Scenic Highways Element of the City's General Plan.

As evaluated in the 2022 VIA, the proposed Project is not anticipated to result in any impacts that would result in a substantial adverse change in light and glare. In addition, the Project would include avoidance and minimization measures. With implementation of the measures, the Project would minimize the likelihood of light reflection and glare, provide a surface that would not be attractive for graffiti (AMM AES-1), and replace vegetation that is destroyed, damaged, or removed in order to minimize changes to

scenic quality (AMM AES-2). Furthermore, the proposed Project would be required to comply with City and Port lighting standards and policies. Therefore, the proposed Project would be consistent with standards and policies contained in the City of Oakland's adopted Outdoor Lighting Standards and the Port of Oakland's Exterior Lighting Policy.

In summary, the proposed Project would be compatible with and would not conflict with applicable zoning and other regulations governing scenic quality. Impacts would be less than significant.

d. The Project would have a less-than-significant impact related to new sources of substantial light or glare that would adversely affect daytime or nighttime views in the area.

The Project would increase shade incrementally. Shade cast by the Link structure would not be discernable from existing shade cast by West Grand Avenue; this would be true along much of the Link (**Figure 2.1-13**, Simulation 1). In the morning, West Grand Avenue casts a slight shadow on the West Grand Avenue alley as the roadway elevates westward from its touchdown at Campbell Street. As seen on **Figure 2.1-7**, Simulation 5, the Link structure would cast a slight shadow. However, although the alley is not shaded when the sun is at solar noon, buildings along the south side of the West Grand Avenue alley cast shadows in the afternoon, leaving the alley mostly shaded. As seen on **Figure 2.1-6**, Simulations 4 and 5, this would result in a situation where the Link would be shaded, just like the alley. Near its connection to the Bay Trail, the Link would cause shading because of the switchback structure. However, a large portion of the Bay Trail near the connection to Burma Road is already shaded because of elevated roadway infrastructure that casts shadows on the trail. The Link switchback would not be as tall as surrounding infrastructure and would cast a shadow only on a small area where it crosses the Bay Trail (**Figure 2.1-9**, Simulation 7). Recreationists on the trail are accustomed to such shading; the trail is already shaded quite a bit in this area. Therefore, shading caused by the Link is considered to be negligible because of the shading caused by other transportation infrastructure and buildings in the area as well as the nominal amount of shading caused by the Link structures.

The Project would include low-level lighting along the Link that would be designed to prevent light pollution. Existing nighttime light sources in the area include street lighting along much of West Grand Avenue and vehicle headlights. New low-level lighting associated with the Link would be negligible compared to existing conditions because it would be side mounted in the barrier along the elevated segments. The new lighting (1- to 2-foot-candle units) would light a 1- to 2-foot area; this new illumination would not be very noticeable to passing drivers. The Project could also include some overhead lights at the top of the fencing along the elevated portions of the Link if deemed necessary for safety. This would result in a negligible contribution to nighttime lighting in the Project area.

Lighting along the at-grade portions of the Link and at the Wood Street parking lot would be provided by new or existing streetlights or pedestrian light standards. There is existing lighting along Wood Street and security lighting at nearby warehouses. Proposed overhead lighting and pedestrian light standards would constitute a minimal change in the amount of lighting in the area, given the existing sources of light. In addition, proposed lighting at the parking lot would constitute a minimal change in the amount of lighting. Furthermore, the Project would be required to comply with the City of Oakland's adopted Outdoor Lighting Standards and the Port of Oakland's Exterior Lighting Policy, ensuring that impacts from lighting would be minimized. With these measures in place, it is not anticipated that future residents at 2011–2195 Wood Street would be negatively affected by lighting associated with the Project. The elevated transportation structure is lit with overhead LED streetlights that provide amply roadway lighting, which would be seen at the future development site. Project lighting would not substantially increase lighting beyond that created by the streetlights on West Grand Avenue.

Parking lot landscaping could include trees. Once the trees mature, lighting would be screened and filtered by the foliage. Glare resulting from the Project would be negligible, as seen in all eight simulations (**Figures 2.1-3 to 2.1-10**), given the predominance of pavement and hardscape features present in the Project vicinity. The proposed vegetation would reduce glare. Any impacts from potential glare related to Project surfaces and the removal of vegetation would be remediated with implementation of the proposed avoidance or minimization measures.

In summary, impacts resulting from increased light and glare would be less than significant because the increase would be negligible compared to existing conditions, proposed landscaping would filter and screen new sources of light and reduce glare, and the proposed surface texture of the elevated Link structure would minimize potential daytime glare.

2.1.3 Mitigation Measures

No mitigation measures are required to reduce impacts related to aesthetics to a less-than-significant level.

2.2 Agriculture and Forest Resources

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

The Project is not located on agricultural or forested land (California Department of Conservation 2013, 2014; City of Oakland 2014a). The Project would not convert agricultural land to non-agricultural uses or forested land to non-forested uses or result in changes to the existing environment that could result in conversion of agricultural or forested land. There would be no impact.

2.3 Air Quality

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard?	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

2.3.1 Environmental Setting

This air quality setting section discusses federal and State ambient air quality standards and existing air quality conditions, identifies sensitive receptors, and describes the regulatory framework for air quality management. Additional background information is contained in **Appendix A-1**, *Air Quality Analysis Technical Errata*, and **Appendix B-1**, *Review of West Oakland Health Impact Studies*.

2.3.1.1 Existing Conditions

The Project area is located within Alameda County in the San Francisco Bay Area Air Basin (SFBAAB). It is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) at the local level, the California Air Resources Board (ARB) at the State level, and the U.S. Environmental Protection Agency (EPA) at the federal level. Refer to Section 2.3.1.2, *Regulatory Setting*.

Project area ambient air quality is affected by multiple sources of pollution, including emissions from vehicles on I-880, California State Route 24 (SR 24), and I-80, as well as local streets; passenger trains and freight trains, including those servicing the Port of Oakland; trucks servicing the Port of Oakland; ships calling on the Port of Oakland; and permitted stationary sources in the area.

Commonly used indicators of ambient air quality conditions are existing concentrations of the following criteria pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead, and particulate matter (PM). For particulate matter, two types are considered: less than or equal to 10 microns in diameter (PM10) and particulate matter less than or equal to 2.5 microns in diameter (PM2.5). These criteria pollutants are regulated by the EPA and ARB through national and California ambient air quality standards (NAAQS and CAAQS), respectively. The ARB and BAAQMD are responsible for ensuring these standards are met.

Ozone and NO_2 are considered regional pollutants because they or their precursors affect air quality on a regional scale. Nitrogen oxides (NO_X) react photochemically with reactive organic gases (ROG) to form ozone. This reaction occurs at some distance downwind of the source of pollutants. Pollutants such as CO, SO_2, and lead are considered to be local pollutants that tend to accumulate in the air locally. Particulate

matter is considered to be a local as well as a regional pollutant. The primary pollutants of concern in the Project area are ozone, ROG, NO_X, CO, and PM. In addition, toxic air contaminants (TACs) are of concern in the Project area. Effects from TACs tend to be local rather than regional. The health effects of TACs can result from either acute or chronic exposure. Many types of cancer are associated with chronic TAC exposures. The majority of the estimated health risks from TACs can be attributed to a relatively few compounds, the most important being particulate matter from diesel-fueled engines ("diesel particulate matter" or DPM). There are no ambient air quality standards established for TACs.

Local Air Quality and Attainment Status

The existing air quality conditions in the Project area can be characterized by monitoring data collected in the region. The nearest monitoring station to the Project area is the Oakland-West station located at 1100 21st Street. The station is approximately 0.4 mile east of the Project area and monitors for ozone, CO, PM2.5, and NO_2. There are currently no stations in Alameda County that collect data on PM10. Based on the monitoring data collected at the Oakland-West station, there were approximately 21 violations of the national PM2.5 standard, one violation each for the 8-hour state and national ozone standards, and one violation of the state 1-hour ozone standard, for the period between 2017 and 2019. Refer to **Appendix A-1**, *Table 2, Ambient Air Quality Monitoring Data for the Oakland-West Station*. (California Air Resources Board 2020a; U.S. Environmental Protection Agency 2020a)

Local air quality monitoring data are used by EPA and ARB to assess and classify the air quality status of each regional air basin, county, or, in some cases, a specific urbanized area. The air quality status is identified as *nonattainment, maintenance, attainment, or unclassified*. If a pollutant concentration is lower than the State or federal standard, the area is classified as being in *attainment* of the standard for that pollutant. If a pollutant violates the standard, the area is considered a *nonattainment* area. *Maintenance* status is assigned to areas where pollutant concentrations previously exceeded the standards but are currently meeting the standard over a designated period of time. If there are not enough data available to determine whether the standard is exceeded in an area, the area is designated *unclassified*. **Table 2.3-1** summarizes the attainment status of the Project area with regard to the NAAQS and CAAQS.

Table 2.3-1. Federal and State Attainment Status of the Project Area (Alameda County)

Pollutant	NAAQS	CAAQS
8-hour ozone	Marginal Nonattainment	Nonattainment
CO	Maintenance	Attainment/Maintenance
PM10	Attainment	Nonattainment
PM2.5	Moderate Nonattainment	Nonattainment
NO_2	Unclassified/Attainment	Attainment
SO_2	Attainment	Attainment
Pb	Attainment	Attainment
Visibility-Reducing Particle	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Unclassified
Vinyl Chloride	N/A	No Information Available

Sources: California Air Resources Board 2020b; U.S. Environmental Protection Agency 2020b.

Monitoring was conducted for the Oakland Army Base Redevelopment Project from January 2020 to March 2021 at several locations, including Raimondi Park, which is one block south of the Project area on West Grand Avenue, east of I-880 (Northgate 2021). Over the course of the reporting period, PM2.5 levels at the West Oakland monitoring locations were generally consistent with historical observations, except for a period in the fall of 2020 when regional air quality impacts due to active wildfires elevated the PM2.5 reading to a level significantly above the historical maximum for the Project area.

The predominant wind direction during the reporting period was west to north. During the 2020 period of covered in this report, there were regional "Spare the Air" alerts on May 25 and 26; August 14 and 18 through 31; September 1 through 16, 19, and 27 through 30; October 1 through 11; and December 5, 21, and 22. No "Spare the Air" alerts were issued during the 2021 period covered in this report. The EPA 24-hour average PM2.5 standard of 35 $\mu g/m^3$ was exceeded at the Project site and the BAAQMD monitoring stations on August 21, September 10 through 14 (wildfire influenced), and October 1 and 2, 2020, all of which were during regional "Spare the Air" alert periods. Northgate consulted with BAAQMD. After discussing concentration trends at each monitoring location, including the BAAQMD West Oakland monitoring location; the differences between concentrations measured at each monitoring location; wind direction; and regional Spare the Air alerts, it was agreed that the elevated PM2.5 concentrations observed in September were the result of a regional air quality event—specifically, the LNU Lightning Complex wildfires between August and September 2020—and not Oakland Army Base Redevelopment Project activities. The monitoring report is included in **Appendix A-3**.

Sensitive Receptors

The BAAQMD generally defines a sensitive receptor as a facility or land use that houses or attracts members of the population who are particularly sensitive to the effects of air pollutants. This includes children, the elderly, and people with illnesses. Examples of sensitive receptors include residences, schools, medical facilities, daycare centers, parks, and playgrounds.

One of the closest sensitive receptors in the vicinity of the Project area is the residential live/work space located on Peralta Street, between 18th and 20th Streets. This is approximately 320 feet south of the proposed Class II bike lanes on 20th Street and 940 feet south of the proposed Class I portion of the Link on West Grand Avenue. In addition, there are some residences in the vicinity of 17th Street, between Mandela Parkway and Willow Street. Peralta Studios, a live/work warehouse space, is located at the southwest corner of West Grand Avenue/Mandela Parkway. The nearest Mixed-Use (Residential/Commercial) land use is located northeast of the Project area at 28th Street, between Mandela Parkway and Ettie Street.

Existing recreational uses include the Bay Bridge Trail on the west end of the alignment, the bicycle/pedestrian pathway along Mandela Parkway, and Raimondi Park on south side of 20th Street, between Wood Street and Campbell Street. The Mandela Parkway median includes informal seating areas at about 100 feet east of the Class I portion of the Link on West Grand Avenue. Raimondi Park is primarily used for active recreation, such as baseball and football activities. There are no schools, medical facilities, or daycare centers within 1,000 feet of the Project area.

Background Health Risks

Per the 2018 changes in the CEQA Guidelines related to the California Supreme Court ruling in the *CBIA vs. BAAQMD* case, the potential impacts of the existing environment on project users are not considered impacts of a project under CEQA. However, for public information purposes only, the following background information is provided concerning existing health risks in the project area.

The Project would extend through the industrial and commercial area in West Oakland. West Oakland is identified by the BAAQMD as one of the urban or industrialized communities with high levels of health risk from TACs. The major TAC of concern in the Project area is DPM emitted by truck traffic traveling on I-880 and I-80, rail yard and port-related operations, and industrial equipment. Long-term health effects associated with existing DPM in the Project area are characterized based on the review of published studies prepared by the by the ARB, University of California-Berkeley, University of California-Davis, Caltrans, and the BAAQMD. Detailed discussion of current health risk levels in the Project area and associated health risks to new Link users is included in **Appendix B-1**. The following studies and data sets were reviewed for the analysis:

- Diesel Particulate Matter Health Risk Assessment for the West Oakland Community (California Air Resources Board 2008)
- West Oakland Monitoring Study (Bay Area Air Quality Management District 2010)
- BAAQMD Windrose Data
- BAAQMD Cancer Risk Data
- The Port of Oakland 2020 Seaport Air Emissions Inventory (Port of Oakland 2021)
- The West Oakland Community Action Plan (WOCAP) (BAAQMD and West Oakland Environmental Indicators Project [WOEIP] (2019)

Background health risks from existing DPM sources were summarized into the overall cancer risks by location as shown by the isopleths from the ARB West Oakland Study. Refer to **Appendix B-1**, Figure 1, *Estimated West Oakland Community Potential Cancer Risk from All Diesel PM Emissions Sources in 2005*. The ARB study evaluated health impacts using 2005 emissions inventories and dispersion models. The study forecasts health risks using available growth and control factors, such as future regulations, to project the same health risks in 2010, 2015, and 2020. Total cancer risk from the port operations, rail yard, and other freight activity was between 1,000 and 1,500 in a million in 2005 for the Project area. Under 2005 scenarios, the majority of DPM is from on-road trucks which contribute from 20 percent to over 60 percent of the Project area's cancer risk.

The WOCAP is an effort of both the BAAQMD and the WOEIP. The WOCAP presents information on existing levels of air pollution in the West Oakland area, including the Project area, and identifies a series of actions to reduce pollutant levels as well as health exposures for the residents of West Oakland. The WOCAP includes a study of local air pollution in West Oakland, utilizing data from 2015 to 2018. Excerpts from the WOCAP technical analysis results are included in **Appendix B-2**, which provides figures showing PM 2.5 concentrations (Figure 5-1), DPM concentrations (Figure 5-2), and excess cancer risk (Figure 5-3), along with source contributions to PM 2.5, DPM, and cancer risk (Table 5-1). As shown in **Appendix B-2**, average excess cancer risks associated with local area pollution sources, based on the 2015 to 2018 data used in the WOCAP study, are estimated to range from less than 200 in 1 million to more than 1,000 in 1 million, depending on the location, with the highest exposure area for residents being the southwest part of West Oakland, in proximity to the rail yard along 7th Street. Based on the pattern of risks shown in Figure 5-3 in **Appendix B-2**, cancer risks in the Project area appear to be influenced by emissions from traffic along West Grand Avenue and I-880 and possibly railroad operations. As shown in Figures 5-2 and 5-3 in **Appendix B-2**, the level of DPM exposure and cancer risks along the pedestrian/ bicycle route from West Oakland along 7th Street westward and then northward along Maritime Street to West Grand Avenue are relatively higher than the level of exposure and cancer risks along the Project alignment from Mandela Parkway along West Grand Avenue to Maritime Street. The Project alignment is also a shorter and more direct route from West Oakland

to the bicycle path to the East Span of the Bay Bridge than the route via 7th Street and Maritime Street, which would result in a shorter duration of exposure to ambient pollutant levels.

As of 2017, DPM reduction at the Port, compared to 2005, was approximately 80 percent (Port of Oakland 2019a); as of 2020, DPM reduction at the Port, compared to 2004, was approximately 86 percent (Port of Oakland 2021a). Consequently, the health risks today associated with Port emissions would be substantially lower than those shown in the ARB study, based on 2005 data. They may also be somewhat lower than shown in the WOCAP study, given progress in reducing Port emissions over time.

2.3.1.2 Regulatory Setting

Federal and State

The EPA and the ARB have established NAAQS and CAAQS, respectively, for six criteria pollutants: CO, NO_2, SO_2, ozone, lead, and PM, which consists of PM10 and PM2.5. Refer to **Appendix A-1**, *Table 1, Federal and State Ambient Air Quality Standards*, for the specific national and State standards for each criteria pollutant. Most standards have been set to protect public health. For some pollutants, standards have been based on values such as protection of crops, protection of materials, or avoidance of nuisance conditions. For certain pollutants and averaging periods, CAAQS are more stringent than NAAQS.

Applicable federal and State regulations that affect DPM emissions in the present and future are discussed in **Appendix B-1**. In particular, the ARB's Diesel Risk Reduction Plan (DRRP) includes the goal to reduce DPM emissions by 85 percent in 2020 from 2000 values by requiring filters and greater vehicle turnover of older more polluting highway diesel vehicles (California Air Resources Board 2000).

Regional and Local

Port of Oakland

In addition to supporting ARB's DRRP, the Port of Oakland adopted the Maritime Air Quality Improvement Plan (MAQIP) (Port of Oakland 2009) to support the implementation of the Port Maritime Air Quality Policy Statement. This established a goal of reducing the excess community cancer health risk related to exposure to DPM emissions associated with the Port's maritime operations by 85 percent from 2005 to 2020. The Plan set the following interim goals of reducing DPM emissions in 2012 and 2020:

- On- and near-shore DPM emissions were to be reduced by 65 percent by 2012 and 85 percent by 2020 from 2005 values.
- Off-shore DPM emissions were to only to increase by 2 percent by 2012 and were to be reduced by 85 percent by 2020 from 2005 values.

As of 2017, DPM emissions at the Port had been reduced by 80 percent relative to 2005 (Port of Oakland 2019a).

In June 2019, the Port completed the Seaport Air Quality 2020 and Beyond Plan, which outlines strategies for the Port to minimize criteria air pollutant, DPM, and greenhouse gas (GHG) emissions (Port of Oakland 2019b).

Based on the Seaport Air Emissions Inventory for 2020, for normal business operations, the results show that the Port reduced DPM emissions by 86 percent from 2005 levels and NO_X emissions by 40

percent, thereby achieving the 85 percent reduction in DPM goal and the 34 percent reduction in NO_X goal established in the Port's 2009 MAQIP (Port of Oakland 2021a).

The Port presented a Year 2 progress report on the 2020 and Beyond Plan and the Near-Term Action Plan to the Board of Port Commissioners and the public on September 30, 2021; it plans to provide a Year 3 progress report in the fall of 2022. The Year 2 progress report described the implementation status of the 39 actions in the Near-Term Action Plan and the feasibility analysis for the 10 new actions proposed by the WOEIP and the BAAQMD (Port of Oakland 2021b).

Bay Area Air Quality Management District

At the local level, the BAAQMD is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and State air quality laws. This is for ensuring that NAAQS and CAAQS are not violated within the SFBAAB, and for implementing strategies for air quality improvement and recommending mitigation measures for new growth and development. The Project may be subject to the following BAAQMD rules and regulations at the time of construction.

- **Regulation 2, Rule 2 (New Source Review).** This regulation contains requirements for Best Available Control Technology and emission offsets.
- **Regulation 2, Rule 5 (New Source Review of Toxic Air Contaminates).** This regulation outlines guidance for evaluating TAC emissions and their potential health risks.
- **Regulation 6, Rule 1 (Particulate Matter).** This regulation restricts emissions of PM darker than No. 1 on the Ringlemann Chart to less than three minutes in any one hour.
- **Regulation 7 (Odorous Substances).** This regulation establishes general odor limitations on odorous substances and specific emission limitations on certain odorous compounds.
- **Regulation 8, Rule 3 (Architectural Coatings).** This regulation limits the quantity of Volatile Organic Compounds (VOCs) in architectural coatings.
- **Regulation 9, Rule 6 (Nitrogen oxides emission from natural gas-fired boilers and water heaters).** This regulation limits emissions of NO_X generated by natural gas-fired boilers.
- **Regulation 9, Rule 8 (Stationary Internal Combustion Engines).** This regulation limits emissions of NO_X and CO from stationary internal combustion engines of more than 50 horsepower.
- **Regulation 11, Rule 2 (Asbestos Demolition, Renovation and Manufacturing).** This regulation controls emissions of asbestos to the atmosphere during demolition, renovation, milling and manufacturing and establishes appropriate waste disposal procedures.

As part of its responsibility, the BAAQMD developed CEQA Guidelines that include analysis requirements for construction- and operational-related emissions and thresholds of significance for ROG, NO_X, CO, PM2.5, PM10, TACs, and odors.

As stated in Appendix G of the State CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the Appendix G checklist determinations. Accordingly, the BAAQMD's thresholds, as summarized in **Table 2.3-2**, are used to evaluate the significance of air quality impacts associated with the Project.

Table 2.3-2. BAAQMD Thresholds of Significance

Pollutant	Construction	Operations
ROG	54 lbs/day	54 lbs/day or 10 tons/year
NO_X	54 lbs/day	54 lbs/day or 10 tons/year
CO	–	Violation of CAAQS
PM10 (exhaust)	82 lbs/day	82 lbs/day or 15 tons/year
PM2.5 (exhaust)	54 lbs/day	54 lbs/day or 10 tons/year
PM10/PM2.5 (dust)	BMPs	–
TACs (Project-level)	Increased cancer risk of 10 in 1 million; increased non-cancer risk of greater than 1.0 (hazard index [HI); PM2.5 increase of greater than 0.3 micrograms per cubic meter	Same as construction
TACs (cumulative)	Increased cancer risk of 100 in 1 million; increased non-cancer risk of greater than 10.0; PM2.5 increase of greater than 0.8 microgram per cubic meter at receptors within 1,000 feet	Same as construction
Odors	–	Five complaints per year averaged over 3 years

Source: Bay Area Air Quality Management District 2017.

City of Oakland General Plan Open Space, Conservation and Recreation Element

The City of Oakland OSCAR (City of Oakland 1996) includes the following policy relevant to emissions.

- **Policy CO-12.6: Control of Dust Emissions.** Require construction, demolition and grading practices which minimize dust emissions.

City of Oakland Standard Conditions of Approval

As stated in Section 1.8.2, *Permits/Approvals*, the Oakland SCA includes conditions of approval for projects. Several conditions in the SCA are not applicable to the Project because they pertain to projects that are land use developments (e.g., residential or commercial developments), involve a stationary source of pollutants, involve a loading dock or truck fleet, or are located in areas with naturally occurring asbestos. The air quality-related SCA include the following conditions of approval that are applicable to the Project:

20. Dust Controls – Construction Related (this condition applies to all projects involving construction activities)

    The Project applicant shall implement all of the following applicable dust control measures during construction of the Project:

    a) Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.

    b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).

c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

d) Limit vehicle speeds on unpaved roads to 15 miles per hour.

e) All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph.

f) All trucks and equipment, including tires, shall be washed off prior to leaving the site.

g) Site access points to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.

Measures h) through l) apply to projects that involve (1) extensive site preparation (i.e., the construction is four acres or more in size) or (2) extensive soil transport (i.e., 10,000 or more cubic yards of soil import/export). The Project would not meet either of these conditions; therefore, measures h) through l) would not be required.

21. Criteria Air Pollutant Controls - Construction Related (this condition applies to all projects involving construction activities)

The Project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the Project as applicable:

a) Idling times on all diesel-fueled commercial vehicles over 10,000 pounds shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations [CCR]). Clear signage to this effect shall be provided for construction workers at all access points.

b) Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes, and fleet operators must develop a written policy as required by Title 23, Section 2449, of the CCR ("California Air Resources Board Off-Road Diesel Regulations").

c) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the BAAQMD as needed.

d) Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall be used only if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand.

e) Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings.

f) All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the CCR (California Air Resources Board Off-Road Diesel Regulations), and upon request by the City (and BAAQMD if specifically requested), the Project applicant shall provide written documentation that fleet requirements have been met.

26. Asbestos in Structures (this condition applies to all projects involving either of the following: [1] demolition of structures or [2] renovation of structures known to contain or may contain asbestos).

    The Project applicant shall comply with all applicable laws and regulations regarding demolition and renovation of Asbestos Containing Materials, including, but not limited to, CCR Title 8; California Business and Professions Code, Division 3; California Health and Safety Code Sections 25915–25919.7; and BAAQMD, Regulation 11, Rule 2, as may be amended. Evidence of compliance shall be submitted to the City upon request.

West Oakland Community Action Plan

West Oakland residents have endured poor air quality and poor health for decades. In recent years, effective community organizing, combined with government regulations and other interventions, have improved conditions considerably. However, disparities persist. Air pollution and poor health conditions in West Oakland continue to be unacceptably high (BAAQMD and WOEIP 2019).

Recent State legislation (Assembly Bill [AB] 617, 2017) opens new opportunities for further progress. AB 617 directs air regulators to identify communities with a high cumulative pollution exposure burden and work with them to develop solutions. Communities are empowered and air regulators are refocused on local impacts and local solutions. Several Bay Area communities were identified through this process, with West Oakland being the first to go through the AB 617 emissions reduction planning process. Meaningful, ongoing engagement with the community is a cornerstone of AB 617 (BAAQMD and WOEIP 2019).

The WOEIP has a long, successful track record of organizing community members to advocate for action to improve air pollution and health. The BAAQMD, the regional air pollution agency, partnered with WOEIP and the WOCAP steering committee to prepare this plan (i.e., Owning Our Air: The West Oakland Community Action Plan). The plan lays out a series of measures to be implemented over the next 5 years by State, regional, and local agencies to reduce pollution in the community. This plan is unique, thanks to the West Oakland community and key stakeholders who genuinely participated to shape its content (BAAQMD and WOEIP 2019).

Regarding the measures to reduce other sources of emissions, the WOCAP states:

> *The steering committee recognizes that improving the design and safety of the local streets will help to indirectly reduce emissions by encouraging residents to walk or ride bicycles and scooters instead of driving cars (Strategy #56).*
>
> ….
>
> *Strategy #56: The City of Oakland implements the broad array of bicycle and pedestrian improvements identified in the West Oakland Specific Plan, the 2019 Oakland Bike Plan, and the 2017 Oakland Walks Pedestrian Plan.*

The West Oakland Specific Plan includes the following Complete Streets Policy (City of Oakland 2014a):

> *Complete Streets Policy: The purpose of Oakland's new policy and ordinances is to establish the City's intent to implement Complete Streets serving all users and modes so as to uniformly regulate the design, construction, operation, and maintenance of the street system. The City of Oakland intends to use Complete Streets to provide safe, comfortable, and convenient travel along and across streets through a comprehensive, integrated transportation network that serves all categories of users.*

The West Oakland Specific Plan includes a series of policies:

> *Construct a safe bikeway within the West Grand Avenue corridor from West Oakland to the new east span of the Bay Bridge.*

The 2019 Oakland Bike Plan (City of Oakland 2019) also includes a proposed bike lane along West Grand Avenue from Mandela Parkway to Maritime Street. The West Oakland Link Project is consistent with WOCAP Strategy #56 because it would implement the bicycle and pedestrian improvements called for in the West Oakland Specific Plan and the 2019 Oakland Bike Plan; it would also indirectly reduce emissions by encouraging walking and riding options over driving.

As noted above, **Appendix B-2** includes excerpts from the results of the technical analysis for the WOCAP concerning PM2.5 and DPM exposure as well as excess cancer risks due to local pollutant sources in West Oakland.

2.3.2 Discussion of Potential Impacts

a. The Project would have a less-than-significant impact on implementation of the applicable air quality plan.

Alameda County is currently designated a nonattainment area for the federal 8-hour ozone standards, as well as maintenance area for the federal CO standard (**Table 2.3-1**). The most recent BAAQMD air quality plan is the *2017 Clean Air Plan*, which provides an integrated strategy to control ozone, PM, TACs, and GHG emissions. The primary goals of the *2017 Clean Air Plan* are to (1) reduce emissions and decrease concentrations of harmful pollutants, (2) safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, and (3) reduce GHG emissions and protect the climate.

To meet the primary goals, the *2017 Clean Air Plan* recommends specific control measures and actions. These control measures are grouped into various categories and include stationary-source measures, mobile-source measures, and transportation control measures. The *2017 Clean Air Plan* recognizes that a key long-term control strategy to reduce emissions of criteria pollutants, air toxics, and GHGs from motor vehicles is to channel future Bay Area growth into vibrant urban communities where goods and services are close at hand and people have a range of viable transportation options. To this end, the *2017 Clean Air Plan* includes control measures that are aimed at reducing air pollution in the SFBAAB.

The Project consists of construction of bicycle and pedestrian facilities, including a parking lot for bicyclists and pedestrians to park their cars. Because the Project would not add any additional capacity to existing roadways in the Project area, it is exempt from federal transportation conformity requirements per 40 Code of Federal Regulations (CFR) 93.126. In addition, the Project would not conflict with any applicable land use plan or contribute to regional employment or population growth. As noted in Chapter 1, *Proposed Project*, the purpose of the Project is to provide a safe connection for bicyclists and pedestrians to travel between West Oakland and the Bay Bridge Trail. Thus, the purpose of the Project directly supports the following measure from the *2017 Clean Air Plan*:

- TR9: Bicycle and Pedestrian Access and Facilities – Encourage planning for bicycle and pedestrian facilities in local plans (e.g., general and specific plans, fund bike lanes, routes, paths and bicycle parking facilities).

The Project would result in additional bicycle infrastructure and thus encourage bicycle and pedestrian transportation, which facilitates the overall goals of the *2017 Clean Air Plan*. The Project would temporarily generate emissions during construction from construction vehicles, equipment and dust. Once constructed and operational, the Project would generate a minor amount of emissions associated with

vehicles traveling to the Project area to use the new Link. Emissions from construction and operation would be well below BAAQMD thresholds of significance, discussed below. These emissions are not expected to impede attainment or maintenance of the NAAQS or CAAQS. Accordingly, the Project would not conflict with or obstruct implementation of air quality plans because the purpose of the Project supports measure TR9. This impact would be less than significant.

b. During construction, the Project would have a less-than-significant impact with mitigation on air quality standards. During Project operation, the Project would have a less-than-significant impact on air quality standards.

Construction

Construction activities associated with the Project would generate short-term emissions of ROG, NO_X, CO, PM10, and PM2.5. Emissions would originate from on-road hauling trips, construction worker commute trips, construction site fugitive dust, and off-road construction equipment. Construction-related emissions would vary substantially, depending on the level of activity on a particular day, specific construction activities, and wind and precipitation conditions.

The California Emission Estimator Model (CalEEMod) was used to estimate construction emissions. The estimate is based on the Project-specific inputs of construction phases and schedule, duration, equipment, demolition and earthmoving volume, and truck and worker trips associated with each phase. Construction data, including phases, schedule, construction equipment, and off-haul debris, were provided by the Project's engineering consultant. The construction assumptions and CalEEMod inputs and outputs are provided in **Appendix A-2**, Attachment 1. Construction equipment defaults from the CalEEMod, such as emission factors, horsepower, and load factors, were used for the analysis. It is assumed that onsite construction equipment and construction activities would occur five days per week and eight hours per day. The default vehicle trip lengths, for hauling trucks and workers, from the CalEEMod were also used for the analysis.

The construction emissions analysis was originally conducted in 2014, using the version of CalEEMod current at that time (version 2013.2.2). Although there have been subsequent updates to CalEEMod since 2014, the emissions presented in this analysis are considered to be a reasonable worst-case estimate for multiple reasons. The 2014 emissions analysis did not assume that the Project would be constructed with phasing options; however, the current definition of the Project indicates that it would be constructed with phasing options. Overall, the phasing options would result in a lower intensity of construction activity and lower emissions compared with emissions from the full Project because construction of the Project between Frontage Road and Mandela Parkway would occur later than the rest of the Project. In addition, the 2014 emissions analysis assumed construction would occur from 2017 through 2019. Because Project construction would start and end approximately five or six years later, the construction equipment would be cleaner because older, more polluting equipment would be replaced by newer, cleaner equipment. The portion of the Project from Frontage Road to Mandela Parkway would be constructed at an even later date, whenever funding is available, and with newer, cleaner construction equipment. Thus, because construction activity would occur later and with cleaner equipment, the emissions modeled with an older version of CalEEMod remains a reasonable worst-case scenario.

Table 2.3-3 summarizes the maximum daily emissions for the Project. Project construction is estimated to occur for approximately two years but within three calendar years. The emissions in the table below indicate that construction emissions would not exceed the BAAQMD thresholds. The BAAQMD considers fugitive dust impacts to be less than significant through the application of BMPs. In addition, the BAAQMD recommends construction contractors implement all basic construction mitigation measures, as listed in their 2017 CEQA Guidelines, to reduce construction emissions from dust and diesel exhaust.

Further, these measures are also required per the Oakland SCAs. Therefore, implementation of **Mitigation Measure AQ-1** (Implement BAAQMD Basic Control Measures to Control Construction-Related Dust and Reduce Exhaust Emissions during Construction) is required to ensure the construction emissions impact is less than significant.

Table 2.3-3. Summary of Construction Criteria Pollutant Emissions

				PM10			PM2.5		
Daily/Annual Emissions	**ROG**	**NO_X**	**CO**	**Dust**	**Exhaust**	**Total**	**Dust**	**Exhaust**	**Total**
Year 1									
Maximum Daily Emissions (lbs/day)	2.53	19.49	18.85	2.06	1.07	2.71	0.41	1.04	1.36
Year 2									
Maximum Daily Emissions (lbs/day)	1.62	13.59	13.69	1.73	0.65	2.08	0.32	0.61	0.93
Year 3									
Maximum Daily Emissions (lbs/day)	0.59	5.03	6.17	0.40	0.26	0.67	0.11	0.24	0.35
BAAQMD Thresholds (lbs/day)	54	54	-	BMPs	82	-	BMPs	54	-
See **Appendix A-1**, Attachment 1 for construction assumptions and CalEEMod inputs and outputs.									

Operation

Long-term Project air quality impacts are limited to those associated with new vehicle trips resulting from individuals driving to the Project area to park and utilize the new Path. Long-term Project operation would require the use of electricity for proposed lighting along the Path and at the Wood Street parking lot.

Some of the people using the new Path would drive to and from the new Wood Street parking lot, which would generate new vehicle trips. Based on the trip generation estimated by the Project's transportation consultant (**Appendix C-1**, *Transportation Impact Analysis*), the Project could generate approximately 400 daily trips on weekdays and 1,500 daily trips on weekends.

The CalEEMod was used to estimate criteria pollutant emissions from these vehicle trips. The operational assumptions and CalEEMod inputs and outputs are provided in **Appendix A-2**, Attachment 1. The default vehicle trip lengths and vehicle trip types from the CalEEMod for the "City Park" land use were also used for the analysis. Similar to the construction analysis discussed above for *Construction*, the operational emissions analysis was originally conducted in 2014, using the current version of CalEEMod at that time (version 2013.2.2). Although there have been subsequent updates to CalEEMod since 2014, the emissions presented in this analysis are considered to be a reasonable worst-case estimate.

The 2014 analysis assumed that the Project would become operational in 2019; the actual operational year would be several years later, with the parking lot not anticipated to be constructed for ten or more years due to funding constraints. Consequently, the 2014 operational emissions analysis represents a worst-case scenario because vehicle emissions in 2019 would be higher on a per-mile basis than in subsequent years. The vehicle fleet generally becomes less polluting over time because of advancements in vehicle technology and the retirement of older, more polluting vehicles. Because the Project would become operational subsequent to 2019, operational emissions are anticipated to be less than what is shown in this analysis.

Table 2.3-4 summarizes the estimated maximum daily emissions during weekends and the annual emissions during operation of the Project. Project implementation would result in a minor net increase in vehicle trips, vehicle miles traveled, and associated operational emissions. These increases are anticipated to be fairly minimal and are well below the BAAQMD thresholds. Therefore, the impact would be less than significant.

Table 2.3-4. Summary of Operational Criteria Pollutant Emissions

Daily/Annual Emissions	ROG	NOx	CO	PM10	PM2.5
Maximum Daily Emissions (lbs/day)	7.74	19.71	71.96	11.68	3.32
Annual Emissions (tons/year)	0.61	1.68	6.39	0.91	0.26
BAAQMD Thresholds (lbs/day)	54	54	CAAQS	82	54
BAAQMD Thresholds (tons/year)	10	10	CAAQS	15	10

Notes:
CAAQS = violation of a CAAQS
See **Appendix A-2**, Attachment 1 for operation assumptions and CalEEMod inputs and outputs.

c. The Project would have a less-than-significant impact on exposure of sensitive receptors to substantial pollutant concentrations.

Diesel Particulate Matter

Construction

Project construction would generate DPM from operation of diesel-fueled equipment. This would result in the exposure of nearby existing sensitive receptors, including residences and Raimondi Park users, to DPM concentrations. Cancer health risks associated with exposure to diesel exhaust are typically associated with chronic exposure, in which a 70-year exposure period is assumed. In addition, DPM concentrations, and thus cancer health risks, dissipate as a function of distance from their source. BAAQMD has determined that construction activities occurring at distances of greater than 1,000 feet from a sensitive receptor likely do not pose a significant health risk.

As discussed above, existing sensitive receptors (residences and Raimondi Park) are located within 1,000 feet of the eastern portion of Project area. Although DPM generated during construction may expose these receptors to increased health risks, construction activities would occur in one section at a time proceeding along its linear alignment, resulting in relatively brief exposure for sensitive receptors within 1,000 feet. This is significantly lower than the 70-year exposure period typically associated with chronic cancer health risks. In addition, the construction of the at-grade portions of the bike path and bike lanes would require minimal construction equipment. Therefore, construction related DPM emissions generated within the immediate construction area are expected to be low and dissipate as construction work moves farther away from these receptors.. Therefore, construction of the Project is not expected to exceed the BAAQMD risk thresholds and, thus, would not expose sensitive populations to substantial pollutant concentrations. This impact is considered less than significant.

Operation

Implementation of the Project would not generate appreciable DPM emissions. However, users of the new Link would be exposed to existing concentrations of DPM emitted by truck traffic traveling on the adjacent roadways (e.g., I-880, I-80, Maritime Street), rail yard and port-related operations, and industrial equipment in the Project vicinity. The California Supreme Court has opined that impacts of the environment on projects are not subject to CEQA analysis, with limited exceptions. Consequently, the operational DPM-related impacts affecting future Link users from existing land uses (i.e., roadways, rail and port uses) do not need to be evaluated under CEQA.

Carbon Monoxide

The BAAQMD establishes screening criteria to determine whether a project would result in CO emissions that exceed the CAAQS. Based on the screening criteria, the Project would result in a less-than-significant impact for localized CO concentrations. This assumes the Project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour and would not conflict with an applicable congestion management program (Bay Area Air Quality Management District 2017). As noted above, the Project would generate an estimated 400 daily trips on weekdays and 1,500 daily trips on weekends. The highest vehicle trip volumes would be at the Wood Street parking lot driveway (50 weekday PM peak hour and 150 Saturday peak hour) and at the West Grand Avenue/Campbell Street intersection (26 weekday PM peak hour and 79 Saturday peak hour). Refer to **Appendix C-1**, Table 6 and Figure 9. Given that the Project-related increases in traffic volumes at affected intersections would be minor, it is unlikely that the BAAQMD's screening criteria of 44,000 vehicles per hour would be exceeded by the Project or the Project would conflict with an applicable congestion management program. Accordingly, the Project would not contribute to or worsen localized CO concentrations from increased traffic or congestion associated with the Project. This impact would be less than significant.

Naturally Occurring Asbestos

Depending on a Project's size and geographic location, BAAQMD may require mitigation to address potential impacts from naturally occurring asbestos (NOA). BAAQMD enforces ARB's applicable air toxic control measures (ATCM). This requires the best available dust mitigation measures to reduce and control dust emissions for operations engaged in road construction and maintenance, grading, and quarrying and surface mining activities in areas where NOA is likely to be found.

The Project is not located in an area known to contain NOA. Accordingly, there is no potential for impacts related to NOA emissions during construction activities. This impact would be less than significant.

Health Effects of Construction Criteria Pollutants (Ozone Precursors and Regional PM*)*

Adverse health effects induced by regional criteria pollutant emissions generated by the Proposed Project (ozone precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (ROG and NOX) contribute to the formation of ground-borne ozone on a regional scale, where emissions of ROG and NOX generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutant may be transported over long distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project.

Exposure to ozone at certain concentrations can make breathing more difficult, cause shortness of breath and coughing, inflame and damage the airways, aggregate lung diseases, increase the frequency of asthma attacks, and cause chronic obstructive pulmonary disease. Particulate pollution can be transported over long distances and may adversely affect humans, especially for people who are naturally sensitive or susceptible to breathing problems. Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms.

Models and tools have been developed to correlate regional criteria pollutant emissions to potential community health impacts. While there are models capable of quantifying ozone and secondary PM

formation and associated health effects, these tools were developed to support regional planning and policy analysis and have limited sensitivity to small changes in criteria pollutant concentrations induced by individual projects. Therefore, translating project-generated criteria pollutants to the locations where specific health effects could occur or the resultant number of additional days of nonattainment cannot be estimated with a high degree of accuracy for relatively small projects (relative to the regional air basin).

Technical limitations of existing models to correlate project-level regional emissions to specific health consequences are recognized by air quality management districts throughout the state, including the San Joaquin Valley Air Pollution Control District (SJVAPCD and South Coast Air Quality Management District (SCAQMD), who provided amici curiae briefs for the Friant Ranch legal proceedings. In its brief, SJVAPCD acknowledged that while HRAs for localized air toxics, such as DPM, are commonly prepared, "it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task." The air district further notes that emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NOX and VOC in the Valley) is not likely to yield valid information," and that any such information should not be "accurate when applied at the local level." SCAQMD presents similar information in their brief, stating that "it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels".

Air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment or nonattainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is cumulative problem, air districts typically consider projects that generate criteria pollutant and ozone precursor emissions below these thresholds (as is true for this project) to be minor in nature and would not adversely affect air quality such that the NAAQS or CAAQS would be exceeded.

Emissions generated by the project could increase photochemical reactions and the formation of tropospheric ozone and secondary PM, which at certain concentrations, could lead to increased incidence of specific health consequences. Although these health effects are associated with ozone and particulate pollution, the effects are a result of cumulative and regional emissions. As such, a project's incremental contribution cannot be traced to specific health outcomes on a regional scale, and a specific quantitative correlation of project-generated regional criteria pollutant emissions to specific human health impacts is not included in this analysis.

d. The Project would have a less-than-significant impact resulting from objectionable odors affecting a substantial number of people.

While offensive odors rarely cause any physical harm, they can be unpleasant. This can lead to considerable distress among the public and often generate citizen complaints to local governments and air districts. Potential odor emitters during construction include diesel exhaust, asphalt paving, and the use of architectural coatings and solvents. However, construction-related operations would be temporary and would not be likely to result in nuisance odors that would violate BAAQMD's Regulation 7. Link users could be exposed to odors from the EBMUD wastewater treatment plant to the north, but, as noted above, the California Supreme Court has opined that impacts of the environment on projects are not subject to CEQA analysis, with limited exceptions. Consequently, the odor impacts affecting future Link users from existing land uses (i.e., the wastewater treatment plant) do not need to be evaluated under CEQA. This impact is therefore considered less than significant.

2.3.3 Mitigation Measures

Mitigation Measure AQ-1: Implement BAAQMD Basic Control Measures to Control Construction-Related Dust and Reduce Exhaust Emissions during Construction

In accordance with the BAAQMD's CEQA Guidelines (2017) and the City of Oakland's Standard Conditions of Approval, BATA/Caltrans will ensure their construction contractor implements the following BASIC construction-related air pollution control measures at all construction sites to reduce particulate matter emissions from construction activities.

a. Water all exposed surfaces of active construction areas (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) at least twice daily (using reclaimed water if possible). Watering will be sufficient to prevent airborne dust from leaving the site, and the frequency will be increased as necessary when wind speeds exceed 15 miles per hour.

b. Cover all haul trucks transporting soil, sand, or other loose material offsite.

c. Remove all visible mud or dirt track-out onto adjacent public roads using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

d. Pave all roadways, driveways, and sidewalks as soon as feasible. In addition, any building pads will be laid as soon as possible after grading unless seeding or soil binders are used.

e. Enclose, cover, water twice daily or apply non-toxic soil stabilizers to exposed stockpiles (dirt, sand, etc.).

f. Limit vehicle speeds on unpaved roads to 15 miles per hour

g. Minimize idling times by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the CCR). Provide clear signage to this effect for construction workers at all access points.

h. Maintain and properly tune all construction equipment in accordance with the manufacturer's specifications. All equipment will be checked by a certified mechanic and determined to be in proper condition prior to operation.

i. Post a publicly visible sign with the contractor's name and telephone number to contact regarding dust complaints. When contacted, the contractor will respond and take corrective action within 48 hours. The names and telephone numbers for contact persons at BATA, Caltrans and the Bay Area Air Quality Management District will also be visible to ensure compliance with applicable regulations.

j. All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph.

k. All trucks and equipment, including tires, shall be washed off prior to leaving the site.

l. Site access points to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.

Mitigation Measure AQ-2: Prepare a Health Risk Assessment prior to Construction near the Wood Street Residences and/or Homeless Services/Housing along Wood Street north of West Grand Avenue and Implement Risk Reduction Measures (as necessary)[3]

a. The project sponsor shall prepare a site-specific construction HRA for all construction activity within 1,000 feet of the 2011–2195 Wood Street project and/or within 1,000 feet of any homeless service or housing that may be extant during construction north of West Grand Avenue along Wood Street once the construction schedule for such activity is known. This HRA shall be prepared well in advance of construction so that if provision of filtration, as discussed below, can be installed prior to construction in the vicinity.

b. For the 2011–2195 Wood Street project, the project sponsor shall determine the specific measures or features that were approved for the Wood Street project, pursuant to the City's conditions of approval to reduce exposure to existing sources of TACs. Indoor air filtration at the Wood Street project is expected to be equal to MERV-13 or greater efficiency standards, based on the requirements of the West Oakland Community Action Plan. The project sponsor shall also confirm other measures at this building that will be implemented, such as strategic site layout planning, and indoor air quality monitoring unit.

c. For homeless services or housing, the project sponsor shall coordinate with the City of Oakland and homeless service providers to determine whether such services, or residents, may be present along Wood Street within 1,000 feet of construction; the project sponsor shall also determine the duration of the presence of individuals at the location.

d. If the project's construction HRA demonstrates that health risk exposures or PM2.5 concentrations at adjacent receptors would be less than BAAQMD thresholds, then additional mitigation would be unnecessary.

e. However, if the HRA demonstrates that health risks or PM2.5 concentrations would exceed BAAQMD thresholds, inclusive of the Wood Street project's conditions of approval, then additional mitigation shall be provided by the applicant to reduce risks so that the project's incremental risk is below BAAQMD project thresholds and the project does not contribute to an exceedance of the BAAQMD cumulative threshold. The additional mitigation will include source reductions, such as mandating Tier 4 engines in construction equipment, and/or receptor reductions, such as higher air filtration efficiency standards than those approved for the Wood Street project (e.g., MERV 14 or higher). The use of filtration with higher MERV values, such as MERV-14, would result in additional filtering of particles beyond MERV-13, with up to 84 percent efficiency for MERV-14 for particles less than 1 micron in size.[4] Regarding homeless services or residents of homeless housing, this mitigation may include temporary relocation of homeless services or residents of homeless housing as necessary to reduce exposure.

[3] Mitigation Measure AQ-2 is to address cumulative impacts (see discussion below in Section 2.21.1). This mitigation is referred to as Mitigation Measure AQ-4 in the 2020 Air Quality Technical Errata.

[4] Based on estimates from the U.S. Environmental Protection Agency (https://www.epa.gov/indoor-air-quality-iaq/what-merv-rating-1).

2.4 Biological Resources

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	☐	☐	☐	☒

2.4.1 Environmental Setting

The Project area occurs within an urban setting and consists mostly of roadways. The Project area is highly disturbed and developed. Most of the vegetation within the Project area consists of non-native plant species. Landscaping, including trees, lines Mandela Parkway, but there is limited landscaping and trees along the other Project area roadways. The Wood Street parking lot site and areas under the freeways are vacant, undeveloped, and contain ruderal vegetation. In addition, the area beneath I-880 on the south side of West Grand Avenue supports an earthen drainage ditch.

