ADDENDUM TO THE CITY OF OAKLAND MEASURE DD IMPLEMENTATION (MEASURE DD) PROJECT ENVIRONMENTAL IMPACT REPORT

FOR THE LAKE MERRITT TO BAY TRAIL BICYCLE/PEDESTRIAN BRIDGE (LM2BT) PROJECT

LSA

February 2016

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FOR THE LAKE MERRITT TO BAY TRAIL BICYCLE/PEDESTRIAN BRIDGE (LM2BT) PROJECT

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I. EXECUTIVE SUMMARY

The proposed Lake Merritt to Bay Trail Bicycle and Pedestrian Bridge (LM2BT) Project (project) encompasses an area located along the southern portion of the Lake Merritt Channel (Channel), generally where the Channel meets the Oakland Estuary in the City of Oakland, Alameda County. The project site encompasses the eastern and western banks of the Channel beginning just north of the elevated I-880 overpass and extends south to the existing Embarcadero Bridge. The proposed project would construct an elevated pedestrian and bicycle path that would provide access from the Lake Merritt Channel to the new Embarcadero Bridge by the Oakland Estuary, closing the existing gap in the regional bicycle and pedestrian trail system between Lake Merritt trails and the San Francisco Bay Trail (Bay Trail).

The project, which consists of two potential pathway alignments referred to as the "proposed project" or "project variant" would implement the 2002 Ballot Measure DD, the City of Oakland General Plan, the Estuary Plan, and the San Francisco Bay Trail Plan and would support adopted policy objectives to provide recreation improvements and safe public access to Lake Merritt, the Lake Merritt Channel, the Oakland Estuary and the San Francisco Bay.

This document, prepared pursuant to the California Environmental Quality Act (CEQA) and the regulations and policies of the City of Oakland, is an Addendum to the *City of Oakland Measure DD Implementation Project Final Environmental Impact Report* (Measure DD EIR), which was certified by the City of Oakland (City) in July 2007. The Measure DD EIR consists of the Draft EIR and the Final Environmental Impact Report (Response to Comments Document). [1,2]

Applicable CEQA streamlining and/or tiering code sections are described below, each of which, separately and independently, provide a basis for CEQA compliance.

1. **Addendum.** Public Resources Code Section 21166 and CEQA Guidelines Sections 15162 and 15164 (Subsequent EIRs, Supplements and Addenda to an EIR or Negative Declaration), provide that an addendum to a certified EIR is allowed when minor changes or additions are necessary, and none of the conditions for preparation of a subsequent EIR have occurred.

   The analysis in the Measure DD EIR directly applies to the proposed project, providing the basis for use of an Addendum.

2. **Community Plan Exemption.** Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183 (Projects Consistent with a Community Plan or Zoning) allow streamlined environmental review for projects that are "consistent with the development

[1] Oakland, City of, 2007. *City of Oakland Measure DD Implementation Project Draft Environmental Impact Report*, State Clearinghouse #2006122048. July.

[2] Oakland, City of, 2008. *City of Oakland Measure DD Implementation Project Final Environmental Impact Report*, State Clearinghouse #2006122048. January.

density established by existing zoning, community plan or general plan policies for which an EIR was certified, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site." Section 15183(c) specifies that "if an impact is not peculiar to the parcel or to the proposed project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards…, then an EIR need not be prepared for the project solely on the basis of that impact."

The analysis in Program EIRs – the 1998 Land Use and Transportation Element (LUTE) EIR, the Estuary Policy Plan (EPP) EIR, and Measure DD EIR – are all applicable to the proposed project and are the Previous CEQA Documents providing the basis for use of the Community Plan Exemption.

The Environmental Checklist provided in Chapter IV of this document evaluates the potential project-specific environmental effects of the proposed project and the project variant, and evaluates whether such impacts were adequately covered by the Measure DD EIR to allow the above-listed streamlining and/or tiering provisions of CEQA to apply. The analysis incorporates by reference the information contained in the Measure DD EIR. Mitigation measures and Standard Conditions of Approval (SCAs) identified in the Measure DD EIR that would apply to the project are listed within and at the end of the Environmental Checklist. The proposed project is legally required to incorporate and/or comply with the applicable requirements of the mitigation measures identified in the Measure DD EIR, and with applicable City of Oakland SCAs; therefore, the measures and SCAs are herein assumed to be included as part of the proposed project (see Attachment A).

The project satisfies each of the foregoing CEQA provisions, as summarized below.

1. **Addendum.** The analysis conducted in this document indicates that an addendum to the Measure DD applies; therefore, this CEQA Analysis is considered to be the addendum. As discussed below in Chapter II, Project Description, the project represents a minor change to the Measure DD group of projects that were analyzed in the Measure DD EIR. The proposed project would not represent a substantial change from what was considered and analyzed in the Measure DD EIR and would not result in new or more severe environmental impacts. The project therefore meets the requirements for an addendum, as evidenced in Attachment B to this document.
2. **Community Plan Exemption.** Based on the analysis conducted in this document, the proposed project also qualifies for a community plan exemption. It is permitted in the zoning district where the project site is located, and is consistent with the group of projects envisioned by the Measure DD project. The analysis herein considers the analysis provided in the Measure DD EIR. This CEQA Analysis concludes that the proposed project would not result in significant impacts that (1) are peculiar to the project or project site; (2) were not identified as significant project-level, cumulative, or offsite effects in the LUTE EIR, EPP EIR, or Measure DD EIR; or (3) were previously identified as significant effects, but are determined to have a more severe adverse impact than discussed in the EIR. Findings regarding the proposed project's consistency with the zoning are included as Attachment C to this document.

The Environmental Checklist provided in Chapter IV evaluates the potential project-specific environmental effects of the proposed project and the project variant, and evaluates whether such impacts were adequately covered by the Measure DD EIR. The analysis conducted incorporates by reference the information contained in the Measure DD EIR including appropriate mitigation measures and SCAs. It should be noted that the City has revised its SCAs as of July 2015, and specific SCAs that are identified in the Measure DD EIR may have been modified; all SCAs that are applicable to the proposed project are identified and updated as necessary in this document (refer to Attachment A).[3] The proposed project is legally required to incorporate and/or comply with the applicable requirements of the mitigation measures identified in the Measure DD EIR, and with applicable City of Oakland SCAs; therefore, the measures and SCAs are herein assumed to be included as part of the proposed project (see Attachment A).

Based on an examination of the analysis, findings, and conclusions of the Measure DD EIR, as summarized in the Environmental Checklist, the Measure DD EIR adequately analyzed and covered the potential environmental impacts associated with the LM2BT project and no further review or analysis under CEQA is required.

[3] Oakland, City of, 2015. Standard Conditions of Approval. Adopted 2008. Revised July 22, 2015.

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II. PROJECT DESCRIPTION

This chapter describes the proposed Lake Merritt to Bay Trail Bicycle and Pedestrian Bridge (LM2BT) Project (project) that is evaluated in this *Addendum to the City of Oakland Measure DD Implementation Project Environmental Impact Report* (Measure DD EIR).[4,5] This is the third Addendum to the Measure DD EIR. The purpose of the project is to close the existing gap in the regional bicycle and pedestrian trail system between Lake Merritt trails and the San Francisco Bay Trail (Bay Trail).

The project would implement the 2002 Ballot Measure DD, the City of Oakland General Plan (and more specifically the Open Space, Conservation and Recreation Element), the Estuary Policy Plan, and the San Francisco Bay Trail Plan. The project would support adopted policy objectives by providing recreation improvements and safe public access to Lake Merritt, the Lake Merritt Channel, the Estuary and San Francisco Bay.

This chapter describes the LM2BT project and how it relates to the project described and evaluated in the Measure DD EIR. A variant to the proposed project's alignment is also described and evaluated in this document. In addition to a description of the proposed project, the following sections describe the proposed project's regional and local context, planning process and background, project objectives, as well as the intended uses of this document and required project approvals.

A. PROJECT SITE

The following describes the geographic context of the project site (generally the area surrounding the proposed bridge's alignment) and provides a brief overview of existing land uses within and around the site.

1. Location

The project site is located along the southern portion of the Lake Merritt Channel (Channel), generally where the Channel meets the Oakland Estuary in the City of Oakland, Alameda County. The project site encompasses the eastern and western banks of the Channel beginning just north of the elevated I-880 overpass and extends south to the existing Embarcadero Bridge. Figure 1 depicts the site's location and regional context.

[4] Oakland, City of, 2007. *City of Oakland Measure DD Implementation Project Draft Environmental Impact Report*, State Clearinghouse #2006122048. July.

[5] Oakland, City of, 2008. *City of Oakland Measure DD Implementation Project Final Environmental Impact Report*, State Clearinghouse #2006122048. January.

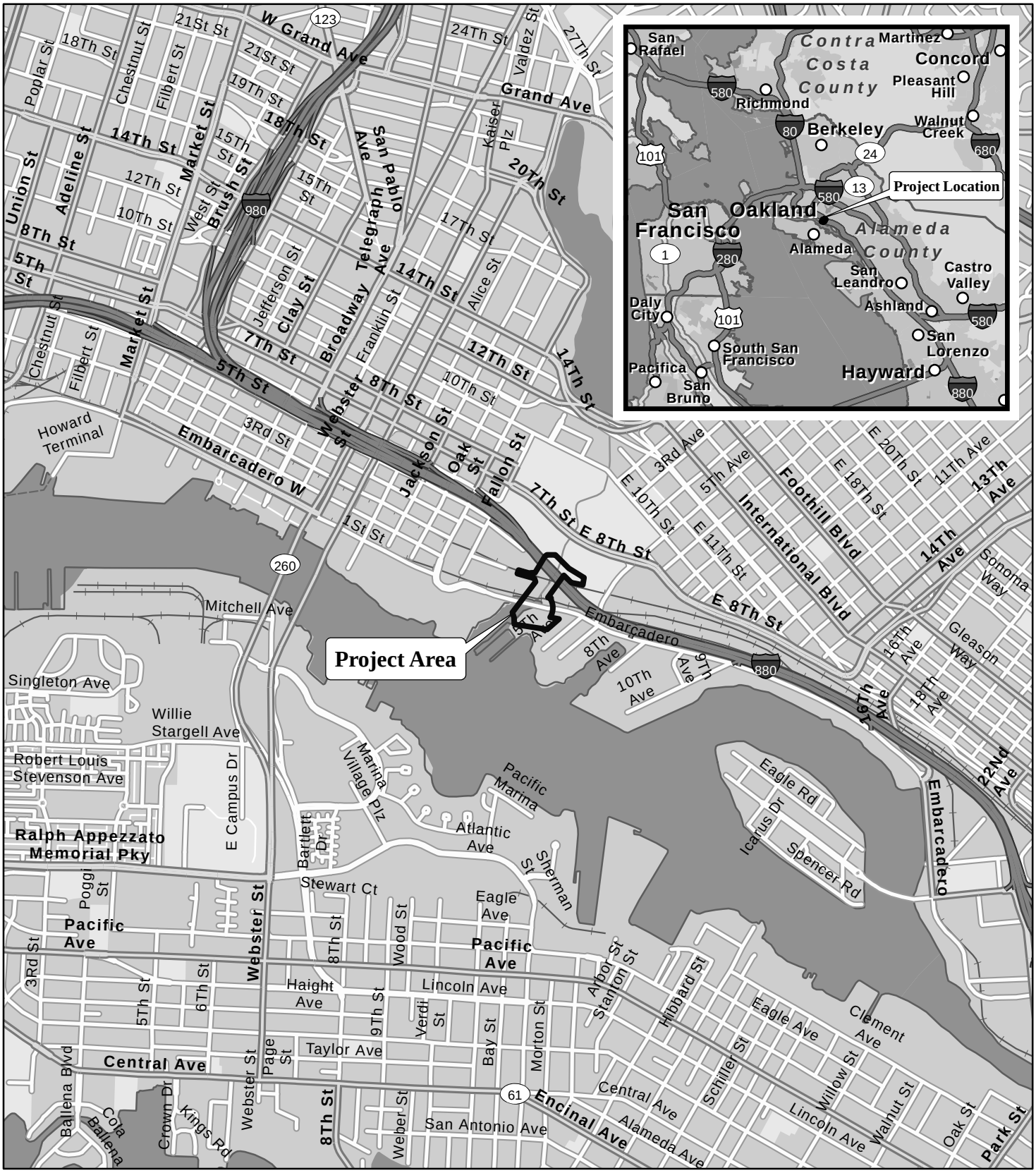

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FIGURE 1

Addendum to the Measure DD EIR for the LM2BT Project

Project Location and Regional Vicinity Map

SOURCE: ESRI StreetMap North America (2012)

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Existing trails within the vicinity of the site include facilities within the Lake Merritt area to the north; however, these trails terminate on the banks of the Channel north of the project site study area. The San Francisco Bay Trail is a separate regional trail to the south of the project site. The project would connect these two trail systems. With the exception of local roadways, most of the site is not currently accessible to pedestrians or bicyclists. Roadways within the vicinity of the site include Embarcadero Road and 5th Avenue. I-880 crosses over the project site on an elevated structure. Existing transit service in the area is provided by the Alameda-Contra Costa (AC) Transit District. The Oakland Jack London Square Train Station (serving Amtrak) is located approximately 0.5 miles to the west of the site and the Lake Merritt Bay Area Rapid Transit (BART) Station is located about 0.75 miles to the northwest of the site.

2. Existing Conditions

The project area extends approximately 1,850 linear feet along the Channel, beginning just north of the elevated I-880 structure, and extends south towards the Union Pacific Railroad (UPRR) tracks and terminates at the existing Embarcadero Bridge. The project site includes the Channel itself, a portion beneath the I-880 structure (the 5th Street Viaduct), and a section over the UPRR tracks and the Embarcadero Bridge. The project area boundary is depicted in Figure 2.

The project alignment would be located on undeveloped portions of the site consisting of ruderal vegetation, tidal marsh, and open water (i.e., the Channel). A few scattered trees and shrubs are also located along the banks of the Channel.

The Lake Merritt Channel/Oakland Estuary Embarcadero Bridge Replacement Project will, once completed, replace the existing/prior Embarcadero Bridge. The bridge is being replaced in order to increase its seismic stability as part of the California Department of Transportation (Caltrans) bridge inspection program.[6] The new bridge will be wider than the previous bridge (59 feet wide rather than 37 feet). In addition to 12-foot travel lanes in either direction, it will accommodate a 6-foot bike lane/ shoulder in each direction, a 5-foot sidewalk on the north side, and a 12-foot multi-use path on the south (Estuary) side. Additional improvements include a higher clearance over the Channel, new street lighting, minor landscaping, new restroom facilities at the west end of the bridge, and planted rainwater treatment areas at both ends to improve water quality in the vicinity. The project is expected to be completed and operational by June 2017.[7] Given this current status, it is anticipated that this project will be completed prior to construction of the proposed LM2BT project; therefore, the completed Embarcadero Bridge project is considered to be part of the existing conditions and is described and evaluated as such in this document.

[6] Oakland, City of, 2015. Lake Merritt Channel/Oakland Estuary Embarcadero Bridge Seismic Safety Replacement Project. Available online at: ec2-54-235-79-104.compute-1.amazonaws.com/oak/groups/pwa/documents/report/oak046680.pdf. February 16.

[7] Oakland, City of, 2015. Embarcadero Bridge Seismic Safety Replacement Project Fact Sheet. Website: www.oaklandnet.com/embarcadero. April.

3. Ownership and Land Use Designations

With the exception of the UPRR railroad corridor and portions of the Peralta and Laney College properties, which are part of the State of California Community College System, all properties within the project area boundaries are publically owned and maintained. Existing Assessor's Parcel Numbers (APNs) and ownership of properties within and immediately adjacent to the project boundary are depicted in Figure 3.

The area north of I-880 is designated as Urban Open Space in the City's General Plan and the area south of I-880 is identified as Planned Waterfront Development 1 in the City's Estuary Plan. The project area is within the Open Space Zoning District and the designations that apply to the project area include OS (LP), Linear Park; OS (RCA), Resource Conservation Area; and OS (RSP), Region Serving Park.

4. Surrounding Land Uses

The project area is located less than 1 mile south of Lake Merritt, which is a local open space and recreation area surrounded by urban uses. The Channel extends south of Lake Merritt to the project site and on to the Oakland Estuary. The proposed project site and the Channel are bordered by vacant lots, paved roads, parking lots, industrial facilities, warehouses, and storage and delivery centers. The area to the west of the Channel and south of the Embarcadero is developed with the Jack London Aquatic Center, Estuary Park and a portion of the Bay Trail. The eastern portion of the Channel directly south of the Embarcadero consists of undeveloped land planned for development of park and open space (Channel Park) and the extension of the Bay Trail as part of the Brooklyn Basin Project. Portions of the Brooklyn Basin development and accompanying marina are currently under construction further east of the site. North of the UPRR tracks, the west side of the Channel is developed with structures used for training by the Oakland Fire Department (OFD), and the east side is developed with an East Bay Municipal Utility District (EBMUD) storm drainage facility. Peralta College owns land currently used as a parking lot to the north of the I-880 structure and west of the Channel; and Laney College owns land developed with their facilities to the east of the Channel. Refer to Section IV.9, Land Use and Planning of this document for additional discussion related to existing land uses within the vicinity of the site.