2.4.1.1 Existing Conditions

The Class I portion of the Link and the Class II bike lanes would be constructed on existing paved surfaces. Non-native landscape trees also occur along the streets where the new Link would be constructed.

The Wood Street parking lot and the stormwater treatment areas or bio-treatment basins would be constructed on undeveloped sites. Nearly half of the Wood Street parking lot site is covered with rail and ballast, as well as paved (concrete) areas. The remainder of the area contains ruderal habitat, dominated by oat grass, (*Avena* sp.), ripgut brome (*Bromus diandrus*), Pampas grass (*Cortaderia selloana*) and stinkwort (*Dittrichia graveolens*). Other plant species found in the undeveloped portions of the Project area include

ribwort plantain (*Plantago lanceolata*), mustard species (*Brassica* sp.), radish (*Raphanus sativus*), saltgrass (*Distichlis spicata*), bristly ox-tongue (*Helminthoteca echioides*), filaree (*Erodium* sp.), and fennel (*Foeniculum vulgare*).

The potential stormwater treatment area beneath I-880 on the south side of West Grand Avenue supports an earthen drainage ditch. The earthen drainage ditch contains dense cattail (*Typha* ssp.) vegetation along the length of the channel. The ditch is considered a water of the State and a potential water of the United States because of its vegetation, location near the Bay, and direction of flow towards the Bay. Although the site was gated and the downstream connection to the Bay needs to be confirmed, federal jurisdiction is assumed.

Invasive plant species found in the Project area are listed in **Table 2.4-1**. These include species designated as federal noxious weeds by the U.S. Department of Agriculture (USDA) 2010, species listed by the California Department of Food and Agriculture (CDFA) 2020, and other invasive plants designated by the California Invasive Plant Council (Cal-IPC) 2006 and 2007.

Common wildlife species that occur in the Project area include the European starling (*Passar domesticus*), Anna's hummingbird (*Calpte anna*), double-crested cormorants (*Phalacrocorax auritus*), barn owl (*Tyto alba*), black phoebe (*Sayornis nigricans*), house finch (*Carpodacus mexicanus*), killdeer (*Charadrius vociferus*), mourning dove (*Zenaida macroura*), rock pigeon (*Columba livia*), Virginia opossum (*Didelphis virginiana*), Norway rat (*Rattus norvegicus*), striped skunk (*Mephitis mephitis*), and raccoon (*Procyon lotor*) (FHA and Caltrans 2001).

Table 2.4-1. Invasive Plant Species Identified in the Project area

Species	Cal-IPC
Oat grass (*Avena* spp.)	Moderate
Ripgut brome (*Bromus diandrus*)	Moderate
Pampas grass (*Cortaderia jubata*)	High
Stinkwort (*Dittrichia graveolens*)	Moderate (Alert)
Fennel (*Foeniculum vulgare*)	High

Notes: The California Invasive Plant Council (Cal-IPC) lists assign ratings that reflect the Cal-IPC views of the statewide importance of the pest, likelihood that eradication or control efforts would be successful, and present distribution of the pest in the State. These ratings are guidelines that indicate the most appropriate action to take against a pest under general circumstances.

The **Cal-IPC categories** indicated in the table are defined as follows:

High: Species with severe ecological impacts, high rates of dispersal and establishment, and usually widely distributed.

Moderate: Species with substantial and apparent ecological impacts, moderate to high rates of dispersal, establishment dependent on disturbance, and limited to widespread distribution.

Limited: Species with minor ecological impacts, low to moderate rates of invasion, limited distribution, and locally persistent and problematic.

Pre-field Investigation

To prepare for the field survey and determine the potential for sensitive biological resources (e.g., special-status species, wetlands) in the Project area and vicinity, the following sources were reviewed:

- California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California for the U.S. Geological Survey (USGS) 7.5-minute Oakland West quadrangle (California Native Plant Society 2021) (**Appendix D**);

- List of sensitive species from the California Natural Diversity Database (CNDDB) records search for the USGS 7.5-minute Oakland West quadrangle (CDFW 2021) (**Appendix E**);
- List of threatened and endangered species provided by the U.S. Fish and Wildlife Service (USFWS) Quad Search for the USGS 7.5-minute Oakland West quadrangle (USFWS 2021) (**Appendix F**);
- List of species provided by the National Marine Fisheries Service (NMFS) search for the USGS 7.5-minute Oakland West quadrangle (NMFS 2021) (**Appendix F**)
- USFWS's National Wetland Inventory (USFWS 2014b);
- USFWS's Critical Habitat Online Mapper (USFWS 2014c); and
- Species distribution and habitat requirements data.

From the CNPS, CNDDB, and USFWS lists, 10 special-status plant species and 15 special-status wildlife species have been recorded within approximately 2.5-mile radius of the Project area (**Figures 2.4-1** and **2.4-2**).

Special-Status Species

For the purpose of this IS/MND, special-status species are plants, animals, and fish that are: 1) legally protected under Federal Endangered Species Act (FESA), California Endangered Species Act (CESA), or other regulations; 2) considered sufficiently rare by the scientific community to qualify for such listing; or 3) included in any of the categories listed below.

- Species listed or proposed for listing as threatened or endangered under FESA (50 CFR 17.11 [listed animals], 50 CFR 17.12 [listed plants], and various notices in the *Federal Register* [FR] [proposed species]).
- Species that are candidates for possible future listing as threatened or endangered under FESA (75 FR 69222, November 10, 2010).
- Species listed or proposed for listing by the State of California as threatened or endangered under CESA (14 CCR 670.5).
- Species that meet the definitions of rare or endangered under CEQA (State CEQA Guidelines Section 15380).
- Plants listed as rare under California Native Plant Protection Act (CNPPA) (California Fish and Game Code 1900 et seq.).
- Plants considered by CNPS to be "rare, threatened, or endangered in California" (2009).
- Plants listed by CNPS as plants about which more information is needed to determine their status and plants of limited distribution, which may be included as special-status species on the basis of local significance or recent biological information.
- Animal species of special concern to CDFW.
- Animals fully protected in California (California Department of Fish and Game Commission [CFGC] Section 3511 [birds], 4700 [mammals], 5050 [amphibians and reptiles], and 5515 [fish])

CNDDB Plant Occurrences within 2.5 Miles

Figure 2.4-1

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CNDDB Wildlife Occurrences within 2.5 Miles

Figure 2.4-2

West Oakland Link

Surveys and Survey Dates

A reconnaissance level survey of the Project area was conducted on May 8, 2014. The surveys included the potential stormwater treatment area beneath I-880 where the earthen drainage ditch is located. Meandering transects were walked through these areas to identify any potentially sensitive resources in the impact area. In addition, a site visit to count trees for removal and measure trunk size was conducted on March 13, 2015. See section *Trees* below for the result of the tree count.

Trees

Based on a site visit, it is estimated there are 44 trees along the alignment that could be removed. Following is the number of trees with the estimated size (diameter at breast height). They are predominantly landscaping trees, and none are oak trees.

- Four trees measuring 8 inches in diameter at breast height (dbh)
- Thirty-four trees measuring 6 inches dbh
- Five trees measuring 4 inches dbh
- One tree measuring 3 inches dbh

2.4.1.2 Regulatory Setting

Federal and State

Clean Water Act Sections 401 and 404

The federal Clean Water Act (CWA) is the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. CWA empowers the EPA to set national water quality standards and effluent limitations and establishes permit review mechanisms to enforce them. Most CWA provisions are at least indirectly relevant to the management and protection of biological resources because of the link between water quality and ecosystem health. The portions that are most directly relevant to biological resources management are contained in Section 404, which regulates the discharge of dredged and fill materials into Waters of the United States (comprising wetlands and other Waters of the United States), which include the following water bodies:

- All areas within the ordinary high-water mark of a stream, including non-perennial streams with a defined bed and bank and any stream channel that conveys natural runoff, even if it has been realigned.
- Seasonal and perennial wetlands, including coastal wetlands.

Section 404 requires project proponents to obtain a permit from the U.S. Army Corps of Engineers (USACE) for all discharges of dredged or fill material into Waters of the United States, including streams, ponds, and wetlands, before proceeding with a proposed activity. CWA Section 401 requires applicants for a Section 404 permit to first obtain certification from the Regional Water Quality Control Board (Regional Water Board) to ensure that their projects will comply with State water quality standards.

Refer to Section 2.10, *Hydrology and Water Quality*, for more information on CWA Sections 401 and 404.

Federal Endangered Species Act

The federal Endangered Species Act (ESA) was enacted in 1973. Under ESA, the Secretary of the Interior and the Secretary of Commerce jointly have the authority to list a species as threatened or endangered (16 United States Code [USC] 1533[c]). ESA is administered by both the National Marine Fisheries Service (NMFS) and USFWS. NMFS is accountable for animals that spend most of their lives in marine waters, including marine fish, most marine mammals, and anadromous fish, such as Pacific salmon. USFWS is accountable for all other federally listed plants and animals.

Pursuant to the requirements of ESA, an agency reviewing a project within its jurisdiction must determine whether any federally listed threatened or endangered species may be present in the project area and determine whether the project would have a potentially significant impact on such species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under ESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536[3], [4]). Therefore, Project-related impacts on these species or their habitats would be considered significant and would require mitigation.

CDFW maintains a list of "species of concern" that receive special attention from federal agencies during environmental review, although they are not otherwise protected under FESA. Project-related impacts on such species would also be considered significant under the CEQA Guidelines Section 15380 and would require mitigation.

Projects that would result in "take" (kill, harm, harass, etc.) of any federally listed threatened or endangered species are required to obtain authorization from NMFS and/or USFWS through either Section 7 (interagency consultation) or Section 10(a) (incidental take permit) of ESA, depending on whether the federal government is involved in permitting or funding the project. The Section 7 authorization process is used to determine if a project with a federal nexus would jeopardize the continued existence of a listed species and what mitigation measures would be required to avoid jeopardizing the species. The Section 10(a) process allows take of endangered species or their habitats in non-federal activities.

Federal Migratory Bird Treaty Act of 1918

The federal Migratory Bird Treaty Act (MBTA) protects migratory birds by prohibiting intentional taking, (i.e. selling, killing, capturing, trading, and transporting) or conducting other activities that would harm migratory birds, their eggs, or nests, unless authorized under a special permit. The list of migratory birds that are protected is provided in 50 CFR 10, Section 10.13 (updated October 5, 2020) and includes geese, ducks, shorebirds, raptors, songbirds, and many others.

California Endangered Species Act

The CESA was enacted in 1984. Under CESA, the CFGC has the responsibility for maintaining a list of threatened species and endangered species. CDFW also maintains lists of species of special concern; impacts on these species would be considered significant under CEQA Guidelines Section 15380 and could require mitigation. Pursuant to the requirements of CESA, an agency reviewing a project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project area and determine whether the project would have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any project which may affect a candidate species. CESA prohibits the take of California listed animals and plants in most cases, but CDFW may issue incidental take permits under special conditions.

California Fish and Game Code Section 1602

This section of the Fish and Game Code prohibits substantial diversion or obstruction of the natural flow of any river, stream, or lake, substantial changes or use of any material from the bed, channel, or bank of any river, stream or lake, or depositing or disposing of debris, waste or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream or lake. Any entity proposing to conduct these activities must notify the California Department of Fish and Wildlife and obtain a Streambed Alteration Agreement prior to the commencement of construction.

California Fish and Game Code Sections 3503, 3503.5, and 3800

These sections of the Fish and Game Code prohibit the "take, possession, or destruction of birds, their nests or eggs." Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a "take." Removal of vegetation is the most common action that can lead to a violation of these code sections.

Regional and Local

City of Oakland General Plan Open Space, Conservation, and Recreation Element

The City of Oakland General Plan OSCAR Element (City of Oakland 1996) includes the following policies relevant to the Project and protecting biological resources.

- **Policy CO-6.5: Protection of Bay and Estuary Waters.** Protect the surface waters of the San Francisco Estuary system, including San Francisco Bay, San Leandro Bay, and the Oakland Estuary. Discourage shoreline activities which negatively impact marine life in the water and marshland area.
- **Policy CO-7.1: Protection of Native Plant Communities.** Protect native plant communities, especially oak woodlands, redwood forests, native perennial grassland, and riparian woodlands, from the potential adverse impacts of development.
- **Policy CO-7.4: Tree Removal.** Discourage the removal of large trees on already developed sites unless removal is required for biological, public safety, or public works reasons.
- **Policy CO-7.5: Non-Native Plant Removal**. Do not remove non-native plants within park and open space areas solely because they are non-natives.
- **Policy CO-7.6: Rehabilitation of Damaged or Dead Vegetation.** Encourage programs which rehabilitate, enhance or replace damaged or dead vegetation as appropriate.
- **Policy CO-8.1: Mitigation of Development Impacts (Wetlands).** Work with federal, State and regional agencies to determine mitigation measures for development which could potentially impact wetlands.
- **Policy CO-9.1: Habitat Protection.** Protect rare, endangered, and threatened species by conserving and enhancing their habitat and requiring mitigation of potential adverse impacts when development occurs within habitat areas.

City of Oakland Protected Trees Ordinance

The Project would be subject to the City of Oakland Municipal Code (Municipal Code) Chapter 12.36,[5] which establishes regulations for the preservation of protected trees. Chapter 12.36 defines "protected tree" as:

- On any property, *Quercus agrifolia* (California or Coast Live Oak) measuring four (4) inches dbh or larger, and any other tree measuring nine (9) inches dbh or larger except *Eucalyptus* (Eucalyptus) and *Pinus radiata* (Monterey Pine);
- Monterey Pine trees shall be protected only on city property and in development-related situation when more than five Monterey Pine trees per acre are proposed to be removed. Although Monterey Pine trees are not protected in non-development-related situations, nor in development-related situation involving five or fewer trees per acres, public posting of such trees and written notice of tree removal to the Office of Park and Recreation is required per Section 12.36.070A and Section 12.36.080A.
- Except as noted above, Eucalyptus and Monterey Pine trees are not protected.

As required by the City's Municipal Code, a tree removal permit must be obtained prior to removal of a protected tree or before doing work that might damage or destroy a protected tree. Any protected trees that will not be removed but are present in the Project area must be protected during construction, and any removal of native Protected Trees must be replaced.

City of Oakland Standard Conditions of Approval

As stated in Section 1.8.2, *Permits/Approvals,* the Oakland SCA includes conditions of approval for projects. The following SCAs (summarized below) are considered relevant because the Project requires tree removal.

43. Tree Removal During Breeding Season. For removal of any unprotected tree, removal of any tree or vegetation suitable for nesting raptors shall not occur during the breeding season (March 15 to August 15). If tree removal must occur during the breeding season, pre-removal surveys shall be conducted by a biologist to verify the presence or absence of nesting raptors or other birds. If present, the biologist in consultation with CDFW will determine appropriate buffer around the nest in which no work will be allowed until the young have fledged.

44. Tree Removal Permit. For removal of any protected trees, a tree removal permit and compliance with conditions of the permit is required (as described under Protected Trees Ordinance above).

46. Tree protection During Construction. For construction within 10 feet of a protected tree, adequate tree protection shall be provided. Measures include fencing around protected trees; root protection measures if necessary; no storage or dumping of chemicals or debris; rinsing leaves with water; and notifying the City Tree Reviewer of any damage to trees and compensation.

2.4.2 Discussion of Potential Impacts

a. The Project would have no impact on special-status species.

Most of the Project area is disturbed and developed, as described above. Developed and landscaped areas are not considered to be habitat for special-status plant or wildlife species.

[5] City of Oakland. 2013. City of Oakland Municipal Code, Section 12.36. November 19, 2013.

The Class I portion of the Link is elevated. The Class II bike lanes are along asphalt roadways flanked either by sidewalks, paved shoulders, or weedy, disturbed vegetation. Any undeveloped space within the Project area is densely vegetated with non-native and invasive plant species. The Wood Street parking lot, as well as the area west of Maritime Street, is comprised mainly of dilapidated rail and ballast, and dense patches of invasive weeds.

California red-legged frog (CRLF) was considered for its potential to occur in the earthen drainage ditch, located in the undeveloped area beneath I-880 and south of West Grand Avenue. Although the ditch contains cattail vegetation, the ditch and the greater Project area do not provide the habitat constituents (e.g., upland refugia, breeding habitat, dispersal sites) necessary to support special-status species. In addition, there are no CNDDB records of CRLF in the Oakland West USGS 7.5-minute quadrangle. Therefore, there would be no impact.

b. The Project would have a less-than-significant impact with mitigation on riparian habitat or other sensitive natural community.

Stormwater treatment facilities (vegetated flow-through treatment area or bio-treatment basins) may be installed in the undeveloped area under I-880 and south of West Grand Avenue. This area includes the earthen drainage ditch with dense cattail vegetation, which is riparian habitat (**Figure 1-9**). Since this is the same area that has been identified as a potential wetland, this impact and required mitigation are discussed under "**c**" below.

c. The Project would have a less-than-significant impact with mitigation on federally protected wetlands as defined by Section 404 of the Clean Water Act.

As described above, the ditch is considered a potentially jurisdictional wetland because of its vegetation, location near the Bay, and direction of flow towards the Bay. Wetlands are considered a sensitive natural community. Although the site was gated and the downstream connection to the Bay needs to be confirmed, federal jurisdiction is assumed. If stormwater treatment facilities (vegetated flow-through treatment area or bio-treatment basins) are located in this area, it could impact the ditch via dredge or fill to improve overall offsite/onsite drainage conditions. Ground disturbance and construction activities could also contribute to the spread of invasive plants identified in the Project area (**Table 2.4-1**) into the earthen ditch.

This impact would be reduced to a less-than-significant level with the implementation of the following mitigation measures. **Mitigation Measure BIO-1** (Install Environmentally Sensitive Area Fencing) and **Mitigation Measure BIO-2** (Avoid Placement of Stormwater Treatment Facilities in Area of Wetland Habitat) would avoid potential impacts to the earthen drainage ditch. **Mitigation Measure BIO-3** (Avoid the Introduction and Spread of Invasive Plants) would ensure invasive plants do not spread into the ditch or other areas. **Mitigation Measure BIO-4** (Develop and Implement Worker Awareness Training) would ensure construction personnel are aware of the measures necessary to protect the ditch and other biological resources that could be present in the Project area.

Project construction activities could temporarily affect water quality by introducing sediments and pollutants into the ditch, storm drains or other water bodies. Construction-related activities that expose and move soils, such as site grading and stockpiling, are primarily responsible for sediment releases. Non-sediment contaminants include construction-related oil, gasoline, petroleum products, and trash. Because the Project would disturb more than one acre of land, a Storm Water Pollution Prevention Plan (SWPPP) will be implemented as part of the NPDES Construction General Permit to minimize the potential for sediments or contaminants to be discharged into San Francisco Bay or wetlands within vicinity. The SWPPP will include BMPs that would be implemented to protect stormwater runoff and monitor BMP effectiveness. At a minimum, BMPs would include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with

stormwater. Implementation of **Mitigation Measure HYD-1** (Toxic Materials Spill Prevention and Response Plan) would regulate the use of petroleum-based products (fuel and lubricants) and other potentially toxic materials associated with Project construction. Therefore, this impact is less than significant. Refer to the *Surface Water Hydrology* subheading under Section 2.10.1.1 for additional detail.

d. The Project would have a less-than-significant impact with mitigation on migratory bird species.

The Project could impact migratory bird species and native wildlife nursery sites. Migratory birds and raptors have the potential to nest in trees and shrubs. They could also nest under the protected elevated portions of roadways in the Project area, including I-880 and the West Grand Avenue overcrossing structure. Migratory birds could include double-crested cormorants, barn owl, black phoebe, house finch, killdeer, mourning dove, and Anna's hummingbird. These species are protected by the MBTA and California Fish and Game code. Nesting birds could be impacted if construction occurs near structures or trees being used by birds, or if trees are removed during the nesting season. Up to 44 trees could be removed to construct the Link. Implementation of **Mitigation Measures BIO-4** (Develop and implement worker awareness training) and **BIO-5** (Implement nesting bird impact avoidance measures) would reduce this impact to less than significant.

The Project would have no impact on fish species because there is no habitat for special-status fish species present in the Project area. The nearest water body is the Bay, located approximately 0.25 mile west of the Project area.

The Project would have no impact on the movement of any wildlife species or on established native resident or migratory wildlife corridors. The Project area is part of a larger urban landscape. Migratory wildlife corridors are not present under the existing urban site conditions. The Project would be constructed within the boundaries of the developed and/or disturbed property and would not result in impacts to any wildlife corridors.

e. The Project would have a less-than-significant impact with mitigation on local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Construction activities may require the removal of up to 44 unidentified trees, which could include trees protected under the City of Oakland Municipal Code Chapter 12.36. In general, these trees are small landscaping trees up to 8 inches in diameter, and none are oak trees. Protected trees include California or Coast Live Oak and other large trees, as described above in Section 2.4.1 2, *Regulatory Setting*. Damaging, destroying, or removing protected trees requires a tree removal permit. Because the trees that could be impacted by the Project will be determined during final design, this impact is considered potentially significant. **Mitigation Measure BIO-6** (Conduct a Tree Survey and, if Protected Trees Are Identified, Comply with City's Protected Tree Ordinance) would ensure protected trees are identified and required tree permit compliance measures are implemented prior to construction. Therefore, this impact is less than significant.

f. The Project would have no impact on the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved regional or State habitat conservation plan.

There would be no impact because the Project area is not covered under any adopted habitat conservation plan, natural community conservation plan, or other approved regional or State habitat conservation plan.

2.4.3 Mitigation Measures

Mitigation Measure BIO-1: Install Environmentally Sensitive Area Fencing to Protect the Sensitive Natural Communities, Including Earthen Drainage Ditch

Environmentally sensitive area fencing will be installed to prevent contaminants and debris from entering waters of the State and U.S. and any other sensitive areas within the Project area. Before construction begins, Caltrans/BATA will retain a qualified biologist to identify the locations of sensitive natural communities for the silt fencing and will mark those locations with stakes or flagging. All fencing will be maintained throughout the construction period. No construction activity, traffic, equipment, or materials will be permitted in fenced areas.

Mitigation Measure BIO-2: Avoid Placement of Stormwater Treatment Facilities in Area of Wetland Habitat.

Stormwater treatment facilities will be designed so as to avoid the identified areas of wetland habitat, including the area below I-880 and south of West Grand Avenue.

Mitigation Measure BIO-3: Implement Measures to Avoid the Introduction and Spread of Invasive Plants

Caltrans/BATA or its contractor will be responsible for avoiding the introduction of new invasive plants and the spread of invasive plants previously documented in the Project area. Accordingly, the following measures will be implemented during construction.

- Surface disturbance within the construction work area will be minimized to the greatest extent possible.
- All disturbed areas will be seeded with certified weed-free native mixes and mulched with certified weed-free mulch (rice straw may be used in upland areas).
- Native, noninvasive species will be used in erosion control plantings to stabilize site conditions and prevent invasive species from colonizing.

Mitigation Measure BIO-4: Develop and Implement Worker Awareness Training

Prior to construction, Caltrans/BATA or its contractor will retain a qualified biologist to develop and conduct a Worker Awareness Training to inform the contractors and all Project construction workers of their responsibilities regarding biological resources. The training will comprise environmental education about sensitive resources (e.g., trees, wetlands, migratory birds), and the protected status of those resources. The training will include visual aids to assist in identifying regulated biological resources. The training will also include actions that should be taken to protect environmental resources in the Project area.

Mitigation Measure BIO-5: Implement Nesting Bird Impact Avoidance Measures

Caltrans/BATA or its contractor will implement the following nesting bird impact avoidance and minimization measures to protect migratory bird species.

- Trees and vegetation removal will occur during the non-breeding season for most migratory birds (generally between September 2 and February 14) to the extent feasible.

- If possible, construction activities will begin prior to the nesting season for most birds (generally, February 15 through September 1). Beginning construction prior to the breeding season will establish a level of noise disturbance that will dissuade noise-sensitive raptors and other birds from attempting to nest within or near the Project area.
- If beginning construction activities (including vegetation removal) prior to the breeding season is not possible, Caltrans/BATA will retain a qualified wildlife biologist with knowledge of the relevant species to conduct nesting surveys before the start of construction. A minimum of three separate surveys will be conducted for migratory birds, including raptors. Surveys will include a search of all trees, shrubs and elevated structures that provide suitable nesting habitat in the Project area. In addition, a 300-foot area around the Project area will be surveyed for nesting raptors. Surveys will occur during the height of the breeding season (March 1 to June 1) with one survey occurring in each of two consecutive months within this peak period and the final survey occurring within 1 week of the start of construction. If no active nests are detected during these surveys, no additional measures are required.
- If an active nest is found in the survey area, a no-disturbance buffer will be established around the site to avoid disturbance or destruction of the nest site until the end of the breeding season (September 1) or until after a qualified wildlife biologist determines that the young have fledged and moved out of the Project area (this date varies by species). The extent of these buffers will be determined by the biologist in coordination with USFWS and CDFW and will depend on the level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Suitable in-construction buffer distances may vary between species.

Mitigation Measure BIO-6: Conduct a Tree Survey and, if Protected Trees Are Identified, Comply with Requirements of City's Protected Trees Ordinance

During final design of the Project, Caltrans/BATA will retain a qualified biologist to conduct a tree survey of the estimated 44 trees to be removed, to identify protected trees, as defined by City of Oakland Section 12.36 of the City's Municipal Code, in the Project area, and identify trees to be trimmed or removed for Project construction. The tree survey report will include specific characterizations of protected trees (size, species, health) and include graphics identifying the location.

If construction activities associated with the Project could result in the disturbance, damage, destruction, or removal of individual protected trees, Caltrans/BATA will obtain a permit from the City of Oakland prior to removal of a protected tree or before doing work that might damage or destroy a protected tree. If construction has the potential to damage or destroy a protected tree, adequate protection will be provided during the construction period for any trees which are to remain standing. Measures deemed necessary by the qualified arborist in consideration of the size, species, condition, and location of the trees to remain may include any of the following:

- Before the start of any clearing, excavation, construction or other work on the site, every protected tree deemed to be potentially endangered by said site work will be securely fenced off at a distance from the base of the tree to be determined by the City Tree Reviewer. Such fences will remain in place for duration of all such work. All trees to be removed will be clearly marked. A scheme will be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree.

- Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures will be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filing, or compaction of the existing ground surface within the protected perimeter will be minimized. No change in existing ground level will occur within a distance to be determined by the Tree Reviewer from the base of any protected tree at any time. No burning or use of equipment with an open flame will occur near or within the protected perimeter of any protected tree.
- No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees will occur within the distance to be determined by the Tree Reviewer from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials will be operated or stored within a distance from the base of any protected trees to be determined by the tree reviewer. Wires, ropes, or other devices will not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, will be attached to any protected tree.
- Periodically during construction, the leaves of protected trees will be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration.
- If any damage to a protected tree should occur during or as a result of work on the site, Caltrans/BATA or their contractor will immediately notify the City of Oakland Office of Parks and Recreation of such damage. If, in the professional opinion of the City Tree Reviewer, such tree cannot be preserved in a healthy State, the Tree Reviewer will require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed.
- All debris created as a result of any tree removal work will be removed by the applicant from the property within two weeks of debris creation, and such debris will be properly disposed of by the applicant in accordance with all applicable laws, ordinances, and regulations.

Removal of any protected tree requires replacement plantings in the Project area to prevent excessive loss of shade, erosion control, groundwater replenishment, visual screening and wildlife habitat. Tree replacement will be conducted in accordance with the following criteria:

- No tree replacement will be required for the removal of non-native species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered.
- Replacement tree species will consist of *Sequoia sempervirens* (Coast Redwood), *Quercus agrifolia* (Coast Live Oak), *Arbutus menziesii* (Madrone), *Aesculus californica* (California Buckeye) or *Umbellularia californica* (California Bay Laurel) or other species determined by the City Tree Reviewer.
- Replacement trees will be of twenty-four (24) inch box size, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate.

In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee as determined by the master fee schedule of the city may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians.

2.5 Cultural Resources

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

2.5.1 Environmental Setting

This section provides a discussion of the existing conditions, as well as relevant prehistoric and historical conditions, related to cultural resources on the Project site and in the immediately surrounding area. Information in this section is based on the Draft Historical Resources Evaluation Report (HRER) (ICF 2022a) and Draft Archaeological Survey Report (ASR) (ICF 2022b) prepared for the Project.

2.5.1.1 Existing Conditions

The Project area is located in an urban setting that consists mostly of roadways. Landscaping, including trees, is found along Mandela Parkway. Landscaping and trees along other roadways are limited. The Wood Street parking lot and the area beneath I-880 on the south side of West Grand Avenue contain ruderal vegetation. In addition, the area beneath I-880 on the south side of West Grand Avenue supports an earthen drainage ditch.

Ethnography and History

This section includes a brief summary of the ethnography and history of the Project area and vicinity. **Appendix G-1**, *Cultural Resources Background Information*, includes more detail regarding the ethnography, prehistory and history of the area.

At the time of European contact, the Bay Area was occupied by a group of Native Americans whom ethnographers refer to as the Ohlone or Costanoan. The territory of the Ohlone people extended along the coast from the Golden Gate to just below Carmel and as far as 60 miles inland (Levy 1978:485–486). With the introduction of seven Spanish missions in Ohlone territory between 1776 and 1797, the population reduced dramatically from approximately 10,000 to less than 2,000. The reduction was due to the introduction of disease, harsh living conditions, and reduced birth rates.

In 1834, the Mexican government began secularizing mission lands. Most of the indigenous population scattered away from the mission centers, although some remained and were given jobs as manual laborers or domestic servants on Mexican ranchos or, later, American cattle ranches.

The land that is now Oakland was part of the Mexican land grant given to Luis Maria Peralta in 1820. The Rancho San Antonio encompassed approximately 44,800 acres. This represents virtually all of today's Oakland, San Leandro, Alameda, Piedmont, Emeryville, Berkeley, and Albany. In 1842, Peralta divided his rancho among his four sons (Marschner 2001:149–153).

In 1852, Oakland was incorporated by the state legislature. Commercial and industrial development concentrated near the wharves as early as 1854, when ferryboat service to San Francisco was established. In 1863, the San Francisco and Oakland Railroad was completed and began operation along Railroad Avenue (now 7th Street), extending from Oakland Point (now West Oakland) to Broadway. For much of its history, West Oakland was a peninsula surrounded an estuary, tidal slough and marsh. Development in West Oakland has been closely tied to its railroad, military, and maritime industries.

In 1869, the transcontinental railroad terminus was completed in Oakland, and the population, as well as businesses, in Oakland saw its first major boom. The railroad lines along 1st and 7th Streets brought residential, commercial, and industrial development to West Oakland, which would become a railroad town and gradually expand over parts of the marshlands. Headquarters for the railroad's Northern California maintenance, construction, and shipbuilding operations was located in West Oakland. This employed about half of the local residents.

In 1909, the Western Pacific Railroad built tracks and a freight depot in West Oakland, about 2 miles south of the Project area. A lesser-known industrial district developed in the Project area but more slowly because of obstacles created by the natural landscape (marshlands). The Outer Harbor and the area east of the railroad tracks did not see development until well into the 1920s, when automobile and truck transportation became more prevalent. Construction of the Caldecott Tunnel and the Bay Bridge connected Oakland to the surrounding communities and enabled industrial and warehouse development away from the railroad lines. By 1920, there were some scattered strips of industrial development along Peralta Street and 22nd Street east of the tracks. World War I (1914–1918) and World War (1939–1945) brought heavy maritime industry to the area of Oakland known as West Oakland.

By 1935, much of the West Oakland area was zoned for heavy industry, and several prominent industries were located west of Peralta Street. These included Pacific Coast Aggregates and the Merco Nordstrom Valve Company at 24th and Peralta Streets and the brick warehouse at 18th and Campbell Streets. However, complete industrial development of the Project area in West Oakland would not occur until construction of the Bay Bridge in 1936, the purchase of the Outer Harbor by the U.S. Army during World War II, and the later boom of the postwar years.

In 1941, the U.S. Army took control of the entire Outer Harbor, developed the areas between Maritime Street and the railroad tracks, and filled marshlands, thereby opening the area east of the tracks to further development. In 1943, the Port was completed, comprising 13 deep ship berths, approximately 175 buildings, 27 miles of rail tracks, and millions of square feet of open and covered storage space. Military activities in the area continued with the Korean War in 1950, the Vietnam War in the 1960s and 1970s, and Desert Storm in the early 1990s.

In 1995, the Defense Base Realignment and Closure Commission recommended closure of the Oakland Army Base. As a result, the Oakland Base Reuse Authority was created to oversee closure and transfer to the Oakland Redevelopment Agency and the Port of Oakland. Military activity on the base officially ceased in 1999. The former base property was to be shared by the City and the Port; the title was transferred on August 7, 2006 (Minor 2006:3).

Currently, demolition of much of the Oakland Army Base is under way; the area is being redeveloped by the City of Oakland and the Port of Oakland.

Research, Outreach and Tribal Consultation, and Surveys

ICF followed a four-step process to prepare this analysis: (1) conducted background research at the Northwestern Information Center (NWIC) to identify previously recorded resources or reports regarding properties within and adjacent to the Area of Potential Effect (APE) and establish the general historic

context for the APE, (2) reached out to the Native American Heritage Commission (NAHC) and consulted with local Native American groups, (3) conducted in-depth property-specific research, and (4) performed on-site fieldwork to inspect and record resources in the APE.

Research

An initial records search was conducted at the California Historical Resources Information System (CHRIS) Northwest Information Center (NWIC) at Sonoma State University, Rohnert Park, on April 29, 2013. The records search compiled bibliographic references, previous survey reports, historic maps, and archaeological site records pertinent to the Project in order to identify prior archaeological studies and known cultural resources within a 0.5-mile area surrounding, or adjacent to, the archaeological APE. Because of the amount of time that had passed since the initial records search, an updated search was conducted by NWIC staff members on August 13, 2021, to identify any additional sites or studies within the APE or the 0.5-mile area surrounding the archaeological APE.

The records searches identified one previously recorded archaeological resource, P-01-010490/CA-ALA-602H, a historic-era refuse deposit, within the archaeological APE. The deposit was identified approximately 3 feet below a layer of crushed rock (fill material) at a depth of 3 to 4 feet. Materials included glass bottles, ceramics, nails, metal fragments, oyster shells, and butchered bones. The recovered sample was dated to between 1883 and 1914 (Longfellow 2000). In addition to the one archaeological resource, three built environment resources were identified within the APE, the Heroic War Dead U.S. Army Reserve Center (P-01-010831), the Oakland Army Base Historic District (P-01-005891), and the Peralta Studios Building (P-01-010842). Seventy-nine additional resources, consisting of 77 historic-era structures, residences, and districts, and two archaeological sites, consisting of one shellmound and one historic refuse deposit, were identified within 0.5 mile of the APE.

Twelve previous studies have covered portions of the archaeological APE or adjacent areas. The majority of these studies focused on the Oakland Army Base and buildings within the base. Additional studies focused on the archaeology and history of West Oakland, the installation of fiber optics, and the San Francisco-Oakland Bay Bridge.

ICF also reviewed several historic maps of West Oakland in order to place the archeological APE, as well as the entire Project area, in a proper historical context. The following historic maps were reviewed:

- 1876 map of Oakland, Alameda, and vicinity (King, M.G. 1876. *Map of Oakland, Alameda, and vicinity, Showing Plan of Streets as Opened and Proposed*. [David Rumsey Map Collection]); and
- 1895 U.S. Geological Survey (USGS) 7.5-minute Oakland West quadrangle (1:24,000 scale).

The 1876 map shows that the western half of the archaeological APE was within the open water of San Francisco Bay. The eastern half was within marshland. A small portion of the archaeological APE extended beyond the marshland and into wetlands along Mandela Parkway, formerly called Cypress Street. Beyond the archaeological APE, the map shows the plan for streets, as proposed at the time. The streets, which extended into the Bay on both sides of the archaeological APE, were laid out with two grid patterns, each with lots of similar sizes.

The 1895 map shows that the proposed 1876 layout for West Oakland was not constructed. By 1895, the Northern Railway corridor, which is now occupied by the UPRR and I-880, was the western boundary for Oakland. West of the railroad tracks were the open waters of San Francisco Bay. East of the railroad tracks, marshland still encompassed the majority of the eastern portion of the archaeological APE. The exception was a small area that extended to the east side of present-day Mandela Parkway. Although houses are shown north, east, and south of the archaeological APE, no buildings or structures are located in the APE on the 1895 map.

Outreach and Tribal Consultation

To assess the potential to affect as-yet undocumented prehistoric archaeological resources, which are often also considered tribal cultural resources, the NAHC was requested to conduct a search of its Sacred Lands File. The request was submitted on September 29, 2020. The NAHC responded on October 5, 2020, providing a list of 10 California Native American tribal representatives. Specifically, the NAHC identified sacred lands in the Project vicinity and provided the names of three individuals for ICF to contact for more information about these scared lands. A formal notification, pursuant to Assembly Bill 52, was sent to the three individuals associated with the sacred lands as well as the seven additional California Native American tribal representatives on October 19, 2020. All tribal representatives had the opportunity to formally request consultation until November 30, 2020. No requests were received within the 30-day response period.

An updated Sacred Lands File request was sent to the NAHC on April 13, 2022 for compliance with Section 106 requirements for the updates to the Archaeological Survey Report. The NAHC provided a list of 10 Native American contacts, most of whom had already been contacted during the 2020 outreach. On July 6, 2022, as part of Section 106 consultation, ICF emailed letters to all 10 contacts, requesting information regarding Native American resources or concerns regarding the Project. This included a formal notification, pursuant to Section 106, to the three individuals associated with the sacred lands. Only one response was received to the written correspondence. Therefore, follow-up emails and phone calls on July 8 and 25, 2022, attempted to confirm that the contacts had received the information. One additional response was received from this effort. Responses comprised a request for cultural sensitivity training for anyone working on the Project and for Native American monitoring for the Project. Other than the recommendations regarding cultural sensitivity training and monitoring, no tribal resources, sacred lands, or any other resources or specific areas of concern were discussed as part of consultation efforts.

Surveys

A field survey of the archaeological and architectural APE was conducted by an ICF archaeologist and architectural historian on May 8, 2014. Additional architectural surveys were conducted by ICF architectural historians on May 12, 2014 and on February 1, 2022. The archaeological APE comprises paved roadways (West Grand Avenue, Burma Road, Maritime Street, Wood Street, 20th Street, Campbell Street, Willow Street, and Mandela Parkway) and/or paved areas that include infrastructure, parking lots, and recent landscaping.

Because the archaeological APE is within a heavily urban/industrial environment, no native ground surfaces were observed during the field survey. However, the entire archaeological APE was inspected as much as was possible for indications of early human activity. Indicators can include stained midden soils, stone artifacts, historic-era trash scatters/artifacts, dietary shells and bones, and unnatural depressions or mounds. Because of the highly developed nature of this area, no evidence of P-01-010490/CA-ALA-602H was relocated during the field survey. No cultural resources were observed in the archaeological APE during the field survey.

The APE for built-environment resources includes the same areas of direct impact, the entirety of properties with partial direct impact, and adjacent properties with potential visual and other indirect impacts. The architectural APE encompasses properties that have the potential to be directly and indirectly impacted by the Project. Indirect impacts include properties within view of the proposed Project, primarily properties adjacent to the area of direct impact. The boundaries are generally the Caltrans maintenance facility on Burma Road to the west, Mandela Parkway to the east, a warehouse district on 26th Street to the north, and 20th Street on the south. Mandela Parkway is included in both the architectural and archaeological APE from 28th Street on the north to 18th Street on the south.

Historical Resources Identified

There are 12 individual built-environment resources in the APE that are more than 45 years of age. These resources were evaluated for listing in the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR). Two were found to be eligible for listing in the NRHP and CRHR. The remaining ten were found *not* to be eligible for listing in the NRHP or CRHR. Additionally, the Oakland Army Base Historic District is located in the APE and was previously evaluated as eligible for NRHP listing. Additional resources in the APE were exempt from evaluation per the terms stipulated in the 2014 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. Further detail on eligible properties is provided below.

Individual Properties Eligible for Listing

Based on the criterion described in Section 2.5.1.2, *Regulatory Setting,* the following two individual properties in the APE are determined eligible for listing in the NRHP**.** The two properties are identified by a map reference (MR) number, which corresponds to the numbers in **Figure 2.5-1**. In the Draft HRER, these properties are shown in the APE map and have been formally recorded and evaluated in Department of Parks and Recreation update forms (ICF 2022a).

- **MR 1:** The warehouse at 2109–2121 Peralta Street has been converted to a live-work space; few alterations have been made to the one- and two-story units. The steel-frame structure has a brick veneer and large multi-pane, steel-frame windows that fill the upper three-quarters of each structural bay. The windows have operational awnings.
- **MR 2:** The two-story office building at 2401–2403 Willow Street and 1700 24th Street is in the Streamlined Moderne Style. Curved windows, the lower portion of which feature glass blocks, face the intersection of Willow and 24th Street. Raised stucco trim unites the lintels and sills on the windows, creating continuous horizontal lines. The warehouse structure parallel to Willow Street has a broad steel canopy over the loading docks, with truck bumpers protecting the raised floor.
- These two properties were part of the warehouse and storage industry, which was centered where railroad, truck, and shipping operations intersected in West Oakland. This location is near the east landing of the San Francisco-Oakland Bay Bridge, the Port of Oakland, the Oakland Army Base, interstate highways, and a railroad corridor.

Former Oakland Army Base Historic District

The APE includes the Oakland Army Base Historic District (**MR 3**) and properties in the West Oakland warehouse area north and south of West Grand Avenue (**Figure 2.5-1**). Eight buildings in the APE were completely or partially demolished since preparation of the Draft HRER. However, in consultation with Caltrans Professionally Qualified Staff (PQS) the APE was delineated to encompass the entirety of the Oakland Army Base Historic District. Additional information is provided in the Draft HRER Summary of Findings (ICF 2022a).

Historical Resources Identified

Figure 2.5-1

2.5.1.2 Regulatory Setting

Federal and State

Section 106 of the National Historic Preservation Act and National Register of Historic Places

Section 106 of the National Historic Preservation Act (NHPA) requires, before beginning any undertaking, a federal agency to take into account the effects of the undertaking on historic properties. The Section 106 process and additional detail are included in **Appendix G-1**. The following describes how properties are determined eligible for listing in the NRHP. Parts of this process are also used to determine CRHR-eligible properties.

To be listed in the NRHP, a property must be at least 50 years old (or be of exceptional historic significance if less than 50 years old) and meet one or more of the NRHP criteria. To qualify for listing, a *historic property* must represent a significant theme or pattern in history, architecture, archaeology, engineering, or culture at the local, state, or national level. It must meet one or more of the four criteria listed below and have sufficient integrity to convey its historic significance. The criteria for evaluating the eligibility of a historic property for listing in the NRHP are defined in 36 CFR Section 60.4, as follows.

- Criterion A – Association with events that have made a significant contribution to the broad patterns of our history.
- Criterion B – Association with the lives of persons significant to our past.
- Criterion C – Resources that embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values; or represent a significant and distinguishable entity whose components may lack individual distinction.
- Criterion D – Resources that have yielded, or may be likely to yield, information important to history or prehistory.

In addition to meeting the significance criteria, a significant historic property must possess integrity to be considered eligible for listing in the NRHP. *Integrity* refers to a property's ability to convey its historic significance (U.S. Department of Interior 1991:44). *Integrity* is a quality that applies to historical resources in seven specific ways: location, design, setting, materials, workmanship, feeling, and association. Evaluating a property's integrity for NRHP purposes and California Environmental Quality Act (CEQA) purposes is based on guidance in National Park Service (NPS) Bulletin 15, *How to Apply the National Register Criteria for Evaluation* (National Park Service 2002). Refer to **Appendix G-1** for additional information on determining a property's integrity.

California Environmental Quality Act

Two categories of cultural resources are specifically called out in the CEQA Guidelines. The categories are historical resources (State CEQA Guidelines Section 15064.5[b]) and unique archaeological sites (State CEQA Guidelines 15064.5[c]; California Public Resources Code [PRC] Section 21083.2). Different legal rules apply to the two different categories of cultural resources. However, the two categories sometimes overlap when a "unique archaeological resource" also qualifies as an "historical resource." In such an instance, the more stringent rules for archaeological resources that are historical resources apply, as explained below. In most situations, resources that meet the definition of a *unique archaeological resource* also meet the definition of a *historical resource*. As a result, it is current professional practice to evaluate cultural resources for significance based on their eligibility for listing in the CRHR.

Historical resources are those meeting the requirements listed below:

- Resources listed in or determined eligible for listing in the CRHR (State CEQA Guidelines Section 15064.5[a][1]).
- Resources included in a local register, as defined in PRC Section 5020.1(k), "unless the preponderance of evidence demonstrates" that the resource "is not historically or culturally significant" (CEQA Guidelines Section 15064.5[a][2]).
- Resources identified as significant in surveys that meet the standards provided in PRC Section 5024.1[g] (CEQA Guidelines Section 15064.5[a][3]).
- Resources that the lead agency determines are significant, based on substantial evidence (CEQA Guidelines Section 15064.5[a][3]).

Unique archaeological resources, on the other hand, are defined in PRC Section 21083.2 as resources that meet at least one of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person. (PRC Section 21083.2[g])

The process for identifying historical resources is typically accomplished by applying the criteria for listing in the CRHR (14 California Code of Regulations [CCR] Section 4852). This states that a historical resource must be significant at the local, state, or national level under one or more of the following four criteria:

1. The resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. The resource is associated with the lives of persons important in our past.
3. The resource embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic values.
4. The resource has yielded, or may be likely to yield, information important in prehistory or history.

To be considered a historical resource for the purpose of CEQA, the resource must also have *integrity*. Integrity is the authenticity of a resource's physical identity, evidenced by the survival of characteristics that existed during the resource's period of significance. Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. It must also be judged with reference to the particular criteria under which a resource is eligible for listing in the CRHR (14 CCR 14 Section 4852[c]). Integrity assessments made for CEQA purposes typically follow the National Park Service (NPS) guidance used for integrity assessments for NRHP purposes (see above).

Resources that meet the significance criteria and integrity considerations must be considered and treated further. This does not preclude a lead agency under CEQA from determining that the resource may be a historical resource (as defined in PRC Sections 5020.1j or 5024.1), even if it is not listed or eligible for listing in the CRHR or a local register of historical resources or identified in a historical resource survey (CEQA

Guidelines Section 15064.5[a][4]). Notably, a project that causes a substantial adverse change in the significance of a historical resource is a project that may have significant impact under CEQA (CEQA Guidelines Section 15064.5[b]). A substantial adverse change in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired. The significance of a historical resource is materially impaired if a project demolishes or materially alters any of the qualities listed below.

- That justify the inclusion or eligibility for inclusion of a resource in the CRHR (CEQA Guidelines Section 15064.5[b][2][A],[C]).
- That justify the inclusion of the resource in a local register (CEQA Guidelines Section 15064.5[b][2][B]).

California State Law Governing Human Remains

California law sets forth special rules that apply where human remains are encountered during project construction. As set forth in CEQA Guidelines Section 15064.5[e], in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, no further excavation or disturbance of the site or any nearby area suspected of overlying adjacent human remains should take place until:

1. The coroner of the county in which the remains are discovered is contacted to determine that no investigation of the cause of death is required (as required under California Health and Safety Code [CHSC] Section 7050.5).
2. If the coroner determines the remains to be Native American:
    a. The coroner will contact the NAHC within 24 hours.
    b. The NAHC will identify the person or persons it believes to be most likely descended from the deceased Native American.
    c. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work regarding the means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods (as provided in PRC Section 5097.98), or
    d. When the following conditions occur, the landowner or authorized representative will rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance:
        1) The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
        2) The descendant identified fails to make a recommendation; or
3. The landowner or his authorized representative rejects the recommendation of the descendant and the mediation by the NAHC.,

Regional and Local

City of Oakland Landmarks and S-7 Preservation Combining Zone

- The City of Oakland's Landmarks Preservation Advisory Board defines *landmarks* in "Guidelines for Determination of Landmark Eligibility" as having "special character or special historical, cultural, educational, architectural, aesthetic, or environmental interest or value." Demolition of a landmark can

be postponed for up to 240 days while under review, and City Planning Department approval is required for any exterior alterations after a recommendation from the Landmarks Preservation Advisory Board.

- Properties eligible for S-7 designation are defined in Section 17.84 of the zoning regulations. This designation is "intended to preserve and enhance the cultural, educational, aesthetic, environmental, and economic value of structures, other physical facilities, sites, and areas of special importance due to historical association, basic architectural merit, the embodiment of a style or special type of construction, or other special character, interest, or value." Demolition of or alteration to designated S-7 properties is subject to the same design review and regulations set for landmarks.

City of Oakland Standard Conditions of Approval

The following SCAs (summarized below) are relevant because Project construction would require ground disturbance and a grading permit.

51. Archaeological Resources. If cultural resources are discovered during ground disturbing activities, all work will stop and a qualified archaeologist or paleontologist will be notified to assess the significance and, if necessary, help determine appropriate avoidance or other measures.

52. Human Remains. If human skeletal remains are discovered, all work will stop and the Alameda County Coroner will be contacted to evaluate the remains, determine if the California native American Heritage Commission will need to be contacted, and determine avoidance or other measures.

2.5.2 Discussion of Potential Impacts

a. This Project would have a less-than-significant impact on historical resources found in the Project area.

The Class I portion of the Link, Class II bike lanes, and Wood Street parking lot would result in minor alterations to the existing setting of identified historical resources. The following are the three identified historical resources, which are described in greater detail in Section 2.5.1.1, above (also see **Figure 2.5-1**):

MR 1: The warehouse at 2109–2121 Peralta Street has been converted to a live-work space; few alterations have been made to the one- and two-story units.

MR 2: The two-story office building at 2401–2403 Willow Street and 1700 24th Street is in the Streamlined Moderne Style.

MR 3: Remaining buildings in the northeast section of the Oakland Army Base Historic District.

MR 1 is adjacent to the proposed Class I portion of the Link and Class II bike lanes on Campbell, Willow and 20th Streets. The Class I bike path is aligned with elevated and at-grade portions of West Grand Avenue. West Grand Avenue's elevated ramp or overcrossing begins west of Campbell Street. The setting of West Grand Avenue was greatly altered in 1997 following partial collapse of the Nimitz Freeway (now Mandela Parkway) during the Loma Prieta earthquake in 1989. Therefore, the setting of MR 1 was significantly altered within the last 20 years. The introduction of the Class I portion of the Link would not affect the historic integrity of setting of the historic property or have any physical effect on its physical characteristics. This impact would be less than significant. In addition, as described in Section 2.13.2 under question (b), construction activities such as pile driving would not threaten fragile historic resources. There are no structures within 175 feet of West Grand Avenue between Wood Street and Campbell Street, the area where pile driving would occur, that would be considered extremely fragile historic buildings, ruins, or ancient monuments.

MR 2 is in the vicinity of proposed Class II bike lanes on Wood Street and the Wood Street parking lot and stormwater treatment area. Although these features would result in a visual change in the area around the structure, the setting lacks historic integrity. Therefore, the impact on MR-2 would be less than significant.

MR 3 is a multi-component historic district that comprises three discontiguous sections. The northeast section of the Oakland Army Base Historic District intersects with the Project footprint south of West Grand Avenue. However, the historic district has experienced the demolition of numerous contributing buildings since 2015, including those that previously were located adjacent to West Grand Avenue and would have been nearest to the Project. The Project would not result in any physical changes to the extant contributing buildings within the northeast section of the Oakland Army Base Historic District, which lie south of Admiral Toney Way. Furthermore, the Project would be an added infrastructural element visually similar to the existing West Grand Avenue Viaduct, which dates to after the period of significance of the Oakland Army Base Historic District. Given the demolition of district contributors and the minimal change the Project would introduce into the district's setting, the Project would not diminish the integrity of the remaining portions of the Oakland Army Base Historic District. The impact on MR 3 would be less than significant.

b. This Project would have a less-than-significant impact on archaeological resources.

The NWIC records search identified one previously recorded historic archaeological resource, a refuse deposit, within the archaeological APE. No traces of this resource were identified during the field survey. In addition, minimal ground disturbance (up to 3 feet deep) is anticipated in this portion of the Project area. As discussed earlier, this resource was identified under at least 3 feet of crushed rock in a fill layer.

Some Project construction, such as pile driving for the elevated bike path, could result in ground-disturbing activities that could affect previously undiscovered archaeological resources. However, this is considered unlikely because historic maps of the Project area indicate that the majority of the ground-disturbing activities would be limited to areas of historic marshes/wetlands and existing infrastructure. The small portion of the Project that would touch ground at the edge of the historic marsh/wetland area, near Mandela Parkway, is not considered sensitive for buried resources. This is because of the lack, prehistorically, of stable, dry ground. However, the NAHC identified sacred lands in the vicinity of the APE, which suggests that the APE may have increased potential for containing as-yet undocumented prehistoric archaeological resources. In addition, there is a slight possibility for previously undiscovered historical archaeological resources to be encountered during construction activities. However, **AMM CUL-1** (Stop Work if Buried Cultural Resources Are Discovered), would ensure that this impact would be less than significant through requiring that construction work be stopped if buried cultural resources are inadvertently discovered during ground-disturbing activities.

c. This Project would have a less-than-significant impact on human remains, including those interred outside of formal cemeteries.

Although there is no indication that any portion of the Project area has been used for human burials, the NAHC identified sacred lands in the vicinity of the APE, which suggests that as-yet undocumented archaeological resources may be present in the vicinity. These resources could include human remains. Therefore, the possibility remains that unmarked burials could be unearthed during excavation and ground-disturbing activities. However, **AMM CUL-2** (If Human Bones Are Discovered, Comply with State Laws Related to Human Resources), would ensure that this impact would be less than significant by ensuring that construction work is stopped if buried cultural resources are discovered, including human remains that are buried outside a dedicated ceremony. If such remains are discovered, the

County coroner would be informed and no excavation would proceed until either the remains are determined not to be Native American in origin or either the descendants of the Native American(s) make a recommendation for treatment of the remains or the NAHC has been unable to identify a descendant or the descendant fails to make a recommendation.

2.5.3 Mitigation Measures

No mitigation measures are required to reduce impacts related to cultural resources to a less-than-significant level.

2.6 Energy

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

2.6.1 Environmental Setting

2.6.1.1 Existing Conditions

Energy resources include electricity, natural gas, and other fuels. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. Energy production and energy use both result in the depletion of nonrenewable resources, such as oil, natural gas, and coal, and the emission of pollutants.

With a relatively mild Mediterranean climate and strict energy-efficiency conservation requirements, California has lower energy consumption rates than other parts of the country. According to the U.S. Energy Information Administration (U.S. EIA), California's per capita energy consumption ranked 48th in the nation as of 2018 (U.S. EIA 2019). California has among the lowest annual electrical consumption rates per person of any State; its industrial uses consume 5.6 percent of the energy consumed nationwide (U.S. EIA 2020a). According to the U.S. EIA, natural gas consumption in California totaled approximately 2,154.03 billion cubic feet in 2019. Commercial uses consumed approximately 12 percent of this total, followed by residential uses (22 percent) and industrial uses (36 percent), among others (U.S. EIA 2020b). According to the California Energy Commission (CEC), total system electric generation for California in 2019 (the most recent year for which data are available) was approximately 277,704 gigawatt hours. California's non-carbon-dioxide-emitting electric generation categories, including nuclear, hydroelectric, and renewable generation, accounted for more than 57 percent of total in-state generation for 2019. California's in-state electric generation was approximately 200,475 gigawatt hours (CEC 2020a).

Pacific Gas and Electric (PG&E) provides electricity and natural gas service to the vast majority of Northern California, including Oakland and the Project site. PG&E's service extends from Eureka to Bakersfield (north to south) and from the Sierra Nevada to the Pacific Ocean (east to west). PG&E purchases gas power from a variety of sources, including other utility companies. PG&E obtains its energy supplies from power plants and natural gas fields in Northern California. PG&E operates a grid distribution system that channels all power produced at the various generation sources into one large energy pool for distribution throughout the service territory. PG&E provides all the natural gas and electric infrastructure in Alameda County and Oakland. However, East Bay Community Energy (EBCE) provides electricity to customers in Alameda County, using PG&E infrastructure, unless individuals choose to opt out of the program, at which point, the default electricity provider is PG&E. The Port of Oakland provides electricity to parts of the Oakland Seaport, including the railroad tracks that run parallel to Frontage Road underneath West Grand Avenue. There is a small area along West Grand Avenue where the Port of

Oakland's utility service area overlaps with the project footprint, but the project would not affect the Port of Oakland's ability to provide electricity to the Oakland Seaport. EBCE is Alameda County's official electricity provider and, therefore, provides electricity to Oakland. EBCE's power comes from a mix of sources, including solar, wind, geothermal, biomass, biowaste, and hydroelectric generation resources. EBCE delivers power to its customers via existing PG&E infrastructure.[6] EBCE allows customers to choose between three different electricity product operations: Bright Choice, which contains at least 38 percent renewable resources and 47 percent carbon-free resources as electricity resources; Brilliant 100, which is at least 40 percent renewable resources and 60 percent carbon-free resources as electricity sources; and Renewable 100, which contains 100 percent renewable resources as electricity sources (EBCE 2020a).In Alameda County, a total of 384 million therms of natural gas were consumed in 2019 (the most recent year for which data are available). In 2019, natural gas in Alameda County was consumed primarily by the residential sector (57 percent), followed by the non-residential sector (43 percent) (CEC n.d.). In 2019, Alameda County consumed a total of 10,684 million kilowatts of electricity. In the county, electricity was consumed primarily by the non-residential sector (71 percent), followed by the residential sector (29 percent) (CEC n.d.).

The Project area currently comprises paved roadways; therefore, the existing energy demand in the Project area is minimal because the energy demand generated by the streetlights along the roadways is less energy than that required to power a building.

2.6.1.2 Regulatory Setting

State

Renewable Energy Standards

In 2002, California established its Renewables Portfolio Standard (RPS), with the goal of increasing the percentage of renewable energy in the State's electricity mix. Specifically, renewable energy would account for 20 percent of retail sales by 2010. In 2006, this goal was codified in Senate Bill (SB) 107. Under the provisions of SB 107, investor-owned utilities were required to generate 20 percent of their retail electricity from qualified renewable energy technologies by the end of 2010. In 2008, Executive Order (EO) S-14-08 was signed into law, requiring retail sellers of electricity to derive 33 percent of their energy from renewable sources by 2020.

Senate Bill 350 (2015), Chapter 547, Clean Energy and Pollution Reduction Act of 2015

SB 350 (DeLeon), also known as the Clean Energy and Pollution Reduction Act of 2015, was approved by California legislature in September 2015 and signed by Governor Brown in October 2015. Its key provisions require the following by 2030: 1) to achieve an RPS[7] of 50 percent and 2) to double statewide energy efficiency savings in natural gas and electricity end uses. To help meet these provisions, the Clean Energy and Pollution Reduction Act of 2015 requires large utilities to develop and submit integrated resource plans that detail how they will reduce GHG emissions and increase the use of clean energy resources while meeting customer needs.

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6 EBCE charges each of its customers an electric delivery charge for maintenance of PG&E's wires, infrastructure, and delivery of electricity to customers.

7 The RPS is one of California's key programs for promoting renewable energy use in the State. The program establishes continuous procurement of renewable energy requirements for load-serving entities with the State of California (California Energy Commission 2020b).

SB 100—The 100 Percent Clean Energy Act of 2018

SB 100 builds on SB 350, the Clean Energy and Pollution Reduction Act of 2015, which required the following by 2030: (1) an RPS of 50 percent and (2) a doubling of energy efficiency (electrical and natural gas) by 2030, including improvements to the efficiency of existing buildings. SB 100 increases the 2030 RPS target set in SB 350 to 60 percent and requires an RPS of 100 percent by 2045.

Regional and Local

PG&E *Integrated Resource Plan*

PG&E adopted its *2018 Integrated Resource Plan* (IRP) on August 1, 2018 to provide guidance for serving the electricity and natural gas needs of the residents and businesses within the PG&E service area while fulfilling regulatory requirements (PG&E 2018). The IRP contains the following objectives that are relevant to the Project:

- **Clean Energy:** In 2017, PG&E delivered nearly 80 percent of its electricity from GHG-free resources and 33 percent of its electricity from RPS-eligible renewable resources, such as solar, wind, geothermal, biomass, and small hydroelectric projects;
- **Reliability:** PG&E's IRP analysis includes an evaluation of PG&E's contribution to system and local reliability, in compliance with the California Public Utilities Commission's resource adequacy requirements; and
- **Affordability:** PG&E's IRP analysis selects resources to meet the State's clean energy and reliability goals and provides a system average rate forecast in compliance with the California Public Utilities Commission's requirements for investor-owned utilities.

EBCE *Integrated Resource Plan*

EBCE adopted its 2020 IRP on September 1, 2020 (EBCE 2020b). The IRP provides guidance for serving the electricity and natural gas needs of residents and businesses within the EBCE service area while fulfilling regulatory requirements. The EBCE IRP does not have specific goals or policies; rather, it lays out measures for achieving EBCE's overarching goal of achieving 60 percent RPS-eligible renewable energy by 2030.

City of Oakland General Plan Open Space, Conservation, and Recreation Element

The City of Oakland General Plan OSCAR Element (City of Oakland 1996) includes the following policies relevant to energy resources and efficiency:

- **Policy CO-13: Energy Resources.** To manage Oakland's energy resources as efficiently as possible, reduce consumption of non-renewable resources, and develop energy resources which reduce dependency on fossil fuels.
- **Policy CO-13.1: Reliable Energy Network**. Promote a reliable local energy network which meets future needs and long-term economic development objectives at the lowest practical cost.
- **Policy CO-13.2: Energy Efficiency**. Support public information campaigns, energy audits, the use of energy-saving appliances and vehicles, and other efforts which help Oakland residents, businesses, and City operations become more energy efficient.

- **Policy CO-13.3: Construction Methods and Materials**. Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximize energy efficiency.

City of Oakland Equitable Climate Action Plan

The Oakland Equitable Climate Action Plan (ECAP) was adopted by the City Council on December 4, 2012, to reduce citywide GHG emissions, consistent with the reduction goals of Assembly Bill (AB) 32. The purpose of the Oakland ECAP is to identify and prioritize actions the City can take to reduce energy consumption as well as GHG emissions associated with Oakland. The ECAP outlines a 10-year plan, including 150 actions to achieve the established goal of reducing GHG emissions by 36 percent, when comparing 2020 levels with 2005 levels, as well as improving energy efficiency and reducing energy consumption. Relevant priority actions (PA) include PA 17, Improve Energy Performance of New City Facilities, and PA 34, Accelerate Completion of Bicycle and Pedestrian Plans.

2.6.2 Discussion of Potential Impacts

a. **This Project would have a less-than-significant impact on the consumption of energy resources during Project construction and operation.**

Construction

Natural gas is not typically used during construction. Electric service to the Project area would be provided to meet the needs of Project construction, as required by the California Public Utilities Commission, which obligates PG&E to provide service to existing and potential customers. Project construction would require excavation, grading, and new pavement, which would consume energy; therefore, construction activities for the Project would result in a temporary increase in demand for electricity. The Project would consume approximately 22,303 kilowatt hours of electricity, approximately 22,214 gallons of diesel fuel, and 13,925 gallons of gasoline over the entire approximately two-year construction period.[8] However, this would be considered a small, temporary increase in energy demand during construction. This is because construction activities would occur over an approximately two-year period, electricity would be used to power an onsite construction trailer at a rate of 38 kilowatt hours per day, and energy in the form of gasoline and diesel would be used to power construction equipment, approximately 12,046 gallons of fuel per year. Therefore, the Project would not result in inefficient, wasteful, or unnecessary consumption of energy resources during construction. This impact would be less than significant.

Operation

The Project would not use natural gas during operation. However, electricity demand generated by operation of the Project would include electricity consumption associated with other aspects of the path and parking lot (e.g., lighting). Based on the Project's energy consumption rates provided by the Project's engineering consultant, the Project would consume approximately 73,000 kilowatt hours of electricity per year at buildout. In addition, vehicles, traveling to and from the parking lot, which would not be anticipated to be operational for ten or more years, require gasoline or diesel fuel. Approximately 1,046 gallons of diesel fuel and 113,944 gallons of gasoline would be used annually for vehicles traveling to and from the parking lot during normal operations. These energy quantities are derived from the Project's estimation of GHG emissions. As explained in Section 2.8, *Greenhouse Gas Emissions*, actual fuel quantities would most likely be lower than projected because the Project would become operational in a

[8] As indicated in Section 2.3, construction would occur for approximately two years but within three calendar years.

later year than originally forecast (2023); thus, the overall vehicle fleet would be more fuel efficient than in 2019 due to regulations becoming increasingly stringent over time. In addition, the GHG emissions (and thus fuel quantities) do not account for any reduction in vehicle miles traveled that would occur from bicycle trips displacing motor vehicle trips. The fuel quantities presented here do not account for any current or future motor vehicle trip reductions that would occur as a result of the increase in bicycle and pedestrian connectivity that the Project would facilitate. Furthermore, the Project would use low-level lighting with LED lights along the paths. The lighting design could further reduce Project-related energy consumption. Therefore, although the Project would result in an increase in energy consumption compared with existing conditions, the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy resources during operation due to incorporation of energy-efficient design features and the use of alternative modes of transportation. This impact would be less than significant.

b. **This Project would have a less-than-significant impact and would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.**

As discussed above, the Project would include energy-efficiency components that would support implementation of applicable plans related to renewable energy or energy efficiency, such as energy-efficient LED lighting. The Project would also include various design features to reduce stormwater runoff and water consumption through the incorporation of biotreatment areas**.** As discussed in Sections 2.3, *Air Quality*, and 2.8, *Greenhouse Gas Emissions*, the Project would be consistent with applicable plans related to renewable energy or energy efficiency. Specifically, the Project would be consistent with the City's *Energy and Climate Action Plan*, *Bay Area 2010 Climate Action Plan*, *Assembly Bill 32 Scoping Plan*, and *Senate Bill 100* as well as PG&E's and EBCE's IRPs. Accordingly, the Project would not impede implementation of any of these plans. Therefore, the Project would not conflict with or obstruct implementation of a State or local plan for renewable energy or energy efficiency. This impact would be less than significant.

2.6.3 Mitigation Measures

No mitigation measures are required.

2.7 Geology and Soils

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

2.7.1 Environmental Setting

2.7.1.1 Existing Conditions

This section discusses the existing conditions related to geology and soils in the Project area. Unless otherwise noted, the information provided in this section is based on the Preliminary Foundation Report for the San Francisco Oakland Bay Bridge Bicycle/Pedestrian Connection prepared by Fugro Consultants, Inc., in July 2014 (**Appendix H**). The purpose of the Preliminary Foundation Report was to summarize previous field investigations and subsurface conditions in the Project area, evaluate the seismic hazard conditions, make preliminary recommendations, and identify the need for additional geotechnical investigations.

Regional Geology

The Project area is located in the Coast Ranges geomorphic province which is characterized by northwest-trending mountain ranges and valleys that are oriented subparallel to the San Andreas Fault (California Geological Survey 2002). The ridges and valleys within the Coast Ranges are controlled by folds and faults that resulted from the collision of the Pacific and North American plates and subsequent strike-slip

faulting along the San Andreas fault zone. The Bay Area also experienced uplift and faulting in several episodes during late Tertiary time (about 25 to 2 million years ago). This produced the Berkeley Hills, the San Francisco Peninsula, and the intervening San Francisco Bay.

Local Geology

The Coast Ranges consist of northwest trending mountain ranges, basins, and narrow valleys generally paralleling major geologic structures and the coastline of California. The San Andreas fault system and the Hayward fault zone contain active northwest-trending strike-slip faults, and to a lesser degree thrust faults which bound the Project area.

Bedrock in the local vicinity consists of the late Jurassic and Cretaceous age Franciscan Complex. The Franciscan Complex is a tectonic mixture of intensely deformed sedimentary, volcanic, and metamorphic rocks including serpentinite. These are generally in faulted contact with the overlying Great Valley Sequence. The San Francisco Bay sits within a broad depression in the Franciscan bedrock, resulting from an east-west extension between the San Andreas and the Hayward fault systems. The bedrock surface is estimated to lie at elevations ranging from 400 to 600 feet below mean seal level in the local vicinity. The bedrock surface deepens towards the south-southeast and is shallower in other directions.

The unconsolidated geologic formations were deposited on top of the dissected Franciscan bedrock surface. This occurred during several episodes of significant sea level rise and fall associated with past glaciation. From deepest to shallowest, these formations include the Alameda Formation, Old Bay Clay, the San Antonio Formation, Young Bay Mud, and fill. The lower Alameda Formation, consisting of continental sediments, was deposited on top of the bedrock surface between 500,000 and 1,000,000 years ago. Depositional environments likely included alluvial fans, lakes, flood plains, streams, and swamps. Between 400,000 to 500,000 years ago the sea entered the bay and deposition of the upper Alameda Formation began. These sediments were deposited in alluvial, estuarine, and marine environments. The Alameda Formation consists of a mixture of clay, silt, sand, and gravel, with a greater proportion of fine-grained sediments. Sand and gravel units are relatively thin and discontinuous. Deposition and subsequent erosion of the upper Alameda Formation ceased approximately 125,000 years ago when Old Bay Clay deposition began.

Old Bay Clay lies above the Alameda Formation and is an unoxidized marine/estuarine unit consisting primarily of gray silty clay with occasional thin, discontinuous sand lenses. It was deposited beginning 115,000 to 125,000 years ago and ending 40,000 to 100,000 years ago during a time when sea level was as high as 20 feet higher than today. Old Bay Clay forms a relatively continuous layer extending a considerable distance inland from the present shoreline.

The San Antonio Formation lies above the Old Bay Clay and consists of continental deposits. Deposition of these units occurred in late Wisconsin time when sea level was lower than at present. The top of the San Antonio Formation was subsequently eroded in very late Wisconsin time.

Deposition of Young Bay Mud has been occurring over the last 10,000 years and continues today. Young Bay Mud occurs above the San Antonio Formation and consists of estuarine/marine gray silty clay with minor discontinuous sand lenses. Young Bay Mud is overlain by undifferentiated fill that was placed in the late 1800s and throughout the 1900s. **Figure 2.7-1** shows the local geology.

According to the Oakland General Plan Safety Element, in the 1980's the U.S. Department of Agriculture evaluated the ability of each soil type in Oakland to support development in the city. Soils were classified as having "low," "moderate," or "severe" limitations for development based on their shrink-swell potential, slope, strength, wetness, depth to bedrock, and flooding potential. As described below under

Geologic Map

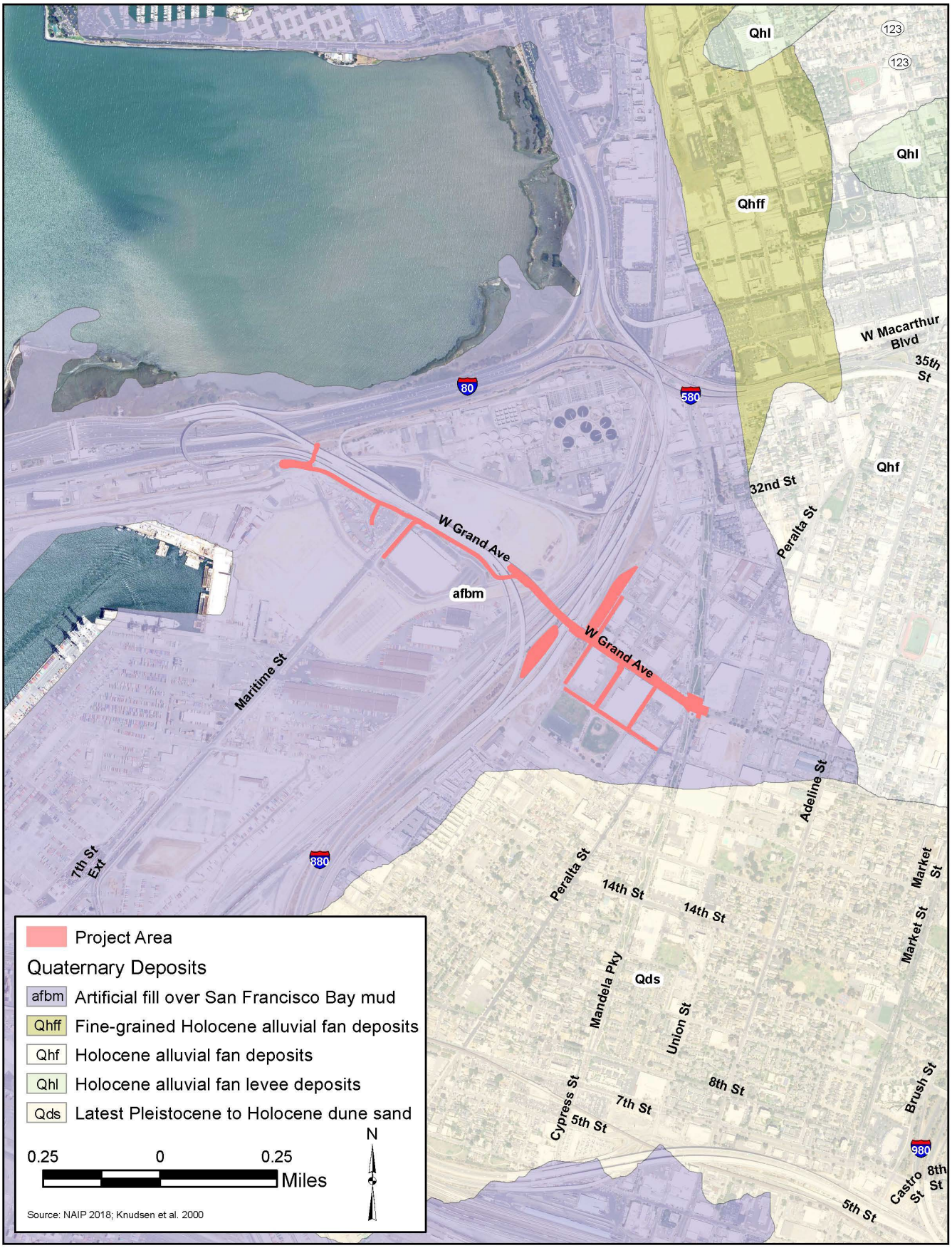

Figure 2.7-1

West Oakland Link

Expansive Soils, shrink-swell is a cyclic change in volume that occurs in fine-grained sediments due to the expansion and contraction of clay caused by wetting and drying. In the flatland areas, shrink-swell was the most common severe constraint. The potential for shrink-swell is highest in areas underlain by Bay Mud and in the fine-grained basin deposits which contain high quantities of expansive clay derived from the uplands by erosion. The alluvial deposits in the flatlands may also contain large quantities of expansive clay at the surface. Low soil strength also appears to be a common constraint. Because of the relatively minor economic losses resulting from shrink-swell behavior and low soil strength, these phenomena are rarely insurmountable obstacles to development; they do, however, necessitate special design and construction techniques. (City of Oakland 2004)

Local Seismicity

The San Francisco Bay Area is considered one of the most seismically active regions in the United States. Significant earthquakes have occurred in the Bay Area and are associated with crustal movements along a system of subparallel fault zones that generally trend in a northwesterly direction.

The Coast Ranges tectonic province is bounded on the west by the northwest-trending San Andreas fault system, the primary boundary between the Pacific and North American Plates. The system boundary is represented as a broad region, 62 to 124 miles wide, centered on the plate boundary, including much of the Coast Ranges, and is tectonically dominated at present by the dextral horizontal shear caused by the relative motion of the two plates. In the San Francisco Bay region, the plate boundary is a 62-mile-wide zone of deformation consisting of several major strike-slip fault zones as shown in **Figure 2.7-2** including the San Gregorio, San Andreas, Hayward-Rodgers Creek, Calaveras, and Concord-Green Valley faults. **Table 2.7-1** outlines the distance from the Project area to nearby major faults, their slip rate, and magnitude.

Table 2.7-1. Major Active Faults in the Project Vicinity

Fault[1]	Distance to Project Area (miles)	Slip Rate (inches/year)	Magnitude[2]
North Hayward	3.7	0.4	7.3
South Hayward	10.6	0.4	7.3
San Andreas-Peninsula	14.9	0.7	8.0

Source: **Appendix H**, *Preliminary Foundation Report*)

[1] Other faults such as the Calaveras and Greenville are not considered major.

[2] Maximum Moment Magnitude that a fault line is capable of generating.

The City of Oakland lies within the San Andreas fault system and straddles the Hayward fault. The last major earthquake on the Hayward fault occurred in 1868 and caused widespread damage throughout much of the East Bay region. This earthquake caused surface rupture from Fremont to as far north as Berkeley. Although the fault rupture was poorly documented, modeling of survey data suggest that the fault moved as far north as Berkeley, and from these data the average amount of horizontal movement along the fault is inferred to be about 6 feet. Based on empirical relationships among earthquake magnitude, fault rupture length, and displacement, a large event on the Hayward fault is capable of generating displacements of at least 10 feet. In addition to coseismic rupture, the Hayward fault is undergoing creep (i.e., it is undergoing continuous aseismic slip). This amounts to about 0.016 to 0.24 inch per year on the Hayward fault in Fremont, approximately 25 miles south of the Project area.

Major Faults

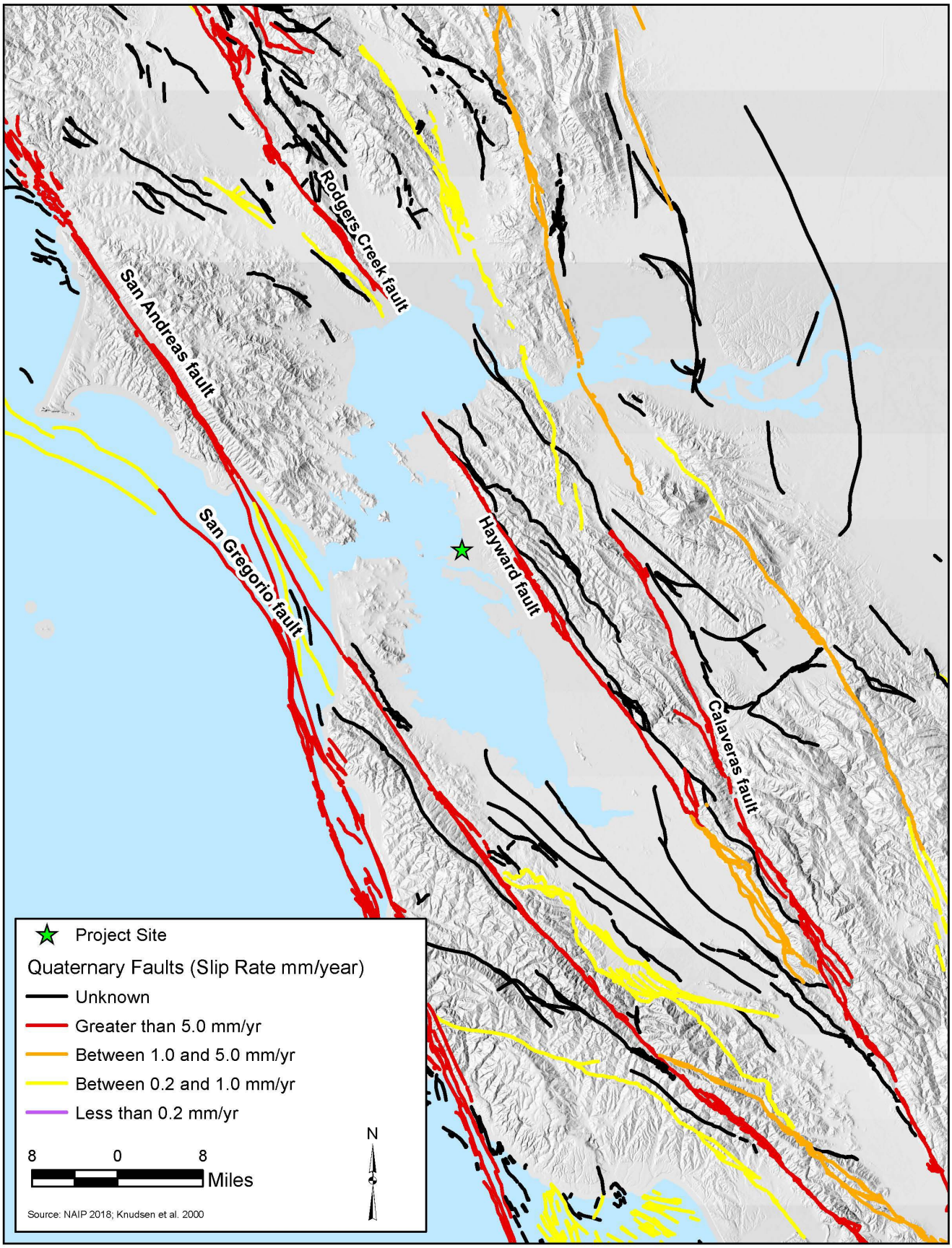

Figure 2.7-2

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Project Area Geology

Topography and Drainage

The topography in the Project area is generally flat with elevations ranging between 8 to 17 feet above mean sea level.

Soils

According to the Water Quality Assessment Report (**Appendix I-1**), three different soil units intersect in the Project area. The major soil components mapped are clay, loamy sand, and urban land complexes. **Table 2.7-2** lists the soil information for the Project area. Descriptions of all the soils features (e.g., setting, composition, and thickness) are included in the Preliminary Foundation Report (**Appendix H)**.

Table 2.7-2. Soils in the Project Area

Unit Name	Percentage of Area	Typical Profile	Depth to Groundwater (feet)
Urban land	97.4	N/A	2-6
Urban land-Baywood complex	0.5	0 to 16 inches: Loamy sand 16 to 60 inches: Loamy sand	2-6
Urban land-Clear lake complex	2.1	0 to 26 inches: Clay 26 to 60 inches: Clay	2-6

Source: **Appendix H**, *Preliminary Foundation Report*

The soil erodibility factor (K) is a measure of the susceptibility of a given soil type to erosion by water; it varies from 0.02 to 0.69, with soils having the highest K values as the most erodible. The K factor for the soils in the Project area varies from 0.24 to 0.37, which suggests moderate erosion susceptibility within the Project area (**Appendix I-1**, *Water Quality Assessment Report*).

Groundwater

Shallow groundwater in the Project area typically varies from 2–6 feet below ground surface (**Appendix H**). The tidal influence on the groundwater gradient extends approximately 600 feet inland from the Oakland Harbor. In this area, groundwater flow is expected to be highly variable due to tidal forces. However, the distance from the Project area to the Bay is at least 1,000 feet, so the tidal force is not expected to significantly impact the groundwater level in the Project area.

Fault Rupture

The majority of earthquakes in the Bay Area are associated with the San Andreas Fault and Hayward Fault system. As mentioned in **Table 2.7-1** above, the nearest active fault is the Hayward fault located approximately 3.9 miles to the northeast of the Project area. The Project area is not located within an Alquist-Priolo Earthquake Fault Zone and is not zoned as susceptible to fault rupture.

Ground Shaking

Due to the close proximity of the Hayward fault, the Project area is subject to strong ground shaking during large earthquakes originating on this fault, as well as from other regional faults.

Liquefaction, Settlement, and Lateral Spreading

Strong ground shaking caused by large earthquakes can induce ground displacement and/or failure, such as liquefaction, compaction settlement, and slope movement. A site's susceptibility to these hazards relates to the site topography, soil conditions, and depth to groundwater.

Liquefaction is a soil behavior phenomenon whereby sediments temporarily lose shear strength and collapse. This condition is caused by cyclic loading during earthquake shaking that generates high pore-water pressures within the sediments. The soil most susceptible to liquefaction is loose, cohesionless, granular soil below the water table and within about 50 feet of the ground surface. Liquefaction can result in loss of foundation support and settlement of overlying structures, ground subsidence and translation due to lateral spreading, and differential settlement of affected deposits.

As shown on **Figure 2.7-3**, the liquefaction susceptibility of the sediments in the Project area is mapped by the USGS as "very high." Based on data reviewed in the Preliminary Foundation Report, the Project area is generally underlain by fill consisting of loose to medium dense cohesionless sand of approximately 5 to 15 feet thick and the depth to groundwater is approximately 2 to 6 feet. Where these deposits are below the water table, there is a high potential for them to liquefy during a major seismic event. There are also some deeper sand layers, which include some thin layers of 1 to 2 feet of medium dense sand, but the majority of the sand layers tend to be dense and/or somewhat cohesive and are expected to have a relatively low potential to liquefy during a major seismic event.

Based on information evaluated in the Preliminary Foundation Report, seismically induced ground surface settlement is on the order of 1 to 15 inches based on a moment magnitude earthquake of 7.3 and a peak ground acceleration of 0.621g. The medium dense to dense lower sand layer may be subject to less than 1-inch of settlement.

Lateral spreading occurs when a layer liquefies at depth and causes horizontal movement or displacement of the overburden mass on sloping ground or toward a free face, such as a stream bank or excavation, or towards an open body of water. Given that the Project area is generally flat and is about 600 to 5,000 feet from the shoreline of the Bay, it is expected that the potential for lateral spreading is low; however, due to the large lateral extent and depth of liquefiable fill, limited permanent lateral soil displacements may occur.

Expansive Soils

Expansive soils are soils that expand as they become wet and contract as they dry. The resulting volume change can be so large that the ground could move up and down several inches during a cycle of wetting and drying. Soil components in expansive soils are predominantly clay minerals that have the ability to adsorb large quantities of water. As the individual clay minerals adsorb water, they repel each other, and the soil expands. The damage caused by expansive soils is due to the differences in the amount of shrinking or swelling that produces uneven displacement. This happens where there are variations in soil moisture and lateral variations or discontinuities in the soil profile. Typical damage consists of cracking of concrete floors, buckling and cracking of walls, racked doorframes resulting in binding doors, and cracking or uneven displacement of road pavement. (American Geological Institute 2009)

As described above, the Project area is generally underlain by fill consisting of loose to medium dense cohesionless sand of approximately 5 to 15 feet thick and the depth to groundwater is approximately 2 to 6 feet. Loose to medium dense sand are not considered expansive soils and given the shallow depth to groundwater, the soils in the Project area, due to continuous saturation, are unlikely to be subject to shrinking and swelling behavior such that uneven displacement would occur.

Liquefaction

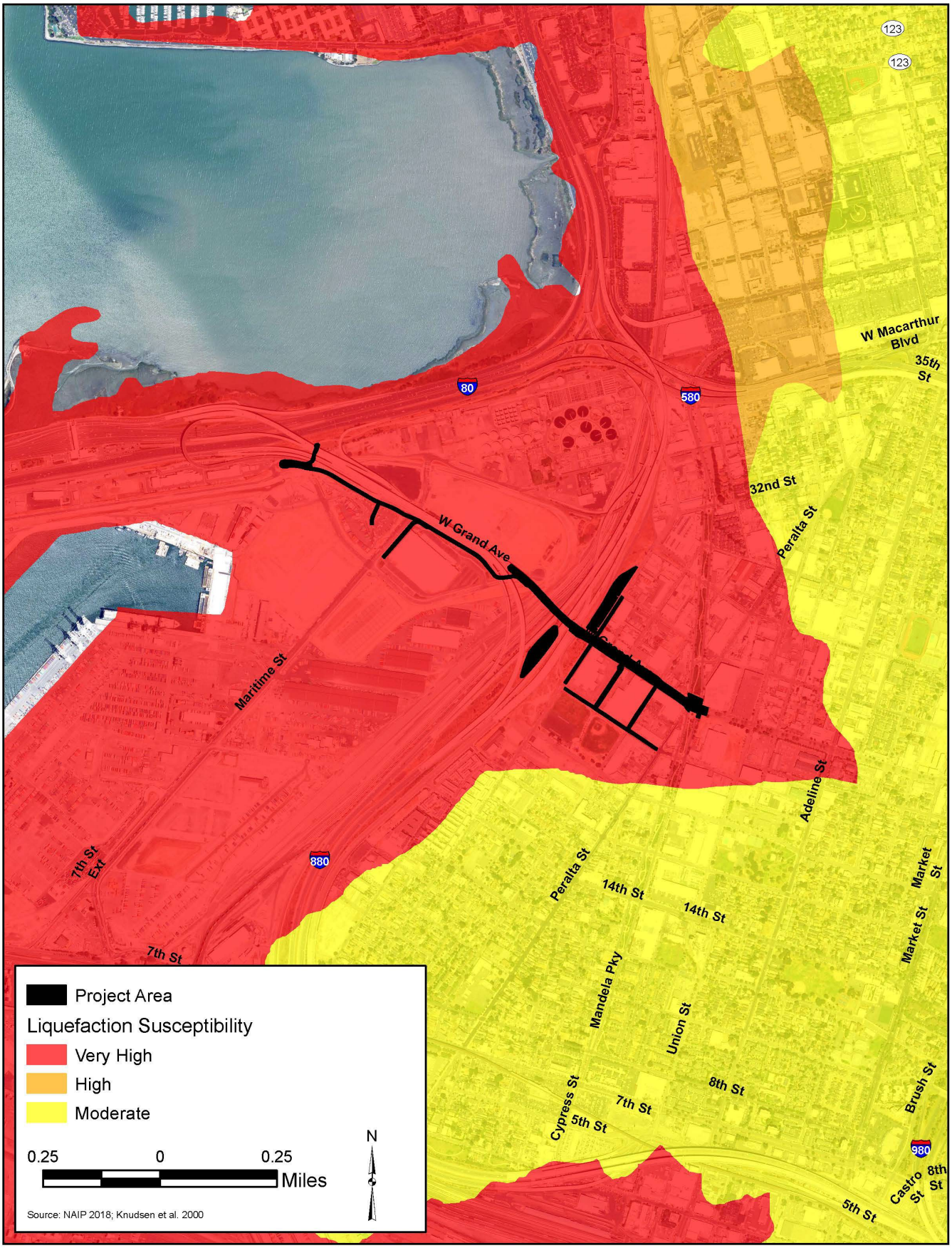


Figure 2.7-3

West Oakland Link

Landslide and Slope Failure

Due to the relatively flat topography of the Project area, landslides and slope failure are not considered hazards.

Tsunami

Tsunami, or seismically induced large waves, may be generated by rapid movements on earthquake faults. Based on the Tsunami Inundation Map for Emergency Planning prepared by the California Geological Survey, the Project area is located within the tsunami inundation area (California Geological Survey 2009).

Paleontological Setting

The fossil-yielding potential of a particular area depends on the geologic age and origin of the underlying rocks. It also depends on the processes that the rocks have undergone, both geologic and anthropogenic.[9]

The Impact Mitigation Guidelines Revisions Committee of the Society of Vertebrate Paleontology (SVP) has published Standard Guidelines. The Standard Guidelines include procedures for the investigation, collection, preservation, and cataloguing of fossil-bearing sites. The Standard Guidelines are widely accepted among paleontologists and are followed by most investigators. The Standard Guidelines identify the two key phases of paleontological resource protection as (1) assessment and (2) implementation. Assessment involves identifying the potential for a project site or area to contain significant nonrenewable paleontological resources that could be damaged or destroyed by project excavation or construction. Implementation involves formulating and applying measures to reduce such adverse effects. The SVP defines the level of potential as one of four sensitivity categories for sedimentary rocks: High, Undetermined, Low, and No Potential.[10]

- **High Potential.** Assigned to geologic units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered; and sedimentary rock units suitable for the preservation of fossils ("e.g., middle Holocene and older, fine-grained fluvial sandstones…fine-grained marine sandstones, etc."). Paleontological potential consists of the potential for yielding abundant fossils, a few significant fossils, or "recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data."
- **Undetermined Potential.** Assigned to geologic units "for which little information is available concerning their paleontological content, geologic age, and depositional environment." In cases where no subsurface data already exist, paleontological potential can sometimes be assessed by subsurface site investigations.
- **Low Potential.** Field surveys or paleontological research may allow determination that a geologic unit has low potential for yielding significant fossils (e.g., basalt flows). Mitigation is generally not required to protect fossils.
- **No Potential.** Some geologic units have no potential to contain significant paleontological resources, such as high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Mitigation is not required.

[9] *Anthropogenic* means caused by human activity.

[10] Society of Vertebrate Paleontology. 2010. *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*. Impact Mitigation Guidelines Revision Committee. Available: http://vertpaleo.org/PDFS/8f/8fe02e8f-11a9-43b7-9953-cdcfaf4d69e3.pdf. Accessed: May 13, 2014.

Geologic units of Pleistocene age and older have potential to contain paleontological resources. Because California's Pleistocene nonmarine strata have yielded many important vertebrate fossils, continental deposits of Pleistocene age are generally treated as paleontologically sensitive in California.

Geologic maps were consulted to determine the geologic units present at and near the Project site and assess the paleontological sensitivity of the geologic unit at the Project site using SVP Guidelines. A records search was conducted at the University of California Museum of Paleontology database for fossil records in Alameda County in the Project vicinity. This is to confirm presence of fossils in nearby areas in similar geologic settings, in order to demonstrate likelihood of fossil presence at the Project site.

The Project area is situated on artificial fill overlying older deposits of Holocene and Pleistocene age (Helley and Graymer 1997). These deposits all have potential to contain paleontological resources. Remains of land mammals (such as extinct mammoth and sloth) have been reported from localities of similar age and origin in the nearby area (University of California Museum of Paleontology2014). As discussed above, vertebrate fossils are considered sensitive paleontological resources. **Table 2.7-3** shows likelihood of fossil types and paleontological sensitivity of the map units in the Project vicinity.

Table 2.7-3. Surficial Geologic Units in the Project Vicinity

Age	Geologic Unit	Location with Respect to Project Area	Depth Relative to Ground Surface (ft)	Paleontological Sensitivity
Historic	Artificial fill	Underlying Project area	+10 to -10	Low
Holocene	Young Bay Mud	Underlying Project area	+5 to -60	Low
Holocene and Late Pleistocene	San Antonio Formation/Merritt Sand deposits	Underlying Project area	-10 to -40	High
Late Pleistocene	Old Bay Mud	Underlying Project area	-25 to max depth explored	Undetermined

Sources: University of California Museum of Paleontology2014; Fugro Consultants 2014.

2.7.1.2 Regulatory Setting

Regulations applicable to soils affecting stormwater run-off are included in Section 2.10, *Hydrology and Water Quality*.

Federal and State

No federal regulations are applicable to the Project.

Alquist-Priolo Earthquake Fault Zoning Act

California's Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621 et seq.), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in corridors along active faults (referred to as earthquake fault zones). It defines criteria for identifying active faults, giving legal weight to terms such as active, and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. It also encourages and regulates seismic retrofits of some types of structures.

Seismic Hazards Mapping Act of 1990

The Seismic Hazards Mapping Act of 1990 (Public Resources Code Sections 2690–2699.6) is intended to avoid or reduce damage resulting from earthquakes. While the Alquist-Priolo Earthquake Fault Zoning Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Earthquake Fault Zoning Act (i.e., the State is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped seismic hazard zones).

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites within seismic hazard zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

Regional and Local

City of Oakland General Plan Safety Element

The policies and actions in the Safety Element (City of Oakland 2012) are designed to protect people and structures from geologic hazards such as fault rupture, ground shaking, liquefaction, landslides, and erosion. The following policies are relevant to the Project and geology, soils and seismicity.

- **Policy GE-1:** Develop and continue to enforce and carry out regulations and programs to reduce seismic hazards and hazards from seismically triggered phenomena.
- **Policy GE-2:** Continue to enforce ordinances and implement programs that seek specifically to reduce the landslide and erosion hazards.
- **Policy GE-3:** Continue, enhance, or develop regulations and programs designed to minimize seismically related structural hazards from new and existing buildings.
- **Policy GE-4:** Work to reduce potential damage from earthquakes to “lifeline” utility and transportation systems.

City of Oakland General Plan Open Space, Conservation, and Recreation Element

The OSCAR Element (City of Oakland 1996) contains the following policy relevant to the Project and seismic hazards.

- **Policy CO-2.3: Development on filled Soils.** Require development on filled soils to make special provisions to safeguard against subsidence and seismic hazards.

2.7.2 Discussion of Potential Impacts

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. **The Project would result in a less-than-significant impact related to directly or indirectly causing substantial adverse effects involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42)**.