B. PROJECT BACKGROUND

In November 2002, Oakland voters passed a $198,250,000 bond measure entitled Oakland Trust for Clean Water, Safe Parks (Measure DD). This bond measure authorizes funding for physical improvements to existing parks; acquisition of land for new parks; development of new parks and recreation facilities; clean water measures; restoration and rehabilitation of recreation buildings; and implementation of creek and waterway protection and restoration activities.

Measure DD authorizes the City to issue bonds that fund two types of activities or actions: those that would provide improved or new recreational opportunities for Oakland's citizens and those that would improve water quality at Lake Merritt and creeks located throughout Oakland. The components and activities funded by Measure DD are grouped as follows:

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FIGURE 2

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Project Area

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Addendum to the Measure DD EIR for the LM2BT Project

Aerial View of the Project Site and Vicinity

SOURCES: GOOGLE EARTH, 6/9/14; LSA ASSOCIATES, INC., 2015

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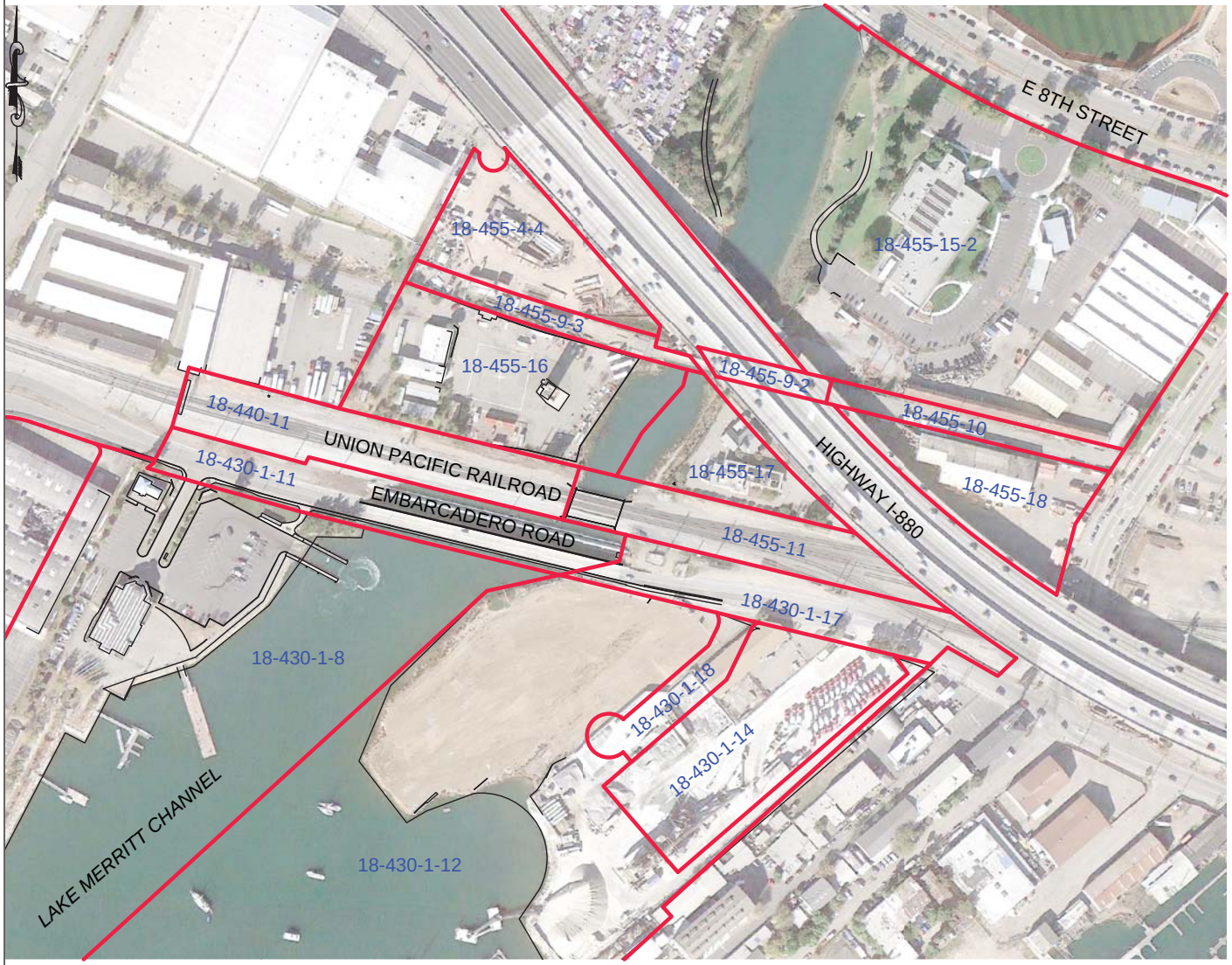

Parcel No.	Owner	Easement Designation
18–455–15–2	PERALTA COMMUNITY COLLEGE DISTRICT	
18–455–4–4	PERALTA COMMUNITY COLLEGE DISTRICT	
18–455–9–3	CITY OF OAKLAND	WPRR
18–455–9–2	CITY OF OAKLAND	WPRR
18–455–10	CITY OF OAKLAND	WPRR
18–455–16	CITY OF OAKLAND	
18–455–17	CITY OF OAKLAND	EBMUD
18–455–18	CITY OF OAKLAND	
18–440–11	UPRR	
18–455–11	UPRR	
18–430–1–11	CITY OF OAKLAND	
18–430–1–17	CITY OF OAKLAND	
18–430–1–8	CITY OF OAKLAND	
18–430–1–12	CITY OF OAKLAND	
18–430–1–18	ZARSION–OHP I, LLC	
18–430–1–14	ZARSION–OHP I, LLC	

NOTE:

PARCEL LIMITS SHOWN ARE APPROXIMATE AND ARE BASED ON INFORMATION PROVIDED ON THE ALAMEDA COUNTY OFFICE OF ASSESSOR "PARCEL VIEWER" WEBSITE.

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FIGURE 3

Addendum to the Measure DD EIR for the LM2BT Project

Project Area Parcel Map

SOURCE: CITY OF OAKLAND, DECEMBER 2014.

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- Lake Merritt and Lake Merritt Channel Improvements (Group 1)
- Oakland Waterfront Trail and Access Improvements (Group 2)
- North and East Oakland Recreational Facilities (Group 3)
- City-wide Creeks Restoration, Preservation and Acquisition (Group 4)

The Measure DD EIR described and evaluated the components of the above-listed activities. In July 2007 the City of Oakland prepared the Measure DD Draft EIR and the Final EIR was certified in February 2008.

The proposed project is located within the boundaries of the Measure DD group of projects evaluated in the Measure DD EIR and is within the scope of the regional group of projects that were evaluated in that document. While a new bridge connecting Lake Merritt to the Oakland Estuary along the Lake Merritt Channel was not specifically described and evaluated as a specific project in the Measure DD EIR, the LM2BT project clearly fits within the Measure DD project objectives and as a component within the group of projects that were evaluated at a program level in the Measure DD EIR. Specifically, the proposed LM2BT project would further the objectives of the Measure DD Project, as follows:

Lake Merritt and Lake Merritt Channel Improvements (Group 1)

- Connect the isolated southern shoreline of Lake Merritt with surrounding cultural, civic, and urban districts;
- Enhance the connection between Lake Merritt, the Lake Merritt Channel, and the Oakland Estuary;
- Improve bicycle and pedestrian safety and circulation;
- Provide safe public spaces; and
- Support the following objectives for parks and recreation as set forth in the OSCAR Element:
    - Maintain an urban park…system which provides open space for outdoor recreation, psychological and physical well-being, and relief from the urban environment;
    - Protect scenic views and improve visual quality;
    - Protect the ecology and promote the beneficial uses of Oakland's creeks, lakes, and near-shore waters; and
    - Improve personal safety and reduce crime in Oakland's parks.

Oakland Waterfront Trail and Access Improvements (Group 2)

- Support the following objectives for the waterfront as set forth in the Estuary Policy Plan:
    - Create a clear and continuous system of public access along the Estuary shoreline;
    - Develop opportunities for recreational activities that are oriented to the waterfront and serve identified neighborhood needs;
    - Improve and clarify regional access to Oakland's waterfront;
    - Improve pedestrian and bicycle circulation; and

- Support the following objectives for the parks, recreation and the waterfront as set forth in the Open Space, Conservation, and Recreation (OSCAR) Element:
    - Maintain an urban park…system which provides open space for outdoor recreation, psychological and physical well-being, and relief from the urban environment;
    - Develop a system of linear parks and trails which: (a) links existing parks together; (b) provides safe, convenient access to open space from residential areas and employment centers; (c) provides places to hike, bike, and experience Oakland's scenery; and (d) provides a means of moving from one place to another without an automobile; and
    - Increase physical and visual access to the Oakland shoreline and create new opportunities for shoreline recreation.

North and East Oakland Recreational Facilities (Group 3)

- Provide additional recreation facilities in East Oakland.

City-wide Creeks Restoration, Preservation and Acquisition (Group 4)

- Support the following objectives of the Oakland Creek Protection Ordinance:
    - Safeguard and preserve creeks and riparian corridors in a natural state;
    - Preserve and enhance creekside vegetation and wildlife;
    - Prevent activities that would contribute significantly to flooding, erosion or sedimentation, or that would destroy riparian areas or would inhibit their restoration;
    - Enhance recreational and beneficial uses of Creeks;
    - Control erosion and sedimentation;
    - Protect drainage facilities;
    - Protect the public health and safety, and public and private property; and
    - Protect and enhance the water quality of Oakland's watercourses, water bodies, and wetlands in a manner pursuant to and consistent with the federal Clean Water Act.

Since certification of the Measure DD EIR in 2008, several of the improvements identified for the Measure DD group of projects have been or will soon be completed. Those improvements that are located within the immediate vicinity of the project area, and generally encompass the Measure DD Group 1 projects, are as follows:

- *12th Street Reconstruction Project*. The area encompassing the former 12-lane segment of 12th Street and the Lake Merritt dam were redesigned to form a 6-lane, tree-lined boulevard with new vehicular and pedestrian bridges, multi-use pathways, tidal marsh, and a 4-acre park. Unsightly tunnels and the Lake Merritt dam and culverts at this location were replaced with new clear span vehicle and pedestrian bridges, allowing improved tidal circulation and enhances water quality and wildlife habitat. This project was completed in 2013.
- *10th Street Lake Merritt Channel Project*. Includes removal of existing culverts, construction of a clear-span bridge and relocation of existing utilities at 10th Street. This improvement is intended to improve tidal circulation in the lake and enhance water quality and

enhance pedestrian, bicycle, and boat access. This project is expected to be completed in 2016.

Further improvements have been implemented around Lake Merritt, which is located north of the project area and north of the Channel improvement projects described above. Improvements to the nearby Estuary Park and development of Channel Park (which is part of the private Brooklyn Basin development) have not yet been implemented, but are anticipated to contribute to the further enhancement of recreational opportunities and pedestrian and bicycle access and connections within the immediate vicinity of the proposed project area.

The above-noted completed and under-construction improvements represent a change in circumstances since certification of the Measure DD EIR; however, none of these improvements have occurred within the boundaries of the project site.

C. PROPOSED PROJECT

The proposed project would construct a new pedestrian and bicycle path to connect the existing pathway on the east side of the Channel to the elevated Embarcadero Bridge. The elevated pathway would form an "S" curve along the proposed alignment. The new pathway would begin on the east side of the Channel, cross to the west side of the Channel beneath the I-880 structure, then cross back to the east side of the Channel before passing over the UPRR tracks and Embarcadero Road. It would then curve around to terminate at the east belvedere of the reconstructed Embarcadero Bridge.

As a variant to the proposed project alignment, a second option for the pathway is also considered in this document. The alignment for the project variant would begin on the west side of the Channel, rather than the east, but would then generally follow a similar path as the proposed alignment. The project variant is also described below, where it would differ from the proposed project alignment. In cases where components of the "proposed project" and "project variant" are the same or are substantially similar, they are collectively referred to simply as "the project."

Individual components of the proposed project and the project variant are discussed in detail below. Figures 4, 5, and 6 depict the conceptual bridge design and alignment and conceptual pathway sections, respectively.

1. Bridge/Pathway Design

The total length of the new pathway would be approximately 1,850 linear feet. The pathway would be 16.5 feet in width, consisting of two 4.5-foot-wide travel lanes for bicyclists and a 6-foot-wide travel lane for pedestrians; the remaining width would consist of railings and curbs. A 3.5-foot-tall railing would be provided along the length of the elevated pathway. Taller fencing (up to 10 feet) would be provided where the bridge would pass over the UPPR right of way.

At the northern touchdown, approximately 3 feet of fill (a total of 500 cubic yards) would be added to raise the existing grade and a pathway would be constructed on top of this fill. The approach ramp structure would rise from this level, spanning over the channel (Span 1), then over an existing parcel known as the Western Pacific Franchise Strip (see Figure 4) (Span 2), then back over the Channel (Span 3), then rise up to approximately 23.5 feet clearance over the UPRR right-of-way (in order to

clear double-stacked freight cars) and to a belvedere touchdown[8] on Embarcadero Bridge Road (Span 4).

The south approach would span over a series of supports located at the future Channel Park, before touching down at the eastern belvedere of the new Embarcadero Bridge structure. Depending on structure type, the top of the bridge superstructure and supporting elements may rise as much as 100 feet above existing grade. The bridge and approach travel-way would have a maximum slope of 5 percent to comply with the Americans with Disabilities Act (ADA) requirements. Clearance beneath the I-880 structure would be a minimum of 10 feet and would be consistent with Caltrans' requirements. Minimum clearance above the UPRR rail corridor would be 23 feet. Minimum clearance above the Embarcadero Road would be 17.5 feet. The maximum clearance above the Channel would be about 15 feet, and the minimum clearance would be 1 foot above the mean high water line.

A total of eight columns would be installed to support the proposed structure, four of which would be located along the banks of the Channel and four of which would be located beneath the portion of the structure that would be located within the future Channel Park. Column supports would be made of reinforced concrete and would vary between 4 and 6 feet wide at the base and 4 and 23 feet tall. Column supports would extend approximately 120 feet below the ground or water surface.

In addition to the column supports, preliminary design features consist of viewing spots at various locations along the traveled way, and optional stairways located at the Western Pacific Franchise Strip, and the future Channel Park. In addition, the structure could be supported by a cable system. If this design option is selected, cables would be a minimum of 1 inch in diameter and spaced 10 feet or more apart.

a. Project Variant. As a variant to the proposed project, the pathway and bridge alignment could begin on the west side of the Channel. For this alternative alignment, at the northern touchdown, approximately 9 feet of fill (a total of 2,000 cubic yards) would be added to raise the existing grade and a pathway would be constructed on top of this fill. The approach ramp structure would rise from this level, spanning over the Channel (Span 1), then rise up to approximately 23.5 feet over the UPRR right-of-way and Embarcadero Road (Span 2) in order to clear double-stacked freight cars. The southern approach would be the same as the proposed project alignment. A total of seven columns would be installed to support the proposed structure, three of which would be located along the banks of the Channel and four of which would be located beneath the portion of the structure that would be located within the future Channel Park.

[8] A belvedere is a structural vantage point.

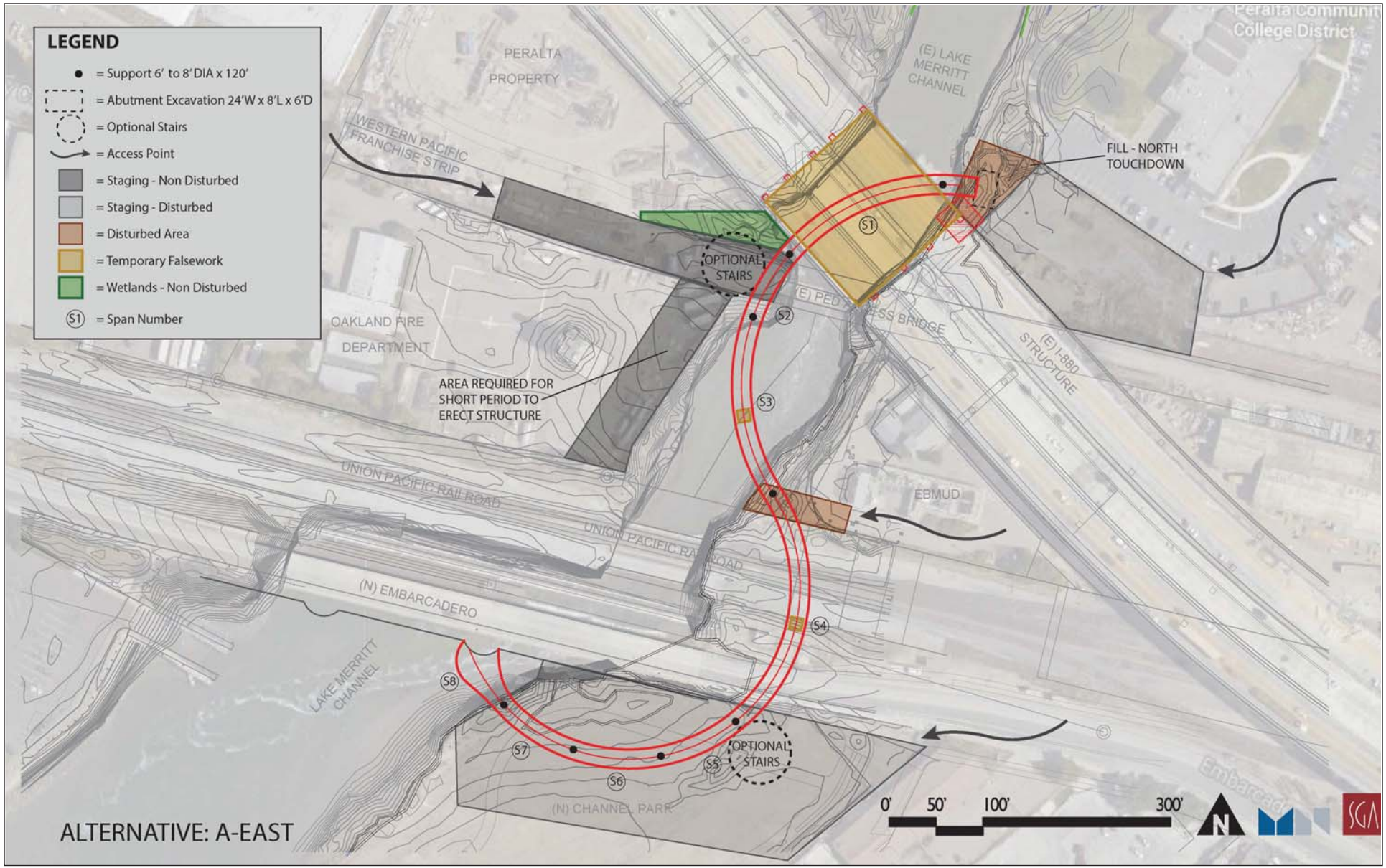

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FIGURE 4a

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SOURCE: MOFFAT & NICHOL; SGA, NOVEMBER 2015.

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Addendum to the Measure DD EIR for the LM2BT Project

Proposed Project - Conceptual Bridge Design and Alignment

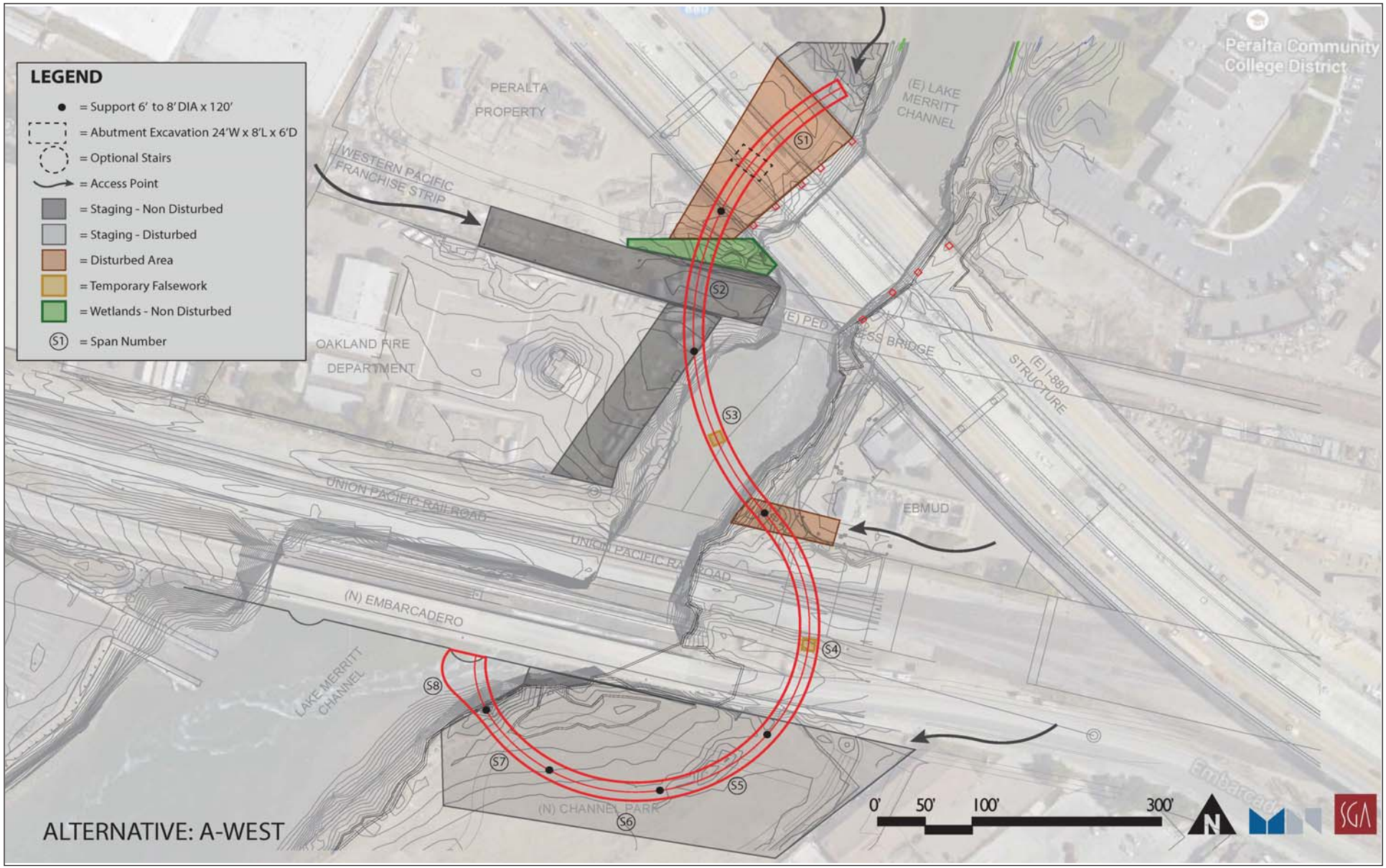

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FIGURE 4b

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Addendum to the Measure DD EIR for the LM2BT Project

Project Variant - Conceptual Bridge Design and Alignment

SOURCE: MOFFAT & NICHOL; SGA, NOVEMBER 2015.

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Legend:
EG - Existing Grade
TOTW - Top of travelled way
CTBOS - Caltrans bottom of soffit
UPRRELEV: Required Min. Elevation at Bottom of Deck at Union Pacific Rail Road
EMBARCELEV: Required Min. Elevation at Bottom of Deck at Embarcadero Roadway

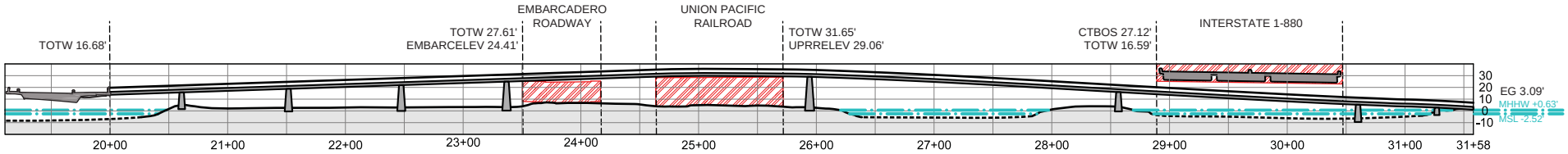

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FIGURE 5

NOT TO SCALE

Addendum to the Measure DD EIR for the LM2BT Project

Proposed Project – Cross Section

SOURCES: MOFFAT & NICHOL; SGA, 2015.

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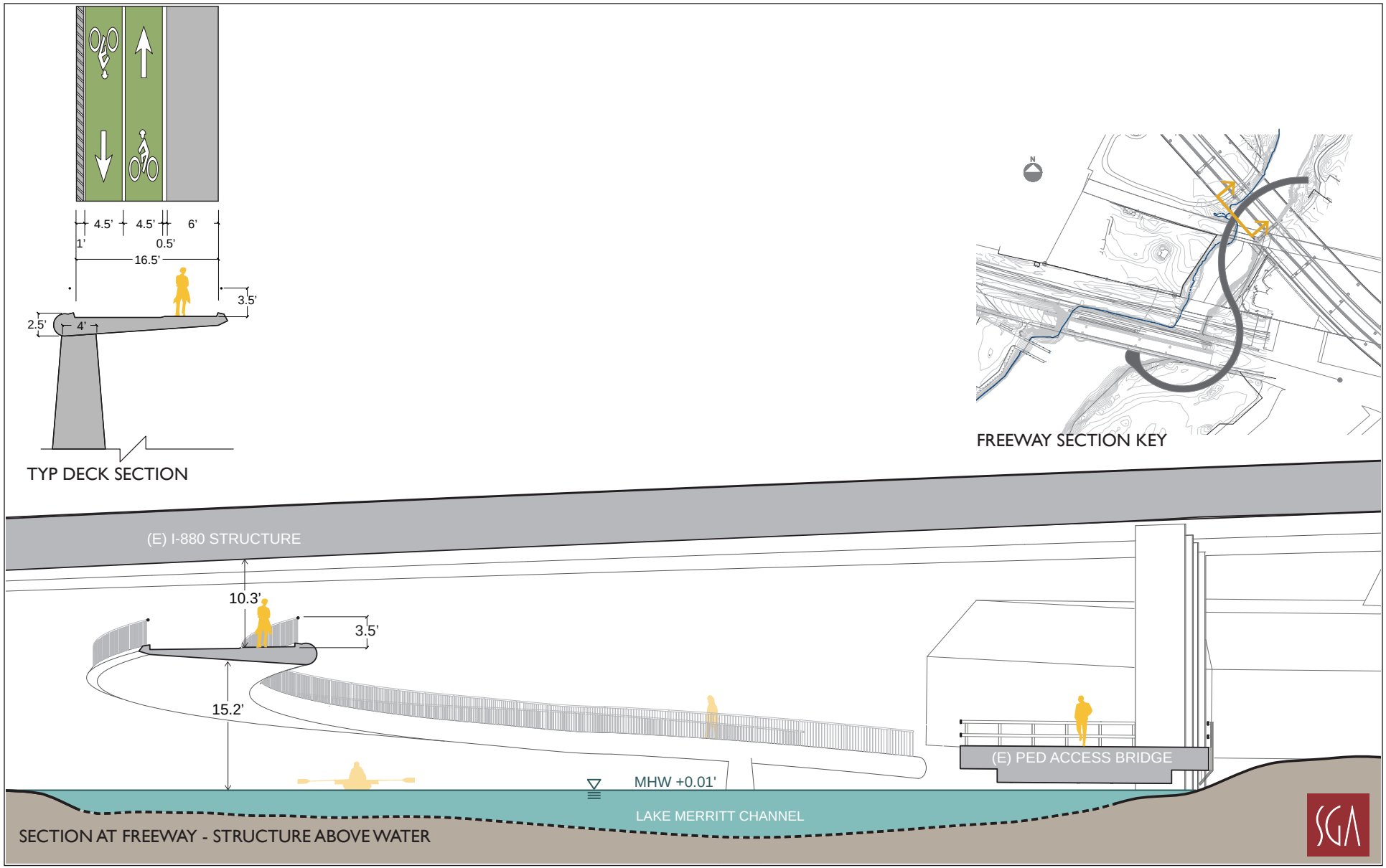

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FIGURE 6a

NOT TO SCALE

MHW = Mean High Water Line

Addendum to the Measure DD EIR for the LM2BT Project

Proposed Project - Conceptual Pathway Sections

SOURCES: MOFFAT & NICHOL; SGA, 2015.

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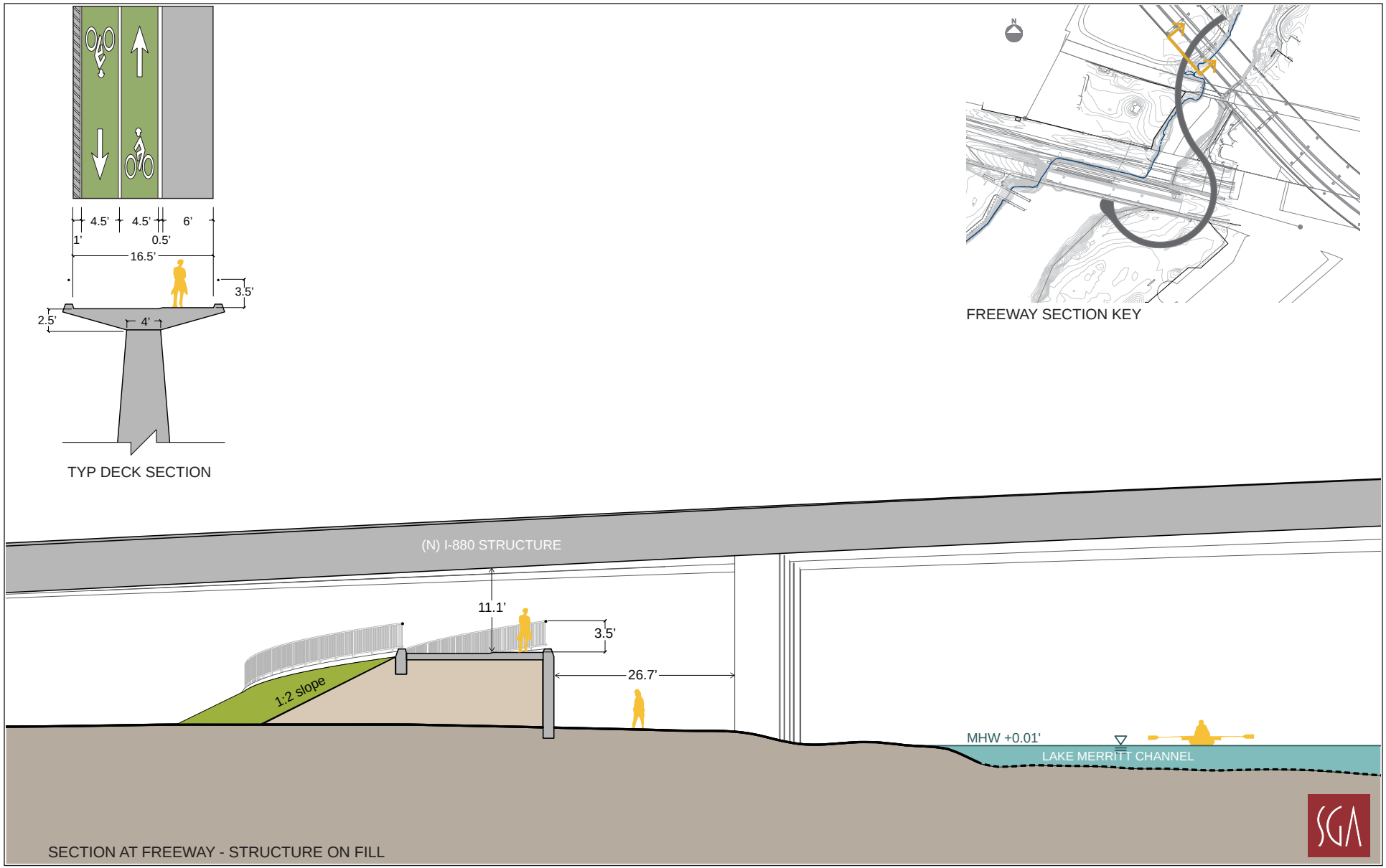

LSA

FIGURE 6b

NOT TO SCALE

MHW = Mean High Water Line

Addendum to the Measure DD EIR for the LM2BT Project

Proposed Variant - Conceptual Pathway Sections

SOURCES: MOFFAT & NICHOL; SGA, 2015.

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2. Access and Circulation

The northern terminus of the proposed pathway would be accessed via existing pathways on the east side of the Channel and would provide a pedestrian connection to Lake Merritt to the north and the Peralta Community College District office immediately to the east. For the project variant, the northern terminus would be accessed by existing pathways on the west side of the Channel and would provide a pedestrian connection to Lake Merritt to the north and Laney College immediately to the west.

The southern terminus of the proposed pathway would be accessed via the completed Embarcadero Bridge, which provides access to the Bay Trail to the south. The southern terminus would be the same for the proposed project and the project variant. Embarcadero Road also provides access to Oak Street, which leads to the Lake Merritt BART Station and Laney College. With the exception of the connection to the Embarcadero Bridge, no changes to the existing roadway network are proposed in association with the LM2BT project.