As discussed above, the Project area is not within a delineated Alquist-Priolo Earthquake Fault Zone. The nearest Alqusit-Priolo Earthquake Fault Zone is associated with the Hayward Fault and is approximately 6.2 miles northeast of the Project area. Therefore, the risk of surface rupture from a known fault in the Project area is less than significant.

ii. **The Project would result in a less-than-significant impact related to directly or indirectly causing substantial adverse effects involving strong seismic ground shaking.**

One of the primary earthquake hazards in the City of Oakland is ground shaking. Thus, the Project is likely to experience strong ground shaking during the life of the Project. According to the Caltrans Highway Design Manual Chapter 1000 Bicycle Transportation Design, the pavement material and structure of a bike path should be designed in the same manner as a highway (American Association of State Highway and Transportation Officials 2009, 2012; Caltrans 2012). Therefore, compliance with Caltrans procedures related to seismic design, as detailed in Section 19, *Earthwork*, of the Caltrans 2010 Standard Specifications (Caltrans 2010), as well as the American Association of State Highway and Transportation Officials Guide Specifications for Design of Pedestrian Bridges and Guide for the Development of Bicycle Facilities (American Association of State Highway and Transportation Officials 2012; 2009), would prevent or minimize adverse effects related to seismic ground shaking. Seismic design would also comply with City of Oakland Title 15 Building and Construction ordinances. Therefore, although the Project would likely experience strong ground shaking due to the regional geology and seismology, with Caltrans seismic design and construction specifications, impacts related to strong seismic ground shaking would be less than significant with compliance.

iii. The Project would result in a less-than-significant impact with mitigation related to directly or indirectly causing substantial adverse effects involving seismic-related ground failure, including liquefaction.

As discussed above, the Project area is located in a "very high" liquefaction susceptibility zone as mapped by the USGS. The Preliminary Foundation Report notes that liquefaction-induced settlements would induce down-drag loads on deep foundations; therefore, down-drag and impacts of soils displacements on structures should be evaluated as part of the detailed design phase. Down-drag is a term used to define the forces on piles installed through soil deposits undergoing consolidation. These forces increase the load on piles and result in additional settlement, thereby reducing the usable capacity of the piles installed. **Mitigation Measure GEO-1** (Perform Site-Specific Geotechnical Investigation) would require additional field investigation and laboratory testing, as outlined in the Preliminary Foundation Report (**Appendix H**), to characterize the subsurface conditions in the Project area and verify the preliminary geotechnical recommendations for the Project. Therefore, with implementation of the **Mitigation Measure GEO-1**, the Project would result in less-than-significant impacts related to seismic-related ground failure, including liquefaction.

iv. The Project would result in no impact related to directly or indirectly causing substantial adverse effects involving landslides.

The Project area is relatively flat and at low elevations. In addition, the Project would not require slope cuts that could result in landslides. Therefore, the Project would not result in any impacts related to landslides.

b. The Project would result in a less-than-significant impact related to substantial soil erosion or the loss of topsoil.

As discussed in Section 2.10, *Hydrology and Water Quality*, grading and other construction activities could result in soil erosion or loss of topsoil. Also, the Project would result in approximately 2.98 acres of new and replaced impervious area (WRECO 2014a), which may result in increased stormwater runoff and potential for erosion. Because the Project would disturb more than one acre of land, the preparation and implementation of a SWPPP, in accordance with the NPDES Construction General Permit and Oakland SCAs (54 and 74), would be required. The SWPPP would list BMPs that would be implemented to minimize stormwater runoff, control erosion, and monitor BMP effectiveness. If grading must be conducted during the rainy season, the primary BMPs selected would focus on erosion control. The Erosion Control Plan would incorporate permanent erosion control elements to ensure that stormwater runoff does not cause soil erosion. Erosion and sediment control plans will be required and prepared under the City's Grading Ordinance which will require reducing erosion and retaining sediment onsite. Therefore, with implementation of the SWPPP and Erosion Control Plan, the Project would not result in substantial soil erosion and impacts would be less than significant.

c. The Project would result in a less-than-significant impact with mitigation related to locating on an unstable geologic unit or soil that could potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse.

As discussed above under Impact a (iii), the Project area is located in a "very high" liquefaction susceptibility zone as mapped by the USGS. In addition, as discussed in the existing setting, the potential for lateral spreading in the Project area is expected to be low. However, due to the large lateral expanse and depth of the liquefiable fill, limited lateral soil displacements could occur. **Mitigation Measure GEO-1** would require additional field investigation and laboratory testing, as outlined in the Preliminary Foundation Report, to characterize the subsurface conditions in the Project area and verify the preliminary geotechnical recommendations for the Project. Therefore, with implementation of the **Mitigation Measure GEO-1**, the Project would result in less-than-significant impacts related to unstable soils that could potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse.

d. The Project would result in a less-than-significant impact with mitigation related to expansive soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

As described above, the Project area is generally underlain by fill consisting of loose to medium dense cohesionless sand of approximately 5 to 15 feet thick. The depth to groundwater is approximately 2 to 6 feet. Loose to medium dense sand is not considered expansive soils. Given the shallow depth to groundwater, the soils in the Project area, due to continuous saturation, are unlikely to be subject to shrinking and swelling behavior such that uneven displacement would occur. However, since expansive soils were not specifically addressed and no new investigations or soil borings were performed as part of the Preliminary Foundation Report to characterize expansive soils, it is uncertain whether expansive soils are known to occur within the limits of the Project. **Mitigation Measure GEO-1** would require additional investigation and possible testing to characterize the expansive nature of the soils within the limits of the Project. In addition, **Mitigation**

Measure GEO-1 would require performance standards and BMPs to minimize impacts should expansive soils be found to occur. As a result, with implementation of **Mitigation Measure GEO-1**, the Project would result in less-than-significant impacts related to expansive soils.

e. The Project would result in no impact related to the placement of septic tanks or alternative waste disposal systems on soils incapable of adequately supporting them.

The Project does not include the use of septic tanks or alternative waste disposal systems. Therefore, the Project would not result in any impacts related to placing these features on soils incapable of adequately support them.

f. This Project would have a less-than-significant impact on paleontological resource or unique geologic features.

Project construction would involve earthwork, such as excavation, grading, and trenching in areas of previously disturbed artificial fill. Artificial fill has a low potential to contain paleontological resources. As such, the potential to disturb paleontological resources is considered a less-than-significant impact.

Project construction would also involve installation of foundation piles into native deposits with high paleontological sensitivity. As stated above, City of Oakland's Standard Conditions of Approval for Paleontological Resources require that if a paleontological resource is discovered, excavation within 50 feet will be halted or discovered until discovery is examined by a qualified paleontologist and appropriate measures are determined. Conformance with the Standard Condition of Approval 53, Paleontological Resources, would ensure that impacts would be less than significant.

2.7.3 Mitigation Measures

Mitigation Measure GEO-1: Perform Site-Specific Geotechnical Investigation.

To minimize potential geotechnical hazards, BATA/Caltrans will hire qualified professionals to perform additional site-specific field investigation and laboratory testing by a professional geologist/engineer and certified analytical laboratory per the specifications outlined in the Preliminary Foundation Report. The additional field investigation and laboratory testing will take place as part of the detailed design phase of the Project. The results will be provided to BATA/Caltrans for compliance and approval prior to issuance of grading permits.

The geotechnical investigation will perform additional investigations and laboratory testing to determine soil characteristics, including but not limited to liquefaction susceptibility and expansiveness within the limits of the Project, if deemed necessary, by a professional geologist/engineer and certified analytical laboratory. The additional investigations would include, but not be limited to, review of available literature prepared for other structural and transportation projects in the vicinity of the Project to evaluate the expansive nature of soils within the Project area. In addition, if deemed necessary by a qualified geologist, soils borings and laboratory testing would be conducted to evaluate the expansive nature of the soils within the limits of the Project.

Should geotechnical hazards soils be found to occur within the limits of the Project, a professional geologist/engineer will prepare appropriate design recommendations, performance standards and BMPs to minimize impacts related to these hazards.

The findings of the additional investigations and laboratory testing, if deemed necessary, will take place as part of the detailed design phase of the Project and will be provided to the Lead Agency for compliance and approval prior to issuance of grading permits.

2.8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

2.8.1 Environmental Setting

The section briefly describes the environmental and regulatory setting for greenhouse gas (GHG) emissions and climate change. Impacts associated with sea level rise and flooding are addressed in Section 2.10, *Hydrology and Water Quality*.

2.8.1.1 Existing Conditions

GHG is any gas that absorbs infrared radiation in the atmosphere. This absorption traps heat within the atmosphere, maintaining the earth's surface temperature at a level higher than would be the case in the absence of GHGs. Increasing levels of GHGs resulting from human activities have increased levels of most of these naturally occurring gases in the atmosphere, which has and will continue to result in an increase in the temperature of the earth's lower atmosphere, a phenomenon that is commonly referred to as global warming. Warming of the earth's lower atmosphere induces a suite of additional changes, including changes in global precipitation patterns; ocean circulation, temperature, and acidity; global mean sea level; species distribution and diversity; and the timing of biological processes. These large-scale changes are collectively referred to as global climate change.

GHGs are both naturally occurring and artificial. Examples of GHGs that are produced both by natural processes and industry include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Examples of GHGs created and emitted primarily through human activities include fluorinated gases and sulfur hexafluoride (SF_6). The primary GHGs generated by construction activities are CO_2, CH_4, and N_2O. The Intergovernmental Panel on Climate Change (IPCC) estimates that CO_2 accounts for more than 75 percent of all anthropogenic (i.e., human-made) GHG emissions. Three-quarters of anthropogenic CO_2 emissions are the result of fossil fuel burning, and approximately one-quarter result from land use change (IPCC 2007). CH_4 is the second largest contributor of anthropogenic GHG emissions and is the result of growing rice, raising cattle, combustion, and mining coal (National Oceanic and Atmospheric Administration 2014). N_2O, while not as abundant as CO_2 or CH_4, is a powerful GHG. Sources of N_2O include agricultural processes, nylon production, fuel-fired power plants, nitric acid production, and vehicle emissions.

GHG emissions other than CO_2 are commonly converted into carbon dioxide equivalent (CO_2e), which takes into account the differing global warming potential (GWP) of different gases. For example, the IPCC Fourth Assessment Report (AR4) finds that N_2O has a GWP of 298 and CH_4 has a GWP of 25. Thus, emissions of 1 metric ton (MT) of N_2O and 1 MT of CH_4 are represented as the emissions of 298 MT and 25 MT of CO_2e, respectively. This method allows for the summation of different GHG emissions into a single total. Within California, GHG emissions in 2018 totaled approximately 425.3 million metric tons

(MMT) of CO_2e, of which, transportation is the largest source of GHG emissions (40 percent of total emissions), followed by industrial sources (21 percent) and electric power (15 percent of total emissions) (California Air Resources Board 2020).

2.8.1.2 Regulatory Setting

Federal and State

There are currently no federal laws specifically related to climate change, although regulation under the Clean Air Act is under development.

California has adopted statewide legislation to address various aspects of climate change and GHG emissions. Much of this legislation establishes a broad framework for the State's long-term GHG reduction and climate change adaptation program. The State's governors have also issued several EOs related to the State's evolving climate change policy. Of particular importance are AB 32 and SB 32, which outline the State's GHG reduction goals of achieving 1990 emissions levels by 2020 and a level 40 percent below 1990 emissions levels by 2030. In the absence of federal regulations, control of GHGs is generally regulated at the State level. It is typically approached by setting emission reduction targets for existing sources of GHGs, setting policies to promote renewable energy and increase energy efficiency, and developing statewide action plans.

ARB adopted the *2017 Climate Change Scoping Plan* in November 2017 to meet the GHG reduction requirement set forth in SB 32 (California Air Resources Board 2017). This updated Scoping Plan includes various elements, including doubling energy efficiency savings, increasing the low-carbon fuel standard from 10 to 18 percent, adding 4.2 million zero-emission vehicles on the road, implementing the Sustainable Freight Strategy, implementing a post-2020 Cap-and-Trade Program, creating walkable communities with expanded mass transit and other alternatives to traveling by car, and developing an Integrated Natural and Working Lands Action Plan to protect land-based carbon sinks.

Regional and Local

Bay Area Air Quality Management District

As discussed in Section 2.3, *Air Quality*, the BAAQMD has the primary responsibility for air quality management within Alameda County. The BAAQMD's (2017) CEQA Guidelines outline advisory operational thresholds for stationary source and land use development projects. In establishing its GHG significance thresholds, BAAQMD identified the emissions level that would not be expected to substantially conflict with AB 32 GHG reductions or to contribute substantially to a cumulative impact. For stationary-source projects, the mass emissions threshold is 10,000 $MTCO_2e$ per year. For land use development projects, the guidelines establish three potential analysis criteria for determining Project significance: compliance with a qualified GHG reduction strategy, a mass emissions threshold of 1,100 $MTCO_2e$ per year, and a GHG efficiency threshold of 4.6 $MTCO_2e$ per service population (projected jobs + projected residents). BAAQMD has no thresholds for transportation projects (Bay Area Air Quality Management District 2017a).

The BAAQMD CEQA Guidelines do not identify a GHG emissions threshold for construction-related emissions. However, the Guidelines recommend that GHG emissions from construction be quantified and disclosed, and that appropriate BMPs implemented to further reduce construction related GHG emissions.

The CEQA Guidelines also outline methods for quantifying GHG emissions as well as potential mitigation measures. As discussed in Section 2.3, *Air Quality*, the BAAQMD has also adopted air quality plans to protect the climate, including the *2017 Clean Air Plan: Spare the Air, Cool the Climate* (Bay Area Air Quality Management District 2017b). The *2017 Clean Air Plan* outlines feasible measures to reduce GHGs to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

City of Oakland Energy and Climate Action Plan

The Oakland ECAP was adopted by the City Council on July 20, 2020, to reduce citywide GHG emissions consistent with the City's 2020, 2030, and 2050 reduction goals. The purpose of the Oakland ECAP (City of Oakland 2012) is to identify and prioritize actions the City can take to reduce energy consumption and GHG emissions associated with Oakland. The ECAP outlines an equitable plan for Oakland to transition to a low-carbon economy and includes a number of actions that will facilitate the transition. The relevant actions in the ECAP to the Project include those in the transportation and land use sector.

City of Oakland Standard Conditions of Approval

As stated in Section 1.8.2, *Permits/Approvals*, the Oakland SCA includes conditions of approval for projects. The SCAs include a requirement to develop a GHG reduction plan for development projects or projects that involve a stationary source of GHG emissions, neither of which applies to the Project.

2.8.2 Discussion of Potential Impacts

a. The Project would have a less-than-significant impact with mitigation on the environment through direct and indirect generation of GHG emissions.

GHG emissions associated with the Project can be divided into those produced during construction and those produced during operations.

Construction GHG emissions would be generated from tailpipe exhaust (by onsite heavy-duty equipment, employee vehicles, haul trucks) and electricity usage (by an onsite office trailer). As discussed in Section 2.3.2 for Impact (b), the direct construction emissions from tailpipe exhaust were estimated using the CalEEMod, based on the construction phases, schedule, construction equipment, and off-haul debris developed by the Project's engineering consultant. The indirect emissions from electricity usage for the onsite office trailer were estimated according to electricity emission factors published by the Climate Registry (2014) and electricity intensity published the EPA (2014c) for commercial buildings which is similar to the office trailer.

Operational GHG emissions would include direct emissions from new vehicle trips and indirect emissions from electricity usage for proposed lighting. As discussed in Section in Section 2.3.2 for Impact (b), new vehicle trips were estimated using the CalEEMod. The default vehicle trip lengths and vehicle trip types from the CalEEMod for the "City Park" lane use were also used for the analysis. The indirect operational emissions from electricity usage for the proposed lighting were estimated according to electricity emission factors published by the Climate Registry (2014) and the proposed electricity usage provided by the Project's engineering consultant (Krcelic pers. comm.)

As noted in Section 2.3, *Air Quality*, for Impact (b), the construction emissions analysis was originally conducted in 2014, using the current version of CalEEMod at that time (version 2013.2.2). Although there have been subsequent updates to CalEEMod since 2014, the emissions presented in this analysis are considered to be a reasonable worst-case estimate for the reasons described in Section 2.3, *Air Quality*, Impact (b). **Table 2.8-1** summarizes the annual GHG emissions from associated with construction and

operation of the Project. Project construction is estimated to occur for approximately two years but within three calendar years. The construction and operation assumptions, CalEEMod inputs and outputs, and GHG emissions calculations are provided in **Appendix A-1**, Attachment 1.

Table 2.8-1. Summary of Construction and Operation GHG Emissions

Annual GHGs in (MT/year)	CO_2	CH_4	N_2O	Total CO_2e
Construction Emissions[a]				
Construction–Year 1[b]	179.27	0.02	0.00	179.65
Construction–Year 2	147.07	0.02	0.00	147.53
Construction–Year 3	21.62	0.00	0.00	21.66
Total Construction	352.45	0.04	0.00	353.36
Operational Emissions[c]				
Vehicle Trips	1,001	0.04	0.00	1,002
Electricity	14.72	0.00	0.00	14.81
Total Operation	1,016	0.04	0.00	1,017

Notes:

[a] From fuel usage by construction equipment, haul trucks, and worker commutes, and electricity usage by an office trailer.

[b] If the project is constructed as a single contract, project construction is anticipated to begin in October 2023 and finish in October 2025.

[c] From vehicle trips and electricity usage by lighting.

MT = metric tons

See **Appendix A-1**, Attachment 1 for assumptions, CalEEMod inputs and outputs, and emission calculation.

As indicated in **Table 2.8-1**, construction of the Project would generate 353 metric tons of GHG emissions. This is the equivalent of adding approximately 76 typical passenger cars (at 4.63 $MTCO_2e$/year per vehicle) to the road (Environmental Protection Agency 2020). The construction emissions are primarily the result of diesel-powered construction equipment exhaust and would be temporary and cease when construction activities are completed.

As discussed above, BAAQMD CEQA Guidelines (2017) do not identify a GHG emissions threshold for construction-related emissions (Bay Area Air Quality Management District 2017a). However, the Guidelines state that, with implementation of the BAAQMD recommended GHG reduction measures (**Mitigation Measure GHG-1**), the impact would be less than significant. Implementing **Mitigation Measure AQ-1**, which is required for impacts described in Section 2.3.3, would further reduce construction-related GHG emissions by limiting vehicle idling times and requiring regular maintenance of construction equipment. Therefore, the impact related to GHG emission impacts from Project construction is considered less than significant.

As discussed above, BAAQMD CEQA Guidelines (2017) do not identify a GHG emissions operational threshold for transportation projects (Bay Area Air Quality Management District 2017a). Under the worst-case scenario, operation of the Project would generate 1,017 MT of GHG emissions per year by new vehicle trips and lighting. As noted above, actual emissions would very likely be lower because of the later operational year and, thus, cleaner vehicle fleet. These emissions do not account for any reduction in vehicle miles traveled that would occur from bicycle trips displacing motor vehicle trips. It is currently possible for people to travel by bicycle from Oakland to Treasure Island. There also is a long-term plan to construct a bicycle path on the west span of the Bay Bridge, which would allow people to travel from

Oakland, past Treasure Island, to downtown San Francisco by bicycle or scooter. The Project would facilitate these connections and serve as the foundation for more connected bicycle infrastructure in the future. The emissions estimates in **Table 2.8-1** do not account for any current or future motor vehicle trip reductions that would occur as a result of the increase in bicycle and pedestrian connectivity. The 1,017 MT of emissions comprise primarily the increased vehicle trips to and from the parking lot. Consequently, the increase in GHG emissions is not considered to be significant because, overall, the Project may result in a beneficial effect by contributing to the development of infrastructure that would not require motorized vehicles between Oakland and Treasure Island (and ultimately San Francisco). With respect to the electricity-related emissions, the Project would use low-level lighting with LED lights along the Link. The lighting design could further reduce Project-related energy consumption and associated GHG emissions. Consequently, the impact related to GHG emission impacts from Project operation is considered to be less than significant.

b. The Project would result in a less-than-significant impact as a result of conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The Project's GHG emissions, alone or considering other cumulative global emissions, would be insufficient to cause substantial climate change. As discussed above, the Project would result in an increase in GHG emissions, primarily from path users' vehicle trips to and from the parking lot. The emissions estimate presented above does not include any trip reduction effects from buildout of connected bicycle infrastructure between Oakland and Treasure Island or downtown San Francisco. That connectivity would allow future path users to travel between Oakland and San Francisco in non-motorized (and emissions-free) vehicles. In the Scoping Plan, increased pedestrian and bicycle trips are specifically mentioned as strategies to reduce GHG emissions in the transportation sector, which the Project would directly facilitate. As such, the Project would not conflict with the Scoping Plan or the goals of SB 32.

By encouraging non-motorized travel, the Project would also not conflict with the goals of *Plan Bay Area*, MTC's Sustainable Communities Strategy, which has a designated per capita GHG reduction target determined by ARB (Metropolitan Transportation Commission 2017).

As such, the Project would not conflict with a GHG emissions-reduction plan. Therefore, the impact would be less than significant.

2.8.3 Mitigation Measures

Mitigation Measure GHG-1: Implement BAAQMD Measures to Reduce Greenhouse Gas Emissions during Construction

BATA/Caltrans will ensure their construction contractor implements the following BMPs, to the extent feasible, to reduce GHG emissions from construction equipment, consistent with measures recommended by the BAAQMD in their CEQA Guidelines (2017):

a. Use alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15 percent of the fleet.

b. Use local building materials of at least 10 percent (i.e., 10 percent of materials used will originate locally).

c. Recycle at least 50 percent of construction waste or demolition materials.

2.9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

2.9.1 Environmental Setting

Unless otherwise noted, hazardous materials information in this section is based on the *Phase I Initial Site Assessment, San Francisco-Oakland Bay Bridge Bicycle/Pedestrian Connection, Oakland, California* (Phase I ISA) (Fugro 2014). The purpose of the Phase I ISA was to identify potential and recognized environmental concerns (RECs) associated with the past and/or present use, generation, storage, or disposal of hazardous materials and/or wastes in the Project area and at nearby properties.

2.9.1.1 Existing Conditions

Recognized Environmental Concerns

According to the Phase I ISA (Fugro 2014), environmental database searches were conducted via State Water Resources Control Board's GeoTracker, Department of Toxic Substances Control's (DTSC's) EnviroStor, and Environmental Data Resources, Inc., to document hazardous materials handling, storage, or releases in the Project area's vicinity. Twenty-seven sites were identified during the environmental database search, and two of those sites were identified as RECs having the potential to affect the Project

area. They are 1) the former Oakland Army Base (OAB) on the west side of I-880, south of the proposed Link, and 2) the Heroic War Dead Army Reserve Center[11] on the west side of I-880, north of the proposed Link on the EBMUD site at 2400 Engineer Road.

The OAB site was identified in the Department of Defense sites database, DTSC's deed restriction listing (DEED), the CalEPA Hazardous Waste and Substances Sites Cortese List, and the State Water Resources Control Board's Leaking Underground Storage Tank database.

The EBMUD site was identified as part of DTSC's Historical CalSites, DEED, State Response Sites, and EnviroStor database. It was also part of the State Water Resources Control Board's Military Cleanup Sites listing.

Nearby Schools

The nearest school to the Project area is Ralph J. Bunche Continuation High School. It is approximately 0.2 mile southeast of the intersection of Peralta Street and 20th Street (the southeast corner of the proposed Class II bike lane locations).

Nearby Airports

The Project area is not within an airport land use plan area or within 2 miles of a public airport or public use airport. The closest airport is Oakland International Airport, approximately 8.1 miles southeast of the Project area. San Francisco International Airport is approximately 14 miles to the southwest (across the Bay), and Hayward Executive Airport is approximately 14 miles to the southeast. There are no private airstrips in the vicinity of the Project.

Wildfire Risk

According to the "Very High Fire Hazards Severity Zones in LRA – Alameda County" map from the Fire and Resource Assessment Program, California Department of Forestry and Fire Protection (CAL FIRE), the Project is not within a High Fire Risk Area (CAL FIRE 2020). The area surrounding the Project area is completely developed and not intermixed with wildlands.

Emergency Planning and Hazardous Materials Response

The City of Oakland is responsible for emergency planning/response and hazardous materials response.

Oakland Fire Department

The Oakland Fire Department (OFD) is responsible for hazardous materials response in the Project area. The OFD's responsibilities include on-scene management of incidents involving hazardous materials, such as accidental releases of toxic substances, industrial fires, and explosions involving petroleum products and other chemicals. The hazmat team includes specialists from the City's Office of Emergency Services (OES) to provide technical expertise in isolation, identification of chemicals, hazard assessment, containment, mitigation, decontamination, and disposal.

The OFD's Emergency Management Services Division (EMSD) is responsible for emergency planning and response in the Project area (City of Oakland 2014b). The EMSD's responsibility is to ensure Oakland is able to prevent, mitigate, prepare for, respond to, and recover from the effects of natural and human-

[11] The Army Reserve named the site the Heroic War Dead United States Army Reserve Center and used the site for vehicle maintenance, medical equipment storage, logistics, and training.

caused emergencies. The EMSD coordinates activities related to planning, preparation, and implementation of the City's Emergency Plan. The EMSD supports emergency response coordination of Oakland's police, fire, and other first responders via the City's Emergency Operations Center. The EMSD also coordinates with the Operational Area and other partner agencies to ensure integration of federal, State, and private resources into local response and recovery operations.

Oakland Office of Emergency Services

The Oakland OES assists local governments in their emergency preparedness, response, and recovery efforts; serves as the conduit for federal disaster assistance; provides emergency information to the public; and coordinates the statewide mutual aid system. The Oakland OES, a division of the OFD, serves as the Certified Unified Program Agency (CUPA) for the city, enforcing federal, State, and local legislation related to hazardous materials and operates the City's Emergency Operations Center.

2.9.1.2 Regulatory Setting

Regulations applicable to contaminated soils affecting stormwater runoff are included in Section 2.10, *Hydrology and Water Quality*.

Federal and State

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established an EPA-administered program to regulate the generation, transport, treatment, storage, and disposal of hazardous waste. The RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the "cradle to grave" system of regulating hazardous.

Cortese List

U.S. Code 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, Department of Health Services lists of contaminated drinking water wells, sites listed by the State Water Resources Control Board as having underground storage tank leaks or a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

U.S. Department of Transportation Hazardous Materials Regulations (49 CFR 100–185)

U.S. Department of Transportation Hazardous Materials Regulations cover all aspects of hazardous materials packaging, handling, and transportation. Parts 107 (Hazard Materials Program), 130 (Oil Spill Prevention and Response), 172 (Emergency Response), 177 (Highway Transportation) apply to the Project and/or surrounding uses.

California Health and Safety Code

DTSC, a department of CalEPA, is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Division 20, Chapter 6.5, of the California Health and Safety Code deals with hazardous waste control through regulations pertaining to the transport, treatment, recycling, disposal, enforcement,

and permitting of hazardous waste. Division 20, Chapter 6.10, contains regulations applicable to the cleanup of hazardous materials releases. Title 22, Division 4.5, contains the environmental health standards for the management of hazardous waste. This includes standards for identification of hazardous waste (Chapter 11) and standards applicable to transporters of hazardous waste (Chapter 13).

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) (California Health and Safety Code, Chapter 6.11, Sections 25404–25404.9)

This program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the environmental and emergency response programs and provides authority to the CUPA. The CUPA is designed to protect public health and the environment from accidental releases and improper handling, storage, transport, and disposal of hazardous materials and wastes. This is accomplished via inspections, emergency response, enforcement, and site mitigation oversight. The CUPA for the City of Oakland is no longer the OFD OES. The California Environmental Protection Agency (CalEPA) has designated the Alameda County Department of Environmental Health (ACDEH) as the CUPA for the City of Oakland (City of Oakland 2020).

California Code of Regulations, Title 8—Industrial Relations

Occupational safety standards exist in federal and State laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal OSHA) and the federal OSHA are the agencies responsible for ensuring worker safety in the workplace. Cal OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices. These standards would be applicable to both construction and operation of the Project. The standards included in the Cal OSHA's Title 8 include regulations pertaining to hazard control (including administrative and engineering controls), hazardous chemical labeling and training requirements, hazardous exposure prevention, hazardous material management, and hazardous waste operations.

California Labor Code (Division 5, Parts 1, and 7)

The California Labor Code is a collection of regulations that include the regulation of the workplace to ensure appropriate training on the use and handling of hazardous materials and the operation of equipment and machines that use, store, transport, or dispose of hazardous materials. Division 5, Part 1, Chapter 2.5, ensures employees that are in charge of the handling of hazardous materials are appropriately trained on, and informed of, the materials they are handling. Division 5, Part 7, ensures employees who work with volatile flammable liquids are outfitted in appropriate safety gear and clothing.

California Department of Forestry and Fire Protection Fire Prevention Program

The program encompasses multiple different facets of fire prevention techniques, including fire engineering, vegetation management, fire planning, education, and law enforcement. These techniques can include firebreak construction and other fire-fuel reduction activities to lessen the risk of wildfire in communities, brush clearance around communities and along roadways, and the creation of evacuation routes. The fire prevention program also includes defensible space inspections, emergency evacuation planning, fire prevention education, fire hazard severity mapping, implementation of the State Fire Plan, and fire-related law enforcement activities such as arson investigation.

Regional and Local

City of Oakland General Plan Safety Element

The Safety Element includes the following policies relevant to the Project, hazardous materials, and public safety (City of Oakland 2012):

- **Policy HM-1:** Minimize the potential risks to human and environmental health and safety associated with the past and present use, handling, storage and disposal of hazardous materials.
- **Policy HM-3:** Seek to prevent industrial and transportation accidents involving hazardous materials, and enhance the city's capacity to respond to such incidents.
- **Policy PS-1:** Maintain and enhance the city's capacity to prepare for, mitigate, respond to and recover from disasters and emergencies.
- **Policy FI-3**: Prioritize the reduction of the wildfire hazard, with an emphasis on prevention.

City of Oakland General Plan Open Space, Conservation, and Recreation Element

The OSCAR Element includes the following policy relevant to the Project, hazardous materials, and public safety (City of Oakland 1996):

- **Policy CO-1.2: Soil Contamination Hazards.** Minimize hazards associated with soil contamination through the appropriate storage and disposal of toxic substances, monitoring of dredging activities, and cleanup of contaminated sites. In this regard, require soil testing for development of any site where contamination is suspected due to prior activities on the site.

City of Oakland Local Hazard Mitigation Plan

The City of Oakland Local Hazard Mitigation Plan (City of Oakland 2016) identifies the hazards the community is facing, assesses the city's vulnerability to the hazards, and identifies specific actions to be taken to reduce the risk from these hazards.

City of Oakland Standard Conditions of Approval

As stated in Section 1.8.2, *Permits/Approvals*, the Oakland SCA includes conditions of approval for projects. The following SCA (summarized below) is required for all construction projects:

42. Hazardous Materials Related to Construction. Best management practices, including the following, will be implemented as part of construction to minimize potential negative effects to groundwater and soils:

a. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction;

b. Avoid overtopping construction equipment fuel gas tanks;

c. During routine maintenance of construction equipment, properly contain and remove grease and oils;

d. Properly dispose of discarded containers of fuels and other chemicals;

e. Implement lead-safe work practices and comply with all local, regional, State, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and

f. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

The following SCA (summarized below) is required for all construction projects involving (a) redevelopment or change of use of a historically industrial or commercial site, (b) a contaminated site as identified in City records, or (c) a site listed on the State Cortese List; site remediation activities are required based on an environmental site assessment.

43. Hazardous Building Materials and Site Contamination.

a. Hazardous Building Materials Assessment. The project applicant shall submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials, lead-based paint, polychlorinated biphenyls (PCBs), and any other building materials or stored materials classified as hazardous materials by State or federal law. If lead-based paint, asbestos-containing materials, PCBs, or any other building materials or stored materials classified as hazardous materials are present, the project applicant shall submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, State, or federal regulatory agency.

b. Environmental Site Assessment Required: The project applicant shall submit a Phase I Environmental Site Assessment (ESA) and Phase II ESA, if warranted by the Phase I ESA, for the project site for review and approval by the City. The report(s) shall be prepared by a qualified environmental assessment professional and include recommendations for remedial action, as appropriate, for hazardous materials. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, State, or federal regulatory agency.

c. **Health and Safety Plan Required:** The project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The project applicant shall implement the approved Plan.

d. **Best Management Practices Required for Contaminated Sites:** The project applicant shall ensure that best management practices (BMPs) are implemented by the contractor during construction to minimize potential soil and groundwater hazards. These shall include the following:

(i) Soil generated by construction activities shall be stockpiled on-site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, State, and federal requirements.

(ii) Groundwater pumped from the subsurface shall be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building.

2.9.2 Discussion of Potential Impacts

a. The Project would have a less-than-significant impact on the environment through the routine transport, use, or disposal of hazardous materials.

Implementation of the Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Construction of the Project is expected to occur over 24 months (October 2023 to October 2025). During construction, fuel and small amounts of solvents, paints, oils, grease and caulking would be transported, used, and disposed of in compliance with applicable regulations, such as the RCRA, Department of Transportation Hazardous Materials Regulations, and the ACDEH CUPA regulations. This would minimize hazards to the public and environment.

Operation and maintenance (O&M) activities for the Project would include trash removal (weekly), sweeping (monthly), and inspections (bi-annually) for restriping, resurfacing, and/or repairs. Materials for O&M are expected to be used in small, localized amounts, and any spills would be cleaned up as they occur. No hazardous materials would be used or stored onsite during normal Project operations. Therefore, potential impacts would be less than significant.

b. The Project would result in a less-than-significant impact with mitigation from reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Implementation of the Project is not expected to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. As mentioned under (a), construction-related hazardous materials that could be used and transported include fuel, solvents, paints, oils, grease, and caulking. It is possible that any of these substances could be released during construction activities. However, compliance with federal, State, and local regulations, in combination with construction BMPs implemented from a SWPPP (as required by the Construction General Permit), would ensure that all hazardous materials would be used, stored, and disposed of properly, which would minimize potential impacts related to a hazardous materials release during the construction phase of the Project. No hazardous materials are expected to be used or stored onsite during the operational phase of the Project. However, construction of the Link on the west side of I-880 could disrupt hazardous materials in the soils at the two sites identified as RECs in the Phase I ISA. As mentioned in Section 2.9.1.1, These sites are 1) the former OAB on the west side of I-880, south of the proposed Link, and 2) the Heroic War Dead Army Reserve Center on the west side of I-880, north of the proposed Link on the EBMUD site at 2400 Engineer Road.

At the former OAB, chemicals of concern associated with historic onsite land uses include heavy metals, VOCs, PCBs, polyaromatic hydrocarbons (PAHs), and organochlorine pesticides. According to the Phase I ISA, the Project would encroach upon three parcels (Parcels 4, 9, 11) of the former OAB. New foundations with columns supporting the elevated path and the western touchdown would be located in these areas. According to the Phase I ISA, both Parcels 4 and 9 are considered areas where the release, disposal, and/or migration of hazardous substances has occurred; required actions have not yet been implemented. Parcel 4 contained elevated concentrations of arsenic in groundwater and benzidine in soil.

Historical land uses in Parcel 9 included an oil reclamation plant and a gasoline station. Chlorinated solvents, including trichlorethene, are present in the groundwater in Parcel 11, along with PAHs and petroleum product–affected soil.

At the EBMUD site, contaminants, such as PAHs and lead, could be found in shallow soil. The EBMUD site was also noted as a REC because of its proximity to the Project site. Historic land uses onsite have included vehicle maintenance, medical equipment storage, logistics, and training. In addition, portions of the Project alignment cross over the UPRR and BNSF rights-of-way, which are typically viewed as potential areas of soil contamination because of the presence of petroleum or chemical conveyance pipelines within the right-of-way easement, potential spills, and weed abatement operations. Therefore, potential contaminants could be present within surficial soils.

As described in Section 1.6, *Project Construction*, soils would be tested for contamination during excavation. Clean soils would be used or sold for reuse at nearby construction sites. Contaminated soils would be disposed of at an appropriate facility.

Hazardous materials cleanup operations have been conducted in several portions of the former OAB, pursuant to the approval of the OAB Redevelopment Plan, required mitigation, and associated RAP/RMP. Required mitigation from the 2002 EIR prepared for the OAB Project (LSA 2012) includes:

> Mitigation Measure 4.7-3: Implement RAP/RMP as approved by the DTSC, and if future proposals include uses not identified in the Reuse Plan and incorporated into the RAP/RMP, of if future amendments to the remediation requirements are proposed, obtain DTSC and City approval.

The redevelopment plan and RAP/RMP did not specifically include the proposed Link; therefore, DTSC and City approval would be required, as identified in Section 1.8.2, *Permits/Approvals*.

Because of its historical use in gasoline, lead may exist in soils near heavily traveled roads. This specific type of lead is referred to as aerially deposited lead (ADL). The presence of ADL in soils may pose a concern for the environment as well as onsite workers during construction activities and require disposal considerations if removed offsite. The historical use of leaded gasoline has resulted in ADL being found along roadways throughout California; the potential also exists for ADL to be found along unpaved areas within the project limits. To address the potential for ADL being present within the project footprint, soil sampling, as part of the aforementioned Phase II ESA, shall be conducted to account for potential ADL impacts and performed to determine the extent of possible contamination.

If a small amount of soil is needed to backfill bridge abutments, the project would reuse soil generated by foundation construction, provided that the soil meets engineering requirements. The properties of the soil to be used as backfill must meet Caltrans specifications and project requirements. Furthermore, the soil cannot be contaminated beyond DTSC/San Francisco Bay Regional Water Quality Control Board reuse criteria.

Implementation of **Mitigation Measure HAZ-1** (Prepare Phase II ESA), as recommended in the Phase I ESA, and **Mitigation Measure HAZ-2** (If Contaminated Soils Exist Onsite, Implement Engineering Controls and Best Management Practices to Minimize Exposure) would reduce impacts to less than significant.

c. The Project would result in a less-than-significant impact as a result of hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

As described under Existing Conditions, Ralph J. Bunche Continuation High School is within 0.25 mile of the east limits of the project area. The school is approximately 0.2 mile southeast of the Class II bike lanes proposed on 20th Street near Peralta Street and 0.25 mile southeast of the Class I portion of the Link proposed on West Grand Avenue near Mandela Parkway. Further, the school is at least a mile away from the western portion of the Class I portion of the Link where the two sites noted as RECs in the Phase I ISA are located.

As discussed under (a**)**, Project construction would involve hazardous materials typical of a construction project; it is expected that the Project would be constructed in compliance with federal, State, and local regulations described under Section 2.9.1.2. In addition, any potential construction-related hazardous releases or emissions would be from commonly used materials such as fossil fuels, solvents, and paints and would not include substances listed in 40 CFR 355 (Extremely Hazardous Substances and Their Threshold Planning Quantities). Any such spills would be localized, immediately contained and cleaned, and have a less-than-significant effect on land uses 0.25 mile away, including Ralph J. Bunche Continuation High School. As discussed under (b), project construction could result in excavation of soils and release of hazardous materials from the two sites identified in the Phase I ISA as being potential RECs. Although this is the case, the Ralph J. Bunche campus is approximately 1.5 miles southeast of the EBMUD site and approximately the 1 mile east of the OAB site. As such, it is very unlikely that potentially contaminated material from these sites would affect land uses farther than 0.25 mile away. Therefore, construction of the Project would not affect land uses 0.2 mile away, including Ralph J. Bunche Continuation High School, and impacts would be less than significant.

As mentioned under threshold "b" above, to address the potential for ADL in unpaved areas within the project limits, sampling for ADL (as part of a Phase II ESA) shall be performed to determine the extent of possible contamination within the right of way. The handling and disposal of excavated material shall be based on the results of the Phase II ESA; therefore, potential impacts associated with ADL would be less than significant.

Implementation of **Mitigation Measures HAZ-1** and **HAZ-2** would decrease potential impacts related to emissions or the handling of hazardous or acutely hazardous materials, substances, or waste near an existing school to less than significant.

d. The Project would result in a less-than-significant impact with mitigation as a result of being located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.

As described under Existing Conditions, the western portion of the Project area (west of I-880) would be adjacent to two sites, former the OAB and EBMUD sites, noted as potential RECs in the Phase I ISA. The Link alignment would extend through three parcels of the former OAB. As discussed under (b), excavation activities in this area could release hazardous materials into the environment. With implementation of **Mitigation Measures HAZ-1** and **HAZ-2**, this impact would be less than significant.

Once constructed, operation of the Project is not expected to create a significant hazard to the public or the environment by being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As mentioned above, the Project is a bicycle path; as such, it would not involve storing or handling hazardous materials during normal Project operations. Therefore, the Project is not included in lists of hazardous materials sites pursuant to Government Code Section 65962.5.

e. The Project would result in no impact as a result of increased safety hazard due to proximity to a public airport or public use airport or the creation of a safety hazard or excessive noise for people residing or working in the project area due to proximity to a public airport or public use airport.

Implementation of the Project would not result in a safety hazard or excessive noise for people residing or working in the Project area due to proximity to a public airport or public use airport because the Project area is not within an airport land use plan area or within 2 miles of a public airport or public use airport.

f. The Project would result in a less-than-significant impact as a result of impairment of or interference with an adopted emergency response plan or emergency evacuation plan?

Implementation of the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Construction haul routes would be limited to key collector roads, including West Grand Avenue, Maritime Street, Frontage Parkway, and Wood Street. As discussed in Section 2.17, *Transportation and Traffic*, the project would incorporate the City's Standard Condition of Approval 74, Construction Activities in the Public Right-of-Way. Incorporation of this Standard Condition of Approval would reduce potential impairment to emergency access. described in Section 1.6.3, *Vehicle Access*, construction vehicles and equipment would not park or remain stationary within key roadways in such a manner that would block emergency vehicle access or hinder emergency response. Moreover, the Project would not include any features that would physically impair or otherwise interfere with emergency response or evacuation in the Project vicinity. The proposed intersection modifications at Campbell Street/West Grand Avenue alley (eastbound) would include the installation of bollards to allow emergency vehicles but prevent regular vehicular traffic from crossing the new Class I portion of the Link. Where Willow Street currently intersects with West Grand Avenue, a cul-de-sac would be created to prevent vehicular traffic from crossing the new Class I portion of the Link on the south side of West Grand Avenue. However, Willow Street is a minor roadway; emergency vehicles passing through the area would use Wood Street, and 20th Street for access through the area.

The impact on emergency response would be less than significant.

g. The Project would result in no impact as a result of exposing people or structures to a significant risk of loss, injury, or death involving wildland fires.

Implementation of the Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. According to the "Very High Fire Hazards Severity Zones in LRA – Alameda County" figure (CAL FIRE 2020), the Project is not within a High Fire Risk Area. Furthermore, the area immediately surrounding the Project area is completely developed and not intermixed with wildlands. No impact would occur.

2.9.3 Mitigation Measures

Mitigation Measure HAZ-1: Prepare a Phase II Environmental Site Assessment.

Prior to construction, BATA/Caltrans will ensure a Phase II Environmental Site Assessment (ESA), as recommended in the Phase I ISA (Fugro 2014), is prepared for the portion of the Project area where planned foundations and surface soil disturbance will occur adjacent to the two hazardous materials sites, 1) the former OAB on the west side of I-880, south of the proposed Link, and 2) the Heroic War Dead Army Reserve Center on the west side of I-880, north of the proposed Link on the EBMUD site at 2400 Engineer Road. In addition, as part of the Phase II ESA, BATA/Caltrans will incorporate ADL sampling for the unpaved areas requiring excavation within 25 to 30 feet of the edge of the roadway pavement. The handling and disposal of excavated material from these areas shall be based on the results of the Phase II ESA sampling.

The Phase II ESA will include the following:

- A scope of work consisting of pre-field activities, such as preparation of a Health and Safety Plan, marking boring locations, and obtaining utility clearance, and field activities, such as identifying appropriate sampling procedures, health and safety measures, chemical testing methods, and quality assurance/quality control procedures in accordance with the ASTM Standard.
- A Sampling and Analysis Plan in accordance with the scope of work.
- Collection of soil samples per the Sampling and Analysis Plan.
- Laboratory analyses conducted by a State-certified laboratory.
- Disposal process including transport by a State-certified hazardous material hauler to a State-certified disposal or recycling facility licensed to accept and treat hazardous waste.

Mitigation Measure HAZ-2: If Contaminated Soils Exist Onsite or Demolition is Required, Implement Engineering Controls and Best Management Practices to Minimize Exposure to during Construction.

In the event that contaminated soils are found to exist onsite (per findings in the Phase II ESA report), BATA/Caltrans will ensure the construction contractor employs engineering controls and BMPs to minimize human exposure to potential contaminants. Engineering controls and construction BMPs will include, but not be limited to, the following:

- Contractor employees working onsite will be certified in OSHA's 40-hour Hazardous Waste Operations and Emergency Response training.
- Contractor will monitor area around construction site for fugitive vapor emissions with appropriate field screening instrumentation.
- Contractor will water/mist soil as it is being excavated and loaded onto transportation trucks.
- Contractor will place any stockpiled soil in areas shielded from prevailing winds.
- Contractor will cover the bottom of excavated areas with sheeting when work is not being performed.

The project is not expected to require the demolition of any buildings or structures. In the unlikely event that such action is needed, removal work and any disposal action will be conducted in accordance with DTSC's 2006 Interim Guidance Evaluation of School Sites with Potential Contamination from Lead-Based Paint, Termiticides, and Electrical Transformers and other applicable federal and State legislation or regulation.

2.10 Hydrology and Water Quality

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation on- or offsite;	☐	☐	☒	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
(iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

2.10.1 Environmental Setting

2.10.1.1 Existing Conditions

Information in this section is based on the Stormwater Data Report (WRECO 2014a), Water Quality Assessment Report (WRECO 2014b), Water Quality Technical Memo (ICF 2014), and the Water Quality Technical Errata (ICF 2020) prepared for the Project. The Water Quality Assessment Report has been included in **Appendix I-1**.

Surface Water Hydrology

The Bay Bridge marks the border of the Central San Francisco Bay (Central Bay) of the Central Basin, and the Lower San Francisco Bay (Lower Bay) of the South Bay Basin watersheds. Therefore, the Project area is located within both watersheds. Runoff flows into storm drains that ultimately discharge into the San Francisco Bay. The western connection of the Link to the Bay Bridge Trail (refer to Segment 5 in **Figure 1-3**) is the portion of the Link that is the closest to the San Francisco Bay (approximately 0.08 mile or 420 feet). The potential stormwater treatment area beneath I-880 on the south side of West Grand Avenue supports an earthen drainage ditch. As described in Section 2.4, *Biological Resources*, the ditch is considered a water of the State and a potential water of the United States because of its vegetation, location near the Bay, and direction of flow towards the Bay (**Figure 1-9**).

Groundwater Hydrology

The Project area is located in the East Bay Plain subbasin of the Santa Clara Valley Groundwater Basin (Basin No. 2-9.04) which is approximately 77,800 acres. The East Bay Plain Basin extends beneath the San Francisco Bay to the west. The regional direction of groundwater flow is generally southwestward toward San Francisco Bay. Shallow groundwater beneath the Project area is hydraulically connected to the Bay; its flow direction is highly variable due to its perched nature within Bay Muds and tidal fluctuation. Shallow groundwater in the Project area typically varies from 2 to 6 feet below ground surface (bgs) (**Appendix H**, *Preliminary Foundation Report*).

Flooding

The Project area is not located within a 100-year flood hazard area designated by the Federal Emergency Management Agency (FEMA) (FEMA 2018). It is located within the unshaded FEMA-designated flood Zone X/0.2 percent flood hazard, which indicates an area of minimal flood hazard. These areas are outside the Special Flood Hazard Area (SFHA) but with some areas lower than the elevation of the 0.2-percent-annual-chance (or 500-year) flood. The western end of the Project area is located near (but not within) Zone VE, the 100-year floodplain for coastal areas, along the San Francisco Bay shoreline.

Historically, flooding was an issue in West Oakland after the tidal marshlands were developed. However, construction in 1954 of an extensive storm drain network and pump station improved stormwater drainage from West Oakland to the Emeryville Crescent. The most common flood hazards in Oakland now are all associated with excess stormwater runoff from heavy rain, including the overtopping of stream banks, the failure of storm drains, and the erosion of creek banks from high-velocity water flows.

Projected sea level rise (SLR) as an effect of climate change will increase the areas of coastal flooding along the San Francisco Bay beyond current levels. **Table 2.10-1** provides a summary of the SLR projections provided by the latest State guidance document (OPC 2018). Coastal and low-lying areas within the Project area may be vulnerable to future SLR.

Table 2.10-1. State Sea Level Rise Projections for Areas within the Project Vicinity

	OPC SLR guidance document (San Francisco, Medium-High risk Aversion Scenario; 0.5% probability)
Time Period	**Feet**
2000–2030	0.8
2000–2050 (mid-century)	1.9
2000–2100 (end of century)	5.7 to 6.9

Sources: OPC 2018.

Water Quality

Surface Water

Water quality in a typical surface water body is influenced by processes and activities that take place within the watershed. Because of the urbanized nature of the Project vicinity, surface water quality in the Project area is directly affected by stormwater runoff from adjacent streets, highways, the Port of Oakland, and properties using fertilizers, pesticides, metals, hydrocarbons, and other pollutants. Typically, pollutant levels in the creeks are highest following the first storm flows of the season when constituents accumulated during the dry season are “flushed” into the creeks.

San Francisco Bay Regional Water Quality Control Board has region-wide and water body-specific beneficial uses and has set numeric and narrative water quality objectives for several substances and parameters in numerous surface waters in its region. **Table 2.10-2** presents the beneficial uses the Basin Plan lists for Central and Lower San Francisco Bay.

Table 2.10-2. Beneficial Uses of the Central and Lower San Francisco Bay

Beneficial Uses	Central Bay	Lower Bay
Industrial service supply (IND)	X	X
Industrial process supply (PROC)	X	
Commercial and sport fishing (COMM)	X	X
Shellfish harvesting (SHELL)	X	X
Estuarine habitat (EST)	X	X
Fish migration (MIGR)	X	X
Preservation of rare & endangered species (RARE)	X	X
Fish spawning (SPWN)	X	X
Wildlife habitat (WILD)	X	X
Water contact recreation (REC-1)	X	X
Noncontact recreation (REC-2)	X	X
Navigation (NAV)	X	X

Source: San Francisco Bay Regional Water Quality Control Board 2019.
X = Existing Beneficial Use
Note: There were no changes of beneficial uses between the 2013 and 2019 version of the Basin Plan.

Water quality objectives have been designated in the San Francisco Bay Basin Plan for the San Francisco Bay watershed. These objectives include criteria for parameters such as pH, dissolved oxygen, electrical conductivity, turbidity, salinity, temperature, taste and odor, oil and grease, bacteria, toxicity, unionized ammonia, and chemical constituents.

The State Water Resources Control Board (State Water Board) boundary for 303(d) impairments defines the Project area as within Central San Francisco Bay. **Table 2.10-3** shows 303(d) listed impairments for the Central San Francisco Bay based on the 2010 California Integrated Report (State Water Board 2011).

Groundwater

The San Francisco Regional Water Quality Control Board identified 13 distinct locations of major groundwater pollution within the East Bay Plain Groundwater Basin. These were identified as having plumes of contamination greater than 1,000 feet in length. Most contamination is due to release of fuels and solvents. Most contamination appears to be restricted to the upper 50 feet of the subsurface (San Francisco Bay Regional Water Quality Control Board 1999). The Project area is adjacent to industrial activities associated with the Port of Oakland, the Oakland Army Base, and Caltrans Maintenance Facility. There is ongoing hazardous materials remediation onshore in this area.

Table 2.10-3. Section 303(d) Listed Impairments for the Central San Francisco Bay

Pollutant	Source	Expected TMDL Completion Date
Chlordane	Nonpoint Source	2013
DDT (Dichlorodiphenyltrichloroethane)	Nonpoint Source	2013
Dieldrin	Nonpoint Source	2013
Dioxin compounds (including 2,3,7,8-TCDD)	Atmospheric Deposition	2019
Furan Compounds	Atmospheric Deposition	2019
Invasive Species	Ballast Water	2019
Mercury	Atmospheric Deposition Industrial Point Sources Municipal Point Sources Natural Sources Nonpoint Source Resource Extraction	2008
PCBs (polychlorinated biphenyls)	Unknown Nonpoint Source	2008
PCBs (dioxin-like)	Unknown Nonpoint Source	2008
Selenium	Exotic Species Industrial Point Sources Natural Sources	2010
Trash	Illegal dumping Urban Runoff/Storm Sewers	2021

Source: State Water Board 2011.

2.10.1.2 Regulatory Setting

Federal and State

Clean Water Act

Clean Water Act (CWA) Sections 303, 305, and 402 are applicable to the Project. CWA Sections 401 and 404 are not expected to apply to the Project, but they are included in this section to provide reasoning for inapplicability and a description as to what may trigger compliance under specific conditions.

Sections 303 and 305 – Impaired Waters and TMDLs

California adopts water quality standards to protect beneficial uses of State waters as required by Section 303(d) of the CWA and the Porter-Cologne Act. Section 303(d) of the CWA established the total maximum daily load (TMDL) process to guide the application of State water quality standards (see the discussion of State water quality standards below). In order to identify candidate water bodies for TMDL analysis, a list of water quality–limited segments was generated by the State Water Board. These stream or river segments are impaired by the presence of pollutants such as sediment and are more sensitive to disturbance because of this impairment. CWA section 305(b) requires states to develop a report assessing statewide surface water quality. Both CWA requirements are being addressed through the development of a 303(d)/305(b) Integrated Report, which addresses both an update to the 303(d) list and a 305(b) assessment of statewide water quality. The 2014/2016 California Integrated Report was approved by the U.S. EPA on April 6, 2018.

Table 2.10-3 shows 303(d) listed impairments for the Central San Francisco Bay based on the 2010 California Integrated Report. All of the 303(d) listed impaired waters with potential to be impacted by the Project will be evaluated as part of the Project, and minimization measures will be implemented to protect waters from further impairment.

Section 401—Water Quality Certification

Section 401 of the CWA requires that an applicant pursuing a federal permit to conduct an activity that may result in a discharge of a pollutant obtain a Water Quality Certification (or waiver). A Water Quality Certification requires the evaluation of water quality considerations associated with dredging or placement of fill materials into waters of the United States.

The Project is not expected to require a Water Quality Certification. The Project includes a potential stormwater treatment area located under I-880 where there is earthen drainage ditch. If it is determined that wetland fill or discharge would occur, a 401 Certification would be obtained.

Section 402–NPDES Program

Section 402(p) requires permits for discharges of storm water from industrial, construction and municipalities. The State Water Board and Regional Water Boards administer this permitting program in California. Below are NPDES permits relevant to the Project:

- The Municipal Storm Water Permitting Program regulates storm water discharges from 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 storm water." The Project will comply with the requirements of the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (San Francisco Bay MRP) (Order No. R2-2015-0049). More information on the San Francisco Bay MRP is in the *Regional and Local* Section.
- The Caltrans MS4 Permit was amended in November 2017 (Order 2012-0011-DWQ [NPDES CAS000003, as amended by Order 2014-0006-EXEC], Order 2014-0077-DWQ, Order 2015-0036-EXEC, and ORDER WQ 2017-0026-EXEC), NPDES Statewide Stormwater Permit, Waste Discharge Requirements (WDRs) for Caltrans (Caltrans MS4 Permit). It regulates all discharges from Caltrans MS4s and maintenance facilities. This Order does not regulate discharges from Caltrans' construction activities, including dewatering effluent discharges from construction projects. Instead, Caltrans is required to obtain coverage under a NPDES Construction General Permit (described below) and develop a SWPPP. Caltrans' SWMP describes the procedures and practices used to reduce or eliminate the discharge of pollutants to storm drainage systems and receiving waters. The last SWMP was adopted in July 2016. This Project Planning and Design Guide (PPDG), last updated in April 2019, was prepared in support of the SWMP. It provides guidance on the process and procedures for evaluating Project scope and site conditions to determine the need for and feasibility of incorporating BMPs into projects, as well as for incorporating those stormwater quality controls into projects during the planning and design phases. The Caltrans' Statewide NPDES Storm Water Permit applies because portions of the Project lie within Caltrans' right-of-way. Based on the Caltrans Project Planning and Design Guide (2019), the Project is required to implement treatment BMPs because it would result in a net increase of more than 1 acre of new impervious surface. Treatment BMPs would be considered to avoid and minimize impacts to water resources to the maximum extent practicable.

- The NPDES Construction General Permit (Order No. 2009-009-DWQ, as amended by 2012-0006-DWG), adopted on November 16, 2010, became effective on February 14, 2011. The permit regulates storm water 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. The Project would disturb approximately 9 acres of land (TYLIN 2014b), and therefore is subject to the Construction General Permit requirements.

Section 404—Dredge/Fill Permitting

Section 404 of the CWA regulates placement of fill materials into the waters of the United States. Section 404 permits are administered by the USACE.

The Project may be required to obtain a Section 404 Permit if permanent Project features or construction occurs within federal jurisdictional waters. The Project includes a potential stormwater treatment area located under I-880 where there is earthen drainage ditch has been identified. This drainage ditch has been identified as a water of the State and a potentially jurisdictional water of the United States.

Porter-Cologne Water Quality Control Act

The Porter Cologne Water Quality Control Act (Porter-Cologne Act), established in 1969 under Division 7 (Water Quality) of the California Water Code (CWC), complements the CWA. It established the State Water Board and divided the State into nine regions, each overseen by a Regional Water Board. The State Water Board is the primary State agency responsible for protecting the quality of the State's surface and groundwater supplies, although much of its daily implementation authority is delegated to the Regional Water Boards, which are responsible for implementing CWA Sections 401, 402, and 303(d). In general, the State Water Board manages both water rights and statewide regulation of water quality, while the Regional Water Boards focus exclusively on water quality within their regions.

The Porter Cologne Act provides for the development and periodic review of Water Quality Control Plans (basin plans) for each region. Basin plans identify beneficial uses of water bodies and their tributaries and water quality objectives to protect those uses. Basin plans are implemented primarily by using the NPDES permitting system to regulate waste discharges so that water quality objectives are met. Basin plans are updated every 3 years and provide the technical basis for determining WDRs and taking enforcement actions.

Protection of beneficial uses and compliance with water quality objectives apply to all waters that could potentially be affected by the Project, which includes an earthen drainage ditch located under I-880, offsite waters receiving stormwater runoff via storm drains or sheet flow originating from the Project area, and the San Francisco Bay. Beneficial uses for the San Francisco Bay are listed above in the *Environmental Setting* section.

State Executive Order S-13-08 on Sea Level Rise

Executive Order S-13-08, issued on November 14, 2008, directed State agencies to plan for SLR and coastal impacts. That executive order also requested the National Research Council (NRC) to issue a report on SLR to advise California on planning efforts. The final report from the NRC, *Sea-Level Rise for the Coasts of California, Oregon, and Washington*, was released in June 2012.

The Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), led by the Ocean Protection Council (OPC), developed the *State of California Sea-Level Rise Guidance Document* for State agencies to incorporate SLR into planning and decision making for projects in California (http://www.opc.ca.gov/webmaster/ftp/pdf/docs/2013_SLR_Guidance_Update_FINAL1.pdf). The document was developed in response to Executive Order S-13-08. The *State of California Sea-Level Rise Guidance Document* was last updated in March 2013 with the scientific findings of the 2012 NRC report.

In the CO-CAT SLR guidance document (CO-CAT 2013), three SLR projections based on time periods (2030, 2050, and 2100) were selected for south of Cape Mendocino using year 2000 as the baseline. SLR projections based on the *State of California Sea-Level Rise Guidance Document* are described later in this section. The Gateway Park Working Group will consider the CO-CAT SLR guidance document for Project planning and decision making.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act of 2014 (SGMA) is a comprehensive three-bill package that Governor Jerry Brown signed into California State law in September 2014. The SGMA provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for State intervention only if necessary to protect the resource. The plan is intended to ensure a reliable groundwater water supply for California for years to come. SGMA requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge.

The Project area is in the East Bay Plain subbasin of the larger Santa Clara Valley groundwater basin, which is designated as a medium-priority basin. SGMA requires local agencies to form groundwater sustainability agencies (GSAs) by June 30, 2017, and prepare groundwater sustainability plans (GSPs) by January 31, 2022, for medium-priority basins to manage the sustainability of groundwater basins. GSAs for all high- and medium-priority basins, as identified by the Department of Water Resources, must adopt a GSP or submit an alternative to a GSP. Groundwater in the basin is managed by the East Bay Municipal Utility District and the City of Hayward as the GSA for the East Bay Plain subbasin. The GSP for the East Bay Plain subbasin manages groundwater in the basin and extends across portions of Contra Costa County and Alameda County. Development of the East Bay Plain subbasin GSP is ongoing and estimated to be completed in 2022.

Regional and Local

Waste Discharge Requirements for Dewatering and Other Low-Threat Discharges to Surface Waters

The Porter-Cologne Act also includes the WDRs Program, which regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Every Regional Water Board implements the program autonomously. The San Francisco Bay Regional Water Quality Control Board has established WDRs for some dewatering activities. While temporary construction-related dewatering of small volumes of water are typically covered under the General Construction Permit, the San Francisco Bay Regional Water Quality Control Board has regulations specific to dewatering activities that typically involve reporting and monitoring requirements. At a minimum, the San Francisco Bay Regional Water Quality Control Board will need to be notified of the nature and type of dewatering discharge. The following two permits are required for specific types of dewatering:

- NPDES Permit No. CAG912002, General Waste Discharge Requirements for Discharge or Reclamation of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by Volatile Organic Compounds (VOCs), Fuel Leaks, Fuel Additives, and Other Related Wastes (VOC and Fuel General Permit) (Order No. R2-2017-0048), covers dewatering discharges of groundwater contaminant with fuel or solvent.
- Groundwater General Permit (Order No. 2018-0026) covers dewatering discharges of groundwater greater than 10,000 gallons per day and requiring treatment for pollutants other than fuels and VOCs.

Should groundwater be encountered and discharged into surface waters during construction activities, the Project would be in compliance with the appropriate requirements.

San Francisco Bay Municipal Regional Stormwater Permit

Stormwater discharges in the City of Oakland are permitted under the San Francisco Bay MRP. The San Francisco Bay MRP is a regional collaborative effort to consolidate six Phase I municipal NPDES permits into one consistent permit. The MRP is the governing document which identifies stormwater discharge limits and BMPs, which refer to a wide variety of pollution prevention systems or efforts. In compliance with the MRP, the City of Oakland, along with other 17 other Alameda County cities, forms the Alameda Countywide Clean Water Program (ACCWP).

Provision C.3 of the SF Bay MS4 Permit is for New Development and Redevelopment projects authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of LID techniques including infiltration and biotreatment. The provision also states that "all projects regardless of size should consider incorporating appropriate source control and site design measures that minimize stormwater pollutant discharges to the maximum extent practicable [MEP]…" Regardless of a project's need to comply with Provision C.3, municipalities apply the MEP standard, including standard stormwater conditions of approval for projects that receive development permits. More information on the Project's applicability to these requirements is provided in the discussion of the Alameda Countywide Clean Water Program (ACCWP) below.

Alameda Countywide Clean Water Program

The Alameda Countywide Clean Water Program (ACCWP) maintains compliance with the NPDES permit requirements by requiring: local agencies to address storm water quality during development review, the utilization of water quality BMPs during Project construction, and the reduction of long-term water quality impacts using site design and source control measures.

The ACCWP has developed a C.3 Stormwater Technical Guidance (Version 6.0, October 2017) to assist developers and engineers in complying with treatment and hydromodification requirements. The MRP provides provisions and requirements for permanent stormwater treatment. Stormwater treatment measures are required to reduce the sediment and pollutant load resulting from the loss of pervious area and creation of impervious area. The permit sets impervious area thresholds for requiring projects to implement permanent stormwater treatment measures. The thresholds applicable for the Project include requiring permanent stormwater treatment measures when 10,000 sf or more of impervious roadway area is created or replaced. If a project creates and/or replaces impervious area equal to more than 50 percent of the existing impervious area not previously requiring treatment, then the project must provide treatment for all existing and newly created impervious area.

In addition to permanent stormwater treatment requirements, the MRP provides provisions and requirements for hydromodification mitigation. Hydromodification is defined as the alteration of the hydrologic characteristics of coastal and non-coastal waters, which in turn could cause degradation of water resources. In the case of a stream channel, this is the process whereby a stream bank is eroded by flowing water. This typically results in the suspension of sediment in the water course. Under the permit, projects subject to hydromodification management (HM) requirements are required to evaluate hydromodification impacts to downstream water bodies and implement mitigation measures where appropriate.

Under the ACCWP, a Project requires hydromodification management (HM) if the Project creates and/or replaces one acre or more of impervious surface; increases impervious surface over pre-Project conditions; and is located in a susceptible area as shown on the HM Applicability Map. More specifically, all projects are required to comply with the HM requirements if it meets the following applicability criteria:

- The Project creates and/or replaces one acre or more of impervious surface,
- The Project will increase impervious surface over pre-Project conditions, AND
- The Project is located in a susceptible area, as shown on the default susceptibility map.

ACCWP guidance shows a schematic view of a portion of the hydromodification susceptibility map. The full map may be downloaded from the Clean Water Program website[12] in an interactive format that enables zooming to a closer view of the Project vicinity with local streets. The requirements do not apply to projects that drain directly to the bay or tidal channels nor to projects that drain into channel segments that have been hardened on three sides and/or are contained in culverts continuously downstream to their outfall in a tidal area.

The Project will comply with requirements and any relevant stormwater guidance documents from ACCWP in Project planning and design. Because the Project involves the addition and/or replacement of greater than 10,000 sf (approximately 3 acres or 130,680 sf), it is subject to C.3 requirements. However, because the Project is located within an area that is tidally influenced, it is not subject to ACCWP hydromodification requirements.

City of Oakland General Plan Open Space, Conservation and Recreation Element

The OSCAR Element (City of Oakland 1996) includes the following policies relevant to the Project and protecting water quality.

- **Policy CO-5.3: Control Urban Runoff.** Employ a broad range of strategies, compatible with the Alameda Countywide Clean Water Program, to: a) reduce water pollution associated with stormwater runoff; and b) reduce water pollution associated with hazardous spills, runoff from hazardous material areas, and improper disposal of wastes.
- **Policy CO-6.5: Protection of Bay and Estuary Waters.** Protect the surface waters of the San Francisco Estuary system, including San Francisco Bay.

City of Oakland Grading Ordinance

As a permittee under the San Francisco Bay MRP, the City of Oakland established a Grading Ordinance, which requires a permit for grading activities on private or public property for projects that exceed certain criteria, such as amount of proposed excavation, area of lane disturbance, degree of site slope, and depth of excavation. The purpose of the Grading Ordinance is to protect surface water quality by prevention of soil erosion and the transport of soil sediments, which may result from grading operations if sediment and erosion control measures/BMPs are not implemented.

The Project is expected to result in a land disturbance greater than one acre and a volume of excavation and/or fill of 50 cubic yards or greater. Thus, the Project proponent would be required to obtain a grading permit from the City of Oakland Director of Planning and Building prior to earthwork.

[12] https://cleanwaterprogram.org/images/uploads/C3TG_v6_Oct_2017_Appendix_I_HM_Map.pdf.

City of Oakland Standard Conditions of Approval

As stated in Section 1.8.2, *Permits/Approvals*, the Oakland SCA includes conditions of approval for projects. The following SCAs (summarized below) are relevant because Project construction requires ground disturbance and a grading permit.

48. Erosion and Sedimentation Control Plan for Construction. If a grading permit is required by the Oakland Grading Regulations pursuant to Section 15.04.660 of the Oakland Municipal Code, the grading permit application shall include an erosion and sedimentation control plan with measures to control erosion and prevent excessive stormwater runoff carrying solid materials from grading operations to adjacent lands, storm drains and water ways.

49. State Construction General Permit. All projects that disturb one acre or more of surface area shall comply with the Construction General Permit issued by the State Water Board prior to approval of a construction-related permit.

53. NPDES C.3 Stormwater Requirements for Regulated Projects. All Regulated Project under the NPDES C.3 Requirements would require a Post-Construction Stormwater Management Plan and Maintenance Agreement.

2.10.2 Discussion of Potential Impacts

a. The Project would have a less-than-significant impact with mitigation for potential violation of water quality standards or waste discharge requirements and would not substantially degrade surface or groundwater quality

Surface Water

Project construction activities, such as site grading and stockpiling, could temporarily affect water quality by introducing sediments, turbidity, and pollutants associated with sediments into storm drains or other water bodies. Construction-related activities that expose and move soils are primarily responsible for sediment releases. Non-sediment potential contaminants that could enter water runoff from the construction site include oil, gasoline, petroleum products, and trash. Implementation of **Mitigation Measures HYD-1** (A Toxic Materials Spill Prevention and Response Plan) would reduce this impact to less than significant by regulating the use of petroleum-based products (fuel and lubricants) and other potentially toxic materials associated with Project construction.

The Project would disturb approximately 9 acres of land and, therefore, will be required to obtain a NPDES Construction General Permit, and prepare and implement a SWPPP. The SWPPP will include BMPs to protect stormwater runoff and monitor BMP effectiveness. At a minimum, BMPs will include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with stormwater. The SWPPP would specify properly designed centralized storage areas that keep these materials out of the rain. If grading must be conducted during the rainy season, the primary BMPs selected will focus on erosion control (i.e., keeping sediment on the site). More examples of construction BMPs are provided in the Project WQAR in **Appendix I-1**, (Section 5.2.3, *List of Proposed Temporary Construction Site BMPs*).

The Project has the potential to result in other construction water quality impacts, such as those that can result from wetland dredge and fill. The potential stormwater treatment area beneath I-880 on the south side of West Grand Avenue supports an earthen drainage ditch (**Figure 1-9**). As described in Section 2.4, *Biological Resources*, the ditch is considered to be a water of the State and a potentially jurisdictional water of the United States because of its vegetation, location near the Bay, and direction of flow toward the Bay. A formal wetland

delineation has not been conducted because the Project design has not been finalized; therefore, these conclusions are based on a reconnaissance-level site visit and desktop review of aerial imagery. Should the area be chosen as a stormwater treatment area, it could affect the ditch (via dredge or fill) to improve overall offsite/onsite drainage conditions. If this occurs, permits for potential impacts on jurisdictional waters, such as CWA Section 404 (USACE 404 Permit) and 401 (401 Water Quality Certification), California Department of Fish and Game Code 1602 (Streambed Alteration Agreement), would be obtained. However, these permits are not anticipated because it is possible to avoid the earthen drainage ditch.

Once constructed and operating, stormwater runoff from the Link and increased impervious surfaces would likely eventually discharge to the San Francisco Bay via existing storm drains or surface flow. As described in Section 1.3.4.8, stormwater on the elevated structure would likely drain off at downspouts at the columns, and continue as surface flows or be conveyed to an existing drainage system, depending on the existing drainage patterns and facilities at each location. As described in Section 1.3.4.8, the Project proposes approximately 0.93 acres of stormwater treatment, either vegetated flow-through treatment areas or bio-treatment basins, beneath the elevated path and/or in vacant areas by freeways and the proposed Wood Street parking lot. The vegetative areas would be designed to provide natural infiltration of stormwater runoff, increase drainage capacity, reduce the potential for flooding, and help filter out contaminants through biological processes. All areas under consideration for stormwater treatment options are within the Project area (**Figure 1-9**). In addition, expansion of Link network connectivity could potentially result in increased use of bikes for transportation and decreased use of cars, which could result in decreases in stormwater pollutants generated by car use such as oils, grease, and metals. Therefore, the Project would have a less-than-significant impact on surface water quality.

Groundwater

Project construction and operation could also affect groundwater quality. As described in Section 1.6.1, it is estimated that the Project would result in up to approximately 2,600 cubic yards of cut material. During excavation, soils would be tested for contamination. Clean soils would be used or sold for reuse at nearby construction sites. Contaminated soils would be disposed of at an appropriate facility.

As described in Section 2.9.1, the Project area includes two sites identified as *recognized environmental concerns* in the Phase I ISA. Both sites are located near the cross-section of West Grand Avenue and Maritime Street. Implementation of **Mitigation Measures HAZ-1** (Prepare Phase II ESA) and **HAZ-2** (Implement Engineering Controls and Best Management Practices) would ensure soil in these areas is investigated prior to soil disturbance. If hazardous substances are found in the soil during construction activities, they would be properly disposed of in a hazardous waste facility or remediated to appropriate levels prior to reuse.

Project construction would require excavation up to 3 feet deep for at-grade portions of the path, Wood Street parking lot, and stormwater treatment areas, and up to 5 feet deep for the elevated Link column footings. The elevated path requires approximately 45 supporting columns whereby piles would be driven 50–60 feet deep. Shallow groundwater in the Project area typically varies from 2–6 feet below ground surface. Therefore, dewatering activities are likely to occur during installation of supporting piles. Water extracted during dewatering (i.e., removal of groundwater by pumping), if required, could contain chemical contaminants (either from pre-existing sources or from equipment), or could become sediment-laden from construction activities. If dewatering to surface waters is required, the contractor would either properly treat the water prior to discharge or dispose of the water at a hazardous waste facility to prevent any discharge of contaminated dewatered groundwater into the storm drain system that could ultimately contaminate surface waters. These activities would be in compliance with applicable groundwater discharge requirements, such as the San Francisco Regional Water Quality Control Board dewatering requirements, and the NPDES Construction General Permit.

The SWPPP for construction would include spill cleanup and prevention measures to minimize the potential for contamination of groundwater that could occur from accidental spills during construction (e.g., fuels, solvents, etc.).

Once the Project is constructed and operating, groundwater could be affected by infiltration of polluted runoff from the new Link, parking lot and other impervious surfaces. As described above, the Project includes stormwater treatment, either vegetated flow-through treatment areas or bio-treatment basins, beneath the elevated path and/or in vacant areas by freeways and the proposed Wood Street parking lot. The vegetative treatment areas would help filter out contaminants through biological processes prior to reaching groundwater aquifers. In addition, the Link is not expected to generate additional pollutants that could contaminate groundwater with increased bicycle and pedestrian use. Therefore, the Project would have a less-than-significant impact on groundwater quality

In summary, potential impacts of the Project on surface water and groundwater quality would be less than significant with implementation of **Mitigation Measure HYD-1** (Prepare and Implement a Toxic Materials Spill Prevention and Response Plan) and compliance with permitting requirements specified in the NPDES Construction General Permit, Caltrans' Statewide NPDES Storm Water Permit, municipal stormwater requirements, dewatering requirements, and local stormwater ordinances, including Oakland Grading Ordinance and Oakland SCAs, as applicable.

b. The Project would have a less-than-significant impact as a result of potentially decreasing groundwater supplies or interfering with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

As described above, Project construction would require excavation up to 3 feet deep for at-grade portions of the path, Wood Street parking lot, and stormwater treatment areas, and up to 5 feet deep for the elevated Link column footings. The elevated path requires approximately 45 supporting columns whereby piles would be driven 50–60 feet deep.

Given the potentially shallow subsurface water levels (2 to 6 feet), groundwater could flow into excavations that extend below the groundwater table. In the event that groundwater is encountered during excavation activities, common practices employed to facilitate construction include either dewatering or shoring the sides of the excavation to reduce groundwater inflow. If dewatering methods are used, groundwater would be pumped out and then discharged typically to either a nearby storm drain leading to the San Francisco Bay. Should groundwater dewatering be necessary during construction, it would be temporary and likely consist of small volumes of water since the column footings and supporting piles would be narrow and cover an overall small area. The Project would be in compliance with dewatering and stormwater requirements, as applicable.

No excavation would occur during Project operation. Therefore, no dewatering would be necessary, and the Project would not contribute to depletion of groundwater supply during operation.

Of the 2.98 acres of proposed new and replaced impervious area, the Project would add 1.68 acres (or 73,180 sf) of new impervious space (conversion of existing pervious to impervious area) within the Project area that would result in a slight decrease of groundwater infiltration. Recharge is determined by the ability for water to infiltrate into the soil. However, the Project includes providing 0.93 acres (or 40,510 sf) of vegetated stormwater treatment area. The new stormwater treatment areas will promote soil infiltration and groundwater recharge. The ability for groundwater infiltration within the Project area would be similar to if not the same as existing conditions. In addition, any water supply needed for Project construction (e.g., dust control) or operation (e.g., landscaping) would be provided by the EBMUD. There are no groundwater supply wells within the Project area, and the Link would not utilize or deplete local

groundwater supplies during operation. Therefore, the Project would not decrease groundwater supply during Project construction or operation or impede sustainable groundwater management of the basin, and this impact would be less than significant.

c. The Project would have a less-than-significant impact as a result of potentially altering the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surface, in a manner that could:

(i) Result in substantial erosion or siltation onsite or offsite.

Construction and operation of the Project would have the potential to alter drainage patterns through temporary and permanent changes to the topography and hydrology through new impervious area or minor modifications to storm drainage flow.

During construction, approximately 9 acres of paved and unpaved land would be disturbed from grading and excavation activities necessary to install the elevated and at-grade portions of the Link, the Wood Street parking lot, and the stormwater treatment areas. The areas under consideration for stormwater treatment (**Figure 1-9**) would remain unpaved and pervious. Construction staging would occur on disturbed or paved areas away from drainages. Land disturbance during construction could temporarily alter localized drainage patterns at the localized site, but would not alter overall drainage patterns in the area. BMPs specified in the Project SWPPP for compliance with the NPDES Construction General Permit would minimize erosion or siltation onsite or offsite. Small portions of the elevated path alignment and the Wood Street are currently unpaved and would be permanently converted to pavement.

Once constructed and in operation, the Project would add approximately 1.68 acres (73,180 sf) of new impervious area from conversion of existing pervious to impervious area (WRECO 2014a), which may result in increased stormwater runoff volumes and associated polluted runoff. Stormwater from the elevated structure would flow to drains and downspouts at the supporting structure columns, and continue as surface flows or be conveyed to an existing drainage system (i.e., city stormwater collection system). Flows would also be routed to stormwater treatment areas, either vegetated flow-through treatment areas or bio-treatment basins, beneath the elevated path and/or in vacant areas by the freeways and the proposed Wood Street parking lot (**Figure 1-9**). This would depend on the existing drainage patterns and facilities at each location. No new stormwater inlets or drainage ditches would be constructed, unless necessary to avoid or minimize impacts to existing wetlands or natural drainages. In addition, with the Project area being within highly saturated soils and a tidally influenced/depositional area (as mapped by the ACCWP),[13] it would be relatively unaffected by hydromodification, and existing drainage patterns are expected to be relatively unaffected.

The additional surface runoff volumes would be minor and would only slightly alter existing drainage patterns throughout the Project area due to existing soil and tidal conditions. It would not alter the course of a stream or river and would not result in substantial erosion or siltation onsite or offsite. Therefore, this impact is less than significant.

(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.

See discussion for (**c)(i)** above. The additional surface runoff volumes would be minor and would only slightly alter existing drainage patterns throughout the Project area due to existing soil and tidal conditions. Proposed stormwater treatment areas would be designed to increase drainage capacity and thereby reduce the potential for flooding. Therefore, this impact is less than significant.

[13] The Project is not located in a BCDC jurisdiction area.

(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

See discussion for (c)(i) above. Any additional surface runoff volumes would be minor and would not exceed existing or planned stormwater drainage systems. Proposed stormwater treatment areas are expected to be sufficient in offsetting impacts of new impervious area resulting from the Project. No new stormwater inlets or drainage ditches would be constructed, unless necessary to avoid or minimize impacts on existing wetlands or natural drainages. Therefore, this impact is less than significant.

(iv) Impede or redirect floodflows.

Portions within the Project area may be vulnerable to localized ponding, flooding, or storm drain overflows during a high rain event. However, the Project area is not located within a 100-year flood zone, and there are no major water crossings where overtopping or erosion of creek banks could occur. Nevertheless, should a high rain event occur during construction, construction equipment would be relocated such that flows would not be impeded or redirected. Furthermore, no new structures would impede or redirect flows.

Compliance with the Construction General Permit and implementation of the SWPPP will minimize or eliminate potential flooding impacts during construction. Stormwater runoff will ultimately be conveyed to vegetative areas that would help minimize the potential for localized ponding or flooding within the Project area. This would reduce construction-related impacts from flooding to less than significant.

SLR is a concern for the future, particularly in combination with future storm events and coastal flooding. A scenario with 100-year flood flows coincident with high tides, taking into account SLR over a 50-year or 100-year horizon, would dramatically increase the risk of flooding in the vicinity of the Project area. The Project and associated facilities would have a small footprint relative to their surrounding areas. Thus, they would not divert or increase flood risks relative to other adjacent areas associated with these events. However, future SLR may result in worsened coastal flooding events that could affect Project infrastructure. The concern is the impact of SLR on the Project, as opposed to the impact of the Project on SLR. This is because the Project is not expected to contribute to a substantial increase in GHG emissions which is known to contribute to SLR. Given court rulings (including *Ballona Wetlands* and *CBIA vs. BAAQMD*), analysis of such "impacts of the environment on the project" are not required by CEQA. BATA/Caltrans is providing this analysis as a conservative approach and for the purposes of public disclosure.

With projected SLR, the low-lying areas within the Project area would experience tidal flooding and storm flooding in the future. Based on the NOAA Sea Level Rise Viewer (NOAA 2014), daily tidal flooding is projected to occur between 2050 and 2100. It is not expected to occur prior to 2050 because a 2-foot SLR scenario does not result in direct daily flooding in the Project area. However, storm flooding would likely occasionally affect the Project area. Current storm floods are approximately 3 feet above daily tide levels. Based on the NOAA Sea Level Rise Viewer (NOAA 2014), with 1-foot SLR and storm level 3 feet above daily tide levels, storm flood impacts could begin to affect the Project area by 2050 or sooner. The majority of the structure is elevated and would not affect flooding. Furthermore, the at-grade bike paths and Wood Street parking lot would be paved and thus relatively resilient to periodic flooding. Therefore, the impact of SLR storm flooding prior to 2050 and associated risk with respect to impeding or redirecting floodflows is considered less than significant.

Sometime between 2050 and 2100, SLR may be 5 feet or greater. It is possible that sea walls or levees will be constructed to protect I-80, the toll plaza, EBMUD, and Port facilities west of I-880 as well as homes and businesses east of I-880. However, this is unknown. Therefore, although the elevated portions of the

Link would not be flooded, the at-grade portions of the Link and Wood Street parking lot could be flooded daily with high tide depending on actual SLR. Daily flooding, should it occur, would prevent facility use and cause permanent damage to the facilities. Implementation of Mitigation Measure HYD-2 (Include Protection of Bike Path Facility in Planning Protection for Other Transportation Facilities) would reduce this impact to less than significant.

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

A major hazard associated with earthquakes is water inundation resulting from a tsunami or seiche. A tsunami with a wave height of 20 feet at the Golden Gate Bridge, which is likely to occur approximately once every 200 years, would result in a run-up of less than 10 feet above sea level. Further, because the Bay Area has not been adversely affected by seiches during its history within this seismically active region of California (Alameda County 2012), both a tsunami and seiche are extremely unlikely to occur. Low lying Project features which could be inundated during a seiche or tsunami include the western and eastern touchdowns and supporting column foundations of the elevated bike Link, the Wood Street parking lot, and potential stormwater treatment areas. The majority of the Project itself would likely not be inundated. In the event of Project inundation, implementation of stormwater BMPs during construction and stormwater treatment areas (vegetated flow-through treatment areas or bio-treatment basins) during operation would reduce release of pollutants due to Project inundation. Therefore, this impact would be less than significant.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Project construction and operation would comply with local, State, and federal regulations, including the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Caltrans MS4 Permit, NPDES Construction General Permit, Basin Plan, and the City's Municipal Code. Commonly practiced BMPs, as required by these regulations, would be implemented to control construction site runoff and reduce the discharge of pollutants to storm drain systems from stormwater and other nonpoint-source runoff. As part of compliance with permit requirements during ground-disturbing or construction activities, implementation of water quality control measures and BMPs would ensure that water quality standards would be achieved, including the water quality objectives that protect designated beneficial uses of surface and groundwater, as defined in the Water Quality Control Plan for the San Francisco Bay Basin. Construction runoff would also have to comply with the appropriate water quality objectives for the region. The NPDES permits listed above require stormwater discharges not to contain pollutants that cause or contribute to an exceedance of any applicable water quality objectives or water quality standards, including designated beneficial uses. Therefore, the Project would not obstruct implementation of a water quality control plan.

Although there is potential shallow subsurface water levels of groundwater within the area, there is no sustainable groundwater management plan for the East Bay Plain Groundwater Basin. In addition, groundwater dewatering is not anticipated during Project construction. Groundwater would not be used during construction activities or operation. As described earlier, the Project proposes approximately 0.93 acres of stormwater treatment, either vegetated flow-through treatment areas or bio-treatment basins, beneath the elevated path and/or in vacant areas by freeways and the proposed Wood Street parking lot. The vegetative areas would be designed to provide natural infiltration of stormwater runoff to help filter out contaminants through biological processes and allow for groundwater recharge. Thus, for the reasons specified above, construction and operation of the Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, this impact would be less than significant.

2.10.3 Mitigation Measures

Mitigation Measure HYD-1: Prepare and Implement a Toxic Materials Spill Prevention and Response Plan

Caltrans/BATA will ensure the construction contractor prepares a toxic materials spill prevention and response plan before allowing construction to begin. The plan will specify BMPs to regulate the use of petroleum-based products (fuel and lubricants) and other potentially toxic materials associated with Project construction. Caltrans/BATA or their construction monitor will routinely inspect the construction site to verity that BMPs specified in the plan are properly implemented and maintained. Caltrans/BATA or their monitor will notify the construction contractor immediately if there is a noncompliance issue and will require compliance.

Mitigation Measure HYD-2: Include Protection of Link Facility in Planning Protection for Other Transportation Facilities

BATA/Caltrans will include flood protection of the Link facilities when planning for the protection of other transportation facilities in the vicinity from daily flooding. Other transportation facilities include I-80, the Bay Bridge Toll Plaza, the Maze, I-880 and connecting roadway facilities. BATA/Caltrans will work with the Port of Oakland, EBMUD, and the City of Oakland in developing flood protection measures that are determined necessary, feasible and able to protect both transportation and non-transportation assets in the Project vicinity. This measure would be implemented as part of other improvements included in broader flooding protections to protect other facilities in the area. Since daily flooding of the Project area is currently estimated to occur sometime after 2050 and then only if the higher range of SLR estimates comes to fruition, this mitigation does not require action until 10 years prior to actual predicted inundation.

2.11 Land Use and Planning

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

2.11.1 Environmental Setting

2.11.1.1 Existing Conditions

The Project is located in West Oakland, approximately 1.3 miles northwest of downtown Oakland, in the Bay Area. The linear Project area is generally parallel to West Grand Avenue, which is a main thoroughfare extending through Oakland in the northwest-southeast direction. West Grand Avenue connects to I-80 on the northwest end, extending beneath the I-880 connection to I-80.

Based on a windshield field survey and review of the City's land use plans and aerial photographs, the Project vicinity is largely comprised of transportation facilities and industrial land uses. On the west side of I-880, the Port and Former Oakland Army Base property is south of the Project area, and the EBMUD wastewater treatment facility is to the north. On the east side of I-880, the area is dominated by industrial uses and warehouses, with some commercial.

There are very few residential land uses in the Project vicinity. The closest existing residential land uses are located south of the Project area in the vicinity of 17th Street, between Mandela Parkway and Willow Street.[14] There also appears to be a residential unit or two on Peralta Street between 18th and 20th Streets amidst the industrial uses. This is approximately two blocks from the southernmost point of the Project area, which is 20th Street. Peralta Studios, a live/work warehouse space, is located at the southwest corner of West Grand Avenue/Mandela Parkway. The nearest Mixed-Use (Residential/Commercial) land use is located northeast of the Project area at 28th Street, between Mandela Parkway and Ettie Street. Several commercial land uses are located in areas adjacent to the residential land uses.

Mandela Parkway itself is a landscaped median with a multi-use path extending down the middle. Raimondi Park is located south of the Project area between 20th and 18th Streets. It is a City park with a playground, restrooms, baseball field, football field, and small putting green.

[14] Please note that as discussed in Section 2.21,there is a planned residential project at 2011–2195 Wood Street (Wood Street Development Area 8). The development area is the block bounded by Wood Street, Frontage Road, West Grand Avenue, and 20th Street. Planned development on the 2.54-acre block includes 235 residential units and 13,615 square feet of commercial space. Potential cumulative impacts are analyzed in that section.

Zoning

Mandela Parkway, although it is not a designated park, is zoned Open Space – Linear Park on the City's official zoning map from 8th Street to beyond 32nd Street. Lining the parkway is an area zoned as Commercial Industrial Mix.

West Grand Avenue travels through Commercial Industrial Mix zoning, the Wood Street Zoning District, Industrial General zoning, and Heavy Industrial zoning.

Land Use Designations

Mandela Parkway is designated in the Land Use Diagram as Community Commercial. West Grand Avenue travels through Community Commercial, Business Mix, and General Industrial/Transportation. (City of Oakland 2015).

Right-of-Way

The Class I portion of the Link (extending along West Grand Avenue) is primarily owned by Caltrans or the City of Oakland, with the exception of up to five privately owned parcels between Wood Street and Frontage Road where there would be minor ROW acquisitions. The Class II portion of the Link (surface streets including West Grand Avenue, Campbell Street, Willow Street, Wood Street, 20th Street, and Mandela Parkway) is within right-of-way owned by the City of Oakland. The proposed Wood Street parking lot is within right-of-way owned by BNSF. The City of Oakland has committed to granting a highway or structure easement where the Link goes over City-owned property that might have been leased to third parties. Potential stormwater treatment areas identified in **Figure 1-9** are located on Caltrans, BNSF, and UPRR property.

2.11.1.2 Regulatory Setting

Federal and State

There are no federal or State laws or regulations that are relevant to the Project and land use.

Regional and Local

The following planning documents guide land use planning in the Project area. No habitat conservation plans or natural community conservation plans are applicable in the Project.

City of Oakland General Plan Land Use and Transportation Element

The Land Use and Transportation Element provides guidance for integrating land use and transportation planning (City of Oakland 1998). The following policies are relevant to the Project:

- **Policy T3.5 Including Bikeways and Pedestrian Walks**: The City should include bikeways and pedestrian walks in the planning of new, reconstructed, or realized streets, wherever possible.
- **Policy T4.8 Accommodating Multiple Types of Travel on the Bay Bridge**: The City should encourage the design and engineering for the new Bay Bridge to accommodate multiple means of access and travel by automobiles, trucks, transit, bicycles, pedestrians, and future mass transit.
- **Policy T4.9 "Gateway" Public Access Area**: The City, in concert with the East Bay Regional Park District, Port of Oakland, Oakland Base Reuse Authority, and Bay Conservation and Development Commission, should support development of a significant new "gateway" public park at the terminus

of the San Francisco/Oakland Bay Bridge east span that is accessible by auto, bicycle, or walking (See also the Open Space, Conservation and Recreation Element).

- **Policy T6.3 Making the Waterfront Accessible**: The waterfront should be made accessible to pedestrians and bicyclists throughout Oakland.

This element also provides area-specific vision and implementation strategies. The Project area lies in West Oakland. Two areas in West Oakland are identified as "target areas" in need of targeted improvement. The implementation program includes as part of its agenda to "encourage and support beautification of the Mandela Parkway corridor" and to provide for "multi-modal access," including bicycle and pedestrian, to the parkland designated at the Bay Bridge terminus.

West Oakland Specific Plan

The following objectives in the West Oakland Specific Plan (WOSP) are relevant to the Project (City of Oakland 2014a).

- Provide a network of "Complete Streets."[15]
- Improve the attractiveness of West Oakland streets.
- Improve the network of pedestrian and bicycle routes through West Oakland.
- Improve lighting and street appearance so as to deter dumping and blight.

The WOSP also specifically acknowledges the waterfront Judge John Sutter Regional Shoreline (in 2014 this was referred to as "Gateway Park") at the foot of the east span of the Bay Bridge, "building upon the pedestrian and bicycle access being incorporated into the new bridge" (City of Oakland 2014a). One of the six sub elements envisioned to support the Judge John Sutter Regional Shoreline is a new bicycle path along West Grand Avenue extending from Mandela Parkway.

2.11.2 Discussion of Potential Impacts

a. The Project would have no impact resulting in the division of an established community

The Project would not physically divide an existing community. The Link would be built along existing right-of-way and thus would not change existing community boundaries. The elevated structure of the Link would not interfere with vehicle or pedestrian movement on the ground. Similarly, the bicycle lane on the West Grand Avenue overcrossing structure would not change vehicle or pedestrian movement. The parking lot, if included in the Project, would be built on existing BNSF right-of-way and thus would not change existing community boundaries. Further, two sides of the parking lot would be adjacent to multi-lane thoroughfares rather than in the middle of a community. The Project could be considered to have a beneficial impact by improving connectivity to and within the West Oakland community. Thus, there would be no impact.

b. The Project would have no impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The Project would not conflict with any land use plan, policy, or regulation. The Link is consistent with all zoning and planned land use designations. The inclusion of pedestrian and bicycle access in the West Oakland planning area is consistent with the principles for West Oakland streets and pedestrian and

[15] Internal streets will better serve pedestrians and bicyclists as well as the new transit loop, becoming ''complete streets'' serving all transportation needs rather than just cars and trucks.

bicycle access. Further, the WOSP states that the Judge John Sutter Regional Shoreline concept is consistent with its principles. There would be no impact.

2.11.3 Mitigation Measures

No mitigation measures are required.

2.12 Mineral Resources

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

There are no mineral resources in the Project area that are mapped by the State (Kohler-Antablin 1996 a,b) or identified as locally important (Alameda County 1994 or City of Oakland 1996). There would be no impact.

2.13 Noise

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

2.13.1 Environmental Setting

This section provides background information on noise and vibration, identifies existing noise sensitive receptors and ambient noise levels in the project area, and presents the regulatory framework for evaluating noise impacts.

2.13.1.1 Existing Conditions

Background on Noise and Ground Vibration

Noise

Noise is commonly defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Because noise is an environmental pollutant that can interfere with human activities, evaluation of noise is necessary when considering the environmental impacts of a Project.

Sound is mechanical energy (vibration) transmitted by pressure waves over a medium such as air or water. The decibel (dB) scale, a logarithmic scale, is used to quantify sound intensity. In general, human sound perception is such that a change in sound level of 1 dB cannot typically be perceived by the human ear. A change of 3 dB is barely noticeable. A change of 5 dB is clearly noticeable. A change of 10 dB is perceived as doubling or halving the sound level.

Because the human ear is not equally sensitive to all frequencies in the entire spectrum, noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called *A-weighting*, written as *dBA* and referred to as *A-weighted decibels*. **Table 2.13-1** summarizes typical A-weighted sound levels for different noise sources. Refer to **Appendix J-1**, *Noise and Vibration Background*, for additional information on sound measurements and other terminology, types of measurements used to characterize the time-varying nature of sound, and influence of atmospheric and physical conditions.

Table 2.13-1. Typical A-weighted Sound Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet		
	100	
Gas lawnmower at 3 feet		
	90	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	70	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60	
		Large business office
Quiet urban daytime	50	Dishwasher in next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime		
	30	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20	
		Broadcast/recording studio
	10	
	0	

Source: California Department of Transportation 2013.

Notes: For a point source such as a stationary compressor or construction equipment, sound attenuates based on geometry at rate of 6 dB per doubling of distance. For a line source such as free flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance.

dB = Decibel. A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.

dBA = A-Weighted Decibel. An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

Ground Vibration

Ground vibration is caused by seismic waves radiating along the surface of and downward into the ground. Operation of heavy construction equipment, particularly pile driving equipment and other impact devices such as pavement breakers, create seismic waves that can be felt as ground vibration. Perceptible ground-borne vibration is generally limited to areas within a few hundred feet of construction activities. As seismic waves travel outward from a vibration source, they cause rock and soil particles to oscillate. The rate or velocity (in inches per second) at which these particles move is the commonly accepted descriptor of the vibration amplitude, referred to as the peak particle velocity (PPV). **Table 2.13-2** summarizes typical vibration levels generated by construction equipment. Refer to **Appendix J-1** for additional information on how vibration levels are estimated.

Table 2.13-2. Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 Feet	PPV at 50 Feet	PPV at 75 Feet	PPV at 100 Feet	PPV at 175 Feet
Pile driver (sonic/vibratory)	0.734	0.2595	0.1413	0.0918	0.0396
Hoe ram or large bulldozer	0.089	0.0315	0.0171	0.0111	0.0048
Loaded trucks	0.076	0.0269	0.0146	0.0095	0.0041
Jackhammer	0.035	0.0124	0.0067	0.0044	0.0019
Small bulldozer	0.003	0.0011	0.0006	0.0004	0.0002

Source: Federal Transit Administration 2006.
PPV = peak particle velocity

Noise Sensitive Land Uses

Noise sensitive land uses are land uses where people reside or locations where the presence of unwanted noise could adversely affect the use of the land. Noise sensitive land uses typically include residences, schools, hospitals, and churches. Recreational areas where quiet is an important part of the environment can also be considered sensitive to noise.

Land uses surrounding the Project area are mostly industrial and commercial uses. There are residential and recreational uses near the project area. There are no schools, hospitals, or churches within or adjacent to the Project area.

As described in Section 2.3, Air Quality, the closest existing residences are located on Peralta Street, between 18th and 20th Streets.[16] This is approximately 320 feet south of the proposed Class II bike lanes on 20th Street and 940 feet south of the proposed Class I portion of the Link on West Grand Avenue. In addition, there are some residences in the vicinity of 17th Street, between Mandela Parkway and Willow Street. Peralta Studios, a live/work warehouse space, is located at the southwest corner of West Grand Avenue/Mandela Parkway, which is directly adjacent to the proposed at-grade bike path. The nearest Mixed-Use (Residential/Commercial) land use is located northeast of the project area at 28th Street, between Mandela Parkway and Ettie Street.