3. Landscaping

Approximately 11 trees are located within the project area boundaries, 5 of which are protected trees. Under the proposed project, no trees would be directly affected; up to six trees, including two protected trees, could however be directly impacted by development of the project variant. Landscaping improvements would be installed at the north touchdown area as well as at optional stair touchdown areas.

4. Utilities and Infrastructure

Multiple subsurface utility lines are located within the project site and are visible as they cross the Channel between the UPRR tracks and Embarcadero Bridge. Two utility service platforms are also located on the eastern side of the Channel, adjacent to the Embarcadero Bridge abutment. These utility lines include a high pressure sewer line as well as jet fuel lines for the Oakland Airport. The proposed project (or project variant) would be designed around these existing utility lines and no modifications to these facilities would be required.

The existing overhead PG&E lines that run parallel to and north of the existing Embarcadero roadway will be relocated into the widened Embarcadero Bridge structure and cross the Lake Merritt Channel. This relocation is necessary to avoid conflicts with the LM2BT bicycle/pedestrian bridge alignment. Beginning from west of the Embarcadero Bridge, the existing overhead line would be undergrounded at an existing pole which is roughly 100 feet west of the widened Embarcadero Bridge. The underground PG&E line would traverse across the Embarcadero roadway to the sidewalk on the south side of the street into a junction box/manhole. The line would then travel along the sidewalk and through the bridge structure via 4-inch conduits under the bridge sidewalk to a point beyond the end of the bridge into another junction box a little short of the future intersection that leads into Channel Park. The underground PG&E line would then traverse back across the Embarcadero roadway to an existing pole on the north side of the street where it would rise up the pole and continue on its existing alignment. The crossing point east of the bridge would be beyond the limits of the project's bicycle/pedestrian bridge alignment. The existing overhead PG&E line and poles between the relocation points would be removed from the project site. These improvements would be the same under the proposed project or the project variant.

Lighting would be provided on the bridge and touchdown areas. Lighting on the bridge would be mounted on the structure and would illuminate only the traveled way. Lighting for the touchdown areas would be low-level landscape or pole mounted lighting and would be designed to avoid lighting of sensitive wetland or aquatic habitat areas.

5. Construction

The maximum depth of excavation for the bridge supports and the touchdown area on the east side of the Channel would be 120 feet. Approximate column foundation locations for the proposed project and project variant are shown on Figures 4a and 4b, respectively. Column foundations would be positioned to avoid wetland areas and would be limited to the staging areas as shown. The foundations would consist of large-diameter (6 to 8 feet) cast-in-drilled-hole or cast-in-steel-shell shafts drilled with land-based crane-mounted drill rigs. If cast-in-drilled-hole piles are used, groundwater within the holes would be displaced with slurry and would be collected in tanks and moved to an approved offsite disposal location. When the hole is completely drilled and full of slurry, a reinforcing steel cage would be inserted and concrete pumped into the hole. Displaced slurry would be collected in tanks and moved to an approved offsite disposal location. The time required to construct each foundation in this manner would be approximately 48 hours. The portion of the column above the foundation would be formed with steel or wooden forms and filled with reinforcing steel and concrete. The total time to construct all columns in this fashion would be approximately two months.

Several construction techniques would be utilized for superstructure construction given the site constraints. For the proposed project, Span 1 would be located beneath the I-880 overcrossing and would span across Channel. Due to the constraints of Span 1, a decked-over working platform would be constructed in order to provide the contractor access to erect and assemble the pre-fabricated bridge components. This platform technique is most commonly referred to as a temporary trestle. Trestles are built to support lifting cranes, construction equipment, and pre-fabricated structure segments. The trestle would most likely be constructed by installing a grid of approximately 200 temporary steel or timber piles in the Channel (each approximately 8 inches in diameter), and then laying beams and plywood or steel decking on them to create the platform. Span 1 could potentially be built by either: assembling segments adjacent to its final location then launching into place along the trestle, or fabricating the bridge segments and assembling them while in position on the trestle. The trestle could then be removed once installation and erection of Span 1 is complete or left in place to facilitate construction and movement across the channel. For the project variant, Span 1 would consist of a ramp located over fill materials and the trestle system would not be required.

Construction of the remaining spans would be similar with the proposed project and the project variant. Span 2 would cross over the Western Pacific Franchise Strip and existing pedestrian access bridge. This portion could be erected using a conventional crane pick and place method and could be accessed from the Western Pacific Franchise Strip. This span is also anticipated to be prefabricated. Span 3 could be constructed similar to Span 2 but built and placed from the Oakland Fire Department training facility. The span could be erected by a single crane and would be lifted and rotated into place. Span 4 could be constructed by a crane positioned at Channel Park and the span lifted and positioned in place. The remaining spans (Spans 5 through 8) would be constructed over Channel Park and could be constructed using conventional methods on falsework, or similar to Span 4, could be a series of spans fabricated and erected in place.

Approximately 50,000 cubic feet of soil would be collected and off-hauled by the construction contractor to an approved facility. The construction period would occur for a total duration of approximately 18 months. Installation of piles is expected to be completed within a two month period. Pending additional funding sources, project construction is expected to commence in June 2017 and project completion is expected by November 2018. Construction timing for the project variant would be similar to the proposed project.

D. DISCRETIONARY ACTIONS

This Addendum is intended to provide environmental review for all approvals necessary to implement the proposed project. The proposed project would require discretionary actions that may include but are not limited to: Subdivision Map; Design Review and Conditional Use Permits; Tree Removal Permits; Grading Permits; Land Acquisition & Condemnation; Creek Permits; Emergency Vehicle Access easement; Public Access Easement; and Encroachment Permits.

A number of permits and approvals, including discretionary actions listed above, would be required for the project. As lead agency, the City of Oakland would be responsible for the majority of the approvals required for implementation of the project. Other agencies may have some authority related to the project and its approvals. A non-exclusive list of the required permits and approvals that may be required by the City and other agencies is provided in Table 1. This Addendum is intended to be used for all discretionary approvals required by the City and other agencies in connection with the project, including funding decisions on grants, etc., which are not included on this list.

Table 1: Required Permits and Approvals [a]

Lead Agency	Permit/Approval
City of Oakland	• Subdivision Map • Design Review • Conditional Use Permit • Tree Removal Permits • Grading Permits • Encroachment Permits • Emergency Vehicle Access Easement • Public Access Easement • Construction Permits • Creek Protection Permit
Responsible Agencies	
Alameda County Flood Control and Water Conservation District	• Flood Encroachment Permit
Alameda Countywide Clean Water Program	• National Pollutant Discharge Elimination System (NPDES) permit • Hydromodification Plan (HMP) for components that are greater than one-acre, not exempt by definition, not serviced by hardened enclosed stormwater conduits, and not in the proposed mapped exempt area (tidally influenced/depositional coastal area)
Regional Water Quality Control Board	• Section 401 Water Quality Certification (Clean Water Act) and/or Waste Discharge Requirements (Porter-Cologne Water Quality Control Act) for impacts to waters of the State
San Francisco Bay Conservation and Development Commission	• Major Permit (Nearly all work, including grading, on the land within 100 feet of the Bay shoreline requires a permit as does filling or dredging in the Bay)
Port of Oakland	• Development Permit
California Department of Transportation	• Encroachment permit for construction in Caltrans right-of-way • National Environmental Policy Act review and approval
California Department of Fish and Wildlife	• Streambed alteration permit in accordance with Section 1601 of the California Fish and Game Code
California Public Utilities Commission	• Approval of Construction and Maintenance Agreement for work within the UPRR right-of-way
State Lands Commission	• Leases or permits for construction or dredging on State lands including navigable rivers, natural lakes, and bays
US Coast Guard	• The US Coast Guard may issue "bridge permits" for the area directly beneath bridges; the Coast Guard is also one of the agencies that comments on Army Corps Sec. 10 permits
US Army Corps of Engineers	• Clean Water Act Section 404/Section 10 permits (for impacts to waters of the United States • Jurisdictional Waters Determinations & Permit for Authorization for Impacts to Waters of the US
US Fish and Wildlife Service	• Consultation with Corps re: potential impacts to federally listed species as part of Section 404 permitting process
National Marine Fisheries Service	• Consultation with Corps re: potential impacts to Essential Fish Habitat (EFH) and federally listed anadromous fish (e.g., steelhead) as part of Section 404/Section 10 permitting process

[a] Does not include funding/grant decisions.
Source: LSA Associates, Inc., 2015.

III. SUMMARY OF FINDINGS

An evaluation of the LM2BT project is provided in the Environmental Checklist below. This evaluation concludes that the project qualifies for an Addendum to the Measure DD EIR and does not require additional environmental review. The project is consistent with the scope of open space and recreational improvements envisioned by the City of Oakland for the Measure DD Improvement Project and evaluated in the Measure DD EIR. Any potential impacts of the LM2BT Project were adequately analyzed and covered by the analysis in the Measure DD EIR. The project would be required to comply with applicable mitigation measures outlined in the Measure DD EIR and identified in the Environmental Checklist below, as modified, and applicable City of Oakland SCAs (see Attachment A, at the end of the Environmental Checklist). With implementation of the applicable mitigation measures and SCAs, the project would not result in a substantial increase in the severity of previously identified significant impacts in the Measure DD EIR, or any new significant impacts that were not previously identified in the Measure DD EIR.

In accordance with California Public Resources Code Sections 21166 and CEQA Guidelines Section 15164, and as set forth in the Environmental Checklist below, the proposed project qualifies for an addendum because the analyses conducted and the conclusions reached in the Measure DD EIR certified in July 2007 remain valid, and no supplemental environmental review is required for the proposed project. The proposed project would not cause new significant impacts not previously identified in the Measure DD EIR, or result in a substantial increase in the severity of previously identified significant impacts. No new mitigation measures would be necessary to reduce significant impacts. No changes have occurred with respect to circumstances surrounding the original project that would cause significant environmental impacts to which the proposed project would contribute considerably, and no new information has been put forward that shows that the proposed project would cause significant environmental impacts.

In addition, as a separate and independent basis and in accordance with California Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183, the project also qualifies for a community plan exemption because it is permitted in the zoning district where the project site is located and is consistent with the LUTE EIR and EPP EIR. As set forth in the Environmental Checklist below, the analysis concludes that the proposed project would not result in significant impacts that (1) are peculiar to the project or project site; (2) were not identified as significant project-level, cumulative, or offsite effects in the LUTE EIR, EPP EIR, or Measure DD EIR; or (3) were previously identified as significant effects, but are determined to have a more severe adverse impact than discussed in the EIR.

Therefore, no supplemental environmental review is required beyond this addendum, in accordance with Public Resources Code Sections 21166 and 21083.3 and CEQA Guidelines Sections 15164 and 15183.

2/8/16
Date

Darin Ranelletti
Environmental Review Officer

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IV. ENVIRONMENTAL CHECKLIST

A. OVERVIEW

This Environmental Checklist describes existing site conditions and provides a summary of potential environmental impacts that may result from adoption and implementation of the Measure DD Project, as applicable to the project area and group of projects that apply to the proposed project and the project variant, as evaluated in the programmatic Measure DD EIR. Potential environmental impacts of development under the Measure DD Project were analyzed and covered by the Measure DD EIR, and the EIR identified mitigation measures and Standard Conditions of Approval (SCAs) to address these potential environmental impacts.

This Environmental Checklist hereby incorporates by reference the Measure DD EIR discussion and analysis of all potential environmental impact topics; only those environmental topics that could have a potential project-level environmental impact are included. The EIR significance criteria have been consolidated and abbreviated in this Environmental Checklist for administrative purposes; a complete list of the significance criteria can be found in the Measure DD EIR.

The following environmental topics were addressed in the Measure DD EIR and are discussed in this Addendum: Aesthetics; Air Quality; Biological Resources; Cultural Resources; Geology and Soils; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use and Planning; Noise; Public Services; Recreation; Transportation/Traffic; Utilities and Service Systems.

The Measure DD EIR concluded that the Measure DD Project would not result in significant impacts related to the following topics: Agricultural Resources, Mineral Resources, Population and Housing, and Schools (see pages 366 through 367 of the Measure DD EIR). The Measure DD EIR determined that impacts related to these topics would be less than significant did not require further evaluation. These topics are also not addressed in this Addendum for similar reasons.

This Environmental Checklist provides a determination of whether the proposed project or the project variant would result in:

- Equal or Less Severity of Impact Previously Identified in EIR;
- Substantial Increase in Severity of Previously Identified Significant Impact in EIR; or
- New Significant Impact.

Where the severity of the impacts of the project would be the same as or less than the severity of the impacts described in the Measure DD EIR, the checkbox for Equal or Less Severity of Impact Previously Identified in EIR is checked. Where the checkbox for Substantial Increase in Severity of Previously Identified Significant Impact in EIR or New Significant Impact is checked, there are significant impacts that are:

- Peculiar to project or project site (per CEQA Guidelines Sections 15183 or 15183.3);
- Not identified in the previous EIR (Measure DD EIR) (per CEQA Guidelines Sections 15183 or 15183.3), including offsite and cumulative impacts (per CEQA Guidelines Section 15183);
- Due to substantial changes in the project (per CEQA Guidelines Section 15162);
- Due to substantial changes in circumstances under which the project will be undertaken (per CEQA Guidelines Section 15162); or
- Due to substantial new information not known at the time the Measure DD EIR was certified (per CEQA Guidelines Sections 15162, 15183, or 15183.3).

Impacts associated with the proposed project and the project variant are fully evaluated and distinguished where necessary in the analysis below. Where the potential impacts would be the same or substantially similar, the analysis simply refers to impacts associated with "the project" or the "LM2BT project."

The project is required to comply with applicable mitigation measures identified in the Measure DD EIR, as may be modified in the checklist below and with City of Oakland SCAs. This Environmental Checklist includes references to the applicable mitigation measures, as modified if necessary, and SCAs. A list of the mitigation measures and SCAs is included in Attachment A, and is incorporated by reference into the Environmental Checklist analysis. If the Environmental Checklist (including Attachment A) inaccurately identifies or fails to list a mitigation measure or SCA, the applicability of that mitigation measure or SCA to the project is not affected. If the language describing a mitigation measure or SCA included in the Environmental Checklist (including Attachment A) is inaccurately transcribed, the language of the mitigation measure as set forth in the Measure DD EIR or City of Oakland SCAs shall control.

B. ATTACHMENTS

The following attachments are included at the end of this Environmental Checklist:

A. Standard Conditions of Approval and Mitigation Monitoring and Reporting Program;

B. Criteria for Use of an Addendum, per CEQA Guidelines Sections 15162, 15164, and 15168;

C. Project Consistency with Community Plan or Zoning, per CEQA Guidelines Section 15183;

D. Arborist Report; and

E. Request for Verification of Jurisdictional Delineation

		Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
1.	**AESTHETICS, SHADOW, AND WIND** Would the project:			
	a. Have a substantial adverse effect on a public scenic vista; substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, located within a state or locally designated scenic highway; substantially degrade the existing visual character or quality of the site and its surroundings; or create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area;	☒	☐	☐
	b. Introduce landscape that would now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code Sections 25980 through 25986); or cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;	☒	☐	☐
	c. Cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space; or, cast shadow on an historical resource, as defined by CEQA Guidelines Section 15064.5(a), such that the shadow would materially impair the resource's historic significance;	☒	☐	☐
	d. Require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform Building Code addressing the provision of adequate light related to appropriate uses; or	☒	☐	☐
	e. Create winds that exceed 36 mph for more than one hour during daylight hours during the year. The wind analysis only needs to be done if the project's height is 100 feet or greater (measured to the roof) and one of the following conditions exist: (a) the project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located in Downtown.	☒	☐	☐

Project Setting

The project area is located along the southern portion of the Lake Merritt Channel, where the Channel meets the Oakland Estuary near the Embarcadero Bridge. The visual character of this area is dominated by waterways and major transportation facilities, including: the Channel, the Estuary, the Oakland Waterfront, the I-880 overpass, and the UPRR railroad tracks. The project area is surrounded primarily by urban development such as institutional facilities and campuses, industrial facilities, warehouses, storage and delivery centers, administrative buildings, vacant lots, and paved parking areas.

Vegetation is sparse, unmaintained and generally limited to the banks of the Channel along the project alignment. Trees, ornamental landscaping, and pedestrian pathways/trails exist along the Channel banks and in and around Lake Merritt (generally north of the project area); however, existing trails and formally landscaped areas terminate at the I-880 overpass where the project alignment begins. The existing I-880 freeway and UPRR tracks currently act as barriers to formal public access to this area, although the area can currently be accessed near the UPRR tracks. Currently, because the area is somewhat isolated and unmaintained, it is attractive to transient encampments and is often littered with debris.

Scenic views within the vicinity of the project area include views of the maintained and landscaped areas of the Channel north of the project area, as seen by pedestrians and bicyclists on nearby trails, and from within the Channel, Estuary, and Bay as seen by recreational boaters. Views of the Bay and waterfront are available from the nearby Bay Trail and park areas south of the project area. There are no State Scenic Highways or locally significant scenic highways within view of the project area.