Recreational uses include the Bay Bridge Trail on the west end of the alignment, the bicycle/pedestrian pathway along Mandela Parkway, and Raimondi Park on south side of 20th Street, between Wood Street and Campbell Street. Although not an officially designated park, the Mandela Parkway median is public open space that includes a pedestrian/bicycle path, and informal seating areas within 100 feet of the intersection with West Grand Avenue. Recreational users are exposed to the vehicle traffic noise on Mandela Parkway. Raimondi Park is primarily used for active recreation, such as baseball and football activities.

The existing noise environment in the Project area is governed primarily by vehicular traffic traveling on the freeways (I-880, I-80) and roadways (Mandela Parkway, West Grand Avenue, Wood Street, Frontage Road, Maritime Street, and Burma Road). This includes industrial truck traffic and railroad operations. To quantify existing ambient noise levels in the Project area, short-term (15-minute) ambient noise

[16] Please note that as discussed in Section 2.21,there is a planned residential project at 2011–2195 Wood Street (Wood Street Development Area 8). The development area is the block bounded by Wood Street, Frontage Road, West Grand Avenue, and 20th Street. Planned development on the 2.54-acre block includes 235 residential units and 13,615 square feet of commercial space. Potential cumulative impacts are analyzed in that section.

measurements were conducted in April 2013 at various locations around the project area. The day ambient noise measurements indicate that the ambient noise level in parts of the Project area that are not directly exposed to traffic noise from major streets is about 64 dBA L_{eq}. The ambient noise level along the Link and in the parts of the Project area that are directly exposed to traffic noise from major streets is about 67 dBA L_{eq}. Refer to the Noise Analysis (**Appendix J-1**) for additional detail.

2.13.1.2 Regulatory Setting

Federal and State

There are no federal regulations applicable to the Project.

Caltrans Construction Noise Requirements

Construction noise from Caltrans projects is regulated by Caltrans Standard Specifications Section 14-8.02, "Noise Control," which states:

- Do not exceed 86 dBA at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m.
- Equip an internal combustion engine with the manufacturer-recommended muffler. Do not operate an internal combustion engine on the job site without the appropriate muffler.

Caltrans Vibration Guidelines

Caltrans developed guidelines for damage and annoyance potential from transient and continuous vibration that is usually associated with construction activity (California Department of Transportation 2004). Pile driving is considered a source of continuous vibration. Refer to **Tables 2.13-3** and **2.13-4**.

Table 2.13-3. Guideline Vibration Damage Potential Threshold Criteria

	Maximum PPV (in/sec)	
Structure and Condition	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: California Department of Transportation 2004.

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 2.13-4. Guideline Vibration Annoyance Potential Criteria

	Maximum PPV (in/sec)	
Structure and Condition	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: California Department of Transportation 2004.

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Regional and Local

City of Oakland Municipal Planning Code

Construction Noise Standards

Noise standards applicable to temporary construction or demolition work are contained in the Oakland Planning Code Section 17.120.050. For construction noise, the planning code specifies short-term operational standards, which apply to residential and commercial and industrial land uses affected by activities lasting less than 10 days, and long-term operational standards, which apply to activities lasting more than 10 days. Because Project construction would occur for more than 10 days and the Project is located in an industrial and commercial area, the Long-Term Operation commercial, industrial noise standards in **Table 2.13-5** would apply.

Table 2.13-5. City of Oakland Planning Code Maximum Allowable Receiving Noise Level Standards

	Daily 7 a.m. to 7 p.m. (dBA)	Weekends 9 a.m. to 8 p.m. (dBA)
Short-Term Operation[1]		
Residential	80	65
Commercial, Industrial	85	70
Long-Term Operation[2]		
Residential	65	55
Commercial, Industrial	70	60

Source: City of Oakland Planning Code.

[1] Short-Term Operational applies activities that occur for less than 10 days

[2] Long-Term Operational applies activities that occur for more than 10 days

Vibration Standards

Under *17.120.060 – Vibration* of the Oakland Planning Code, ground vibration caused by temporary construction or demolition work is exempt from vibration standards.

City of Oakland Standard Conditions of Approval

As stated in Section 1.8.2, *Permits/Approvals*, the Oakland SCA includes conditions of approval for projects. Several conditions in the SCA are not applicable to the Project because they pertain to projects that are land use developments (e.g., residential or commercial developments) and/or involve stationary sources of noise or vibration. The noise-related SCAs include the following conditions of approval that are applicable to the Project:

61. Construction Days/Hours.

The project applicant shall comply with the following restrictions concerning construction days and hours:

b) Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m.

c) Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday.

d) No construction is allowed on Sunday or federal holidays.

Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

62. Construction Noise

The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:

a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible.

b) Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10

dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

c) Applicant shall use temporary power poles instead of generators where feasible.

d) Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.

e) The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

63. Extreme Construction Noise

a) Construction Noise Management Plan Required

Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90 dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:

e) Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;

f) Implement “quiet” pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;

g) Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;

h) Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and

i) Monitor the effectiveness of noise attenuation measures by taking noise measurements.

b) Public Notification Required

The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.

64. Project-Specific Construction Noise Reduction Measures

    The project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction noise impacts on an adjacent sensitive receptor or business. The project applicant shall implement the approved Plan during construction.

65. Construction Noise Complaints

    The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include:

    a) Designation of an on-site construction complaint and enforcement manager for the project;

    b) A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit;

    c) Protocols for receiving, responding to, and tracking received complaints; and

    d) Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.

69. Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities

    Requirement: The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located at an adjacent property or adjacent vibration-sensitive activity. The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. The applicant shall implement the recommendations during construction.

2.13.2 Discussion of Potential Impacts

a. The Project would result in a less than significant impact related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Construction Noise

During construction of the Project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. **Table 2.13-6** summarizes noise levels produced by construction equipment that is expected to be used on this Project. L_{max} sound levels at 50 feet are shown along with the typical acoustical use factors. The acoustical use factor is the percentage of time each piece of construction equipment is assumed to be operating at full power (i.e., its noisiest condition) during construction operation and is used to estimate L_{eq} values from L_{max} values. For example, the L_{eq} value for a piece of equipment that operates at full power and 50 percent of the time (acoustical use factor of 50) is 3 dB less than the L_{max} value.

Table 2.13-6. Typical Noise Levels by Construction Equipment

		Typical Noise Level (dBA) at 50 feet from Source	
Equipment	**Acoustical Use Factor (%)**	**L_{max}**	**L_{eq}**
Backhoe	40	78	74
Compactor	20	83	76
Compressor	40	78	74
Concrete pump Truck	20	81	74
Concrete Saw	20	90	83
Crane	16	81	73
Dump Truck	40	76	72
Loader	40	79	75
Generator	50	81	78
Pile Driver	20	101	94
Jackhammer	20	89	82
Lift	20	75	68
Paver	50	77	74
Pneumatic Tools	50	85	82
Roller	20	80	73
Sand Blasting	20	96	89
Tractor	40	84	80
Welder	40	74	70

Source: Federal Highway Administration 2006

L_{max} = The maximum sound level measured during the measurement period.

L_{min} = The minimum sound level measured during the measurement period.

L_{eq} = The equivalent steady state sound level that in a stated period of time would contain the same acoustical energy.

Construction of the elevated portion of the Link requires pile driving for the supporting columns. A reasonable worst-case construction noise level assumes that the three loudest pieces of equipment would operate concurrently (concrete saw, pile driver, and sand blasting). The combined L_{eq} level for these three pieces of equipment is 96 dBA at 50 feet.

For construction of the at-grade portion of the Link on West Grand Avenue, a reasonable worst-case construction noise level assumes that the three loudest pieces of equipment would operate concurrently (concrete saw, jackhammer, and sand blasting). The combined L_{eq} level for these three pieces of equipment is 91 dBA at 50 feet.

Table 2.13-7 summarizes the estimated construction noise levels at the nearest noise-sensitive use (Peralta Studios live/work space), which is located about 75–100 feet from proposed elevated structure and within 50 feet from the Link on West Grand Avenue and Class II bike lane on Campbell Street. The Link by Peralta Studios could experience noise levels as high as 92 dBA L_{eq} during the construction of elevated structure and 91 dBA L_{eq} during the construction of the Link. However, due to the intermittent nature of construction and because construction activities are not typically occurring in the exact same location for the duration of the construction window, construction noise would likely be considerably lower than this at this location most of the time. In addition, note that it is unlikely that the three loudest pieces of equipment for each activity would be operating simultaneously and in the same exact location; however, this

assumption allows for a conservative analysis of potential construction noise effects. Further, intermittent construction noise would most likely not dominate the ambient noise environment in these areas, which is generally dominated by vehicle traffic on the freeway ramps, Mandela Parkway, and West Grand Avenue.

Table 2.13-7. Estimated Reasonable Worst-Case Noise Levels at Nearest Noise-Sensitive Use by Construction Activities

	L_{eq} Noise Level (dBA)	
Construction Activity	**At 50 feet from Source**	**Peralta Studios**
Elevated Link structure with pile driving	96	92 (at 75 feet)
At-grade Link without pile driving	91	91 (at 50 feet)

Further, Project construction would be conducted in accordance with Caltrans Standard Specifications Section 14-8.02, Noise Control, and the City of Oakland's SCAs. As described in detail above, applicable SCAs include 61 (limits on days/hours of construction operation), 62 (requirement to implement noise reduction measures to reduce construction noise), 63 (requirement of a construction noise management plan for extreme construction noise and requirement of notification for property owners within 300 feet of extreme noise-generating construction activities), 64 (requirement for project-specific construction noise reduction measures) and 65 (requirement to generate procedures for responding to and tracking construction noise complaints). Because the project would comply with the local restrictions on construction noise and because construction activities would follow the City of Oakland's SCAs, construction related noise impacts would be less than significant.

Operational Noise

Construction of the new Link would require permanently closing or vacating the existing West Grand Avenue alley[17] to provide the right-of-way for the new Link. It would also require creating a cul-de-sac on Willow Street and installing bollards on Campbell Street, where they currently intersect with West Grand Avenue, to prevent vehicular traffic from crossing the new Link on West Grand Avenue. In addition, a new 100-space parking lot located on the west side of Wood Street would be constructed to provide vehicle parking for Link users. Since this project is not a Type I or II project, a noise study is not required per Caltrans requirements.

Changes to these local streets would result in redistribution of traffic to surrounding local streets. However, traffic volumes on West Grand Avenue alley, Willow Street, and Campbell Street are generally low.[18] To result in a 3 dB increase in traffic noise, which is generally not considered to be perceptible outside of controlled laboratory conditions,[19] a doubling of traffic volumes would need to occur. Therefore, the redistribution of traffic on these streets is not expected to cause a substantial traffic increase on surrounding local streets or cause a noticeable traffic noise increase at the Mandela Parkway median, Raimondi Park, Peralta Studios live/work warehouse space, or other sensitive land uses.

[17] West Grand Avenue alley is a narrow one-way street on the south side of Grand Avenue, between Wood Street and Mandela Parkway.

[18] Based on the traffic counts conducted at the Campbell Street/West Grand Avenue alley intersection in October 2013, the peak hour traffic volume on Campbell Street was 145 vehicles in the afternoon or PM peak hour.

[19] California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013, *https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf*, accessed July 9, 2020.

Link users and existing Bay Bridge Trail users utilizing the new Wood Street parking lot would generate localized vehicle trips on surrounding streets that provide the access to the parking lot. As described in Section 2.17, *Transportation/Traffic*, the parking lot is anticipated to generate 50 vehicle trips in the afternoon peak hour on weekdays and 150 midday peak hour trips on weekends (Fehr and Peers 2014). Vehicle trips generated by the parking lot are not expected to cause a substantial traffic increase on surrounding streets or cause a noticeable traffic noise increase at Mandela Parkway median, Raimondi Park, or Peralta Studios, or other sensitive land uses. This is because the afternoon peak hour traffic volumes on Mandela Parkway are about 564 vehicles per hour in the southbound direction and about 393 vehicles per hour in the northbound direction.[20] A doubling of the traffic volumes on Mandela Parkway would be required to result in a 3 dB (i.e., barely noticeable) increase in noise. Thus the 50 and 150 Project-generated weekday and weekend vehicle trips, respectively, in the peak hour would result in much less than a 3 dB, or a barely noticeable (if noticeable at all), increase in noise. Therefore, traffic noise impacts from Project operation would be less than significant.

b. The Project would result in a less than significant impact as a result of exposing people to or generation of excessive ground-borne vibration or ground-borne noise levels.

Construction of the elevated Link structure would require the use of pile drivers, which have the potential to cause substantial ground vibration that could affect surrounding land uses. The nearest recreational sensitive receptors (Mandela Parkway median and Raimondi Park) are approximately 500 and 600 feet from the elevated structure, respectively. The Peralta Studios live/work space building would be within 100 feet of pile driving activities.

The PPV vibration level from use of the pile drivers at the nearest reactional sensitive land uses would be approximately 0.008 inches/second at Mandela Parkway median and substantially less than this at Raimondi Park. Using the criteria in **Table 2.13-4**, a PPV of 0.008 is less than the lowest Caltrans annoyance criterion, barely perceptible. Therefore, vibration impacts related to annoyance would not be excessive at Mandela Parkway median or Raimondi Park.

The PPV at the Peralta Studios live/work space would be, at most, approximately 0.1413 inches/second in the area of the building that is closest (75 feet) to the pile driving activity occurring near the Campbell Street/West Grand Avenue alley intersection (**Table 2.13-2**). Although this property has been identified as eligible for listing on the NRHP and CRHR (refer to MR-4 in Section 2.5.1), this property is not considered a fragile historic building.

A PPV of 0.1413 could be strongly perceptible in the area of the Peralta Studios live/work space, adjacent to the Campbell Street/West Grand Avenue intersection. However, pile driving activities that would affect the building would be short in duration because the Campbell Street/West Grand Avenue intersection is at the terminus of the elevated bike path. Thus, the majority of the pile driving activity would not occur near the Peralta Studios live/work space. In addition, in most of the building the PPV would be less than 0.0396 (see **Table 2.13-2**). This is because most of the building is located more than 175 feet from the nearest proposed pile driving activity near the intersection of West Grand Avenue and Campbell Street/West Grand Avenue intersection. A PPV of 0.0396 would be less than distinctly perceptible. Because strongly perceptible vibration from pile driving activities would be temporary and only occur in a small area of the Peralta Studios building, ground vibration impacts from pile driving activities related to annoyance would not be characterized as excessive. Further, temporary construction activities are exempt from vibration standards in the Oakland Planning Code. Consequently, vibration impacts related to annoyance would be considered less than significant.

[20] Based on the traffic counts conducted at the Mandela Parkway/West Grand Avenue intersections in October 2013.

Buildings in the vicinity of the elevated structure consist of industrial warehouses that would not be particularly sensitive to ground vibration caused by Project pile-driving activities. As discussed above, the PPV would be 0.0396 inches/second beyond 175 feet of the pile driving activities. This PPV is less than half of the vibration damage potential for the most fragile structures (extremely fragile historic buildings, ruins, ancient monuments), as shown in **Table 2.13-3**. According to the architectural historians who conducted the analysis in Section 2.5, *Cultural Resources*, there are no structures within 175 feet of West Grand Avenue between Wood Street and Campbell Street, where pile driving activities would occur, that would be considered extremely fragile historic buildings, ruins, or ancient monuments. There is one property at 1657 West Grand Avenue that may be eligible for the NRHP (refer to MR-4 in Section 2.5.1 and **Figure 2.5-1**). However, this property is not considered to be an extremely fragile historic building. The property includes very large steel storage sheds with very high tensile strength because they were designed for heavy equipment use around and inside the structures. It is mostly likely to fall under the Caltrans vibration-related damage category of historic and/or some old buildings, which has a damage criterion of 0.25 PPV for continuous/frequent intermittent sources (such as construction). The vibration level cited above of, at most, approximately 0.14 PPV inches/second, along with the vibration level for most of the Perlata Studios live/work space cited above of 0.0396 PPV inches/second are both below this damage criterion. Thus, as was the case for vibration-related annoyance impacts on nearby sensitive uses, potential vibration-related damage impacts on surrounding buildings would be less than significant.

c. The Project would have no impact as a result of exposing people to excessive noise levels due to Project location within the vicinity of a private airstrip or within two miles of a public airport or public use airport.

The Project is not located within an airport land use plan or within two miles of a public use airport. In addition, the project is not located within the vicinity of a private air strip. Therefore, the project would not expose people in the Project area to excessive noise levels from aircraft. There would be no impact related to the exposure of persons to excessive noise levels from aircraft.

2.13.3 Mitigation Measures

No mitigation measures are required.

2.14 Population and Housing

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

2.14.1 Environmental Setting

2.14.1.1 Existing Conditions

There are no residents or residential units within the Project area. The closest residential units are located on Peralta Street, between 18th and 20th Streets. This is approximately 320 feet south of the proposed Class II bike lanes on 20th Street and 940 feet south of the proposed Class I portion of the Link on West Grand Avenue. In addition, there are some residences in the vicinity of 17th Street, between Mandela Parkway and Willow Street. Peralta Studios, a live/work warehouse space, is located at the southwest corner of West Grand Avenue/Mandela Parkway. The nearest Mixed-Use (Residential/Commercial) land use is located northeast of the Project area at 28th Street, between Mandela Parkway and Ettie Street.

According to recent U.S. Census Bureau data, the city of Oakland has a population of 433,031 (as of July 1, 2019) (U.S. Census Bureau 2020). By 2025, according to ABAG's *Projections 2040*, the city's population is expected to grow to 516,855, an increase of approximately 19 percent (ABAG 2018). According to recent California Department of Finance data, there are approximately 175,457 housing units in Oakland (as of January 1, 2020). Of the total housing units, approximately 93.6 percent (164,296 units) are occupied and the city has a vacant rate of 6.4 (California Department of Finance 2020).

The Association of Bay Area Government's Regional Housing Need Plan for the San Francisco Bay Area, 2015–2023, states that Oakland must add a total of 14,765 new housing units between 2015 and 2023 (ABAG 2013). **Table 2.14-1** shows the number of new housing units needed per income group.

Table 2.14-1. Regional Housing Need Allocation for Oakland, Alameda County, 2015–2023, by Income Level

Very Low*	Low*	Moderate*	Above Moderate*	Total
2,059	2,075	2,815	7,816	14,765

Source: Association of Bay Area Governments 2013.
Note: Income levels
Very Low = Up to 50% of area median income
Low = Between 51 and 80% of area median income
Moderate = Between 81% and 120% of area median income
Above Moderate = Above 120% of area median income

2.14.1.2 Regulatory Setting

Federal and State

There are no federal or State laws or regulations that pertain to recreational resources.

Regional and Local

The City of Oakland adopted Housing Element 2015–2023 on December 9, 2014 (City of Oakland 2014c). The current Housing Element contains the following goals relevant to the Project.

- **Goal 1:** Provide Adequate Sites Suitable for Housing for All Income Groups
- **Goal 4:** Conserve and Improve Older Housing and Neighborhoods
- **Goal 5:** Preserve Affordable Rental Housing
- **Goal 7:** Promote Sustainable Development and Sustainable Communities

2.14.2 Discussion of Potential Impacts

a. The Project would have a less-than-significant impact regarding the induction of substantial unplanned population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads of other infrastructure).

The Project would not induce population growth either directly by proposing new residential units or businesses or indirectly by extending roads or infrastructure. Although the Project would construct Class I and Class II bicycle paths, these would pass through a developed, urban environment and therefore would not lead indirectly to the construction of new homes or business that would induce population growth. The impact would be less than significant.

b. The Project would have no impact regarding the displacement of substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The Project would construct Class I and Class II bicycle lanes. It would not require the removal of any housing and thus would not result in any displacement of housing or people. There would be no impact.

2.14.3 Mitigation Measures

No mitigation measures are required.

2.15 Public Services

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☐	☒

2.15.1 Environmental Setting

2.15.1.1 Existing Conditions

Fire Protection

The Oakland Fire Department (OFD) is the agency responsible for preventing and suppressing fires in Oakland. The OFD employs approximately 500 sworn full-time fire fighters. Combined daily staffing at all the city's fire stations totals three battalion chiefs, 32 officers, 25 fire engineers, and 75 firefighters over three daily shifts. The OFD operates 25 fires stations throughout the city. OFD's fleet of equipment includes 25 type-1 engines, four type-3 engines, seven aerial ladders, eight brush patrols, a fireboat, a heavy-rescue vehicle, two foam units, six airport rescue rigs, and four hose tenders. The OFD aims to provide emergency service within seven minutes of notification 90 percent of the time. Emergency services can be provided in that time-frame to areas located within 1.5 miles of a fire station (City of Oakland 2012). The OFD has an interagency mutual-aid agreement with the City of Emeryville and other adjoining jurisdictions for cooperative response to fires (City of Oakland 2012).

Three fire stations are within a 1.5-mile radius of the Project area. The OFD station No. 3 is located at 1445 14th Street, Oakland, approximately 0.23 mile south of the Project. OFD station No. 5 is located approximately 0.73 mile northwest of the Project area at 934 34th Street, Oakland. The City of Emeryville's Alameda County Fire Station 34 is located approximately 1.3 miles north of the Project area (City of Emeryville 2014). The Project area is not within a designated very high fire hazard severity zone as designated by the California Department of Forestry and Fire Protection (California Department of Forestry and Fire Protection 2008).

Police Protection

The City of Oakland is divided into five areas for police protection. The linear Project area extends through Area 1 (City of Oakland 2020).

The Oakland Police Department Bureau of Field Operations (BFO) personnel provide day-to-day police services that include response to emergency and non-emergency calls for service and critical incidents, problem solving and crime-fighting efforts). The BFO is divided into two units, BFO 1 and BFO 2. BFO 1 covers Areas 1, 2, and 3 and neighborhood services units (beats 1-22). BFO 2 covers all other areas of the city. (Oakland Police Department 2018a)

In 2018, the BFO had 557 sworn police officers and 87 civilian professional staff members (Oakland Police Department 2018b). In 2018, Area 1 had one captain, 90 authorized officers, 17 authorized sergeants, and two authorized lieutenant officers.

The Oakland Police Department does not have a full-time police bicycle patrol unit. However, there are officers who conduct bicycle patrols as a collateral duty. The officers who are assigned to the downtown area (one sergeant and three officers) as part of the Foot Patrol Unit use bicycles half the time and walk half the time to patrol their areas. Currently, they do not patrol the recently constructed Bay Bridge Trail, recreational areas near the Bay Bridge, or the Project area. In addition, the Department has trained many of their Community Resource Officers (currently 35) to conduct bicycle patrol in different geographic areas throughout the City. (Allison pers. comm.).

The California Highway Patrol (CHP) will likely patrol the Link in cooperation with the Oakland Police Department. The CHP works to reduce the number of collisions and fatalities on California's roads and highways and provides programs that promote safety and educate the public. The nearest CHP office to the Project site is less than one mile away at 3601 Telegraph Avenue. The Oakland CHP office services Oakland, Berkeley, Piedmont, Emeryville, Albany, El Cerrito, and Richmond (CHP 2021).

Schools

The Oakland Unified School District is responsible for providing public education for grades K–12 in the City of Oakland. There are five schools within a 0.5-mile radius of the Project area. These five schools are PLACE at Prescott located approximately 0.53 mile southwest of the Project area, St. Martin de Porres school located 0.48 mile south of the Project area, Cole Elementary school located approximately 0.41 mile south of the Project area, Ralph J. Bunche High School located approximately 0.2 mile east of the Project area, and McClymonds High School located approximately 0.40 mile east of the Project area.

Parks

The Oakland Parks and Recreation Department manages approximately 2,500 acres of open space, including 100 parks, five swimming pools, 53 athletic fields, three golf courses, 59 outdoor tennis courts, seven community gardens, and 25 recreation community interpretive centers (City of Oakland 2014d).

There are 13 parks in the vicinity (within 0.5 mile) of the Project area. These parks are John Judge Sutter Regional Shoreline, 14th Street Pocket Park, Crescent Park, Cypress Freeway Memorial Park, De Fremery Playground, Fitzgerald Park, Lowell Park, McClymonds Mini Park, Poplar Playground, Raimondi Park, Union Plaza Park, Wade Johnson Park, and Willow Street Mini Park.

The closest park is Raimondi Park, which is located adjacent to the Project area on the south side of 20th Street, between Wood Street and Campbell Street. Raimondi Park has a playground and is used for active recreation, such as baseball and football activities. Although not a designated park, the Mandela Parkway median is designated open space extending 1.25 miles, between 32nd Street on the north to 8th Street on the south. The regional Bay Trail extends along Mandela Parkway.

Other Public Facilities

The Project alignment connects with existing segments of the regional Bay Trail on both the east and west ends. Refer to Section 2.16, *Recreation*.

There are no other public facilities (e.g., community centers, libraries) within or adjacent to the Project area. No other public services would be affected by the Project.

2.15.1.2 Regulatory Setting

Federal and State

There are no federal and State policies relevant to the public services issues addressed in this section.

Regional and Local

City of Oakland General Plan Safety Element

The City of Oakland General Plan Safety Element (City of Oakland 2012) sets forth policy and goals associated with safety. The City's Safety Element goals promote preparedness to respond to and recover from disasters and emergencies and reducing the city's rate of violent crime.

2.15.2 Discussion of Potential Impacts

a. The Project would result in a less-than-significant impact on fire protection and police protection services, and no impact on schools, parks, and other public facilities.

The Project would not increase the population in the Project area such that construction of new public facilities or alteration to existing public facilities would be required. The Project would not increase the demand for schools or parks because it would not result in new housing or otherwise introduce a new permanent population to the area. There would be no impact on schools.

Project construction would occur on 20th Street, adjacent to Raimondi Park. This could temporarily disrupt access to the park via 20th Street; however, the main entrance to the park is on 19th Street, which is easily accessed via the other surrounding streets (Wood Street and Campbell Street). Therefore, the impact would be less than significant. Project construction would also occur on Willow Street, adjacent to Willow Street Mini Park. This could temporarily disrupt access to the park via Willow Street. However, the park is also easily accessed from 13th Street and 14th Street. Therefore, the impact would be less than significant.

The Project would introduce a new recreational facility that would attract more people to visit the area for recreational purposes. An increase of recreational users in the Project area and on the Link itself would result in a slight increase in the demand for fire and police protection in the event of an emergency. As described Section 1.3, *Project Description*, the elevated portion of the Link would include fencing, and lighting would be provided along the length of the Link by existing and new streetlights. The periodic patrolling of the Link by the CHP or city police bike patrol unit would also minimize the potential increase demand for public services. Patrols of the Link would not result in a demand for new fire or police protection facilities. Therefore, the impact on public services would be less than significant.

2.15.3 Mitigation Measures

No mitigation measures are required.

2.16 Recreation

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

2.16.1 Environmental Setting

2.16.1.1 Existing Conditions

Parks and Recreational Facilities

Existing recreation facilities that are owned and operated by the City of Oakland Parks and Recreation Department in the West Oakland area include Raimondi Park, Cypress Freeway Memorial Park, 14th Street Pocket Park, and Willow Street Mini Park (City of Oakland 2014d). The closest park is Raimondi Park, which is located adjacent to the Project area on the south side of 20th Street, between Wood Street and Campbell Street. Raimondi Park has a playground and is used for active recreation, such as baseball and football activities. Artwork in Cypress Freeway Memorial Park, located on Mandela Parkway at 14th Street, honors responders to the collapsed Cypress freeway during the 1989 Loma Prieta earthquake, many of whom were West Oakland residents (Oakland Wiki 2014). The 14th Street Pocket Park, between Palisade Drive and Zephyr Drive, and Willow Mini Park at 14th Street are approximately 0.5 mile from the Project.

Existing recreational facilities within the project facility that are owned and operated by the East Bay Regional Parks District comprise the Judge John Sutter Regional Shoreline, which is approximately 1,500 feet west of the Project area on Burma Road.

Although not a designated park, the Mandela Parkway median is designated open space and is considered green space by the City (Miller pers. comm.). Mandela Parkway provides an attractive parkscape in a highly industrialized setting. Mandela Parkway is 1.3-mile-long roadway, extending from 8th Street to 32nd Street in West Oakland where the Cypress Freeway was located. A wide median, which varies in width from 65 feet to 110 feet, separates the two northbound and two southbound lanes of vehicular traffic and Class II bicycle lanes. The median includes a wide meandering bicycle/pedestrian path, approximately 14 acres of landscaping, lighting, sculptures, benches, drinking fountains, and a memorial to the victims and rescuers of the 1989 Loma Prieta Earthquake (the Cypress Freeway Memorial Park described above) (**Figure 2.1-2e**, **Photo 9**).

The City of Oakland has 12 planning areas, 10 of which have permanent populations. The Project is in the West Oakland planning area. The City of Oakland OSCAR element defines 10 park classifications for the City of Oakland and specifies service levels for some of these park types. The Project is a linear park, defined as “a trail that either provides a connection between two areas or provides linear access to a linear

feature such as a shoreline or creek, or both" The size range varies, the service area depends on the size of the parks served, and the service goal is to provide a linear park where possible along creek and shoreline areas and within major medians (City of Oakland 1996).

Bicycle and Pedestrian Paths

The Project area is served by a robust bicycle network. According to the 2014 Oakland Bikeways map (City of Oakland 2014e), two primary bicycle paths are near the Project area: the Bay Bridge Trail (called the Bay Bridge Path on the Bikeways map) and the Mandela Parkway bike lane and median with bicycle/pedestrian path. As shown in **Figure 1-3**, the Project would connect to the Bay Bridge Trail on the west end and Mandela Parkway on the east end, including a Class IV bike lane along West Grand Avenue between Mandela Parkway and San Pablo Avenue.

These two primary bicycle paths have the following local connections, which lead to a greater bicycle network.

- Bay Bridge Trail
  - Shellmound Street bike lane
  - 40th Street bike lane to Mandela Parkway bike lane
  - Horton Street bike boulevard
- Mandela Parkway bike lane
  - 32nd Street bike boulevard
  - 14th Street bike lane
  - 8th Street bike lane
  - 7th Street path from Wood Street eastward to Middle Harbor Shoreline Park
  - 7th Street bike lane and 7th Street arterial bike route

Both the Bay Bridge Trail and Mandela Parkway are segments of the regional Bay Trail (Figure 2.16-1). An existing path follows Mandela Parkway and turns onto 8th Street and 3rd Street, and a proposed path leads from the Bay Bridge to Maritime Street, and branches from there to lead under the I-80/I-580 interchange to Shellmound Street (City of Oakland 2014e). The Bay Trail is a series of existing and planned regional hiking and bicycle trails. When complete, it will provide a 500-mile connected trail network around the San Francisco and San Pablo Bays. It will connect with the shoreline of all nine Bay area counties, link 47 cities, and cross the major toll bridges. Over 70 percent of the Bay Trail's ultimate length has been completed (San Francisco Bay Trail 2020). On January 27,2022, the San Francisco Bay Trail Project approved the addition of the West Oakland Link to the spine alignment of the Bay Trail System (ABAG San Francisco Bay Trail Steering Committee. 2022).

2.16.1.2 Regulatory Setting

Federal and State

There are no federal or State laws or regulations that pertain to recreational resources as addressed in this section.

Bay Trail Map

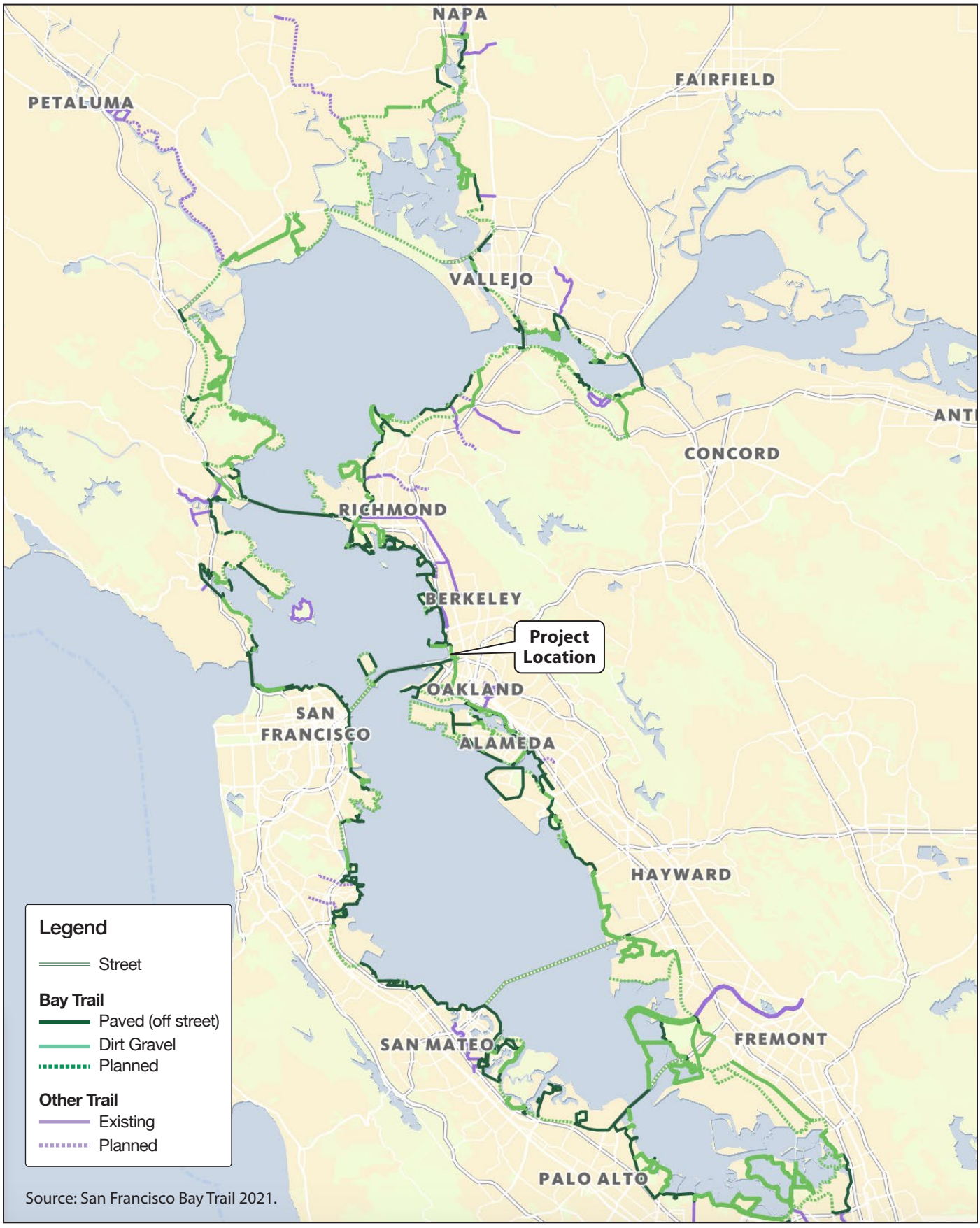


Figure 2.16-1

West Oakland Link

Regional and Local

City of Oakland General Plan Open Space, Conservation, and Recreation Element

In addition to several policies listed in Aesthetics Section 2.1.1.2, the OSCAR includes the following policies relevant to the Project and recreation.

- **Policy REC-2.4: Offsite Conflicts.** Manage park facilities and activities in a manner which minimizes negative impacts on adjacent residential, commercial, or industrial areas.
- **Policy REC-3.3: Park Location Factors.** Consider a range of factors when locating new parks or recreational facilities, including local recreational needs, projected operating and maintenance costs, budgetary constraints, surrounding land uses, citizen wishes, accessibility, the need to protect or enhance a historic resource, and site visibility.

West Oakland Specific Plan

The West Oakland Specific Plan (WOSP) describes the open spaces and parklands that currently exist in West Oakland and the types of urban spaces and parklands that would support urban and community growth in West Oakland as envisioned by City planners. West Oakland includes both traditional city parks as well as other types of urban shared spaces, such as waterfronts, linear parks, outdoor markets, and urban farms. Several urban planning efforts are listed in the WOSP as being consistent with the WOSP. The Gateway Project, including the Link leading to the new Bay Bridge, is described as being "generally consistent with principles of this [WOSP]. It would provide additional open space resource for the community and would create another West Oakland amenity that could attract new development" (City of Oakland 2014a).

City of Oakland Bicycle Master Plan

The Bicycle Master Plan includes a planned bicycle lane and bicycle path leading from Mandela Parkway along Grand Avenue to the Bay Bridge approach (City of Oakland 2007). The following policies and actions are relevant to the Project and recreation.

- **BMP Policy 1A: Bikeway Network.** Develop and improve Oakland's bikeway network.
    - **Action 1A.9** – Bicycle Path Security: Where appropriate, consider security and monitoring mechanisms such as lighting, video cameras, call boxes, emergency access, and bicycle patrols along paths in isolated areas.
    - **Action 1A.12** – Regional and Inter-regional Bikeways: Work with partner agencies to support the development of regional and inter-regional bikeways.
- **BMP Policy 1D: Parking and Support Facilities.** Promote secure and conveniently located bicycle parking at destinations throughout Oakland.
    - **Action 1D.5** – Security: Identify security and monitoring mechanisms for bicycle parking including lighting, video cameras, call boxes, and security patrols.

City of Oakland Pedestrian Master Plan

The following policies and actions are relevant to the Project and recreation.

- **PMP Policy 2.1: Route Network.** Create and maintain a pedestrian route network that provides direct connections between activity centers.
    - **Action 2.1.1.** Improve existing connections across/under freeways to activity centers using lighting, acoustics, and other design features.

- **Action 2.1.2.** Develop a system of signage for pedestrian facilities including walkways and trails.
- **Action 2.1.8.** To the maximum extent possible, make walkways accessible to people with physical disabilities.

- **PMP Policy 3.1: Streetscaping.** Encourage the inclusion of street furniture, landscaping, and art in pedestrian improvement projects.
  - **Action 3.1.4.** Include pedestrian-scale lighting in streetscaping projects.

2.16.2 Discussion of Potential Impacts

a. The Project would have a less-than-significant impact on the use of existing parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

Construction of the Project would not adversely affect or cause a substantial increase in the use of nearby parks and other recreational facilities. The number of construction workers onsite who might use nearby recreational facilities during their break times for the 24-month construction period is expected to be minor and is not expected to cause physical deterioration in nearby parks, open spaces, and trails, or create a need for new or expanded recreational facilities. Therefore, the impact of Project construction on nearby recreational facilities is less than significant.

Project operation would improve access to the area. However, it would not result in an increase in population that would result in increased use of or need to expand existing recreational facilities. The Project would not displace any facilities, requiring expansion of existing or new recreational facilities. Further, pedestrian and bicyclist use of the Link is not expected to cause increase the use of neighborhood parks. Therefore, the impact of the Project on nearby recreational facilities during Project operation is less than significant.

b. The Project would have a less-than-significant impact as a result of requiring the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

The Project does not require the construction or expansion of recreational facilities. This Project is itself a recreational project with independent utility. This Initial Study evaluates and discloses environmental effects associated with this Project and identifies mitigation to reduce all potentially significant effects to a less-than-significant level. Therefore, this impact is less than significant.

Together with the proposed Judge John Sutter Regional Shoreline project, the Project provides an integrated recreational facility. The WOSP states that this integrated recreational facility is "generally consistent" with the WOSP.

2.16.3 Mitigation Measures

No mitigation measures.

2.17 Transportation

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Conflict with an a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)(1)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

2.17.1 Environmental Setting

This setting section discusses existing roadway network and transportation facilities in the vicinity of Project area, traffic operation conditions at analysis intersections, and the applicable regulations and impact criteria for the evaluating the Project's transportation and traffic impacts. Information in this section is based on the Transportation Impact Analysis and the Transportation Errata Memorandum prepared for this Project (**Appendix C-1**), which also includes additional background information.

As described in Section 1.3, the Project would require the conversion of roadway shoulders to a bike path and lane reductions at the West Grand Avenue/Mandela Parkway intersection.

2.17.1.1 Existing Conditions

Roadway Network

Regional access to the Project area is provided by several regional freeways, including I-80, I-580, I-880, I-980, and California State Route 24 (SR 24). Other major roadways in the vicinity of the Project area include Mandela Parkway, Adeline Street, Grand Avenue, 7th Street, Frontage Road, Maritime Street, and Burma Road. The extents of these roadways in relation to the Project are shown in **Figure 2.17-1**. The Project would construct a Class I bike path on West Grand Avenue and Class II bike lanes on Wood Street, Willow Street, Campbell Street, and 20th Street. These roadways in the Project area are described in more detail below.

West Grand Avenue is a four-lane arterial that extends east–west through the Project area. Within the Project area, it connects to I-880 and the eastern end of the Bay Bridge on the west and Mandela Parkway on the east. There are sidewalks on West Grand Avenue between Campbell Street and Mandela Parkway and on West Grand Avenue alley between Wood Street and Campbell Street. There is a narrow (4.5' wide) sidewalk on the south side of the elevated portion of West Grand Avenue west of Campbell Street. No street parking is provided on West Grand Avenue in the Project area. Alameda-Contra Costa Transit District (AC Transit) operates the Transbay NL bus line along Grand Avenue. The City of Oakland's *Grand Avenue Mobility Plan* is currently in progress. It outlines a multimodal mobility plan for Grand Avenue between Mandela Parkway and MacArthur Boulevard, with an emphasis on fairness, just treatment, and safety. The final plan is set to be completed in 2021.

Roadway Network

Figure 2.17-1

West Oakland Link

Wood Street, Willow Street, Campbell Street, and **20th Street** in the Project area are low-volume, two-lane local streets. There are sidewalks on Willow Street, Campbell Street, and 20th Street. There are no sidewalks on Wood Street, but there are shoulders. There is no formal on-street parking with signage on these streets. However, the road width of these streets is wider than standard two-lane streets, and the additional width is used for informal on-street parking for businesses along the streets.

Pedestrian and Bicycle Facilities

Pedestrian facilities include sidewalks, pathways, crosswalks, and pedestrian signals. In the Project area, sidewalks are provided on West Grand Avenue (between Campbell Street and Mandela Parkway and along the south side of the elevated section west of Campbell Street), West Grand Avenue alley (between Wood Street and Campbell Street), and on Willow Street and Campbell Street. Shoulders are provided on Wood Street. Crosswalks are provided at the West Grand Avenue/Mandela Parkway intersection.

In general, bicycle facilities in Oakland are classified into following three types, as identified in the City of Oakland's Bicycle Master Plan (2007). These are consistent with the Caltrans classifications identified in Section 1.3.1.

- **Class I Bikeway (Bike Path):** A completely separate right-of-way designated for the exclusive use of bicycles and pedestrians with minimal roadway crossings. Class I paths are typically 8 to 10 feet wide.
- **Class II Bikeway (Bike Lane):** A striped lane on a street for one-way bicycle travel. Bike lanes are generally 5 feet wide. Vehicle parking and vehicle and pedestrian cross flows are permitted. Class II lanes are typically 5 to 6 feet wide.
- **Class III Bikeway:** Streets with signs or pavement markings for shared use with cyclists and motor vehicles. Class III bikeways are generally designated for local residential or collector streets with low traffic volumes.

Existing and proposed bicycle facilities in the Project vicinity are shown in **Figure 2.17-2**.

A portion of the Link will be incorporated into the regional Bay Trail (ABAG San Francisco Bay Trail Steering Committee. 2022). The Link will therefore connect directly to the Bay Bridge Trail on the west end of the Link alignment and Mandela Parkway on the east end of the alignment, which are part of the Bay Trail. As described in Section 2.16.1.1, the Bay Trail includes 500 miles of continuous bicycle and hiking trails that will ultimately connect the shorelines of all nine Bay Area counties.

Transit Services

Transit service in the Project area is provided by AC Transit, which provides both local service and Transbay service throughout Oakland and the greater East Bay and San Francisco area. The closest services to the Project area are Transbay route NL, operating along West Grand Avenue, and local route Line 29, operating along Peralta Street. Stops are located near the West Grand Avenue/Mandela Parkway intersection. **Figure 2.17-3** shows transit services in the Project vicinity.

Amtrak is a national train operator that connects Northern California to the rest of the country via passenger rail. Amtrak extends beneath West Grand Avenue in the Project area. The two closest stations are in Emeryville to the north and in Oakland's Jack London Square to the south.

Existing Bicycle Facilities

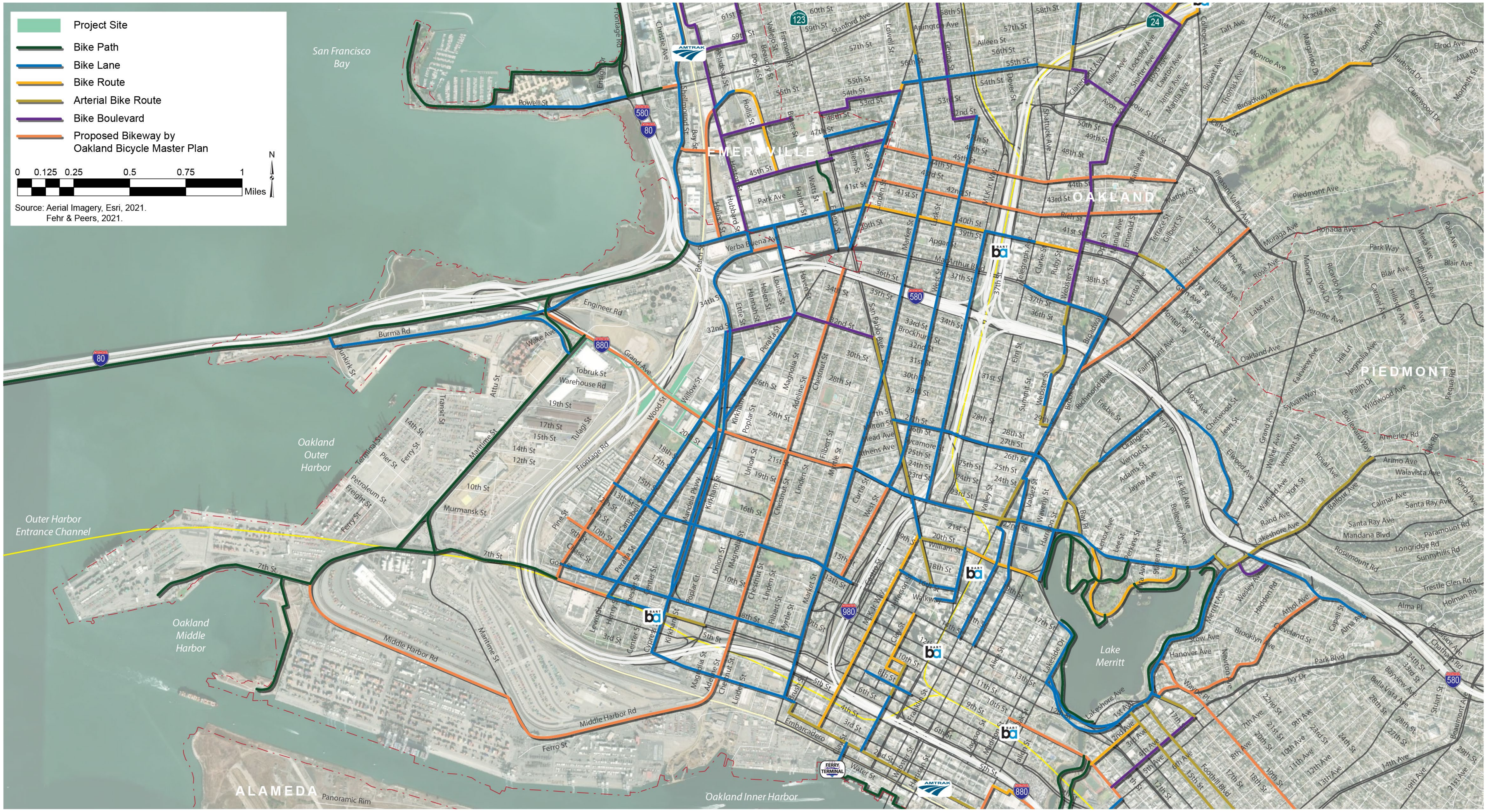


Figure 2.17-2

West Oakland Link

Existing Transit Service

Figure 2.17-3

West Oakland Link

2.17.1.2 Regulatory Setting

Federal

There are no relevant federal regulations for identifying environmental effects of the Project on transportation and traffic relevant to this section.

State

Senate Bill 743 (SB 743) updated the way transportation impacts are measured in California for new projects. In response to SB 743, the Office of Planning and Research (OPR) updated the California Environmental Quality Act (CEQA) Guidelines to include new transportation-related evaluation metrics. Draft guidelines were developed in August 2014, and after several rounds of public review and feedback, final proposed guidelines were published on November 27, 2017, with an associated *Technical Advisory Document on Evaluating Transportation Impacts in CEQA* dated December 2018. That process identified vehicle miles traveled (VMT) as the most appropriate metric for evaluating the environmental effects of a project from a transportation perspective and prohibited the use of delay-based metrics for the purposes of identifying transportation impacts under CEQA.

Regional and Local

Metropolitan Transportation Commission Vehicle Transportation Maps

The Metropolitan Transportation Commission (MTC) has prepared VMT maps that characterize current (2020) VMT per capita by place of residence (Metropolitan Transportation Commission 2018) and VMT per capita by place of work (Metropolitan Transportation Commission 2019) for all areas of the nine-county San Francisco Bay Area region, as summarized at the geographic level of the Transportation Analysis Zone (TAZ). These maps were prepared consistent with City of Oakland and OPR Technical Advisory guidelines for map-based screening, in which geographic areas that generate low levels of VMT are identified because projects in those areas are presumed to exhibit similarly low levels of VMT and thus can be screened out of further VMT analysis. This type of screening is recommended for residential and for office (employment) uses.

Alameda County Countywide Travel Demand Model

The Alameda County Transportation Commission's Alameda Countywide Travel Demand Model allows the commission to anticipate and forecast the potential impacts of land development decisions on major roadways in the county. The model is periodically updated to be consistent with the most recent land use and socio-economic database (Sustainable Communities Strategy from the Plan Bay Area) of the Association of Bay Area Governments and assumptions of the MTC's regional travel demand model. The current Alameda countywide travel demand model, completed in July 2014, includes Plan Bay Area 2013 land use assumptions. An update to incorporate the Plan Bay Area 2040 assumptions is under way. The model addresses traffic volumes, VMT, transit accessibility, and miles of congested roads.

City of Oakland General Plan Land Use and Transportation Element

The Land Use and Transportation Element (LUTE) (City of Oakland 1998) includes objectives and policies to maintain acceptable traffic operations, reduce congestion, and promote the use of alternative transportation modes. The following policies are relevant to the Project:

- **Policy T3.5: Including Bikeways and Pedestrian Walks.** The City should include bikeways and pedestrian walks in the planning of new, reconstructed, or realized streets, wherever possible.
- **Policy T3.9: Providing Parking for Transportation.** The City should strive to provide parking for multiple modes of transportation throughout the city where it is needed and does not unduly disrupt traffic flow.
- **Policy T4.8: Accommodating Multiple Types of Travel on the Bay Bridge**. The City should encourage the design and engineering for the new Bay Bridge to accommodate multiple means of access and travel by automobiles, trucks, transit, bicycles, pedestrians, and future mass transit.
- **Policy T4.9: "Gateway" Public Access Area.** The City, in concert with the East Bay Regional Park District, Port of Oakland, Oakland Base Reuse Authority, and Bay Conservation and Development Commission, should support development of a significant new "gateway" public park area[21] at the terminus of the San Francisco-Oakland Bay Bridge east span that is accessible by auto, bicycle, or walking.
- **Policy T4.10: Converting Underused Travel Lanes.** Take advantage of existing transportation infrastructure and capacity that is underutilized to convert travel lanes to bicycle or pedestrian paths or amenities.

City of Oakland Vehicle Miles Traveled Thresholds

The City of Oakland has established VMT thresholds for typical development projects, such as residential, office, or retail projects. Transportation projects are typically evaluated to determine if they could result in induced travel. For example, adding a lane to a congested portion of a highway could result in additional travel as time barriers to travel are reduced. Guidance from OPR, as documented in the December 2018 technical advisory (Governor's Office of Planning and Research 2018), specifies that "the addition of new or enhanced bicycle or pedestrian facilities on existing streets/highways or within existing public rights-of-way, as well as the addition of Class I bicycle paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel," is not likely to increase VMT and should not require an induced travel analysis.

City of Oakland Resolution 84204 Complete Streets Policy

The City of Oakland's Complete Streets Policy (Resolution No. 84204 C.M.S.) states a strong preference for encouraging the use of non-automobile transportation modes, such as transit, bicycling, and walking. This resolution expresses the City of Oakland's commitment to creating and maintaining "complete streets" that provide safe, comfortable, and convenient travel along and across streets through a comprehensive, integrated transportation network that serves all categories of users. This resolution further states that City of Oakland agencies are committed to maintaining sensitivity to local conditions when planning and implementing street projects.

[21] This is now Judge John Sutter Regional Shoreline.

City of Oakland Bicycle Plan

In July 2019, the Oakland City Council adopted Let's Bike Oakland!, an update to the City of Oakland Bicycle Plan. The plan focuses on updating the 2007 plan's vision, goals, and policies with a focus on equity, engaging local community organizations, developing an action plan with performance measures for increasing the number of people who bike, decreasing bicyclist crashes, improving the quality of bikeways to serve all ages and abilities, supporting and expanding existing community-led programs to teach and support new and continuing bicyclists, and implementing the plan with a focus on an equitable distribution of programs and projects.

City of Oakland Pedestrian Plan

The City of Oakland Pedestrian Plan was updated and adopted in 2017. The pedestrian plan identified the "high-injury network," a set of 34 high-injury corridors and 37 high-injury intersections. It also incorporated up-to-date information on existing conditions, refined the City's pedestrian vision and goals, and outlined a five-year work plan of specific high-priority and cost-effective improvements, programs, and policies.

West Oakland Truck Management Plan

The West Oakland Truck Management Plan, prepared by the City of Oakland and the Port of Oakland, is an action plan designed to reduce the effects of truck transportation on local streets in West Oakland. The plan identifies a number of improvements in the West Oakland area, including designating additional streets as Truck-Prohibited Streets, improving truck routing and wayfinding to minimize the number of trucks driving on non-industrial streets, improving safety at intersections near the Port, improving traffic enforcement, changing parking regulations, and improving parking enforcement.

West Oakland Community Action Plan

The West Oakland Community Action Plan, prepared by the Bay Area Air Quality Management District, identifies specific strategies and goals to improve air quality and reduce pollution in West Oakland. Although most of the emissions in West Oakland come from the Port and Port-related functions, there are strategies in the plan related to improving the design and safety of local streets to encourage residents to walk or ride bicycles.

AC Transit Service Adjustment Plan

The AC Transit Service Adjustment Plan, prepared by AC Transit, identifies changed routes in their service area, mostly to increase the frequency of specific routes and eliminate some underperforming routes.

West Oakland Specific Plan

The West Oakland Specific Plan, prepared by the City of Oakland, provides comprehensive, multi-faceted strategies for facilitating the development of selected vacant and/or underutilized commercial and industrial properties within the West Oakland community. The plan is a tool for supporting, attracting, and developing commercial and industrial enterprises that will provide the jobs and services needed by the West Oakland community and the city of Oakland at large.

City of Oakland Standard Conditions of Approval

As stated in Section 1.8.2, *Permits/Approvals*, the Oakland SCA includes conditions of approval for projects. The following SCA is required for all construction projects:

74. Construction Activity in the Public Right-of-Way.

(a) The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets, sidewalks, bicycle facilities, and bus stops.

(b) In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit.

(c) The project applicant shall repair any damage to the public right-of way, including streets and sidewalks, caused by project construction at his/her expense within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to approval of the final inspection of the construction-related permit.

2.17.2 Discussion of Potential Impacts

a. The Project would have a less-than-significant impact resulting from potential conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

During construction, the Project would result in a less-than-significant impact.

For operation, the Project would have a less-than-significant impact related to conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. The Project would also have a less-than-significant impact on parking.

Construction

If the Project is constructed as a single contract, Project construction is estimated to occur over 24 months, from October 2023 to October 2025. However, the Project may be constructed in phases, as follows:

- Phasing Option 1 would take 21 months for the initial build, and the remaining construction would take an additional 18 months.
- Phasing Option 2 would take 21 months for the initial build, and the remaining construction would take an additional 18 months.
- Phasing Option 3 would take 21 months for the initial build, and the remaining construction would take an additional 15 months.

During the construction period, temporary and intermittent transportation impacts may result from truck movements and construction workers' vehicles traveling to and from the Project area. The construction-related traffic may temporarily reduce roadway capacities in the Project vicinity and increase congestion. This is because construction trucks have slower movements and larger turning radii compared to passenger vehicles. In addition, construction activities could disrupt access to existing land uses and parking along the alignment and impede pedestrian and bicycle flow.

Construction equipment could block roadways and damage streets. However, incorporation of the City's SCA 74, Construction Activities in the Public Right-of-Way, requires that the Project applicant obtain an obstruction permit prior to placing any temporary construction-related obstruction in the public right-of-way, prepare a traffic control plan, and repair any damage to the public right-of-way caused by construction. The traffic control plan would contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian accommodations (or detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. Through incorporation of this SCA, this impact would be less than significant.

Operation

The City of Oakland and other agencies adopted several plans that influence the West Oakland area. These plans were reviewed to determine if the Project would result in a conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.

Let's Bike Oakland

The City of Oakland Bicycle Plan identifies a new protected bicycle lane on West Grand Avenue from Maritime Street east through downtown Oakland and beyond. Within the Project area, Wood Street is designated as a future neighborhood bicycle route, and buffered bicycle lanes are proposed to be provided on 14th Street, 18th Street, and Mandela Parkway. The Project would advance the provision of protected bicycle facilities on West Grand Avenue by completing the portion of the Project between Mandela Parkway and Maritime Street. The Project would also provide Class II bicycle lanes on the following roadways:

- West Grand Avenue alley (westbound), from Mandela Parkway to Wood Street
- 20th Street, from Peralta Street (one block south of West Grand Avenue) to Wood Street
- Wood Street, from 20th Street to 24th Street
- Willow Street, from 20th Street to West Grand Avenue
- Campbell Street, from 20th Street to West Grand Avenue alley
- Wood Street parking lot

This would provide additional bicycle facilities beyond those identified in the City of Oakland Bicycle Plan and would not preclude the provision of additional bicycle facilities as identified in the plan by others.

Oakland Walks

The City of Oakland Pedestrian Plan identifies the Project area as a car-dependent area, with the worst sidewalks in the city and the second-highest transportation system injury rate. The Project does not propose any changes at high-injury intersections. There are numerous sidewalk gaps in the area, including on Wood Street and 20th Street. Construction of the proposed Project would not preclude the construction of additional sidewalk facilities by others.

West Oakland Truck Management Plan

As described above, the West Oakland Truck Management Plan is an action plan designed to reduce the effects of truck transportation on local streets in West Oakland. The proposed Project would not preclude

the implementation of any of the plans or strategies identified in the West Oakland Truck Management Plan, and although it would not construct any of the safety improvements identified, the Project would improve bicycle facilities along Grand Avenue (a truck route), thereby improving bicyclist safety in West Oakland.

West Oakland Community Action Plan

The West Oakland Community Action Plan identifies specific strategies and goals to improve air quality and reduce pollution in West Oakland. Although most of the emissions in West Oakland come from the Port and Port-related functions, there are strategies in the plan related to improving the design and safety of local streets to encourage residents to walk or ride bicycles. Because the Project would provide improved bicycle infrastructure in the area, it would help further the goals in the West Oakland Community Action Plan and would not preclude the implementation of other strategies.

AC Transit Service Adjustment Plan

The AC Transit Service Adjustment Plan identifies changed routes in the Project vicinity, mostly to increase the frequency of specific routes and eliminate some underperforming routes. Implementation of the proposed Project would not preclude planned changes to AC Transit service in the area.

West Oakland Specific Plan

As described above, the West Oakland Specific Plan provides comprehensive, multi-faceted strategies for facilitating the development of selected vacant and/or underutilized commercial and industrial properties within the West Oakland community. The plan identifies the provision of bicycle facilities in the area, including Class II bicycle facilities on West Grand Avenue. The proposed Project advances these improvements by constructing a Class I bicycle facility along the West Grand Avenue corridor between Mandela Parkway and Maritime Street.

The West Oakland Specific Plan also identifies Wood Street as a Neighborhood Route and intersecting streets, such as 20th Street, as Minor Priority Pedestrian Routes. A Neighborhood Route is a local street that connects schools, parks, recreational centers, and libraries. Neighborhood Routes are intended to be used for active transportation as well as recreation; Neighborhood Routes accommodate safe walking at night. The proposed Project would improve a portion of Wood Street, as well as intersecting streets, helping to achieve West Oakland Specific Plan goals. Implementation of the Project would not preclude the implementation of other goals and policies articulated in the plan.

Parking

Wood Street, Willow Street, Campbell Street, and 20th Street in the Project area are low-volume, two-lane local streets. There is no signed street parking on these streets, but the road width of these streets is wider than standard two-lane streets. The additional width is used as street parking on both sides of the streets for businesses.

Implementation of the Project would restripe these streets to eliminate the informal parking on one side of the streets and provide Class II bike lanes on both sides of the streets, which would result in the loss of some street parking. However, field observation and a review of Google Earth aerial images and street views indicate that the number of vehicles using on-street parking on these streets is low. Therefore, with implementation of the Project, the parking supply for businesses on the streets is expected to be sufficient.

The City of Oakland General Plan LUTE and the City's Complete Streets Policy (Resolution No. 84204 C.M.S.) state a strong preference for encouraging the use of non-automobile transportation modes, such as

transit, bicycling, and walking. The Project would encourage the use of non-automobile transportation modes by providing additional bicycle and pedestrian facilities within the city of Oakland. The Project would add Class I bicycle facilities along the West Grand Avenue corridor consistent with the City's 2007 Bicycle Master Plan. The Project would add Class II bicycle facilities in the West Grand Avenue corridor vicinity. Therefore, the Project would not conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. In addition, although not required to reduce this impact to a less-than-significant level, **Mitigation Measures TR-1** through **TR-5** would improve access, circulation, safety, and comfort for pedestrian and bicyclists. This would further encourage the use of these modes of travel in the Project vicinity.

Conclusion

Based on the above review of applicable plans, the Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. This would result in a less-than-significant impact, and no mitigation measures are required.

b. The Project would have a less-than-significant impact resulting from a conflict or inconsistency with CEQA Guidelines Section 15064.3, subdivision (b)(1).

Guidance from OPR, as documented in the December 2018 technical advisory, specifies that the addition of new or enhanced bicycle or pedestrian facilities on existing streets/highways or within existing public rights-of-way, as well as the addition of Class I bicycle paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel, is not likely to increase VMT and should not require an induced travel analysis. Therefore, the Class I and Class II facility portions of the Project can be presumed to have a less-than-significant impact on VMT, and no further analysis is required. However, the 100-space parking lot portion of the Project[22] may not be exempt from VMT analysis. Because there are no published guidelines or criteria to evaluate VMT for a parking lot that serves as a trailhead for a Class I facility, guidance presented in the City of Oakland Transportation Impact Review Guidelines and the concepts presented in the technical advisory were applied to the parking lot portion of the Project, considering the intent of SB 743, which is to "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses."

The guidelines suggests the use of "screening criteria" that can be applied to a project to determine whether that project can be presumed to cause a less-than-significant level of VMT, in which case the project could be screened out of further VMT analysis. The City of Oakland criteria include the ability to screen out small projects, which are defined as projects that generate fewer than 100 vehicle trips per day. It is estimated that the parking lot portion of the Project could generate up to 400 vehicle trips per day. However, many of these trips are most likely already on the roadway system and not new vehicle trips. In addition, many people who ride bikes on the Bay Bridge Path have been observed to park in other locations in the vicinity, including the Ikea and Target parking lots and parking areas off Burma Road. However, the extent of this has not been quantified, and providing a trail facility parking facility in combination with the new bicycle facilities could be expected to generate new bicycle travel demand that could back-fill parking demand shifts in the area.

Another screening method is map-based screening, in which geographic areas that generate low levels of VMT are identified. Projects that are located in those areas are presumed to exhibit similarly low levels of VMT and thus can be screened out of doing further VMT analysis. The MTC has prepared VMT maps that characterize current (2020) VMT per capita by place of residence and VMT per capita by place of work

[22] The parking lot would very likely reduce the driving distance to Judge John Sutter Regional Shoreline, leading to an overall decrease in shoreline traffic VMT.

for the Bay Area. The parking lot portion of the Project is located in an area that experiences low levels of VMT per capita by place of residence, meaning that people who live in this area tend to travel shorter distances for their daily needs. Although employment uses in this area tend to have higher levels of VMT, this is largely a function of the primarily industrial jobs located in the area.

Although the parking lot portion of the Project is expected to generate some new VMT, it is expected to be at a low level on per capita basis because the people who live in the general vicinity tend to travel at levels at least 15 percent below existing regional averages per household. If the parking lot portion of the Project were not constructed, trail users that drive to the area would very likely still continue to drive and park in non-designated areas and use roadway facilities connecting to the trail that do not provide adequate bicycle facilities. Therefore, if the parking lot were not constructed, there would most likely not be an appreciable change in overall VMT, and there could be worse safety outcomes. Therefore, based on the review of VMT per capita levels in the area and the types of trips in the area expected to be generated by the Project—primarily residential based trips for recreational purposes—the parking lot portion of the Project is expected to have a less-than-significant impact on VMT.

c. The Project would have a less-than-significant impact with mitigation as a result of a potentially substantial increase in hazards because of a geometric design feature or incompatible uses.

The Project is not expected to result in a significant demand for public transit, nor would it change any existing transit facility. Therefore, the impact on bus rider safety is considered to be less than significant. The following sections describe impacts resulting from transportation hazards, Link design, and pedestrian and bicycle safety.

Transportation Hazards

The Project is intended to provide a safe route for bicyclists and pedestrians who travel between West Oakland and the Bay Bridge Trail by separating bicycle and pedestrian travel from motor vehicle travel and reducing potential conflicts between different roadway users. Access to the Link from the east would be from West Grand Avenue at Mandela Parkway. Access to the Link for users who park within the Wood Street parking lot would be from new Class II bike lanes marked on Wood Street, 20th Street, Willow Street, and Campbell Street. The Class II bike lanes would connect to the at-grade section of the Link on West Grand Avenue between Mandela Parkway and Campbell Street.

The Link would provide a physical separation between Link users (pedestrians and bicyclists) and motor vehicle traffic for most of its length, thereby reducing hazards. However, there are two intersections where there are potential hazards for pedestrians and bicyclists, as described below.

West Grand Avenue/Frontage Road/I-80 Ramps Intersection. The Project would add pedestrian and bicycle traffic to the intersection where the current pedestrian crosswalk and signals would be insufficient to accommodate increased demand. This could create a hazard for bicyclists and pedestrians. Implementation of **Mitigation Measure TR-1** (Implement Signal Upgrade Crosswalk Improvement at West Grand Avenue/Frontage Road/I-80 Ramps Intersection) would reduce the impact to less than significant.

West Grand Avenue/Mandela Parkway (Northbound). The Project would add pedestrian and bicycle traffic to the intersection, increasing exposure to vehicles at the intersection. This could create a hazard for bicyclists and pedestrians. Implementation of **Mitigation Measure TR-2** (Implement Improvements at West Grand Avenue/Mandela Parkway Intersection) would reduce the impact to less than significant.

Link Design

The Link would be constructed in five sections with varying widths, reflective of right-of-way constraints. Because the Project is intended to accommodate both bicycle and pedestrian travel, there could be some conflicts between bicyclists and pedestrians. Generally, the path is being designed to provide 10 feet for bicyclists (5-foot lanes in each direction), a 5-foot area for pedestrians, and a 2-foot area for fencing within a 17-foot cross section. Segments 2 and 3 would have a width of 14 feet (10-foot clear area and 4 feet for shoulders to accommodate fencing). The Caltrans *Highway Design Manual* (Chapter 1000) specifies a minimum width of 8 feet for a two-way bike path, with 10 feet preferred. Where a path is on a structure, the minimum width of the path is 14 feet to provide 10 feet for travel and a 4-foot shoulder area.

The Class I portion of the Project as currently proposed would meet or exceed Caltrans standards for Class I path design. The volume of pedestrian and bicycle travel along the Link is expected to be less than 10 percent of the total pedestrian and bicycle traffic that is expected through the park area and the east span of the Bay Bridge, with higher levels of bicycle activity than pedestrian activity. This level of activity would result in 140 to 450 Link users on a typical weekday and 430 to 830 Link users on a weekend day, with less activity during an individual hour.

The Trail Level of Service (LOS) Calculator was developed by North Carolina State University and Toole Design Group, based on the Federal Highway Administration *Shared-Use Path Level of Service Calculator—A User's Guide,* July 2006. The calculator was used to assess pedestrian/bicycle LOS on the Link, which considers factors such as bicyclist passing, desired buffer space between path users, and the mix of bicyclists, pedestrians, runners, and child bicyclists. Based on the weekend peak-hour pedestrian/bicycle volume estimate for the Link (between 60 and 120 trail users in a peak hour), the trail LOS is B for the segments with a 17-foot cross section and LOS C for segments with a 14-foot cross section, meaning that pedestrians and bicyclists can generally travel fairly unimpeded along the Link, although some bicyclists may have to wait to pass a slower moving bicyclist. Trail operations would be better during other times of day and week.

Approximately 500 users per hour could be accommodated on the path at an LOS D condition, which is considered the functional capacity of a trail. When these conditions are experienced, bicyclists are likely to avoid peak periods or adjust expectations of path operations. Segment 3 of the Link constrains the volume of pedestrian and bicycle travel that could be accommodated along the entire Link corridor.

Bicycle/pedestrian conflicts could exist where the path would connect to the existing Bay Bridge Trail, below the I-880/I-80 connection. This could result in bicycle/pedestrian conflicts at the intersection and create a hazard for pedestrians and bicyclists. Implementation of **Mitigation Measure TR-3** (Implement Improvements at Bay Bridge Trail Intersection) would reduce the impact to less than significant.

Pedestrian and Bicycle Safety

The Project would add a separated bicycle and pedestrian path, connecting West Oakland to the Bay Bridge Trail, that would be open at all times and enhance bicycle safety by adding a separated bicycle facility where there currently is none. Sidewalks and paths are provided in the Project vicinity along Grand Avenue and Mandela Parkway, connecting to the Link, as well as crosswalks and pedestrian signals. Some Link pedestrians could use the Wood Street parking lot. Although sidewalks are provided on some of the streets around the parking lot, they are discontinuous in the area. In addition, some bicyclists could use the Wood Street parking lot and access the Link from the Class II bicycle facilities proposed on the streets connecting the Wood Street parking lot and the Link.

A second hazard to bicyclists could result within Segment 4 of the path, which contains a 180-degree curve on a 2 percent grade to transition from the elevated structure to the at-grade level. Based on guidance provided in the Caltrans *Highway Design Manual*, a 5 percent grade is the maximum allowed for short segments, and 2 percent is recommended for sustained grades.

Distance between Wood Street Parking Lot and Link. The Project would add pedestrian and bicycle travel on the roadways between the Wood Street parking lot and the start of the Link on West Grand Avenue at Mandela Parkway, a distance of approximately 0.25 mile. The Project could add Class II bicycle facilities in this area, if funding is available. This could create a hazard for pedestrians and bicyclists because sidewalks are discontinuous in this area and street lighting is intermittent. In addition, if the Wood Street parking lot is constructed without the accompanying bicycle facilities, a hazard to bicyclists would result because new bicyclist demand would be added to an area without facilities to serve the demand. Implementation of **Mitigation Measure TR-4** (Implement Pedestrian and Bicycle Safety Measures between Wood Street Parking Lot and Path) would reduce the impact to less than significant. Measures would include crosswalks and crossing treatments, lighting, and wayfinding elements as necessary.

Segment 4 Switchback. At the west end of the elevated Link, Segment 4 includes a switchback or 180-degree curve to transition from the elevated structure to grade level. Based on guidance provided in the Caltrans *Highway Design Manual*, the current design does not provide a sufficient turn radius to maintain a minimum design speed of 20 miles per hour for a bicycle path. Bicyclists can exceed speeds of 20 miles per hour, especially on flat surfaces or downgrade. In addition, there may not be clear lines of sight. This could result in unsafe conditions for bicyclists and pedestrians. The posted speed on the Bay Bridge Trail is 15 miles per hour, and it is likely the posted speed on the elevated Link would be 15 miles per hour or less. However, this has not yet been determined. Implementation of **Mitigation Measure TR-5** (Implement pedestrian/Bicycle Safety Measures along Segment 4 of the Link) would include installing warning signs at the curve approaches and maintaining clear lines of sight to minimize the potential for collisions. Therefore, this impact would be less than significant with mitigation.

d. The Project would have a less-than-significant impact on adequacy of emergency access.

During construction, temporary lane closures would occur, which could cause short-term disruption of emergency access along the corridor. As described in Section 1.6.3 of the project description, construction activities are not anticipated to result in any long-term road closures. Temporary road closures could affect Campbell Street and Willow Street for intersection modifications at West Grand Avenue alley to allow for footing construction and excavation; and Maritime Street, to place falsework over Maritime Street for the new elevated structure. Construction vehicles and equipment would not park or stop along key collector roads and block emergency vehicle access or hinder emergency response.

The Project includes installing a cul-de-sac where Willow Street intersects West Grand Avenue alley, closing West Grand Avenue alley on the south side of West Grand Avenue. These changes would prevent emergency vehicles from using these roadways. However, because of the grid street network in the Project area and the short distance between parallel streets, the impact on the emergency vehicle response time is expected to be less than significant.

2.17.3 Mitigation Measures

Mitigation Measure TR-1: Implement Signal Upgrade and Crosswalk Improvement at West Grand Avenue/Frontage Road/I-80 Ramps Intersection

BATA/Caltrans will be responsible for implementing future improvements at the West Grand Avenue/Frontage Road/I-80 ramps intersection to minimize conflicts and safety hazards between vehicles and Link users. This includes upgrading the marked crosswalk along the south leg of the intersection to be the same width as the Link, installing pedestrian and bicycle signals, and upgrading traffic signal equipment as necessary. This includes installing video detection equipment to accommodate pedestrian and bicycle movement across the intersection. With installation of video detection for both bicyclists and vehicles, the improvements are not projected to degrade automobile LOS at the intersection.

Mitigation Measure TR-2: Implement Signal Upgrade and Optimization at West Grand Avenue/Mandela Parkway (northbound) Intersection

BATA/Caltrans will coordinate with the City of Oakland to implement signal upgrades and optimization at West Grand Avenue/Mandela Parkway (northbound) intersection. This includes modifying the eastbound approach to convert the shared left through lane to a left-turn-only lane, installing protected phasing for the eastbound and westbound left-turn movements, and upgrading traffic signal equipment as necessary to provide bicycle video detection.

Mitigation Measure TR-3: Implement Safety Measures at Bay Bridge Trail Intersection

BATA/Caltrans will design the path in the vicinity of the Bay Bridge Trail intersection to provide for safe movement, provide directional signage and striping, and potentially provide a bicycle stop sign on the path at the Bay Trail connection.

Mitigation Measure TR-4: Implement Pedestrian/Bicycle Safety Measures between Wood Street Parking Lot and Link

Prior to operation, BATA/Caltrans will implement the following pedestrian/bicycle safety measures between the Wood Street parking lot and the Link.

- Identify the preferred pedestrian/bicycle route between the Wood Street parking lot and the Link.
- Install crosswalks, crossing treatments, pedestrian-scale lighting, and wayfinding elements as necessary along the route to guide pedestrians and bicyclists.

Mitigation Measure TR-5: Implement Pedestrian/Bicycle Safety Measures along Segment 4 of the Link

Prior to final design, BATA/Caltrans will implement the following bicycle safety measures along the west end of Segment 4 of the Link:

- Install warning signs at the curve approaches on Segment 4 where the Link ascends and descends with a switchback curve.
- Ensure there are clear lines of sight maintained between path sections and, where practical, provide a wider cross section through the curve area.

2.18 Tribal Cultural Resources

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

2.18.1 Environmental Setting

This section describes the environmental and regulatory setting for tribal cultural resources. As defined in CEQA Section 21074, tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed or determined to be eligible for listing in a national, State, or local register of historical resources. Based on discussions with Native American tribal representatives in San Francisco, prehistoric archeological resources are presumed to be potential tribal cultural resources. This section also describes impacts on tribal cultural resources that would result from implementation of the Project and mitigation for significant impacts where feasible and appropriate.

2.18.1.1 Existing Conditions

Information about ethnographic lifeways and the post-contact history of Native Americans who traditionally inhabited the vicinity of the Project site is provided in Section 2.5, *Cultural Resources*.

2.18.1.2 Regulatory Setting

California Public Resources Code

Archaeological, paleontological, and historical sites are protected pursuant to a wide variety of State policies and regulations, as enumerated under the California PRC. Cultural and paleontological resources are recognized as nonrenewable resources and receive additional protection under the California PRC and CEQA.

- California PRC Sections 5020–5029.5 continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the CRHR and is responsible for the designation of State Historical Landmarks and Historical Points of Interest.

- California PRC Sections 5079–5079.65 define the functions and duties of the Office of Historic Preservation (OHP). The OHP is responsible for the administration of federally and State-mandated historic preservation programs in California and the California Heritage Fund.
- California PRC Sections 5097.9–5097.991 provide protection to Native American historical and cultural resources and sacred sites and identify the powers and duties of the NAHC. These sections also require notification to descendants of discoveries of Native American human remains and provide for treatment and disposition of human remains and associated grave goods.

California Environmental Quality Act

CEQA requires projects to be assessed to determine their potential to affect historical resources. CEQA uses the term *historical resources* to include buildings, sites, structures, objects, or districts, each of which may have historical, pre-historical, architectural, archaeological, cultural, or scientific importance. If implementation of a project would result in significant effects on historical resources, CEQA states that alternative plans or mitigation measures must be considered; however, only significant historical resources need to be addressed (14 CCR 15064.5, 15126.4). Therefore, before impacts and mitigation measures can be identified, the significance of historical resources must be determined.

The State CEQA Guidelines define three ways that a property may qualify as a historical resource for the purposes of CEQA review.

1. The resource is listed in or determined eligible for listing in the CRHR.
2. The resource is included in a local register of historical resources, as defined in Section 5020.1[k] of the California PRC or identified as significant in a historical resource survey meeting the requirements of Section 5024.1[g] of the California PRC unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. The Lead Agency determines the resource to be significant, as supported by substantial evidence in light of the whole record (CCR, Title 14, Division 6, Chapter 3, Section 15064.5[a]).

The State CEQA Guidelines also establish the criteria for CRHR eligibility as the standard for the significance of historical resources and find that cultural resources that meet the criteria of eligibility for the CRHR are significant historical resources. A historical resource may be eligible for inclusion in the CRHR if it meets any of the following conditions:

A. The resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

B. The resource is associated with the lives of persons important in our past.

C. The resource embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values.

D. The resource has yielded, or may be likely to yield, information important in prehistory or history.

Properties that are listed in or eligible for listing in the NRHP are considered eligible for listing in the CRHR (PRC Section 5024.1[d][1]) and, thus, are significant historical resources for the purpose of CEQA.

According to CEQA, a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant impact on the environment (14 CCR 15064.5[b]). Under CEQA, a substantial adverse change in the significance of a resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired. Actions that would

materially impair the significance of a historical resource are any actions that would demolish or adversely alter the physical characteristics that convey the property's historical significance and qualify it for inclusion in the CRHR or in a local register or survey that meet the requirements of PRC Sections 5020.1[k] and 5024.1[g].

CEQA includes in its definition of *historical resources* "any object [or] site … that has yielded or may be likely to yield information important in prehistory" (State CEQA Guidelines Section 15064.5[3]), which is typically interpreted as including fossil materials and other paleontological resources. In addition, destruction of a "unique paleontological resource or site or unique geologic feature" constitutes a significant impact under CEQA (State CEQA Guidelines Appendix G). Treatment of paleontological resources under CEQA is generally similar to treatment of cultural resources, requiring evaluation of resources in a project's area of potential affect; assessment of potential impacts on significant or unique resources; and development of mitigation measures for potentially significant impacts, which may include monitoring, combined with data recovery and/or avoidance.

Assembly Bill 52 – Tribal Cultural Resources

A tribal cultural resource can be a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe. It also must be either on or eligible for the CRHR, or a local historic register; otherwise, the lead agency, at its discretion and supported by substantial evidence may choose to treat the resource as a significant tribal cultural resource. AB 52, which amended the PRC, requires lead agencies to participate in formal consultations with California Native American tribes during the CEQA process, if requested by any tribe, to identify tribal cultural resources that may be subject to significant impacts by a project. Where a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document must discuss the impact and whether feasible alternatives or mitigation measures could avoid or substantially lessen the impact. Consultation is required until the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource or when it is concluded that mutual agreement cannot be reached.

2.18.2 Discussion of Potential Impacts

This section contains the impact analysis for the proposed Project as it relates to tribal cultural resources. The methods used to determine the potential Project-related impacts, as well as the thresholds of significance used to conclude whether or not an impact would be significant, are described below. Measures that would mitigate (i.e., avoid, minimize, rectify, eliminate, or compensate for) significant impacts are included within each impact discussion where they have been deemed necessary and appropriate.

2.18.2.1 Thresholds of Significance

CEQA Guidelines Appendix G (14 CCR 15000 et seq.) identifies significance criteria to be considered for determining whether a project could have significant impacts on existing tribal cultural resources:

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- Listed or eligible for listing in the CRHR or in a local register of historical resources, as defined in PRC Section 5020.1(k), or

- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1? In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

2.18.2.2 Methods for Analysis

Records Search and Historic Map Review

As discussed in Section 2.5. *Cultural Resources*, a Records search was conducted at the NWIC on April 29, 2013. The records search compiled bibliographic references, previous survey reports, historic maps, and archaeological site records pertinent to the Project in order to identify prior archaeological studies and known cultural resources within a 0.5-mile area surrounding, or adjacent to, the archaeological Area of Potential Effect (APE).

Eleven previous studies have covered portions of the archaeological APE or adjacent areas. The majority of these studies focused on the Oakland Army Base and buildings within the Base; additional studies focused on the archaeology and history of West Oakland, the installation of fiber optics, and the San Francisco Bay Bridge.

The records search identified one historic-era resource within the archaeological APE. While no prehistoric resources were identified within the archaeological APE, the location of a former shellmound was identified within 0.5 mile.

To supplement the material collected during the records search, several historic maps of West Oakland were reviewed to place the archaeological APE in a proper historic context. The following historic maps were reviewed:

- 1876 Map of Oakland, Alameda, and Vicinity, Showing Plan: Streets As Opened and Proposed. Published by M. G. King, C. E., 1876, via Rumsey Digital Collection
- 1895 7.5-minute Oakland West USGS quadrangle (1:24,000 scale)

Both maps depict the archaeological APE as existing partially within what was historically open water of the San Francisco Bay and marshland.

Native American Consultation

ICF contacted the NAHC on September 29, 2020, requesting a search of the Sacred Lands File and a list of Native American individuals with an affiliation to the geographic region. The NAHC responded on October 5, 2020, stating that a search of the Sacred Lands File indicated the presence of Native American cultural resources in the vicinity of the archaeological APE. The NAHC identified three California Native American Tribe representatives to contact to further discuss the sacred lands. The NAHC also provided a list of six individuals who may have knowledge of additional resources in the area. Letters containing the Project description and location were sent to the following individuals on October 19, 2020:

- Monica Arellano, Chairperson – Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
- Tony Cerda, Chairperson – Costanoan Rumsen Carmel Tribe
- Andrew Galvan – The Ohlone Indian Tribe
- Charlene Nijmeh, Chairperson – Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
- Ann Marie Sayers, Chairperson – Indian Canyon Mutsun Band of Costanoan

- Kanyon Sayers-Roods, MLD Contact - Indian Canyon Mutsun Band of Costanoan
- Irenne Zwierlein, Chairperson – Amah Mutsun Tribal Band of Mission San Juan Bautista
- Timothy Perez, MLD Contact – North Valley Yokuts Tribe
- Katherine Perez, Chairperson – North Valley Yokuts Tribe
- Corrina Gould, Chairperson – The Confederated Villages of Lisjan
- All tribal representatives had the opportunity to formally request consultation until November 30, 2020. No requests were received within the 30-day response period.

An updated Sacred Lands File request was sent to the NAHC on April 13, 2022 for compliance with Section 106 requirements for the updates to the Archaeological Survey Report. The NAHC provided a list of 10 Native American contacts, most of whom had already been contacted during the 2020 outreach. On July 6, 2022, as part of Section 106 consultation, ICF emailed letters to all 10 contacts, requesting information regarding Native American resources or concerns regarding the Project. This included a formal notification, pursuant to Section 106, to the three individuals associated with the sacred lands.

Letters were emailed to the following contacts:

- Irene Zwierlein, chairperson, Amah Mutsun Tribal Band
- Ann Marie Sayers, chairperson, Indian Canyon Mutsun Band of Costanoan
- Kanyon Sayers-Roods, most likely descendant contact for the Indian Canyon Mutsun Band of Costanoan
- Monica Arellano, Vice chairwoman, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
- Katherine Erolinda Perez, chairperson, North Valley Yokuts Tribe
- Timothy Perez, North Valley Yokuts Tribe
- Kenneth Woodrow, chairperson, Wuksache Indian Tribe/Eshom Valley Band
- Corrina Gould, chairperson, The Confederated Villages of Lisjan
- Tony Cerda, chairperson, Costanoan Rumsen Carmel Tribe
- Andrew Galvan, Ohlone Indian Tribe

Only one response was received to the written correspondence. Therefore, follow-up emails and phone calls on July 8 and 25, 2022, attempted to confirm that the contacts had received the information. One additional response was received from this effort. Responses comprised a request for cultural sensitivity training for anyone working on the Project and for Native American monitoring for the Project. Other than the recommendations regarding cultural sensitivity training and monitoring, no tribal resources, sacred lands, or any other resources or specific areas of concern were discussed as part of consultation efforts.

a, b The project could cause a potentially substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the CRHR, in a local register of historical resources (as defined in PRC Section 5020.1(k). This also includes tribal cultural resources determined to be significant by the lead agency in its discretion and supported by substantial evidence (as defined in subdivision (c) of Public Resources Code Section 5024.1). (Less than Significant)

Although a review of existing records and review of historic maps indicate that the archaeological APE has low potential for prehistoric resources, the presence of sacred lands in the vicinity of the APE suggests

that the potential exists for previously undiscovered tribal cultural resources (as defined in CEQA Section 21074.2) to be encountered during demolition or construction activities associated with the Project. Furthermore, any such buried deposits may be eligible for listing in the CRHR. Therefore, this impact could be significant. However, **AMM CUL-1** (Stop Work If Buried Cultural Resources Are Discovered) and **AMM CUL-2** (If Human Remains Are Discovered, Comply with State Laws Relating to Human Remains) would ensure that the proper protocols are in place to protect any inadvertent discoveries encountered during Project-related ground disturbance and ensure the proper and respectful treatment of human remains. Therefore, impacts related to tribal cultural resources would be less than significant.

2.18.3 Mitigation Measures

No mitigation measures are required to reduce impacts related to tribal cultural resources to a less-than-significant level.

2.19 Utilities and Service Systems

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☒
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

2.19.1 Environmental Setting

2.19.1.1 Existing Conditions

Wastewater

Wastewater collection and treatment is provided by the East Bay Municipal Utility District (EBMUD). EBMUD serves approximately 650,000 people in an 88-square-mile area of Alameda and Contra Costa counties (EBMUD 2014a). Wastewater is carried by city pipes into the EBMUD collection systems, which deliver it to a wastewater treatment plant. On average, EBMUD treats approximately 63 million gallons of municipal wastewater per day (EBMUD 2014b). EBMUD's plant provides primary treatment for up to 320 million gallons per day (mgd) and secondary treatment for a maximum flow of 168 mgd. The storage basins provide plant capacity for a short-term hydraulic peak of 415 mgd (EBMUD 2014b). EBMUD's wastewater treatment plant is approximately 0.15 mile north of the Project area, immediately north of West Grant Avenue. The Project area does not currently demand wastewater services from EBMUD.

Stormwater

Stormwater in the Project area drains into Oakland's municipal storm drain system, which ultimately discharge into San Francisco Bay. As described in Section 2.10.1.1, the potential stormwater treatment area beneath I-880 on the south side of West Grand Avenue supports an earthen drainage ditch. The Project is covered under the Alameda County Phase I Municipal Separate Storm Sewer System (MS4) under the Regional Water Board Municipal Regional Stormwater NPDES Permit (Order R2-2009-0074, NPDES Permit No. CAS612008).

Water Supply

EBMUD provides potable water in a 322-square-mile area, including the city of Oakland (EBMUD 2010). The system collects, transmits, treats, and distributes high-quality water from its primary water source, the Mokelumne River. The Mokelumne aqueducts convey water from Pardee Reservoir to local storage and treatment facilities in San Francisco's East Bay area (EBMUD 2010). EBMUD projects that the 2020 water demand in the service area will be 221 mgd, and the available water supply will be 221 mgd during normal year conditions. However, EBMUD is not projected to be able to meet water demand under a single dry year or multiple dry years (EBMUD 2010).

Solid Waste

Waste Management, Inc., provides solid waste collection and disposal services to West Oakland (City of Oakland 2020c). Four landfill facilities are operated by Waste Management within 100 miles of the Project. The four landfill facilities are Altamont Landfill & Resource Recovery in the city of Livermore, Guadalupe Rubbish Disposal in the city of San Jose, Kirby Canyon Landfill in the city of Morgan Hill, and Redwood Landfill in the city of Novato. California Waste Solutions operates a recycling facility and provides recycling services in West Oakland (California Waste Solutions 2007). The City of Oakland has franchise agreements with construction and demolition hailing services that are authorized to collect debris as well as construction and demolition waste (City of Oakland 2020a).

2.19.1.2 Regulatory Setting

Federal and State

There are no federal regulations applicable to the Project and utilities. Regulations applicable to soils affecting stormwater runoff and water quality are included in Section 2.10, *Hydrology and Water Quality*.

California Integrated Waste Management Act of 1989 (AB 939)

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State legislature passed Assembly Bill (AB) 939, the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties in California were required to divert 25 percent of all solid waste to recycling facilities from landfill or transformation facilities by January 1, 1995, and 50 percent by January 1, 2000. The California Integrated Waste Management Board's California Department of Resources Recycling and Recovery (CalRecycle) is the State department designated to oversee, manage, and track California's 92 million tons of waste generated each year.

Model Water Efficient Landscape Ordinance (23 California Code of Regulations 490)

To prevent water from being wasted on irrigated landscapes, the State legislature created the Model Water Efficient Landscape Ordinance (MWELO) in 1993 from the earlier Water Conservation and Landscaping Act. The law directs cities, counties, and other land use authorities to ensure MWELO compliance for residential, commercial, industrial and institutional projects with landscaped areas of 500 square feet or more that require a permit, plan check, or design review. The MWELO establishes a structure for planning, designing, installing, maintaining, and managing water-efficient landscapes for new construction and rehabilitated projects.

Regional and Local

City of Oakland Construction and Demolition Debris Waste Reduction and Recycling Ordinance

Chapter 15.34 of the Oakland Municipal Code is the City's Construction and Demolition Debris Reduction and Recycling Ordinance (C&D Recycling Ordinance). This is part of the City's efforts to meet local and state mandated AB 939 requirements to divert materials from landfill facilities. Affected projects include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3), and all demolition. The C&D Recycling Ordinance requires that 100 percent of all asphalt and concrete materials and 65 percent of all other materials be recycled. Further, the C&D Ordinance requires the preparation of a Waste Reduction and Recycling Plan that shows how the Project would salvage and/or recycle 100 percent of asphalt and concrete debris, as well as at least 65 percent of all other materials, and the preparation of a Construction and Demolition Summary Report that documents the actual salvage, recycling, and disposal activity of the completed Project. The City of Oakland also requires companies that collect and transport construction and demolition (C&D) debris in Oakland to obtain a non-exclusive franchise agreement from the City of Oakland for the provision of these services (City of Oakland 2020b).

City of Oakland General Plan Open Space, Conservation, and Recreation Element

The City of Oakland OSCAR (City of Oakland 1996) includes the following policy relevant to the Project and public services (water supply):

- **Policy CO-4.3: Use of Reclaimed Water.** Promote the use of reclaimed water for irrigating landscape medians, cemeteries, parks, golf courses, and other areas requiring large volumes of non-potable water.

City of Oakland Standard Conditions of Approval

As stated in Section 1.8.2, *Permits/Approvals*, the Oakland SCA includes conditions of approval for projects. The following SCA is required for all construction projects:

> **81. Waste Reduction and Recycling.** A Construction and Demolition Waste Reduction and Recycling Plan and Operation Diversion Plan are required for review and approval by the Public Works Agency, in compliance with Chapter 15.34 of the Oakland Municipal Code (see above).

2.19.2 Discussion of Potential Impacts

a. The Project would have no impact as a result of exceeding wastewater treatment requirements of the RWQCB or from requiring or resulting in the construction of new water or wastewater treatment facilities or expansion of existing facilities.

Construction and operation of the proposed bicycle/pedestrian Link would not generate wastewater (or would generate minimal water such as associated with a water fountain) requiring wastewater treatment. Therefore, the Project would not exceed wastewater treatment requirements, require construction of new water or wastewater treatment facilities, or require expansion of existing facilities. There would be no impact.

b. The Project would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years.

The Project would require small quantities of water for irrigation of the drought-resistant native plants. If available, recycled water would be used, in which case the Project would not require potable water. If

recycled water is not available, potable water would be used. The quantity of water required for irrigation purposes would not require new or expanded water entitlements. Therefore, there would be a less-than-significant impact on the water supply.

c. The Project would not result in a determination by the wastewater treatment provider which serves or may serve the Project that it lacks adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.

The Project would not generate wastewater or demand the service (or would generate minimal amounts of wastewater such as through installation of water fountain and minimal demand for service) of a wastewater treatment provider. Therefore, there would be no impact on wastewater treatment capacity.

d. The Project would have a less-than-significant impact as a result of generating solid waste in excess of local standards, or in excess of the capacity of local infrastructure, or otherwise impairing the attainment of solid waste reduction goals.

The Project would generate solid waste during construction. There is currently debris on portions of the alignment and at the Wood Street parking lot site that would need to be removed. Portions of the at-grade Link segments would require removing old asphalt to repave. Disposal of these materials could require the services of a landfill with permitted capacity to accommodate construction-related solid waste.

As described above, the City's C&D Recycling Ordinance requires 100 percent of all asphalt and concrete materials, as well as 65 percent of all other materials, to be recycled and companies that collect and transport C&D debris in Oakland to obtain a non-exclusive franchise agreement from the City of Oakland for the provision of these services. Compliance with this ordinance and SCA 81 (waste reduction and recycling, described above) would ensure that the Project would not affect landfill capacity. Therefore, this impact would be less than significant.

As discussed in Section 1.6.1, it is estimated that Project construction could result in up to approximately 2,600 cubic yards of cut material. During excavation, soils would be tested for contamination. Clean soils would be used or sold for reuse at nearby construction sites. Contaminated soils would be disposed of at an appropriate facility.

Once constructed and operating, the Project would generate a small amount of trash from people who use the parking lot and Link. Because people would be on bicycles or walking, it is not anticipated that a substantial amount of trash would be generated. Therefore, preparation of an Operational Diversion Plan is not anticipated to be necessary. As described in Section 1.3.5, Project maintenance would include weekly trash removal, which would ensure that operational impacts would be less than significant.

e. The Project would have a less-than-significant impact as a result of requirements to comply with federal, State, and local statutes and regulations related to solid waste.

As described under (d), the Project would comply with requirements to recycle and divert all construction waste using appropriately permitted C&D waste hauling services, divert non-contaminated soils from landfills, and ensure proper disposal of any contaminated soils to an appropriate landfill. Therefore, the Project would comply with statues and regulations related to solid waste. The impact would be less than significant.

2.19.3 Mitigation Measures

No mitigation measures are required.

2.20 Wildfire

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

2.20.1 Environmental Setting

2.20.1.1 Existing Conditions

The California Department of Forestry and Fire Protection (CAL FIRE) has designated Fire Hazard Severity Zones (FHSZs) statewide to help identify areas of moderate, high, and very high fire risk. Some FHSZs are designated as State Responsibility Areas (SRAs), areas in which CAL FIRE is responsible for wildland fire prevention and management. Other areas are designated as Local Responsibility Areas (LRAs), areas in which local fire departments are responsible for wildland fire prevention and management (CAL FIRE 2007). The 2018 California State Hazard Mitigation Plan states that Very High FHSZs are generally located in landscapes with numerous features that are known to elevate fire risk, such as steep slopes and a high density of dry vegetation (OES 2018). Areas that experience wildfires also have an increased susceptibility to secondary affects after wildfires, such as landslides on steep, devegetated slopes. The Project area is very close to the San Francisco Bay, on flat or nearly flat terrain. In relation to wildfire risk, the Project area is approximately 4 miles west of the nearest Very High FHSZ in an LRA and approximately 7 miles west of the nearest Very High FHSZ in an SRA (CAL FIRE 2018).