Since certification of the Measure DD EIR, several of the identified improvement projects have been implemented, resulting in improved visual conditions within the Lake Merritt area. However, no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting for visual resources as described in the Measure DD EIR.

Figure 7 depicts a viewpoint photo location map for important view corridors and vantage points within the project area. Figures 8 through 12 depict photos of existing conditions within the project area.

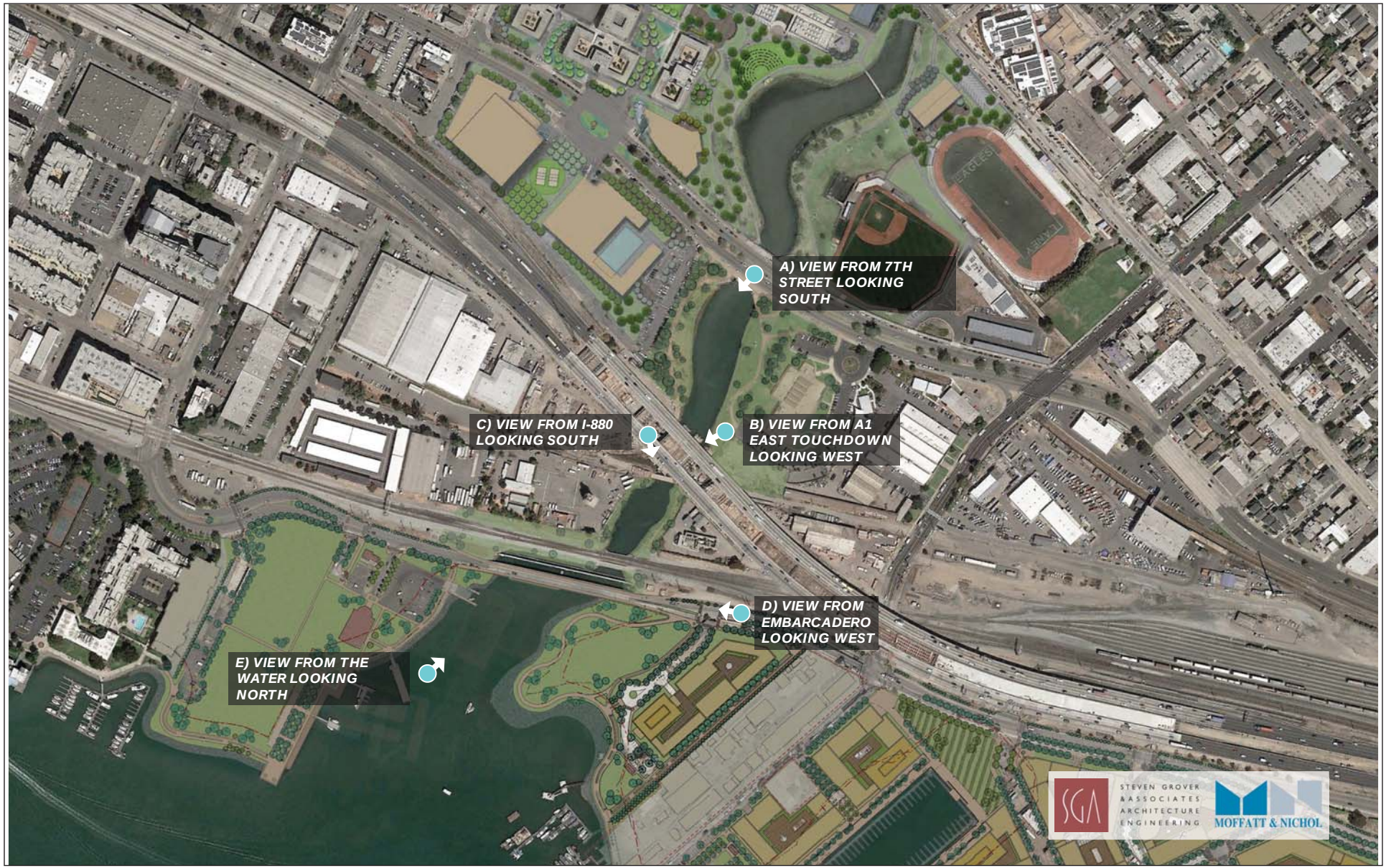

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FIGURE 7

NOT TO SCALE

Addendum to the Measure DD EIR for the LM2BT Project

Viewpoint Location Map

SOURCES: MOFFAT & NICHOL; SGA, DECEMBER 2015.

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FIGURE 8

Addendum to the Measure DD EIR for the LM2BT Project

Viewpoint Location A

SOURCES: MOFFAT & NICHOL; SGA, DECEMBER 2015.

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FIGURE 9

Addendum to the Measure DD EIR for the LM2BT Project

Viewpoint Location B

SOURCES: MOFFAT & NICHOL; SGA, DECEMBER 2015.

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LSA

FIGURE 10a

Addendum to the Measure DD EIR for the LM2BT Project

Viewpoint Location C

SOURCES: MOFFAT & NICHOL; SGA, DECEMBER 2015.

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LSA

FIGURE 10b

Addendum to the Measure DD EIR for the LM2BT Project

Viewpoint Location C

SOURCES: MOFFAT & NICHOL; SGA, DECEMBER 2015.

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EXISTING
D) VIEW FROM EMBARCADERO LOOKING WEST

PROPOSED
D) VIEW FROM EMBARCADERO LOOKING WEST

LSA

FIGURE 11

Addendum to the Measure DD EIR for the LM2BT Project
Viewpoint Location D

SOURCES: MOFFAT & NICHOL; SGA, DECEMBER 2015.

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EXISTING
E) VIEW FROM THE WATER LOOKING NORTH

PROPOSED
E) VIEW FROM THE WATER LOOKING NORTH

LSA

FIGURE 12

Addendum to the Measure DD EIR for the LM2BT Project
Viewpoint Location E

SOURCES: MOFFAT & NICHOL; SGA, DECEMBER 2015.

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City of Oakland Standard Conditions of Approval. The City of Oakland provides SCAs regarding aesthetics as identified below and in Attachment A.

SCA AES-1 Graffiti Control

Requirement:

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).

When Required: Ongoing
Initial Approval: N/A
Monitoring/Inspection: Public Works Department

SCA AES-2 Landscape Plan

a. Landscape Plan Required

Requirement: 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.

When Required: Prior to approval of construction-related permit
Initial Approval: Public Works Department
Monitoring/Inspection: N/A

b. Landscape Installation

Requirement: 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.

When Required: Prior to Notice of Completion
Initial Approval: Public Works Department
Monitoring/Inspection: Public Works Department

c. Landscape Maintenance

Requirement: 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.

When Required: Ongoing
Initial Approval: N/A
Monitoring/Inspection: Public Works Department

SCA AES-3 Lighting

Requirement: 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.

When Required: Prior to Notice of Completion
Initial Approval: N/A
Monitoring/Inspection: Public Works Department

Scenic Vistas, Scenic Resources, and Visual Character (Criterion 1a)

The Measure DD EIR determined that implementation of Measure DD projects would generally benefit the visual quality and the appearance of open space in the vicinity by implementing water quality control measures, enhancing landscaping and open spaces, replacing diseased trees, adding new trails and renovating or adding new recreational facilities. Measure DD projects would also enhance recreational opportunities and accessibility throughout Lake Merritt and the Channel area, the Oakland Waterfront, and various creeks throughout Oakland. For these reasons, the Measure DD EIR concluded that potential impacts to scenic vistas and resources, visual character, and lighting and glare from development would be less than significant. All Measure DD projects would be required to comply with applicable SCAs related to graffiti, landscaping and lighting. No mitigation measures were identified for impacts to visual resources in the Measure DD EIR.

The project would create a new elevated pedestrian and bicycle path that would complete the connection between Lake Merritt, the existing trails along the Channel, and the Oakland Waterfront/ Bay Trail. Figures 8 through 12 depict visual simulations of the proposed pathway and bridge structure from various public vantage points (refer to Figure 7 for photo locations). In some cases, variations of the proposed bridge architecture are presented as the final design is not yet established. Although specific landscaping improvements are not currently part of the project, a landscape plan would be required per SCA AES-2 and landscape improvements are proposed at the northern bridge touchdown. This plan would ensure that the visual character of the area is enhanced. As depicted in the viewpoint simulations, the new pedestrian and bicycle bridge would be designed to be visually appealing and architecturally significant and would provide elevated views of the waterfront and the Oakland hills for trail users. Although the bridge would be nearly 100 feet in height in some locations, it would be visually compatible with other elevated structures within the vicinity and would

not detract from the visual quality or character of the area. The new pathway would be well lit and provide formal public access to an area where none currently exists. Lighting would be installed to illuminate the pathway and bridge during the evening/nighttime hours and would be directed downward to prevent glare and spillover light. The enhancement of public access to and through this area and installation of nighttime lighting could reduce existing problems with litter and overnight camping, which detract from the visual quality of the area. Therefore, the project would not degrade the visual quality or character of the site or its surroundings; rather, it would generally improve the visual character and quality of recreation uses and accessibility from Lake Merritt to the Oakland Waterfront. No new or more severe impacts to scenic vistas, scenic resources, or visual character would result from implementation of the LM2BT project.

Shadow (Criteria 1b through 1d)

The Measure DD EIR did not specifically evaluate shadow-related impacts because such impacts typically occur when tall buildings or other structures are constructed near public open space areas or areas where access to sunlight is required to support existing uses.

The project consists of the construction of a bicycle and pedestrian pathway and bridge that would cross beneath the I-880 overpass, and rise above the Channel, UPPR tracks, and Embarcadero Road. The project would cast minimal shadows over the Channel and the future park to be developed as part of the Brooklyn Basin development, similar to other existing elevated roadways within the vicinity (i.e., I-880 and the Embarcadero Bridge). New shadows cast by the bridge structure would not eliminate or substantially reduce solar access to the public or protected wildlife/aquatic species within the vicinity of this generally urbanized area. No other public park, lawn, garden, or open space areas would be shaded by the project.

The project does not include the construction of a structure that would cast substantial shadows on solar collectors or that would impair the function of a building using passive solar heat collection or solar collectors for hot water heating or photovoltaic solar collectors. There are no residential buildings within the vicinity of the project that would be impacted by shadows. Therefore, the project would have no impact on existing solar collectors nor impede the function of passive solar heat collection.

In addition, an archeological field study was conducted in March 2014 that identified potential cultural and historic resources in the vicinity of the project, which are further evaluated in Section IV.4, Cultural Resources of this document. None of the identified resources involves a building of historic significance. As such, the project would not cast shadow that would negatively impair a historic resource and there would be no impact as a result of the project.

Given the above, the LM2BT project would not result in significant shadow-related impacts.

Wind (Criterion 1e)

The Measure DD EIR did not evaluate project-level wind-related impacts of individual Measure DD components. Such impacts typically occur when a building or structure's exposure, massing and orientation affect nearby ground-level wind conditions such that winds are accelerated and in turn affect pedestrian comfort levels. Under the City of Oakland's thresholds of significance, wind analysis is performed if the project's height is 100 feet or greater (measured to the roof) and one of

the following conditions exists: the project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt, or San Francisco Bay) or the project is located in the Downtown. The purpose of these thresholds is to ensure pedestrian comfort levels are maintained in areas that are subject to windy conditions. The City has determined that a building of over 100 feet in height in any of these locations could generate winds in excess of 36 miles per hour, which are well above typical wind conditions in the area and could in turn affect the comfort level of the pedestrian environment. Although the proposed bridge is located near Lake Merritt and the Oakland Estuary, the walking and bicycling surface would not exceed approximately 30 feet in height and would not contain elements that would create excessive winds. As such, a wind study would not be required and the LM2BT project would not result in wind-related impacts in the project area.

Conclusion

The project is consistent with the objectives and the group of projects that were evaluated in the Measure DD EIR. Implementation of the project would not substantially increase the severity of significant impacts identified, nor would it result in new significant impacts related to aesthetics, shadow, and wind that were not identified in the Measure DD EIR. In addition, no mitigation measures from the EIR related to aesthetics, shadow, and wind are applicable to the project, as none were identified related to this issue topic. Implementation of the City's updated SCAs that relate to visual resources would be required, as identified in the Measure DD EIR. The project would be required to implement SCAs related to landscaping, graffiti and lighting, as identified above and in Attachment A (including SCA AES-1, SCA AES-2, and SCA AES-3) and, as described in the analysis above, compliance with these measures would ensure that all impacts related to aesthetics would continue to be less than significant with the LM2BT project. Finally, Measure DD or other projects that have been implemented within the vicinity of the project site have improved visual conditions north of the site through landscape improvements and removal of unsightly tunnels and no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting or analysis for visual resources as described in the Measure DD EIR.

Therefore, based on the analysis above, no changes have occurred with respect to circumstances surrounding the Measure DD project that would cause significant impacts related to aesthetics or to which the LM2BT project would contribute considerably to a significant impact, and no new information has been put forward that shows that the project would cause new significant aesthetic impacts.

		Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
2.	**AIR QUALITY** Would the project:			
	a. During project construction result in average daily emissions of 54 pounds per day of ROG, NO_X, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; during project operation result in average daily emissions of 54 pounds per day of ROG, NO_X, or $PM_{2.5}$, or 82 pounds per day of PM_{10}; result in maximum annual emissions of 10 tons per year of ROG, NO_X, or $PM_{2.5}$, or 15 tons per year of PM_{10}; or	☒	☐	☐
	b. For new sources of Toxic Air Contaminants (TACs), during either project construction or project operation expose sensitive receptors to substantial levels of TACs under project conditions resulting in (a) an increase in cancer risk level greater than 10 in one million, (b) a noncancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average $PM_{2.5}$ of greater than 0.3 microgram per cubic meter; or, under cumulative conditions, resulting in (a) a cancer risk level greater than 100 in a million, (b) a noncancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 microgram per cubic meter; or expose new sensitive receptors to substantial ambient levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 100 in a million, (b) a noncancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 microgram per cubic meter.	☒	☐	☐

Project Setting

Local air quality in the vicinity of the project site is most affected by carbon monoxide (CO) emissions from motor vehicles. High CO concentrations are associated with roadways and intersections operating at unacceptable levels of service or with high traffic volumes. The I-880 highway system experiences high traffic volumes and is a source of mobile source emissions that contribute to long-term air emission impacts in the local vicinity. The project is also located within the UPRR railroad corridor, which is another source of diesel particulate matter emissions in the area of the project site. Fugitive dust and construction-related emissions (as a result of demolition, land clearing and exposure of soil to the air) in the area surrounding the project site is associated with general redevelopment of the area, including improvements to the I-880 highway system, and the current redevelopment of the Embarcadero Bridge. The use of construction equipment, including utility engines, transport vehicles, and hauling trucks also results in localized exhaust emissions. Odor

producers in the area of the project site include restaurants, manufacturing plants and other industrial facilities.

Since certification of the Measure DD EIR, no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting for air quality as described in the Measure DD EIR.

City of Oakland Standard Conditions of Approval. The City of Oakland provides SCAs regarding air quality as identified below and in Attachment A.

SCA AIR-1 Construction-Related Air Pollution Controls (Dust and Equipment Emissions)

Requirement: The project applicant shall implement all of the following applicable air pollution control measures during construction of the project:

[BASIC CONTROLS (apply to ALL construction sites)]

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. Pave all roadways, driveways, sidewalks, etc. within one month of site grading or as soon as feasible. In addition, building pads should be laid within one month of grading or as soon as feasible 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. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either 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 California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.

h. 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 five minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations").

i. 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.

j. Portable equipment shall be powered by electricity if available. If electricity is not available, propane or natural gas shall be used if feasible. Diesel engines shall only be used if electricity is not available and it is not feasible to use propane or natural gas.

[ENHANCED CONTROLS: All "Basic" controls listed above plus the following controls if the project involves:

- 114 or more single-family dwelling units;
- 240 or more multi-family units;
- Nonresidential uses that exceed the applicable screening size listed in the Bay Area Air Quality Management District's CEQA Guidelines;
- Demolition permit;
- Simultaneous occurrence of more than two construction phases (e.g., grading and building construction occurring simultaneously);
- Extensive site preparation (i.e., the construction site is four acres or more in size); or
- Extensive soil transport (i.e., 10,000 or more cubic yards of soil import/export).]

k. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

l. All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph.

m. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

n. Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more).

o. Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress.

p. Install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of the construction site to minimize wind-blown dust. Wind breaks must have a maximum 50 percent air porosity.

q. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

r. Activities such as excavation, grading, and other ground-disturbing construction activities shall be phased to minimize the amount of disturbed surface area at any one time.

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

t. Site accesses 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.

u. All equipment to be used on the construction site and subject to the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") must meet emissions and performance requirements one

year in advance of any fleet deadlines. Upon request by the City, the project applicant shall provide written documentation that fleet requirements have been met.

v. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings).

w. All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM.

x. Off-road heavy diesel engines shall meet the California Air Resources Board's most recent certification standard.

y. Post a publicly-visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours.

When Required: During construction
Initial Approval: N/A
Monitoring/Inspection: Public Works Department

[The following condition applies to all projects that meet all of the following criteria:

a. The project involves any of the following sensitive land uses:
   i. Residential uses (new dwelling units); or
   ii. New or expanded schools, daycare centers, parks, nursing homes, or medical facilities; and

b. The project is located within 1,000' (or other distance as specified below) of one or more of the following sources of air pollution:
   i. Freeway;
   ii. Roadway with significant traffic (at least 10,000 vehicles/day);
   iii. Rail line (except BART) with over 30 trains per day;
   iv. Distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating Transportation Refrigeration Units (TRU) per day, or where the TRU unit operations exceed 300 hours per week;
   v. Major rail or truck yard (such as the Union Pacific rail yard adjacent to the Port of Oakland);
   vi. Ferry terminal;
   vii. Stationary pollutant source requiring a permit from BAAQMD (such as a diesel generator);
   viii. Within 0.5 miles of the Port of Oakland or Oakland Airport;
   ix. Within 300 feet of a gas station; or
   x. Within 300 feet of a dry cleaner with a machine using PERC (or within 500 feet of a dry cleaner with two or more machines using PERC); and

c. The project exceeds the health risk screening criteria after a screening analysis is conducted in accordance with the Bay Area Air Quality Management (BAAQMD) CEQA Guidelines.]

Construction and Operational Emissions (Criterion 2a)

Measure DD projects include physical improvements to existing parks, acquisition of new land for the creation of new parks, development of parks and recreation facilities, clean water measures, restoration and rehabilitation of existing recreation buildings and implementation of creek and waterway protection and restoration projects. Measure DD projects do not include the installation of facilities or buildings that would generate substantial diesel exhaust emissions, air quality pollutants or objectionable odors. Furthermore, implementation of Measure DD projects would not substantially increase population or employment in the area or generate a substantial increase in vehicular traffic. The addition of a pedestrian and bicycle bridge to improve access between Lake Merritt, the Downtown, and the regional Bay Trail and shoreline development would improve air quality during the long-term. Traffic volumes and CO concentrations would also be reduced as a result of implementation of Measure DD projects.

For these reasons, the Measure DD EIR concluded that Measure DD projects would be consistent with regional air quality planning programs and would not result in a significant cumulative impact to air quality. The Measure DD EIR also concluded that impacts would be less than significant for operational–period ozone contribution, generation of criteria pollutants and exposure of sensitive receptors to substantial air pollutants.

Measure DD projects would, however, contribute to particulate matter emissions through construction vehicle emissions and the disturbance of soil within individual project sites during the construction period. There would also be temporary, short-term construction period exposure of air pollutants to sensitive receptors in the area. All projects are required to implement SCAs which include Bay Area Air Quality Management District (BAAQMD) control measures. Mitigation measures related to air quality impacts were not required to be identified because compliance with the City's SCAs would reduce the impact to a less-than-significant level

Construction activities associated with the project could generate exhaust emissions from utility engines, on-site heavy duty construction vehicles, equipment hauling materials to and from the site, and motor vehicles transporting construction crews. Exhaust emissions during construction would vary daily as construction activity levels change. The use of construction equipment would result in localized exhaust emissions.

Project construction emissions were estimated using the BAAQMD's Road Construction Emissions Model (RoadMod) which provides a methodology specifically for quantifying the emission impacts of linear construction projects and is approved for use on projects within the region. The model was used to estimate vehicle exhaust and fugitive dust emissions from project construction. Construction-related emissions are presented in Table 2.

The estimated short-term emissions of criteria pollutants as a result of project construction are expected to be below emissions thresholds established by the BAAQMD.

As identified in the Measure DD EIR, sensitive receptors in the vicinity and on-site workers may be exposed to blowing dust, depending on the prevailing wind. City SCA's specify measures for dust control related to construction projects. These mitigation measures are intended to reduce PM_{10} emissions to less-than-significant levels during the construction period. Implementation of SCA 19 would reduce this short-term construction period air quality impact to a less than significant level.

Table 2: Project Construction Emissions in Pounds/Day

	ROG	NO_x	Exhaust PM_{10}	Exhaust $PM_{2.5}$
Average Daily Construction Emissions	3.2	31.7	1.5	1.4
BAAQMD Daily Thresholds	54	54	82	54
Exceed Threshold?	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., November 2015

Operational emissions generated by the project would be associated with any change in permanent use of the project site by on-site stationary and off-site mobile sources that substantially increase vehicle trip emissions. As a bike and pedestrian bridge, the project would not generate vehicle trips and no stationary sources of emissions are proposed as part of the project. Therefore, long-term operation of the LM2BT project would not contribute substantially to an existing or projected air quality violation.

Toxic Air Contaminants (Criterion 2b)

Implementation of Measure DD projects would not expose sensitive receptors to substantial diesel exhaust emissions. Although construction activities would involve the use of diesel operated engines, the construction duration would be temporary and exhaust from construction equipment would not cause a significant health risk. Additionally, sensitive receptors are not located adjacent to the proposed construction areas. No mitigation measures or SCAs related to toxic air contaminants were required in the Measure DD EIR because no impacts were identified. Implementation of SCA AIR-1 would ensure that the BAAQMD's best management practices are implemented, further ensuring that construction-period toxic air contaminants would be reduced, and that this impact would be less than significant. Once operational, the project is not expected to be a source of any toxic air contaminant emissions.

Conclusion

The project includes the construction of a bicycle/pedestrian pathway and bridge to enhance recreational access. The project would not generate vehicular trips that would contribute to regional air emissions. In addition, the project is not expected to generate objectionable odors. Implementation of the project would also not locate sensitive receptors near facilities with substantial diesel exhaust or expose existing sensitive receptors to substantial diesel exhaust emissions. Construction of the project would require the use of diesel operated engines; however, the construction duration would be temporary and would not result in a significant health risk.

Based on an examination of the analysis, findings, and conclusions of the Measure DD EIR, implementation of the project would not substantially increase the severity of significant impacts identified in the Measure DD EIR, nor would it result in new significant impacts related to air quality that were not identified in the Measure DD EIR. The project would be required to implement SCAs related to construction-related emissions controls, as identified in Attachment A at the end of the Environmental Checklist (SCA AIR-1) and, as described in the analysis above, compliance with this

measure would ensure that all impacts related to air quality would continue to be less than significant with the project. The Measure DD EIR did not identify any mitigation measures related to air quality, and none would be required for the project. Finally, Measure DD or other projects that have been implemented within the vicinity of the project site, such as improved recreation and open space areas and roadway modifications north of the site, have not resulted in adverse changes to ambient air quality (such as might be associated with increased vehicle trips and related emissions) and no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting or analysis for air quality as described in the Measure DD EIR, particularly since the project itself would not increase air quality emissions during project operation.

Therefore, based on the analysis above, no changes have occurred with respect to circumstances surrounding the Measure DD project that would cause significant impacts related to air quality to which the LM2BT project would contribute considerably, and no new information has been put forward that shows that the project would cause significant air quality impacts.

	Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
3. BIOLOGICAL RESOURCES 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;	☒	☐	☐
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 Game or U.S. Fish and Wildlife Service;			
Have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means;			
Substantially interfere 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;			

	Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
3. BIOLOGICAL RESOURCES Would the project:			
b. Fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code [OMC] Chapter 12.36) by removal of protected trees under certain circumstances; or Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources.	☒	☐	☐

Project Setting

LSA biologists conducted field surveys of the project area in February 2014, January 2015, and May 2015, which included a tree survey and jurisdictional wetland delineation (refer to Attachments D and E, respectively).[9,10] The survey area included a 9-acre area surrounding and including the proposed trail alignment. The project area consists of four habitat community types, including open water (i.e., the Channel), tidal marsh/wetlands, ruderal vegetation, and landscaped/developed. Most of the project area is developed with very little non-landscaped plant cover. A few scattered trees and shrubs are located along the Channel.

Sensitive biological resources within the study area include open water habitat and tidal marsh habitat. Open waters of the tidal Channel that connect to the Oakland Estuary provide habitat for a wide variety of waterbirds throughout the year, with the largest concentration during the winter. Wetland vegetation within the project site is limited to narrow bands below the top-of-bank along either side of the Channel between I-880 and the UPRR, an approximately 155-foot-long by 30-foot-wide triangular inlet located immediately south of I-880, somewhat larger bands on either side of the Channel at the northern end of the site, and scattered clumps along the eroded fill shoreline of the future park area within the Brooklyn Basin site. Vegetation density of the wetland habitat ranges from very sparse along the waterfront shoreline to moderately dense within the triangular inlet south of I-880. Due to their small size, narrow configuration, limited structural diversity and adjacent disturbance, wetland habitats within the project site are unlikely to support special-status tidal marsh wildlife species. Ruderal vegetation on the project site is comprised of plant species adapted to disturbed areas, and mostly dominated by coyote brush and sweet fennel.

[9] LSA Associates, Inc., 2015. *Arborist Report, Lake Merritt to Bay Trail – Bicycle/Pedestrian Project, City of Oakland, Alameda County*. November 17.

[10] LSA Associates, Inc., 2015. Request for Verification of Jurisdictional Delineation, Lake Merritt to Bay Trail Bicycle and Pedestrian Bridge Project, City of Oakland, Alameda County, California. July 30.

A total of 11 trees, 5 of which are protected by the City's Tree Protection Ordinance, are present within the project study area (which includes the proposed project and project variant alignments and associated construction areas), including: 1 Fremont cottonwood, 1 Lombardy poplar, 2 blackwood acacias, 3 coast redwoods and 4 Monterey pine trees. These trees provide suitable nesting habitat for urban-adapted birds, such as the Cooper's hawk and western scrub-jay. Ten of these trees are located north of I-880, six on the west side of the Channel and four on the east side of the Channel. The remaining tree, which is a protected blackwood acacia, is located on the west side of the Channel, south of I-880 and north of the UPRR. Most of the area surrounding the project site has been developed, and therefore, does not provide high quality nesting habitat for birds. Urban-adapted birds, however, could nest in these 11 trees and in the shrubs associated with the existing landscaping.

Developed areas include the Jack London Aquatic Center and associated parking lots and landscaping to the south, storage yards to the east, and the Brooklyn Basin site located to the southeast. Landscaped areas provide habitat for common, urban-adapted wildlife species that occur in trees and ruderal vegetation. There are no regional habitats of concern within or in the vicinity of the project site. Sensitive natural habitats identified are limited to the open water associated with the Channel and tidal marsh/wetlands. However, existing tidal marsh habitat is fragmented and considered relatively low in vegetation diversity. Open water habitat within the Channel is also compromised due to effects and runoff from the surrounding development.

Eight special-status species have the potential to occur within the project area, including green sturgeon (*Acipenser medirostris*), longfin smelt (*Spirinchus thaleichthys*), steelhead (*Spirinchus thaleichthys*), chinook salmon (*Oncorhynchus tshawytscha*), chinook salmon-Central Valley spring run, California least tern (*Sternula antillarum browni*), salt marsh common yellowthroat (*Geothlypis trichas sinuosa*) and the Alameda song sparrow (*Melospiza melodia pusillula*). Approximately 3.19 acres of wetland and water areas occur within the project area, and are subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC), the United States Army Corps of Engineers (USACE), and the Regional Water Quality Control Board (RWQCB). The limits of USACE jurisdiction pursuant to Section 404 the Clean Water Act have been identified along the shoreline of the Channel, between the mean high water and the high tide. The limits of jurisdiction pursuant to Section 10 of Rivers and Harbors Act have been identified below the mean high water mark. The limits of BCDC jurisdiction include areas delineated as waters subject to Section 404 and Section 10. The project site is located adjacent to an Essential Fish Habitat (EFH) for 83 fish species covered under the Pacific Groundfish Fishery Management Plan.

Since certification of the Measure DD EIR, several improvements proposed as part of the Measure DD Group 1 projects have been implemented in and around Lake Merritt and the Lake Merritt Channel. These projects have resulted in improved conditions to tidal areas within the Channel.

City of Oakland Standard Conditions of Approval. The City of Oakland provides SCAs regarding biological resources as identified below and in Attachment A. Also refer to SCAs HYD-1, HYD-2, and HYD-4, which are also applicable to biological resources (refer to Chapter IV.8, Hydrology and Water Quality and Attachment A).

SCA BIO-1 Tree Removal During Bird Breeding Season

> Requirement: To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird breeding season of February 1 to August 15 (or

during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work and shall be submitted to the City for review and approval. If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.

When Required: Prior to removal of trees
Initial Approval: Bureau of Building
Monitoring/Inspection: Public Works Department

SCA BIO-2 Tree Permit

a. Tree Permit Required

Requirement: Pursuant to the City's Tree Protection Ordinance (OMC chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit.

When Required: Prior to Notice to Proceed
Initial Approval: Permit approval by Public Works Department, Tree Division; evidence of approval submitted to Bureau of Building
Monitoring/Inspection: Public Works Department

b. Tree Protection During Construction

Requirement: Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist:

i. 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 shall be securely fenced off at a distance from the base of the tree to be determined by the project's consulting arborist. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree.

ii. Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall 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 shall be minimized. No change in existing ground level shall occur within a distance to be determined by the project's consulting arborist from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree.

iii. No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the project's consulting arborist 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 shall be operated or stored within a distance from the base of any protected trees to be determined by the project's consulting arborist. Wires, ropes, or other devices shall 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, shall be attached to any protected tree.

iv. Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration.

v. If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Department and the project's consulting arborist shall make a recommendation to the City Tree Reviewer as to whether the damaged tree can be preserved. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall 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.

vi. All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations.

When Required: During construction
Initial Approval: Public Works Department, Tree Division
Monitoring/Inspection: Public Works Department

c. Tree Replacement Plantings

Requirement: Replacement plantings shall be required for tree removals for the purposes of erosion control, groundwater replenishment, visual screening, wildlife habitat, and preventing excessive loss of shade, in accordance with the following criteria:

i. No tree replacement shall be required for the removal of nonnative 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.

ii. Replacement tree species shall consist of Sequoia sempervirens (Coast Redwood), Quercus agrifolia (Coast Live Oak), Arbutus menziesii (Madrone), Aesculus californica (California Buckeye), Umbellularia californica (California Bay Laurel), or other tree species acceptable to the Tree Division.

iii. Replacement trees shall be at least twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate.

iv. Minimum planting areas must be available on site as follows:

- For Sequoia sempervirens, three hundred fifteen (315) square feet per tree;
- For other species listed, seven hundred (700) square feet per tree.

v. In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee in accordance with the City's Master Fee Schedule may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians.

vi. The project applicant shall install the plantings and maintain the plantings until established. The Tree Reviewer of the Tree Division of the Public Works Department may require a landscape plan showing the replacement plantings and the method of irrigation. Any replacement plantings which fail to become established within one year of planting shall be replanted at the project applicant's expense.

When Required: Prior to Notice of Completion
Initial Approval: Public Works Department, Tree Division
Monitoring/Inspection: Public Works Department

Special-Status Species, Riparian Habitat, Wetlands, and Wildlife Corridors, (Criteria 3a)

Candidate, Sensitive, and Special-Status Species

The Measure DD EIR identified Cooper's Hawk as the only special-status species potentially occurring within all Measure DD project components, including the Lake Merritt and Lake Merritt Channel project components of Measure DD, which was a California Species of Special Concern. Since it is no longer considered a Species of Special Concern, the Cooper's hawk no longer qualifies as a special-status species under CEQA. The Measure DD EIR concluded that the removal of trees and other vegetation within the Lake Merritt and Channel area could directly impact other nesting birds by removing vegetation that contains active nests. Suitable nesting habitat for native bird species protected by the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game code is present within all Measure DD project groups, including the Lake Merritt and Channel group. The Measure DD EIR concluded; however, that implementation of SCAs related to tree removal and replacement, tree protection during construction, pre-construction surveys, and protection of nesting birds during the breeding season would reduce potential impacts to nesting birds to a less-than-significant level**.**

As shown in Table 3, surveys conducted for the LM2BT project determined that no special-status plant species are expected to occur on the project site due to a lack of habitat and the extent of historical disturbance in the vicinity. As shown in Table 4, a total of 44 special-status animal species occur within various open water, stream, wetland, grassland and woodland habitats within the vicinity of the project site. Suitable habitat for eight of the 44 special-status animal species is present within the project study area. These eight species include the following: green sturgeon (federally threatened), longfin smelt (State threatened), steelhead (federally threatened), chinook salmon (federally endangered), chinook salmon-Central Valley spring run (federally threatened), California least tern (federally endangered), salt marsh common yellowthroat (California Species of Special Concern) and the Alameda song sparrow (California Species of Special Concern). In addition to these species, Pacific herring (*Clupea pallasi*) in San Francisco Bay are of special interest to the CDFW, because the Bay supports some of the largest spawning aggregations in California. The open waters in the Channel could provide spawning habitat for Pacific herring. The spawning season extends from November through March, with peak activity in January.