2.20.1.2 Regulatory Setting

Federal

Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 provides the legal basis for FEMA's mitigation planning requirements for State, local, and tribal governments as a precursor to mitigation grant assistance. The Disaster Mitigation Act of 2000 requires that local governments prepare a Local Hazard Mitigation Plan, which must be reviewed by the State Mitigation Officer, approved by FEMA, and renewed every 5 years. The plan must

include a planning process, a risk assessment, a mitigation strategy, plan maintenance, and updating procedures to identify the natural hazards, risks, and vulnerabilities of the area under the jurisdiction of the government. Natural hazards include earthquakes, tsunamis, tornadoes, hurricanes, flooding, and wildfires.

State

California Department of Forestry and Fire Protection

CAL FIRE protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values, providing social, economic, and environmental benefits to rural and urban citizens. CAL FIRE's firefighters, fire engines, and aircraft respond to an average of more than 5,400 wildland fires each year (CAL FIRE 2016).

The Office of the State Fire Marshal supports CAL FIRE's mission by focusing on fire prevention, providing support through a wide variety of fire-safety responsibilities, including:

- Regulating buildings in which people live, congregate, or are confined;
- Controlling substances and products that may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire;
- Providing statewide direction for fire prevention in wildland areas;
- Regulating hazardous liquid pipelines;
- Reviewing regulations and building standards; and
- Providing training and education in fire protection methods and responsibilities.

2018 Strategic Fire Plan for California

The 2018 Strategic Fire Plan for California (CAL FIRE 2018) is a cooperative effort between CAL FIRE and the Board of Forestry and Fire Protection (Board). The Board has adopted fire plans since the 1930s and periodically updates them to reflect current and anticipated needs. Over time, as the environmental, social, and economic landscape of California's wildlands changed, the Board evolved the Strategic Fire Plan to better respond to these changes and provide the CAL FIRE with appropriate guidance "…for adequate statewide fire protection of State responsibility areas" (PRC 4130). In 2018, the Board adopted a strategic fire plan to update and address fire concerns in California.

Reflecting a society that must be more aware of and responsive to the benefits and threats of wildland fire, the 2018 plan calls for a more fire-resistant natural environment, with buildings and infrastructure that are also more fire resistant, all achieved through local, State, federal, tribal, and private partnerships. The goals that are critical to achieving the 2018 plan's vision revolve around fire prevention, natural resource management, and fire suppression efforts, as broadly construed. Major components include:

- Improving the availability and use of consistent, shared information about hazard and risk assessment;
- Promoting the role of local planning processes, including general plans, new development, and existing developments, and recognizing individual landowner/homeowner responsibilities;
- Fostering a shared vision among communities and multiple fire protection jurisdictions, including county-based and community-based plans, such as Community Wildfire Protection Plans;
- Increasing awareness and actions to improve fire resistance of man-made assets at risk and fire resilience of wildland environments through natural resource management;

- Integrating implementation of fire and vegetative fuels management practices consistent with the priorities of landowners or managers;
- Determining and seeking the needed level of resources for fire prevention, natural resource management, fire suppression, and related services; and
- Implementing needed assessments and actions for post-fire protection and recovery.

Fire Hazard Severity Zones: PRC Sections 4201–4204

In 1965, PRC Sections 4201–4204 and Government Code Sections 51175–51189 directed CAL FIRE to map areas of significant fire hazards, based on fuels, terrain, weather, and other relevant factors. The FHSZs define the application of various mitigation strategies to reduce risks associated with wildland fires (State of California 1965).

Senate Bill 1241

In 2012, SB 1241 added Section 66474.02 to Title 7, Division 2, of the California Government Code, commonly known as the Subdivision Map Act. The statute prohibits the subdivision of parcels that are designated as very high FHSZs or located in an SRA, unless certain findings are made prior to approval of the tentative map. The statute requires that a city or county planning commission make three new findings regarding fire hazard safety before approving a subdivision proposal. In brief, the three findings require that (1) the design and location of the subdivision and its lots are consistent with defensible space regulations found in PRC Section 4290–91, (2) structural fire protection services will be available for the subdivision through a publicly funded entity, and (3) ingress and egress road standards for fire equipment are met per any applicable local ordinance and PRC Section 4290.

Fire Safe Development Regulations

The Fire Safe Development Regulations section of the 2018 plan implements PRC Section 4290 and stipulates minimum requirements for building construction in SRAs. These regulations address ingress and egress (e.g., road widths, turnouts, etc.), building and street sign visibility, emergency water standards, and fuel modification. In June 2012, the Board and CAL FIRE formed a workgroup to revise the Fire Safe Development Regulations. The workgroup made the first significant changes to the regulations since they were initially effective in 1991 and identified future areas of study. Changes to the regulations were effective January 1, 2016. This workgroup was re-engaged in 2017 to align the update timeline for the Fire Safe Development Regulations with the triennial California Fire Code cycle. The workgroup has been reviewing the existing regulations, based on feedback received from the 2016 updates, to reduce inconsistencies and improve clarity. These changes are anticipated to be effective with the 2020 California Fire Code on January 1, 2020.

California Building Code and Fire Code

CCR Title 24 is a compilation of building standards, including fire safety standards for residential and commercial buildings. The California Building Code standards serve as the basis for the design and construction of buildings in California; the California Fire Code is a component of the California Building Code. Typical fire safety requirements of the California Fire Code include the installation of sprinklers in all high-rise buildings, the establishment of fire resistance standards for fire doors, building materials, and particular types of construction, and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas. The California Fire Code applies to all occupancies in California, except where more stringent standards have been adopted by local agencies.

Regional and Local

City of Oakland General Plan Safety Element

The Safety Element includes the following policies relevant to the Project, and wildfire risk (City of Oakland 2012).

- **Policy PS-1:** Maintain and enhance the city's capacity to prepare for, mitigate, respond to and recover from disasters and emergencies.
- **Policy FI-1:** Maintain and enhance the city's capacity for emergency response, fire prevention and fire-fighting.
- **Policy FI-2**: Continue, enhance or implement programs that seek to reduce the risk of structural fires.
- **Policy FI-3**: Prioritize the reduction of the wildfire hazard, with an emphasis on prevention.

Alameda County Emergency Operations Plan

The Alameda County EOP establishes policies and procedures that define how the county will prepare for, respond to, and mitigate against natural or human-caused disasters, including wildfires. The Alameda County EOP was developed in cooperation with multiple cities in the county, including Oakland. The EOP has the flexibility to be used for all emergencies and will facilitate response and recovery activities in an efficient and effective way. Wildfires are common in the Bay Area, especially in the hills. The EOP assumes that emergency situations will primarily be handled locally within their jurisdiction. In the event that disaster relief requirements exceed the County's ability to meet them, mutual aid shall be requested (Alameda County 2012).

City of Oakland 2016–2021 Local Hazard Mitigation Plan

The City of Oakland 2016–2021 Local Hazard Mitigation Plan was adopted by the City on June 7, 2016. It was prepared to guide hazard mitigation planning to protect the people and property in Oakland from natural disasters and hazard events, including wildfires. Wildfire Mitigation Strategies include:

- Wildfire Prevention Assessment District Re-authorization
- Reliable Water Supply during Fires
- Defensible Space Vegetation Program to Manage Wildfire hazards; Preparation of a Vegetation Management Plan
- Continuity of Operations Emergency Planning
- Emergency Notification Systems
- Implement Energy Assurance Plan
- Amend Oakland Planning Code to Adopt a "Fire-safe Combining Zone" for future construction
- Assessment and Retrofit of Critical Facilities and Infrastructure/Infrastructure Operators (City of Oakland 2016)

City of Oakland Municipal Code – Oakland Fire Code

The Oakland Fire Code, Chapter 15.12, was last updated and amended in 2019. Chapter 49 establishes a wildland-urban interface in the city of Oakland, which is a designation for a very high FHSZ. This chapter also establishes hazardous vegetation management and field management and specifies that vegetation must be controlled to reduce fire hazards.

City of Oakland Standard Conditions of Approval

As stated in Section 1.8.2, *Permits/Approvals*, the Oakland SCA includes conditions of approval for projects. The following SCAs (summarized below) are relevant because Project construction requires ground disturbance and a grading permit.

> **45. Fire Safety Phasing Plan.** If a project is constructed in phases and the furthest structure is over 150' from the nearest fire hydrant, the project application is required to submit a Fire Safety Phasing Plan for City review and approval. It must include all fire safety features and emergency vehicle access incorporated into each phase of the project and the schedule for implementation.

2.20.2 Discussion of Potential Impacts

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

As described in Section 2.92 in *Hazards and Hazardous Materials*, implementation of the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Thus, the impact on emergency response would be less than significant.

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks of, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The Project is not located within or near a FHSZ within an SRA or LRA. In addition, the Project involves construction of bicycle and pedestrian facilities, including a parking lot for bicyclists and pedestrians to park their cars. Accordingly, there would be no residential occupants. Furthermore, the Project does not include any components that would exacerbate wildfire risks. Therefore, there would be no impact.

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment?

The Project would not include or require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment. Therefore, there would be no impact.

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Because the nearest Very High FHSZ to the Project area is approximately 4 miles away, it is unlikely that Project structures would be exposed to downstream flooding or landslides resulting from post-fire slope instability or drainage changes. In addition, the Project area is completely developed. The topography is generally flat, with elevations ranging between 8 and 17 feet above mean sea level. Therefore, there would be no impact.

2.20.3 Mitigation Measures

No mitigation measures are required.

2.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

2.21.1 Discussion of Potential Impacts

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

As discussed in Section 2.4, *Biological Resources*, the Project area is highly disturbed and developed. Most of the vegetation consists of non-native plant species and limited landscaping, including trees. There is no suitable habitat for special-status plant or fish species and no high-quality habitat for wildlife species. There is one area beneath I-880 on the south side of West Grand Avenue that supports an earthen drainage ditch, which contains dense cattail (*Typha* ssp.) vegetation along the length of the channel.

The earthen ditch is considered a water of the State and a potential water of the United States because of its vegetation, location near the Bay, and direction of flow toward the Bay. The ditch could be affected if stormwater treatment facilities are located in this area. Also, ground disturbance and construction activities could also contribute to the spread of invasive plants identified in the Project area and contaminants in stormwater runoff. These impacts would be reduced to a less-than-significant level with implementation of **Mitigation Measures BIO-1** (Install Environmentally Sensitive Area Fencing), **BIO-2** (Avoid Placement of Stormwater Treatment Facilities in Area of Wetland Habitat), **BIO-3** (Avoid the Introduction and Spread of Invasive Plants), **BIO-4** (Develop and Implement Worker Awareness Training), and **HYD-1** (Toxic Materials Spill Prevention and Response Plan). In addition, the Project could remove trees being used by nesting birds or considered protected by the City. These impacts would be reduced to a less-than-significant level with implementation of **Mitigation Measures BIO-5** (Implement Nesting Bird Impact Avoidance Measures) and **BIO-6** (Conduct a Tree Survey and, if Protected Trees Are Identified, Comply with City's Protected Tree Ordinance). Therefore, with implementation of the aforementioned mitigation, the Project would not degrade the quality of the environment, substantially reduce the habitat of a fish or

wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

b. Does the project have impacts that are individually limited but cumulatively considerable?

The Project would have impacts that are individually limited but, when considered together with other projects, could contribute to cumulatively considerable impacts. This discussion first describes the other projects considered and then evaluates the Link's contribution to cumulative impacts. As described below, the Project would not result in a substantial contribution to cumulative impacts.

Other Projects Considered

The City of Oakland's Major Projects List[23] was used to determine other projects considered for the cumulative analysis. Projects located within two blocks of the Project area are described briefly below. Although not on the Major Projects List, the list of projects below also includes completion of the Judge John Sutter Regional Shoreline and the Bay Bridge Forward Phase 2 projects. The locations of these projects are shown in **Figure 2.21-1**.

- **West Oakland Specific Plan.** This specific plan, approved in 2014, supports more mixed-use development and transit options in West Oakland, in the area west of I-980, south of I-580, east of I-880, and north of the Port of Oakland (City of Oakland 2014a).
- **2011–2195 Wood Street (Wood Street Development Area 8)**. The development area is the block bounded by Wood Street, Frontage Road, West Grand Avenue, and 20th Street. Planned development on the 2.54-acre block includes 235 residential units and 13,615 square feet of commercial space. This is an approved project and planned for construction.
- **Potential Homeless Services or Homeless Housing along Wood Street North of West Grand Avenue.** The homeless encampments along Wood Street have been undergoing clearance activities during the summer 2022. In the summer of 2022, the City of Oakland indicated the potential to locate homeless services and/or homeless housing at approximately the 26th Street/Wood Street location north of West Grand Avenue. At present, it is uncertain whether or not such services or housing may be present at the time of construction of the project.
- **Bay Bridge Forward Phase 2.** This project is expected to open in mid-2022 and provide additional access and operational improvements for carpools and buses by converting the existing westbound right shoulder on West Grand Avenue between the I-580 eastbound on-ramp and the intersection of West Grand Avenue with Frontage Road to an HOV/bus lane. A multi-use path for bicyclists and pedestrians is planned for construction on the south side of West Grand Avenue between Maritime Street and Mandela Parkway as well.
- **Judge John Sutter Regional Shoreline Buildout.** A portion of the Judge John Sutter Regional Shoreline (formerly known as Gateway Park) project has been completed, providing a 22.5-acre park along the shoreline just south of the east span of the Bay Bridge. There are additional park developments included in the approved Judge John Sutter Regional Shoreline project east of the regional shoreline that have not been built yet. The West Oakland Link would provide a connection from West Oakland to the existing regional shoreline as well as future park development when completed.

[23] Available: https://www.oaklandca.gov/topics/major-development-projects. Accessed: November 6, 2020.

Cumulative Projects

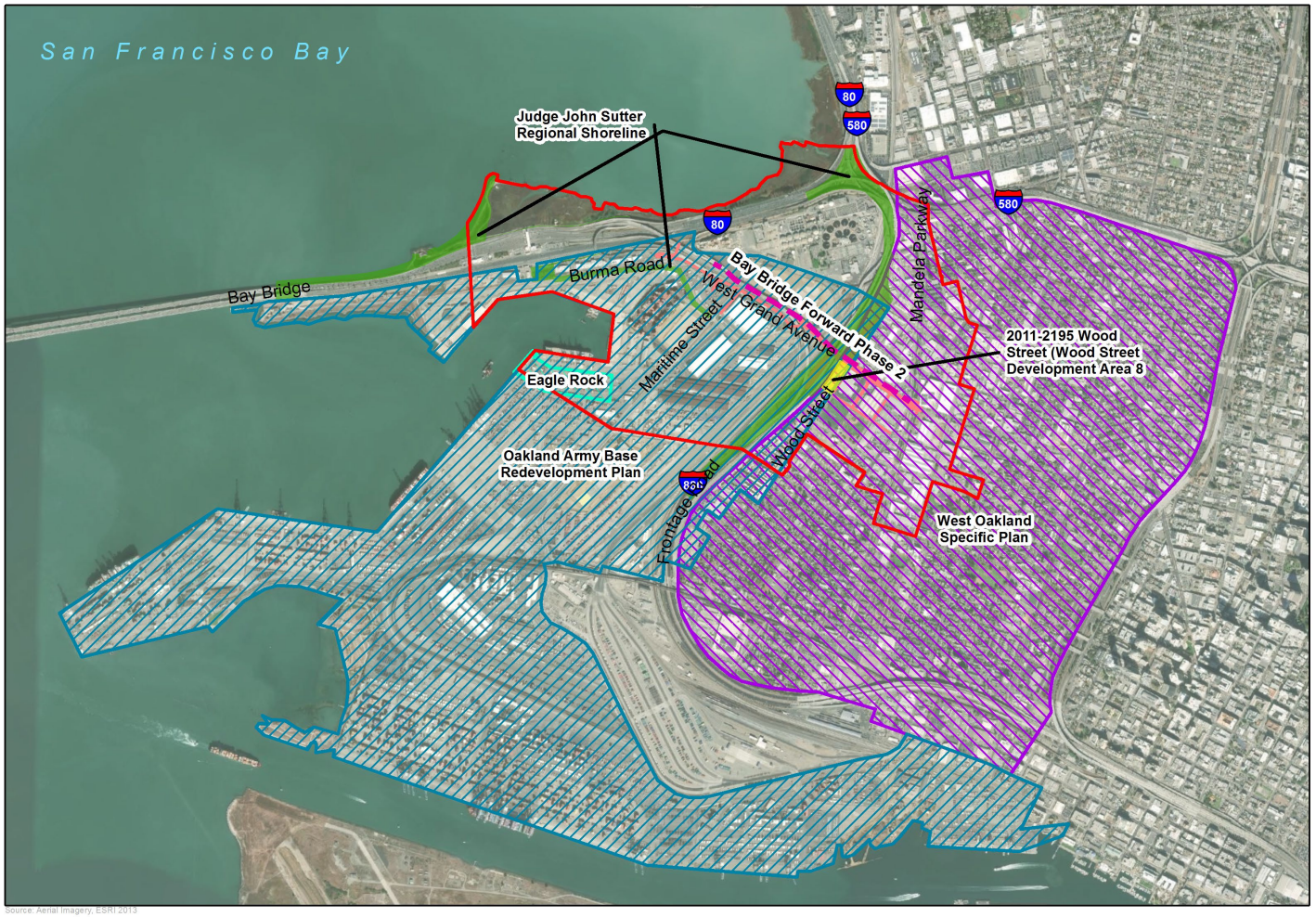


Figure 2.21-1

- **Oakland Army Base Area Redevelopment Plan**. The Oakland Army Base (OAB) Area Redevelopment Plan covers approximately 1,800 acres, including the area surrounding the 430-acre former OAB in West Oakland. The 1,800-acre area is bounded by I-80 on the north, Wood Street on the east, and the Oakland Inner, Middle, and Outer Harbors on the west and south. The information in this discussion is based on environmental documentation (City of Oakland 2002; LSA 2012).

  The 1,800-acre redevelopment area is divided into the three following sub-districts:

  - The OAB Sub-District (470 acres) includes the 430-acre former OAB. It is further subdivided into the 228-acre Gateway development area owned by the City, Port, and Caltrans and the 241-acre Port development area. Plans for the Gateway development area include approximately 2,347,000 square feet of light industry, office/R&D, warehouse/distribution, and retail uses. Plans for the Port development area include new maritime terminals, expanded rail space, and realignment of Maritime Street.
  - The Maritime Sub-District (1,290 acres) comprises the Port's industrial maritime area plus a freeway right-of-way and miscellaneous non-Port parcels. Plans include new maritime terminals, terminal reconfiguration, maritime support, expanded rail space, and realignment of Maritime Street.
  - The 16th/Wood Sub-District (41 acres) comprises a crescent-shaped area of current and former industrial lands located between I-880, Wood Street, 9th Street, and 26th Street. Plans include1,743,300 square feet of light industry, office R&D, and retail space as well as 374 live/work units.

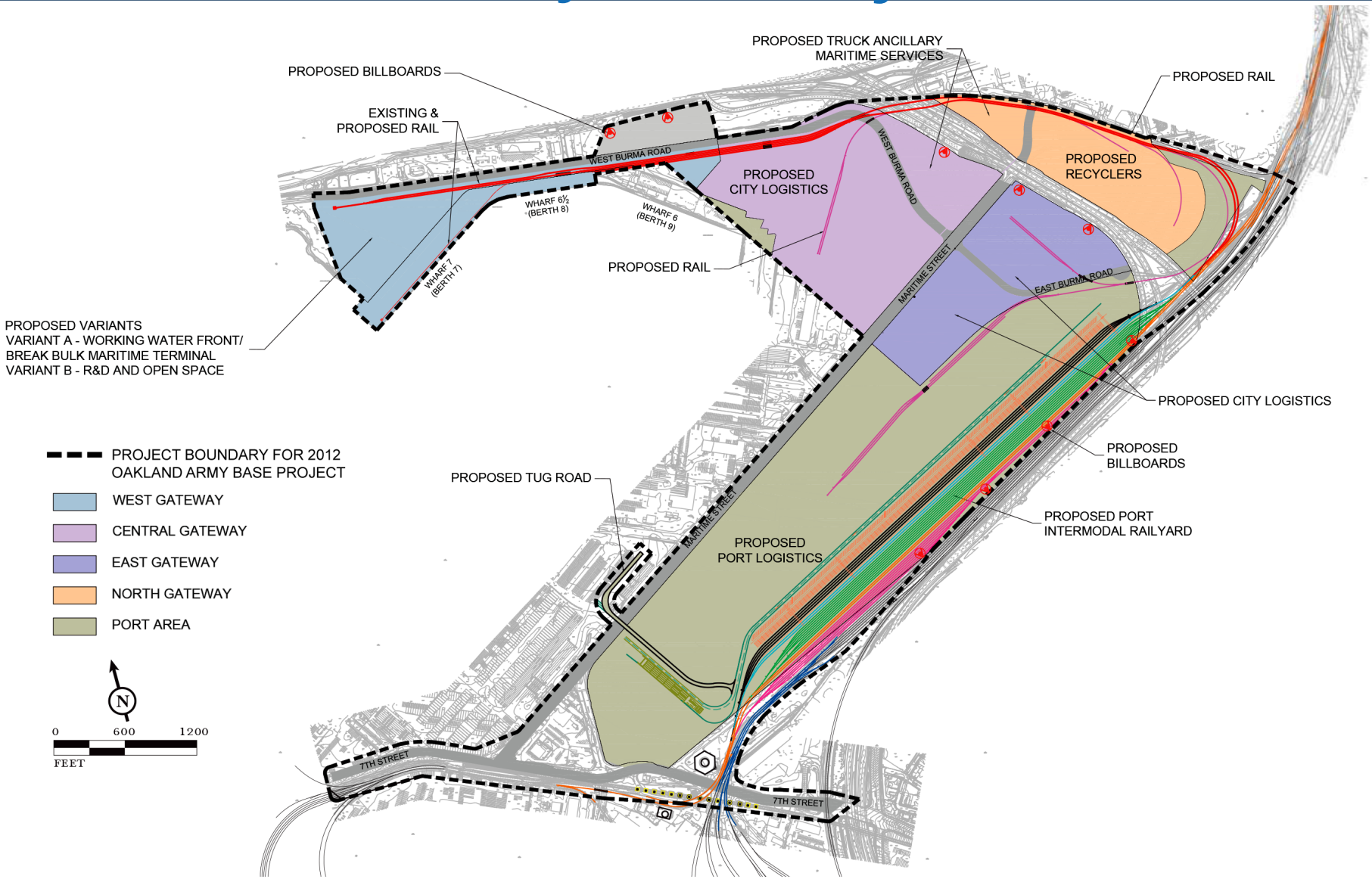
  In 2002, the EIR for the OAB Area Redevelopment Plan was certified; the plan adopted in 2002. The EIR identified significant and unavoidable impacts for aesthetics, air quality, biology, cultural resources, and transportation/traffic.

  Since the 2002 EIR, amendments to the OAB Area Redevelopment Plan have been studied. These included the Auto Mall Project in 2006 (not pursued), Maritime Street Relocation in 2006 (decided not to realign Maritime Street as proposed in 2002), Aggregate Recycling and Fill Project in 2009 (not pursued), and the 2012 Oakland Army Base Project.

  The **2012 Oakland Army Base Project** is proposed development of a 370-acre the portion of the redevelopment area that generally encompasses the former OAB. In 2006, approximately 170 acres of the former OAB was transferred to the City, with 200 acres going to the Port. The proposed development for both the City-owned and Port-owned areas is collectively known as the 2012 Oakland Army Base Project. **Figure 2.21-2** shows the Gateway development area and the Port development area in the OAB Sub-District; it shows the Gateway development area has been further subdivided into Gateway West, Central, East and North.

  The primary differences between the 2012 Oakland Army Base Project and what was proposed for the same geographic location in the greater OAB Area Redevelopment Plan are described below. The predominant land use shifted from office/R&D to warehouse/distribution and maritime-related logistics uses. The 2012 Oakland Army Base Project proposes up to approximately 2.5 million square feet of warehouse/distribution and maritime-related logistics uses (instead of 300,000 square feet) and 175,000 square feet of office/R&D (instead of 1.5 million square feet). North Gateway area has 407,160 square feet of indoor recycling facilities instead of light industrial uses. In the Central Gateway area near the Maritime Street/Burma Road intersection, there is a commemorative area to memorialize Bay Area civilian and military contributions to World War II, the Korean War, and the Vietnam War. Up to nine billboards were added along Grand Avenue and I-880. Maritime Street will not be realigned; it will be improved with intersection controls, bicycle and pedestrian paths, repaving, and landscaping. Additional differences and changes in circumstances since the 2002 EIR are described in the 2012 Oakland Army Base Project Initial Study/Addendum (LSA 2012).

2012 Oakland Army Base Project



Source: LSA 2012 (Architectural Dimensions, May 23, 2012).

Figure 2.21-2

Redevelopment has proceeded in certain parts of the former OAB, including new buildings east of Maritime Street and south of I-580, in the area south of the West Oakland Link alignment.

Hereinafter, the OAB Area Redevelopment Plan and the 2012 Oakland Army Base Project will be collectively referenced as the OAB projects.

- **Eagle Rock Aggregates Oakland Terminal Project.** The Eagle Rock Aggregates Oakland Terminal Project would create a marine terminal at the Port of Oakland that would import, store, and distribute bulk construction aggregates (i.e., sand and gravel) (Port of Oakland 2020). The Eagle Rock Aggregates Oakland Terminal Project would assist in meeting current and projected needs for sand and gravel in the greater Bay Area. The Project site would use Berth 22 for vessel and barge operations and approximately 18 acres of Berth 20, 21, and 22 backlands for stockpiling and distributing construction aggregates. The Project site is approximately 18 acres in size and generally bounded by the Outer Harbor to the north and west, 14th Street and the Outer Harbor Terminal to the south, and Maritime Street to the east. The Project site lies within the boundary of the OAB Area Redevelopment Plan. Under typical operating conditions, the project would include 48 ocean-going vessel calls per year, 76 barge calls per year, and up to 375 haul trucks per day (Port of Oakland 2020). The West Oakland Link project is approximately 0.4 miles north of the proposed terminal location.

Evaluation of Cumulative Impacts

The following discussion describes the Project's potential contribution to cumulative impacts for each of the primary issues for which the Project resulted in a potential impact. The issues for which there would be no impact (Agriculture, Land Use and Planning, Mineral Resources) are not discussed in this section.

- **Aesthetics.** Cumulative impacts could result from a change in visual character, altered views, and increased light and glare, primarily from the OAB projects, which include new lighted billboards. As described in Section 2.1, *Aesthetics*, the Project was determined to have a less-than-significant impact on aesthetics. The new elevated structure would not change the visual character or impede views in the area because it would be alongside other larger elevated roadway structures constructed of similar materials, such as West Grand Avenue. As such, the Link would effectively blend with views, or views of the Link would be obscured by other transportation facilities. The Project would include trash removal and graffiti control, as required by City SCAs (16, Trash and Blight Removal, and 17, Graffiti Control), and it would also be required to meet City standards regarding landscaping (18, Landscaping Plan). Although the Project would include low-level lighting, it would be negligible compared to existing conditions and would not introduce a substantial source of light and glare. Further, the City SCA 19, Lighting Plan, requires that exterior lighting fixtures for all projects be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties. Lastly, the project would also be consistent with the West Oakland Planning Area Strategy within the OSCAR because the proposed Project would improve shoreline access, create connections to parks in West Oakland, and include street tree planting to help "green" the city. Overall, the Project would be consistent with local regulations governing scenic quality, would not negatively affect scenic roadways, and would not result in a substantial change in light or glare. Therefore, the Project would not result in a substantial contribution to cumulative impacts.
- **Air Quality.** Cumulative impacts could result from construction-related diesel emissions, diesel emissions from Port operations and trucking activities, and vehicular emissions from passenger vehicles and delivery trucks.

The Project would contribute to construction-related emissions and vehicular emissions from people traveling to the Wood Street parking lot to use the new Link. The analysis in Section 2.3, *Air Quality*, is inherently cumulative. As indicated in the analysis, Project emissions from construction and operation would be well below BAAQMD thresholds of significance which are designed to account for cumulative effects. As required by the City SCAs for all construction projects, the Project would implement Mitigation Measure AQ-1, Implement the BAAQMD Basic Control Measures to Control Construction-Related Dust and to Reduce Exhaust Emissions during Construction. The impact of construction emissions on existing sensitive receptors in West Oakland would be less than significant.

However, a new multi-family residential building is planned for construction at 2011–2195 Wood Street. To reduce health effects from existing sources of pollution in the area (e.g., I-80, Port of Oakland, trains), the Wood Street project would be required to comply with the City SCAs. These conditions of approval would require the Wood Street project sponsor to choose one of two options. The first was to prepare a Health Risk Assessment (HRA). If health risks are below acceptable levels, then no further measures are needed. If risks are above acceptable levels, then the Wood Street project sponsor would need to implement approved HRA recommendations. Alternatively, the Wood Street project sponsor can choose to implement all of the measures listed in the City's SCAs. In addition, it is possible that homeless services or housing may be established along Wood Street north of West Grand Avenue by the time of project construction.

Although the planned building adjacent to West Grand Avenue is not currently built or occupied, it is possible that it will be constructed and occupied by the time construction of the Project commences. Similarly, homeless services and housing may be established by the time of construction. As such, construction of the Project could adversely affect future occupants (i.e., sensitive receptors) at the 2011–2195 Wood Street building, as well as homeless individuals using services or housing, through emissions of toxic air contaminants (TACs). The primary TAC of concern associated with project construction is DPM, which is a carcinogen emitted by diesel internal combustion engines. Construction activities would generate DPM and could expose adjacent receptors at the Wood Street building and users of homeless services or housing to significant health risks. DPM concentrations would be dramatically reduced as the distance between construction activities and sensitive receptors increases, however. Given the linear nature of the Project, it is not anticipated that construction activity would occur next to the Wood Street building or homeless services or housing for a prolonged period of time. Nevertheless, the proximity of Project construction activity to sensitive receptors warrants mitigation. With implementation of Mitigation Measure AQ-2, future construction activity in proximity to the Wood Street building or homeless services or housing with sensitive receptors would require an evaluation for its health risk effect on those receptors. Health risks from Project construction that are above the applicable BAAQMD thresholds would necessitate implementation of additional measures to reduce impacts on sensitive receptors to a less-than-significant level.

The Eagle Rock Aggregates Oakland Terminal Project, which is currently going through environmental review, would add criteria pollutant and TAC emissions (including diesel particulate matter [DPM]), associated with diesel equipment associated with marine vessels, onshore equipment, and trucks at the terminal location as well as DPM emissions associated with truck travel to and from the terminal to destination locations. The Draft EIR for the Eagle Rock project describes the project air quality effects and proposed mitigation. Concerning construction, as discussed above, the BAAQMD thresholds are designed with cumulative effects in mind and the West Oakland Link project would have emissions below the BAAQMD thresholds with Mitigation Measures AQ-1 and AQ-2, so would not contribute considerably to significant cumulative air quality impacts during construction, include those that may result from the Eagle Rock project, if approved and implemented. While the Eagle Rock project would increase operational diesel-related emissions in proximity of the

West Oakland Link project, the West Oakland Link project would have limited operational criteria pollutant emissions (associated with travel to the parking lot on Wood Street) but they would be below the BAAQMD thresholds, which account for cumulative effects, and thus the West Oakland Link project would not contribute considerably to significant cumulative criteria pollutant emissions impacts, including those that may result from the Eagle Rock project. Finally, operationally, the West Oakland Link project would not result in more than minimal operational TAC emissions given that the only operational emissions are related to passenger vehicles accessing the Wood Street parking lot, and thus the West Oakland Link would not contribute considerably to significant cumulative TAC emissions, including those that may result from the Eagle Rock project.

Therefore, with the implementation of Mitigation Measures AQ-1 and AQ-2, the Project would not result in a substantial contribution to cumulative impacts.

- **Biological Resources.** Cumulative impacts could result from the spread of invasive species at the expense of special-status species, the degradation of drainages and waters that could affect habitat value of special-status species and sensitive communities, and the loss of protected trees, which could affect protected nesting migratory birds. These impacts would be reduced by implementing site-specific best management practices and other measures determined by appropriate permitting resource agencies in compliance with federal, state, and local regulations such as the federal Clean Water Act Sections 404 and 401. The Oakland Protected Trees Ordinance and SCAs (43, Tree Removal During Breeding Season; 44, Tree Removal Permit; 45, Tree Replacement Plantings; and 46, Tree Protection During Construction) apply to all the projects to reduce impacts on protected trees and nesting birds. In addition, as described in Section 2.4, *Biological Resources*, implementing the following mitigation measures ensures the Project would have a less-than-significant impact and would not result in a substantial contribution to cumulative impacts: BIO-1 (Install Environmentally Sensitive Area Fencing to Protect the Sensitive Natural Communities, Including Earthen Drainage Ditch), BIO-2 (Avoid Placement of Stormwater Treatment Facilities in Area of Wetland Habitat), BIO-3 (Implement Measures to Avoid the Introduction and Spread of Invasive Plants), BIO-4 (Develop and Implement Worker Awareness Training), BIO-5 (Implement Nesting Bird Impact Avoidance Measures), BIO-6 (Conduct a Tree Survey and, if Protected Trees Are Identified, Comply with Requirements of City's Protected Trees Ordinance).
- **Cultural Resources.** Cumulative impacts could result from development that adversely affects historical resources, including those within the former Oakland Army Base Historic District and the West Oakland Historic District and determined eligible for the National Register of Historic Places and California Register of Historical Resources. The Project would not result in the demolition of any buildings or structures that could be considered historical resources. Other projects that require a demolition permit would be required by the City of Oakland to make a good-faith effort to relocate buildings considered contributors to the historic district, in compliance with Policy 3.7 of the Historic Preservation Element. As described in Section 2.5, *Cultural Resources*, the Project would result in minor alterations to the existing setting of three identified historical resources in West Oakland. However, because the setting has already been significantly altered, introducing the Link would not affect the historic integrity of the setting. Therefore, the Project would not result in a substantial contribution to cumulative impacts.

  The cumulative geographic context for archaeological resources and human remains is the immediate vicinity of the Project site, which is the area where construction activities, including ground-disturbing activities, could encounter archaeological resources and human remains that may be present on or near the site.

Similar to the proposed Project, all cumulative projects would be required to implement measures to ensure that project activities would not result in the inadvertent destruction of an archaeological resource and that discovery procedures pertaining to human remains would be implemented. Nonetheless, cumulative impacts on archaeological resources and human remains could be significant because the reasonably foreseeable projects involve ground-disturbing activities that have the potential to uncover archeological resources, including human remains, during project construction.

However, **AMM CUL-1** (Stop Work if Buried Cultural Resources Are Discovered) and **AMM CUL-2** (If Human Bones Are Discovered, Comply with State Laws Related to Human Resources) would ensure that the proposed Project's contribution to cumulative impacts on archaeological resources and human remains would be less than cumulatively considerable.

- **Energy.** The cumulative setting for energy is typically the service area of the energy providers (i.e., EBCE and PG&E). The cumulative projects identified above, as well as other future development, could result in a change in the demand for energy or result in the use of large amounts of fuel, water, or energy or use these in a wasteful manner, which would be considered a significant cumulative impact. As discussed in Section 2.6, *Energy*, the Project would include energy-efficient components that would support implementation of applicable plans related to renewable energy or energy efficiency and would not conflict with or obstruct implementation of a state or local plan for renewable energy or energy efficiency. In addition, the Project would not result in the inefficient, wasteful, or the unnecessary consumption of energy resources during construction or operation. Therefore, the proposed Project would not result in a cumulatively considerably impact on energy.
- **Geology and Soils.** Potential cumulative impacts for geology and soils do not extend far beyond a project's boundaries because such impacts are typically confined to specific locations and do not combine to create a cumulative impact. The exception to this would occur where a large geologic feature (e.g., fault zone, massive landslide) might affect an extensive area or where the development effects from the Project could affect the geologic stability of an off-site location. As described in Section 2.7, *Geology and Soils*, these circumstances are not present on the Project site.

  Potential cumulative impacts for paleontological resources extend to sensitive geologic units. Other projects planned or approved in the cumulative impact study area could also disturb sensitive paleontological resources. However, the Project as well as other projects would be required to conform to the City's SCAs for paleontological resources. Therefore, the Project would not result in a substantial contribution to cumulative impacts on paleontological resources.
- **Greenhouse Gas Emissions**. Cumulative impacts could result from construction related greenhouse gas (GHG) emissions generated from tailpipe exhaust (e.g., equipment, employees' vehicles, haul trucks) and electricity usage (e.g., office trailers) and operational GHG emissions generated from new vehicle trips and electricity usage. As stated in Section 2.8, *Greenhouse Gas Emissions*, the Project would result in a minor amount of construction related GHG emissions from diesel-powered equipment. Mitigation Measure GHG-1 (Implementing the BAAQMD Measures to Reduce Greenhouse Gas Emissions during Construction) would ensure that this impact would be less than significant and would not result in a substantial contribution to cumulative impacts. The Project would also generate operational GHG emissions from the new vehicle trips associated with using the Wood Street parking lot and the low-level lighting along the Link and in the parking lot. As stated in Section 2.8, *Greenhouse Gas Emissions*, the Project would facilitate future connections to downtown San Francisco and thus serve as the foundation for more connected bicycle infrastructure in the future. Consequently, the Project's increase in operational GHG emissions is not considered to be significant because, overall, the Project may result in a beneficial effect by contributing to the

development of infrastructure that would not require motorized vehicles between Oakland and Treasure Island (and ultimately San Francisco). Therefore, the Project would not result in a substantial contribution to cumulative impacts.

- **Hazards and Hazardous Materials.** Potential cumulative impacts do not extend far beyond a project's boundaries because such impacts are typically confined to specific locations and do not combine to create a cumulative impact. However, because there has been a substantial amount of industrial and transportation land uses historically in West Oakland, particularly in the OAB area, construction activities in this area could contribute to a cumulative impact by releasing hazardous materials into the environment during construction. All construction projects are required to comply with City SCAs (42, Hazardous Materials Related to Construction) prior to the commencement of demolition, grading, or construction. Other SCAs pertain to redevelopment of historically industrial or commercial buildings if the site has been identified in City records regarding hazardous materials or identified on the state Cortese List.

  As described in Section 2.9, *Hazards and Hazardous Materials*, two sites are identified as "recognized environmental concerns" for the Project, one on the north side at the EBMUD site and one on the south side at the OAB. Implementing the City's SCAs and Mitigation Measures HAZ-1 (Prepare a Phase II Environmental Site Assessment) and HAZ-2 (If Contaminated Soils Exist On-site, Implement Engineering Controls and Best Management Practices to Minimize Exposure to during Construction) would ensure that the impact would be less than significant and exposure would not extend beyond the Project boundaries. Therefore, the Project would not result in a substantial contribution to cumulative impacts.

- **Hydrology and Water Quality.** Potential cumulative impacts are related to degrading the quality of local and regional surface water bodies (including San Francisco Bay) and groundwater. There could also be cumulative impacts associated with constructing facilities that would be at risk from flooding associated with sea-level rise.

  As described in Section 2.10, *Hydrology and Water Quality*, the Bay is listed as impaired on the CWA Section 303(d) list, and 13 locations have been identified as having major groundwater pollution in the East Bay Palin Groundwater Basin. Construction and operation of the projects identified for the cumulative analysis could result in stormwater runoff that is a source of contamination in the Bay or other nearby surface waters, including drainages. Projects would be required to comply with state, regional and local regulations in place to protect water quality (refer to Section 2.10.1.2). If a project results in more than 1 acre of ground disturbance, a SWPPP is required, which dictates implementation of several best management practices to protect water quality and minimize the potential for contamination of groundwater. The Alameda Countywide Clean Water Program sets impervious area thresholds, requiring projects to implement permanent stormwater treatment.

  As discussed in Section 2.10, potential impacts of the Project on surface water and groundwater quality would be less than significant with implementation of Mitigation Measure HYD-1 (Prepare and Implement a Toxic Materials Spill Prevention and Response Plan) and compliance with permitting requirements specified in the NPDES Construction General Permit, Caltrans' Statewide NPDES Stormwater Permit, municipal stormwater requirements, dewatering requirements, and local stormwater ordinances, including the Oakland Grading Ordinance and Oakland SCAs. To mitigate for stormwater runoff from increased impervious surfaces, the Project includes 0.93 acre of stormwater treatment, either vegetated flow-through treatment areas or bio-treatment basins. Therefore, the Project is not expected to result in a substantial contribution to degrading the quality of local and regional surface water bodies.

As described in Section 2.10, projected sea-level rise would result in worsened coastal flooding that could affect infrastructure in West Oakland. Sometime between 2050 and 2100, sea-level rise may be 5 feet or greater. It is possible that sea walls or levees will be constructed to protect new and existing infrastructure such as I-80, the toll plaza, EBMUD facilities, and Port facilities west of I-880 as well as homes and businesses east of I-880. Most of the Link would be an elevated structure that would not be at risk from flooding. However, the at-grade portions of the Link and Wood Street parking lot could be flooded daily with high tides, which would prevent facility use and cause permanent damage to the facilities. Implementation of Mitigation Measure HYD-2 (Include Protection of Bike Link Facility in Planning Protection for Other Transportation Facilities) would reduce this impact to less than significant. Therefore, the Project is not expected to result in a substantial contribution to constructing facilities at risk from sea-level rise and thus creating a new burden regarding flood protection.

- **Noise.** The Project would not result in long-term increases in operational noise, except a slight increase from traffic redistribution due to closing Willow and Campbell Streets to through traffic. However, cumulative impacts could result from construction-related noise and therefore must be assessed. Noise from construction would be highly localized, intermittent, and temporary. Oakland has several Standard Conditions of Approval that apply to all construction projects. Applicable SCAs include 61 (limits on days/hours of construction operation), 62 (requirement to implement noise reduction measures to reduce construction noise), 63 (requirement of a construction noise management plan for extreme construction noise and requirement of notification for property owners within 300 feet of extreme noise-generating construction activities), 64 (requirement for project-specific construction noise reduction measures), and 65 (requirement to generate procedures for responding to and tracking construction noise complaints). Because the Project would comply with the local restrictions on construction noise and because construction activities would follow the City's SCAs, Project construction noise would not be expected to combine with construction noise effects from other projects and result in a cumulative construction noise impact. With regard to potential construction noise impacts from the Project on cumulative projects, a new multi-family residential project has been approved to be constructed at 2011–2195 Wood Street. Although this project is not built at this time, it is an approved project and therefore is considered a cumulative receptor for the purposes of this analysis. This project would be located along Wood Street, south of West Grand Avenue. The residential structure would be as close as approximately 50 feet from construction activities for the elevated path along West Grand Avenue and approximately 60 feet from in-road at-grade construction activities along Wood Street. At a distance of 50 feet, pile driving can result in a noise level of approximately 94 dBA Leq. Combined noise from a concrete saw, pile driver, and sand blaster for construction of supporting columns for the elevated path section could result in a noise level of approximately 96 dBA Leq at a 50-foot distance. For construction of the at-grade portions of the Project site, construction noise from a concrete saw, jackhammer, and sand blaster could result in a noise level of 91 dBA at 50 feet. Therefore, should the residences at the new 2011–2195 Wood Street project be occupied during Project construction, residents may be exposed to elevated noise levels. However, as described under the analysis of direct Project construction impacts, construction would be short term, and noise and vibration effects would cease upon completion of the Project. In addition, Project construction activities would comply with the City's SCAs. Because the Project would comply with the local restrictions on construction noise and because construction activities would follow the City's SCAs, noise impacts from Project construction on cumulative projects would be less than significant.

- **Population and Housing**. As described in Section 2.14, *Population and Housing*, the Project would not remove housing or induce population growth, either directly by proposing new residential units or business or indirectly by extending roads or infrastructure. The Link would provide a connection between two existing segments of the Bay Trail and improve bicycle and pedestrian access in West Oakland. However, it would not remove an obstacle to growth or otherwise induce population growth. Therefore, the Project would not result in contribution to cumulative impacts.
- **Public Services**. Potential cumulative impacts include increased demand for police and fire service. Projects that would result in population increases, through residential or business development, would generate a greater demand for police and fire service than the proposed Project. Because patrols of the Link would not result in a demand for new fire or police protection facilities, the impact would be less than significant and would not result in a substantial contribution to cumulative impacts.
- **Recreation**. The Project would add cumulative local recreational capacity and infrastructure that would serve West Oakland and the San Francisco Bay Area. This represents a cumulative net beneficial effect on recreational infrastructure.
- **Transportation.** Cumulative impacts could result from construction-related traffic and an increase in hazards because of a geometric design feature or incompatible uses. As indicated in the analysis, construction-related traffic may temporarily reduce roadway capacities and increase congestion in the Project vicinity as well as disrupt access to existing land uses and parking. As required for all construction projects, compliance with Oakland SCA 74 (Construction Activities in the Public Right-of-Way) would ensure that this impact would be less than significant.

  The Project would also result in an increase in hazards at the West Grand Avenue/Frontage Road/I-80 Ramps intersection, West Grand Avenue/Mandela Parkway (northbound), at the existing Bay Bridge Trail below the I-880/I-80 connection, between the Wood Street parking lot and the Link, and at the Segment 4 switchback, as described in Section 2.17. Mitigation Measures TR-1 through TR-5 would reduce these impacts to less than significant. Therefore, with implementation of mitigation measures, the cumulative transportation impact would also be less than significant because geometric hazards would be avoided in the cumulative condition.
- **Tribal Cultural Resources.** The cumulative geographic context for tribal cultural resources is the immediate vicinity of the Project site, which is the area where construction activities, including ground-disturbing activities, could encounter tribal cultural resources that may be present on or near the site**.**

  The cumulative projects in the vicinity of the Project site would be constructed on infill sites in highly disturbed areas. It is likely that the cumulative projects would be constructed on sites where the ground surface has been disturbed and/or covered with fill and gravel. Similar to the proposed Project, all cumulative projects would be required to implement measures to ensure that project activities would not result in the inadvertent destruction of a tribal cultural resource and that discovery procedures pertaining to human remains would be implemented in case of discovery. Nonetheless, cumulative impacts on archaeological resources and human remains could be significant because the reasonably foreseeable projects involve ground-disturbing activities that have the potential to uncover archeological resources, including human remains, during project construction.

  However, **AMM CUL-1** (Stop Work if Buried Cultural Resources Are Discovered) and **AMM CUL-2** (If Human Bones are Discovered, Comply with State Laws Related to Human Resources) would ensure that the proposed Project's contribution to cumulative impacts on archaeological resources and human remains would be less than cumulatively considerable.

- **Utilities and Service System.** Potential cumulative impacts include construction-related solid waste impacts, particularly from projects with substantial demolition and grading (cut). All construction projects are required to comply with Oakland's Construction and Demolition Debris Waste Reduction and Recycling Ordinance and SCA 35 (Waste Reduction and Recycling). This would ensure that the Project would not affect landfill capacity. Therefore, the Project would not result in a substantial contribution to cumulative impacts.
- **Wildfire.** Potential cumulative impacts related to the Project have to do with the potential for the Project to substantially impair an adopted emergency response plan or emergency evacuation plan. As described in Section 2.20, *Wildfire*, during construction activities, the Project would be required to comply with applicable requirements set forth by the Alameda County Emergency Operations Plan and other County and City regulations. In addition, because the Project would be constructed in phases, it must comply with the City's SCA to implement a Fire Safety Phasing Plan. Therefore, the proposed Project is not expected to contribute to any cumulative impacts on wildfire hazards.

c. Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?

During construction activities, workers could be exposed to dust and hazardous materials on the Project site. These exposures have the potential to have adverse effects on human beings. Implementation of **Mitigation Measure AQ-1** (Implement BAAQMD Basic Construction Mitigation Measures) would reduce the exposure to dust. Implementation of Mitigation Measure AQ-2 (Prepare a Health Risk Assessment prior to Construction near the Wood Street Residences and Implement Risk Reduction Measures (as necessary) would reduce potential construction health risks relative to future residential development adjacent to the project alignment. Implementation of **Mitigation Measures HAZ-1** (Prepare Phase II ESA), **HAZ-2** (If Contaminated Soils Existing On-site, Implement Engineering Controls and Best Management Practices to Minimize Exposure), and **HYD-1** (Prepare and Implement a Toxic Materials Spill Prevention and Response Plan) would reduce the potential adverse effects on construction workers. Therefore, the Project would not cause a substantial adverse effect on human beings.

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Chapter 3
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Chapter 4
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Appendices

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