Table 3: Listed, Proposed Plant Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status: Federal/State	General Habitat Description	Habitat Present/ Absent	Occurrence within the Biological Study Area
Bent-flowered fiddleneck	*Amsinckia lunaris*	-/CRPR 1B	Cismontane woodland, valley and foothill grassland. Elevation: 30-680 m Blooms: March-June	A	No suitable habitat within the BSA.
Pallid manzanita	*Arctostaphylos pallida*	FT/CE, CRPR 1B	Shale or thin chert substrates in deciduous and coniferous forests and woodlands, chaparral, or coastal scrub. Elevation: 160-490 m Blooms: December-March	A	No suitable habitat within the BSA.
Alkali milk vetch	*Astragalus tener var. tener*	-/CRPR 1B	Low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools. Elevation: 1-170 m Blooms: March - June	A	No suitable habitat within the BSA.
Big-scale balsamroot	*Balsamorhiza macrolepis*	-/CRPR 1B	Slopes in valley grassland, foothill woodland. Elevation: 90-1740 m Blooms: March-June	A	No suitable habitat within the BSA.
Round-leaved filaree	*California macrophylla* (syn. = *Erodium macrophyllum*)	-/CRPR 1B	Grassy openings in cismontane woodland, valley and foothill grassland with clay soils. Elevation: 15-1,200 m Blooms: March-May	A	No suitable habitat within the BSA.
Bristly sedge	*Carex comosa*	-/CRPR 2B	Marshes and swamps in lake margins, wet places; Site below sea level is on a Delta Island. Elevation: 270-1,030 m Blooms: May-September	A	No suitable habitat within the BSA.
Point Reye's bird's beak	*Chloropyron maritimum ssp. palustre*	-/CRPR 1B	Coastal salt marsh; usually with *Salicornia, Distichlis, Jaumea, Spartina*, etc. Elevation: 0-200 m Blooms: June-October	A	No suitable habitat within the BSA.

Table 3: Listed, Proposed Plant Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status: Federal/State	General Habitat Description	Habitat Present/ Absent	Occurrence within the Biological Study Area
Robust spineflower	*Chorizanthe robusta* var. *robusta*	FE/CRPR1B	Cismontane woodland, coastal dunes, and coastal scrub; openings with sandy or gravelly soils. Elevation: 3-300 m Blooms: April-September	A	No suitable habitat within the BSA.
Presidio clarkia	*Clarkia franciscana*	FE/-	Serpentine outcrops in grassland or scrub. Elevation: 30-340 m Blooms: May-July	A	No suitable habitat within the BSA.
Western leatherwood	*Dirca occidentalis*	-/CRPR 1B	On brushy slopes, mesic sites; mostly in mixed evergreen and foothill woodland communities. Elevation: 12-560 m Blooms: January-March	A	No suitable habitat within the BSA.
Tiburon buckwheat	*Eriogonum luteolum var. caninum*	-/CRPR 1B	Serpentine soils; sandy to gravelly sites in chaparral, valley and foothill grassland, cismontane woodland, coastal prairie. Elevation: 20-630 m Blooms: May-September	A	No suitable habitat within the BSA.
Contra Costa wallflower	*Erysimum capitatum var. capitatum*	FE/-	Stabilized dunes of sand and clay near Antioch along the San Joaquin River. Elevation: 7-3290 m Blooms: April-May	A	No suitable habitat within the BSA. No designated Critical Habitat occurs within the BSA.
San Joaquin spearscale	*Extriplex joaquinana*	-/CRPR 1B	Wet, alkaline sparse grassland areas, alkaline pools. Elevation: 1-835 m Blooms: April-October	A	No suitable habitat within the BSA.
Fragrant fritillary	*Fritillaria liliacea*	-/CRPR 1B	Often on serpentine; various soils reported though usually clay, in grassland, coastal scrub, and coastal prairie. Elevation: 6-370 m Blooms: February-April	A	No suitable habitat within the BSA.

Table 3: Listed, Proposed Plant Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status: Federal/State	General Habitat Description	Habitat Present/ Absent	Occurrence within the Biological Study Area
Blue coast gilia	*Gilia capitata ssp. chamissonis*	-/CRPR 1B	Coastal dunes, coastal scrub. Elevation: 0-2,320 m Blooms: February-April	A	No suitable habitat within the BSA.
Diablo helianthela	*Helianthella castanea*	-/CRPR 1B	Broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland; usually in chaparral/oak woodland interface in rocky, azonal soils, often in partial shade. Elevation: 20-960 m Blooms: March – June	A	No suitable habitat within the BSA.
Loma Prieta hoita	*Hoita strobilina*	-/CRPR 1B	Serpentine and mesic sites in chaparral, cismontane woodland, riparian woodland. Elevation: 90-1,170 m Blooms: May-July	A	No suitable habitat within the BSA.
Santa Cruz tarplant	*Holocarpha macradenia*	FT/SE, CRPR 1B	Coastal prairie, coastal scrub, valley and foothill grassland; often in clay, sandy soil. Elevation: 10-220 m Blooms: June-October	A	No suitable habitat within the BSA.
Kellogg's horkelia	*Horkelia cuneata* var. *sericea* (*syn. = H. cuneata* subsp. *sericea*)	-/CRPR 1B	Closed-cone coniferous forest, chaparral, and coastal scrub; in openings with sandy or gravelly soil. Elevation: 0-1690 m Blooms: February-July	A	No suitable habitat within the BSA.
Beach layia	*Layia carnosa*	FE/SE, CRPR 1B	Sandy soils of coastal dunes and coastal scrub in Humboldt, Marin, San Francisco, Monterey, and Santa Barbara Counties. Elevation: 0-60 m Blooms: March-July	A	No suitable habitat within the BSA.

Table 3: Listed, Proposed Plant Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status: Federal/State	General Habitat Description	Habitat Present/ Absent	Occurrence within the Biological Study Area
Oregon meconella	*Meconella oregana*	-/CRPR 1B	Open, moist places in coastal prairie, coastal scrub. Elevation: 340-650 m Blooms: March-April	A	No suitable habitat within the BSA.
Woodland woolythreads	*Monolopia gracilens*	-/CRPR 1B	Grassy sites, in openings; sandy to rocky soils, often seen on serpentine after burns but may have only weak affinity to burns; chaparral, valley and foothill grasslands (serpentine), cismontane woodland, broadleafed upland forests, north coast coniferous forest. Elevation: 60-1,360 m Blooms: March-July	A	No suitable habitat within the BSA.
Antioch Dunes evening-primrose	*Oenothera deltoides ssp. howellii*	FE/CRPR 1B	Interior sand dunes. Elevation: 0-30 m Blooms: March-September	A	No suitable habitat within the BSA. No designated Critical Habitat occurs within the BSA.
Choris' popcorn-flower	*Plagiobothrys chorisianus var. chorisianus*	-/CRPR 1B	Mesic sites in chaparral, coastal scrub, coastal prairie. Elevation: 4-300 m Blooms: March-June	A	No suitable habitat within the BSA.
San Francisco popcorn-flower	*Plagiobothrys diffusus*	-/CRPR 1B	Historically from grassy slopes with marine influence in valley and foothill grassland, coastal prairie. Elevation: 17-260 m Blooms: March-June	A	No suitable habitat within the BSA.
Adobe sanicle	*Sanicula maritima*	-/CRPR 1B	Moist clay or ultramafic soils in meadows and seeps, valley and foothill grassland, chaparral, coastal prairie. Elevation: 18-190 m Blooms: February-May	A	No suitable habitat within the BSA.

Table 3: Listed, Proposed Plant Species Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status: Federal/State	General Habitat Description	Habitat Present/ Absent	Occurrence within the Biological Study Area
Most beautiful jewell-flower	*Streptanthus albidus spp. peramoenus*	-/CRPR 1B	Serpentine outcrops, on ridges and slopes in chaparral, valley and foothill grassland, cismontane woodland. Elevation: 95-1000 m Blooms: April-September	A	No suitable habitat within the BSA.
California seablite	*Suaeda californica*	FE/-	Margins of coastal salt marshes. Elevation: 0-160 m Blooms: July-October	A	No suitable habitat within the BSA.
Saline clover	*Trifolium hydrophilum* (syn. = *T. depauperatum* var. *hydrophilum*)	-/CRPR 1B	Marshes and swamps, valley and foothill grasslands, vernal pools; prefers mesic, alkaline sites Elevation: 0-220 m Blooms: April-June	A	No suitable habitat within the BSA.
Viburnum	*Viburnum ellipticum*	-/CRPR 2B	Chaparral, cismontane woodland, lower montane coniferous forest. Elevation: 215-1400 m Blooms: May-June	A	No suitable habitat within the BSA.

Notes:
A (Absent) = No habitat present and no further work is needed.
BSA = Biological Study Area
CRPR 1B = Rare or Endangered in California and elsewhere
CRPR 2B = Rare or Endangered in California, more common elsewhere
FT/FE = Federal Threatened/Endangered
ST/SE = State Threatened/Endangered

Source: LSA Associates, Inc., 2015; California Natural Diversity Database.

Table 4: Listed, Proposed Animal Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status: Federal/State	General Habitat Description	Habitat Present/ Absent	Rationale
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT/-	Endemic to the grasslands of the Central Valley, and central and south coast mountains in small, clear water sandstone-depression and grassed swale, earth slump, or basalt-flow depression rain-filled pools.	A	No vernal pool complexes or other suitable habitat present in the BSA.
Callippe silverspot butterfly	*Speyeria callippe callippe*	FE/-	Coastal scrub; host plant is *Viola pedunculata*; most adults found on east-facing slopes; males congregate on hilltops in search of females.	A	No suitable coastal scrub habitat present in the BSA.
Bay checkerspot butterfly	*Euphydryas editha bayensis*	FT/-	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay; *Plantago erecta* is the primary host plant; *Orthocarpus densiflorus* and *O. purpurscens* are the secondary host plants.	A	No suitable grassland habitat present in the BSA.
San Bruno elfin butterfly	*Callophrys mossii bayensis*	FE/-	Located on steep, north-facing slopes within the fog belt in coastal, mountainous areas with grassy ground cover; mainly in the vicinity of San Bruno Mountain, San Mateo County; *Sedum spathulifolium* is the larval host plant.	A	No suitable grassland habitat present in the BSA.
Monarch Butterfly – Winter colony sites	*Danaus plexippus*	[b]	Winter colony sites occur along the California coast in wind protected tree groves (eucalyptus, Monterey pine, and cypress) where nectar and water resources are nearby.	A	No suitable habitat present in the BSA.
Green sturgeon Southern DPS	*Acipsenser medirostris*	FT/-	Near shore marine waters, bays and estuaries, spawns in rivers in deep fast water over large cobbles, but also clean sand to bedrock. Southern most spawning population in the Sacramento River.	P	Potential foraging habitat is present in the Channel, but spawning habitat is absent. Critical Habitat has been designated in the San Francisco Bay, including the Channel, but not all of the primary constituent elements (food resources, water flow to migrate upstream to spawning grounds, water quality, migratory corridor, depth, sediment quality) are present within the Channel.

Table 4: Listed, Proposed Animal Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status: Federal/State	General Habitat Description	Habitat Present/ Absent	Rationale
Tidewater goby	*Eucyclogobius newberryi*	FE/SSC	Shallow brackish lagoons and low gradient stream reaches with aquatic vegetation and areas of open bottom; most common in the upstream portions of lagoons with barrier beaches. Generally not found in lagoons with open mouths and strong tidal flow. Favors low salinity, generally less than 10 parts per thousand (ppt).	P	Although this species was documented in the BSA according to the CNDDB (CDFW 2015b), it is considered extinct from the San Francisco Bay (Moyle 2002). Tidewater goby is unlikely to be present in the BSA. No designated Critical Habitat occurs within the BSA.
Delta smelt	*Hypomesus transpacificus*	FT/SE	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay; seldom found at salinities greater than 10 ppt; most often at salinities less than 2ppt.	A	BSA is outside of known range for species.
Longfin smelt	*Spirinchus thaleichthys*	FC/ST, SSC	Open waters of estuaries, mostly in the middle or bottom water column. Prefers salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	P	The Channel and surrounding harbor are not known as breeding grounds for this species. Species detected in the Oakland Harbor in 2005 (CDFW 2015) and therefore could occur in or near the BSA (Arn Aarreberg, personal comm.).
Coho salmon - central California coast ESU	*Oncorhynchus kisutch*	FE/SE	Anadromous: spawns in coastal streams in fall and winter.	P	Although suitable spawning habitat is absent in the Channel, occasional stray individuals could occur within the BSA.
Steelhead; Central California coast DPS	*Oncorhynchus mykiss*	FT/-	Coastal streams from Russian River south to Aptos Creek (Santa Cruz Co.), including streams tributary to San Francisco and San Pablo Bays.	P	Although suitable spawning habitat is absent in the Channel, occasional stray individuals could occur within the BSA. Critical Habitat has been designated in the San Francisco Bay, including the Channel, but the primary constituent elements (spawning and rearing habitat, etc.) are not present within the Channel.
Central Valley steelhead DPS	*Oncorhynchus mykiss*	FT/-	Sacramento and San Joaquin Rivers and their tributaries.	P	Although suitable spawning habitat is absent in the Channel, occasional stray individuals could occur within the BSA.
Central Valley spring-run chinook salmon ESU	*Oncorhynchus tshawytscha*	FT/ST	Anadromous: spawns in Sacramento River system; occurs in small numbers in Central Bay.	P	Although suitable spawning habitat is absent in the Channel, occasional stray individuals could occur within the BSA.
Winter-run chinook salmon, Sacramento River ESU	*Oncorhynchus tshawytscha*	FE/SE	Anadromous: spawns in Sacramento River system; occurs in small numbers in Central Bay.	P	Although suitable spawning habitat is absent in the Channel, occasional stray individuals could occur within the BSA.

Table 4: Listed, Proposed Animal Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status: Federal/State	General Habitat Description	Habitat Present/ Absent	Rationale
California tiger salamander	*Ambystoma californiense*	FT/ST, SSC	Annual grasslands and valley-foothill oak savannah with vernal pools or other temporary water bodies (e.g., stock ponds) for breeding. During the non-breeding season occupies the burrows of California ground squirrels and Botta's pocket gophers.	A	No suitable breeding or upland habitat is present on or adjacent to the BSA. The isolation of the BSA, from nearby areas of occurrence, by heavily traveled roadways, developed landscapes, and marine waters and salt marsh (all barriers to dispersal for salamanders) would preclude dispersing individuals from reaching the BSA.
California red-legged frog	*Rana draytonii*	FT/SSC	Creeks, ponds, marshes. Prefers aquatic habitat with deep (2 feet or deeper) areas with undercut banks, emergent aquatic vegetation, and bank cover. Does not occur in salt marshes or wetland with brackish water.	A	No suitable habitat is present within the BSA. The isolation of the BSA, from nearby areas of occurrence, by heavily traveled roadways, developed landscapes, and marine waters and salt marsh (all barriers to dispersal for frogs) would preclude dispersing individuals from reaching the BSA. No designated Critical Habitat occurs within the BSA.
Alameda whipsnake [=striped racer]	*Masticophis lateralis euryxanthus*	FT/ST	Chaparral and sage scrub with rock outcrops and an abundance of prey species such as western fence lizard (*Sceloporus occidentalis*).	A	No suitable habitat is present within the BSA. The isolation of the BSA, from known CNDDB occurrences approximately 4.5 miles to the northeast, by heavily traveled roadways, urban development, and open water (all barriers to dispersal for snakes) would preclude dispersing individuals from reaching the BSA. No designated Critical Habitat occurs within the BSA.
Western pond turtle	*Actinemys marmorata*	-/SSC	Wide variety of freshwater habitats with deep water, including slow flowing pools of rivers and streams, ponds, and marshes. Aquatic habitats with a muddy or sand bottom, but also occurs in areas with a rocky or cobble bottom. Generally most common in areas with abundant basking habitat such as fallen trees. Must have access to upland areas with friable soils for egg laying.	A	This species is known from nearby freshwater habitats, but does not occur in salt water estuaries, bays or other marine habitats. This species is considered absent from the BSA.
Redhead	*Aytha americana*	SSC (nesting)	Large, deep bodies of water; nests in freshwater emergent wetlands.	A	Could forage in open water habitat within BSA; does not breed in Bay Area.

Table 4: Listed, Proposed Animal Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status: Federal/State	General Habitat Description	Habitat Present/ Absent	Rationale
Barrow's goldeneye	*Bucephala islandica*	SSC (nesting)	Protected coastal and open inland waters.	P	Observed foraging in open water habitat within BSA during LSA's 2014 site visit; does not breed in Bay Area.
American white pelican	*Pelecanus erythrorhynchos*	SSC (nesting colony)	Shallow inland and coastal marine habitats, marshes, lakes, rivers.	A	Could forage in open water habitat within BSA; does not breed in Bay Area.
California brown pelican	*Pelecanus occidentalis californicus*	FDE/SDE, SFP (nesting colony and communal roosts)	Open marine waters with abundant small schooling fish populations, nests on islands lacking terrestrial predators, roosts on isolated islands, rocks, breakwaters, and docks.	P	Could forage in open water habitat within the BSA; does not breed in Alameda County, but post breeding adults and young birds disperse north from the Channel Islands in southern California (the closest breeding area) and are most abundant in the County from July through late October. However, within the BSA there may be small numbers of non-breeding individuals present all year.
Western snowy plover	*Charadrius alexandrines nivosus*	FT/SSC (nesting)	Sandy beaches, salt pond levees and shores of large alkali lakes. Need sandy, gravelly or friable soils for nesting.	A	No suitable breeding habitat present in the BSA. Could briefly fly through or forage in the BSA. No designated Critical Habitat occurs within the BSA. Closest breeding occurrence is approximately 3.3 miles from the BSA (CDFW 2015a).
California least tern	*Sterna antillarum browni*	FE/SE, SFP (nesting)	Coastal waters, sandy beaches, alkali flats, and hard-pan surfaces (salt ponds).	P	No suitable breeding habitat present in the BSA. Could briefly fly through or forage over the open water in the BSA. Closest breeding colony is approximately 3 miles from the BSA at the Alameda Naval Air Station (CDFW 2015a).
White-tailed kite	*Elanus leucurus*	-/SFP (nesting)	Forages over grasslands, dry areas of marshes, road verges, and other open habitats. Nests in isolated trees and shrubs in grasslands, pasturelands and savannahs.	A (nesting)	Not likely to nest or forage in BSA due to lack of suitable foraging habitat. Trees within BSA do not provide good nesting habitat due to their location within an urban area.
Northern harrier	*Circus cyaneus*	-/SSC (nesting)	Nests on the ground among tall vegetation in grasslands, grain fields, sagebrush flats, and emergent wetlands along rivers or lakes.	A (nesting)	Suitable nesting and foraging habitat is not present in the BSA.
American peregrine falcon	*Falco peregrinus anatum*	FD/SD, SFP (nesting)	Nests on cliffs, buildings, and under tall bridges often near water bodies, but also in inland areas. Forages for birds over land and water.	A (nesting)	Suitable nesting habitat is not present in the BSA. This species could forage in the BSA.

Table 4: Listed, Proposed Animal Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status: Federal/State	General Habitat Description	Habitat Present/ Absent	Rationale
California black rail	*Laterallus jamaicensis coturniculus*	-/ST, SFP	Freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays, frequents marshes dominated by pickleweed (*Salicornia* sp.).	A	Suitable nesting and foraging habitat are absent from the BSA.
California clapper rail (=California Ridgway's rail)	*Rallus longirostris obsoletus (=Rallus obsoletus obsoletus)*	FE/SE, SFP	Salt-water and brackish marshes traversed by tidal slough. Associated with abundant growth of pickleweed.	A	Suitable nesting and foraging habitat are absent from the BSA.
Short-eared owl	*Asio flammeus*	-/SSC (nesting)	Upland areas of fresh and salt marshes, moist grasslands, irrigated alfalfa fields. Roosts and nests on the ground in areas concealed by tall grass. Not expected to nest.	A	May forage in the BSA as a rare winter visitor and fall migrants.
Burrowing owl	*Athene cunicularia*	-/SSC (burrow sites and some wintering sites)	Uses burrows (often California ground squirrels) for refuge and breeding in relatively open, dry, annual or perennial grasslands. May use a given site for breeding, wintering, foraging, and/or migration stopovers. May exhibit site fidelity, reusing burrows year after year.	A	May forage or winter within the BSA, but species not known to breed in the area (CDFW 1501a). No California ground squirrels observed during the site visit. Suitable burrow sites present in rock rip-rap.
Loggerhead shrike	*Lanius ludovicianus*	-/SSC (nesting)	Grasslands and open shrub or woodland communities; nests in dense shrubs or trees and forages in scrub, open woodlands, grasslands, and croplands.	P	May forage in the BSA, but not likely to nest due to lack of suitable nesting habitat.
Yellow warbler	*Setophaga petechia*	-/SSC (nesting)	Nests in extensive willow riparian woodlands.	A	May forage in the BSA during migration, but not likely to nest due to lack of suitable nesting habitat.
Salt marsh common yellowthroat	*Geothlypis trichas sinuosa*	-/SSC (nesting)	Resident of the San Francisco Bay region, in fresh and salt water marshes; requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	P	May forage in the BSA, but not likely to nest due to lack of suitable nesting habitat. Only small patches of low quality habitat present.

Table 4: Listed, Proposed Animal Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status: Federal/State	General Habitat Description	Habitat Present/ Absent	Rationale
Bryant's savannah sparrow	*Passerculus sandwichensis alaudinus*	-/SSC (nesting)	Nests and forages in salt marsh and adjacent ruderal habitat, and moist grasslands in the fog belt, but has also be found in dry grasslands back from the coast.	A	Not likely to nest or forage within BSA due to the lack of suitable salt marsh habitat.
Alameda song sparrow	*Melospiza melodia pusillula*	-/SSC (nesting)	Salt marshes bordering south arm of San Francisco Bay; inhabits pickleweed marshes; nests low in gumplant (*Grindelia* sp.) bushes (high enough to escape high tides) and in pickleweed.	P	May forage in the BSA, but not likely to nest due to lack of suitable nesting habitat. Only small patches of low quality habitat present.
Tricolored blackbird	*Agelaius tricolor*	-/SSC (nesting)	Grasslands and agricultural fields; nests in dense vegetation near open water.	A	No suitable habitat within BSA.
Pallid bat	*Antrozous pallidus*	-/SSC	Wide variety of habitats at low elevations; most commonly found in open, dry habitats with rocky areas for roosting.	A	May forage within BSA, but no suitable roost sites present.
Big free-tailed bat	*Nyctinomops macrotis*	-/SSC	Roosts in buildings, caves, crevices in high cliffs or rock outcrops, and occasionally in holes in trees.	A	May forage within BSA, but no suitable roost sites present.
Townsend's Big-eared Bat	*Corynorhinus townsendii*	-/CST, SSC	Roosts in the open, hanging from walls and ceilings; roosting sites limiting; extremely sensitive to human disturbance; occurs throughout California in a wide variety of habitats; most common in mesic sites.	A	No suitable habitat within BSA.
Salt-marsh wandering shrew	*Sorex vagrans haliocoetes*	-/SSC	Middle upper salt marsh with dense vegetation cover such as pickleweed; favors areas with abundant drift wood or other surface cover.	A	This subspecies of the vagrant shrew is not expected to occur in the BSA due to the lack of suitable habitat.
Alameda Island mole	*Scapanus latimanus parvu*	-/SSC	Only known from Alameda Island; found in a variety of habitats, especially annual and perennial grasslands; prefers moist, friable soils; avoids flooded soils.	A	No suitable habitat within BSA. Only known to occur on Alameda Island.

Table 4: Listed, Proposed Animal Species and Critical Habitat Potentially Occurring or Known to Occur in the Project Area

Common Name	Scientific Name	Status: Federal/State	General Habitat Description	Habitat Present/ Absent	Rationale
Salt marsh harvest mouse	*Reithrodontomys raviventris*	FE/SE, SFP	Tidal salt marshes of San Francisco Bay and its tributaries; requires tall, dense pickleweed for cover.	A	Species not expected to occur in the BSA due to the lack of suitable habitat.
American badger	*Taxidea taxus*	-/SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils; needs sufficient food, friable soils and open, uncultivated ground; preys on burrowing rodents; digs burrows.	A	No suitable habitat within BSA.

Notes:
A (Absent) = No habitat present and no further work is needed.
CST = Candidate State Threatened
DPS = Distinct Population Segment
ESU = Evolutionary Significant Unit
FC = Federal Candidate
FD = Federal Delisted
FT/FE = Federal Threatened/Endangered
FT/FPE = Federal Proposed Threatened/Endangered
P (Present) = The species is present.
SFP = Fully Protected
SSC = California Species of Special Concern
ST/SE = State Threatened/Endangered

Source: LSA Associates, Inc., 2015; California Natural Diversity Database.

Special-Status Fish Species

The Measure DD EIR identified construction-period noise impacts that could directly impact special-status fish species, including Pacific herring and migrating salmonids, as well as other native San Francisco Bay fish species protected under the Magnuson-Stevens Act and Essential Fish Habitat (EFH). The EIR concluded that with the implementation of Mitigation Measure BIO-2, the impact would be reduced to a less-than-significant level.

The project site is located within an area designated as an Essential Fish Habitat (EFH) by the National Marine Fisheries Service (NMFS) for the Pacific Coast Salmon Fishery Management Plan and the Pacific Coast Groundfish Fisheries Management Plan. The project site and adjacent vicinity could potentially impact two species covered under the Pacific Coast Salmon Fishery Management Plan and 83 fish species under the Pacific Groundfish Fishery Management Plan. Federal agencies responsible for permitting other aspects of the project (i.e., wetlands) would be required to consult with NMFS as part of their permitting process and an EFH assessment would need to be prepared. Fish species listed in these plans that could be in the vicinity of the project site or in the project site itself include: chinook salmon, leopard shark, spiny dogfish, brown rockfish and starry flounder.

The LM2BT project could impact Pacific Coast Salmonids and Pacific Coast Groundfish EFH through the construction of the bridge and temporary falsework (trestles) across the Channel. The temporary and permanent supports for the bridge and multiple temporary piles for the trestle would not likely impede movement of fish into and out of the Channel due to the relatively small size of the supports. Construction activities are not likely to have a temporary impact on fish that inhabit the Channel since no impact pile driving would occur. Temporary impacts to the EFH would include the minimal loss of Channel bottom where the 6-to-8-foot, cast-in-drilled concrete temporary support would be placed (approximately 175 square feet (0.004 acre) for both the proposed project and project variant). The multiple temporary piles that would be installed for the proposed project would impact approximately 0.0016 acres of open water/wetlands. The project variant would not require the use of the trestle and therefore would not include impacts associated with trestle support piles. Permanent impacts to EFH would include the minimal loss of channel bottom where the permanent 6-to-8-foot, cast-in-drilled concrete support would be placed for the proposed project (approximately 44 square feet (0.001 acre). No permanent impacts to the open water portion of the Channel would occur with implementation of the project variant since no permanent in-water supports are proposed.

Although special-status fish species such as green sturgeon, longfin smelt, and steelhead may occur in the study area, they are unlikely to be impacted by the project. The Channel does not support the primary constituent elements for green sturgeon, such as spawning habitat, food resources/abundant prey, sufficient water flow, high water quality, a diversity of depths necessary for shelter, foraging, and migration of juvenile; subadult, and adult life stages, and sediment quality (i.e., chemical characteristics) necessary for normal behavior, growth, and viability of all life stages. Due to the absence of primary constituent elements and because green sturgeon do not spawn in the Channel, this species is not likely to occur in the Channel for a prolonged period of time. The cast-in-drill piling will cause minimal noise and therefore, would likely not impact fish species.

Based on available data, longfin smelt could occur within the project area year-round. Because cast-in-drill pilings would be installed rather than driven piles, the in-water construction work is not likely to impact longfin smelt. Since the fish are highly mobile, they are likely to swim away during the in-water construction work. The main potential impact would be excessive underwater noise levels.

Longfin smelt have a noise threshold of 187 decibels for fish over 2 grams, at which the fish could be impacted by the construction. The cast-in-drill piling installation is expected to fall below this noise threshold.

Steelhead could briefly swim in the Channel, although they would not spawn in the Channel due to the lack of suitable habitat. The South San Francisco Bay Critical Habitat unit for steelhead includes the Channel. The project is unlikely to adversely affect steelhead during construction activities. Since steelhead do not spawn in the Channel, critical habitat for steelhead would not be affected by the project.

While direct impacts, (i.e., injury or mortality) to special-status fish species would likely be avoided by the project, conservation measures would be required to ensure that potential impacts to these species and EFH would be reduced to a less-than-significant level. Mitigation Measure BIO-2 in the Measure DD EIR was required to reduce impacts to certain fish species to a less-than-significant level. This measure is modified below to include fish species that were not specifically identified in the Measure DD EIR but that were identified for the LM2BT project. In addition, this measure is further modified to include Mitigation Measure BIO-2b, which specifically addresses potential impacts that could occur to EFH habitat associated with construction of the proposed project and the project variant and associated direct work in the Channel, including installation of drilled piles. Although impacts to EFH habitat were identified and mitigated in the Measure DD EIR, these additional measures would be required to reduce the impact to a less-than-significant level because drilled piles were not anticipated to be installed as part of Measure DD projects. The proposed project and project variant would be required to comply with measures outlined in Modified Mitigation Measure BIO-2, below to ensure that potential impacts to special-status fish species and EFH are reduced to a less-than-significant level.

> Modified Mitigation Measure BIO-2a: To avoid adverse impacts to special-status fish species, including green sturgeon, longfin smelt, Pacific herring, federally listed salmonids (chinook salmon, Coho salmon, and steelhead), and EFH, pile driving shall either be avoided or occur within the June 1 to November 30 work window in accordance with National Marine Fisheries Service (NMFS) guidelines. Any pile driving occurring outside this period will require informal or formal consultation with the NMFS (for listed salmonids and Essential Fish Habitat [EFH]) and California Department of Fish and Wildlife (CDFW) (for Pacific herring) prior to the Army Corps of Engineers' (USACE) issuance of a Section 404 permit for impacts to waters of the U.S.
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> Modified Mitigation Measure BIO-2b: Consultation with the NMFS regarding effects to EFH in the Channel would be required for the proposed project and the project variant. At a minimum, conservation measures shall be implemented to reduce impacts to EFH associated with the construction of the proposed project and the project variant, as follows.
>
> 1. Temporary piles shall be completely removed rather than cutting or breaking off if the pile is structurally sound.
> 2. The suspension of sediments and disturbance of the substrate shall be minimized when removing temporary piles. Measures to help accomplish this include, but are not limited to, the following:

- When practicable, temporary piles shall be removed with a vibratory hammer, rather than the direct pull or clamshell method.
- Temporary piles shall be slowly removed to allow sediment to slough off at, or near, the mudline.
- The operator shall first hit or vibrate the temporary pile to break the bond between the sediment and pile to minimize the potential for the pile to break, as well as reduce the amount of sediment sloughing off the pile during removal.
- A ring of clean sand shall be placed around the base of the temporary pile. This ring shall contain some of the sediment that would normally be suspended.
- Temporary piles shall be encircled with a silt curtain that extends from the surface of the water to the substrate.

3. Each pass of the clamshell shall be completed to minimize suspension of sediment if temporary pile stubs are removed with a clamshell.
4. All holes left by the temporary piles shall be filled with clean, native sediments if possible.
5. Temporary piles shall be placed on a barge equipped with a basin to contain all attached sediment and runoff water after removal. Creosote-treated timber piles shall be cut into short lengths to prevent reuse, and all debris, including attached, contaminated sediments, shall be disposed of in an approved upland facility.
6. Use of treated wood timbers or pilings shall be avoided to the extent practicable. Use of alternative materials such as untreated wood, concrete, or steel is recommended.
7. Erosion control and stabilization measures shall be incorporated to reduce erosion potential.
8. Spoils and construction-related trash shall be properly disposed of.

Implementation of Modified Mitigation Measures BIO-2a and BIO-2b would reduce impacts to special-status fish species and ESH to a less-than-significant level. These modifications are required to address potential impacts to specific fish species that were not specifically identified in the Measure DD EIR and are specific to the LM2BT project. However, the Measure DD EIR did identify impacts to fish species as a potentially significant impact and recommended mitigation measures in the EIR to reduce this impact to a less-than-significant level. The identification of impacts to additional fish species and the recommendation of more specific measures to be implemented to ensure that these impacts would be less than significant do not represent a significant effect that would be substantially more severe than those identified and described in the Measure DD EIR.

Special-Status Bird Species

California least-terns, salt marsh yellowthroats, and the Alameda song sparrow may forage over the Channel within the project site, but are unlikely to occur on a regular basis or for prolonged periods of time. Implementation of the proposed project and variant would not have an adverse impact on these species. The proposed project would not impede movement of this species because the trail and bridge would be constructed at a similar level as the existing roadway structures with only a 3.5-foot tall railing for a majority of the structure. Where the bridge would expand over the UPRR tracks, the railing would be 10 feet, which would likely not restrict movement of this species. The proposed bridge could include suspension members that would be relatively larger, bulkier, and more visible

than suspension cables. For possible cable-supported structure options, the bridge deck would be supported from above by the suspension members. These steel members would be a minimum of 1 inch in diameter and spaced 10 feet or more apart, such that they would be visible to passing birds. Because the new bridge would be constructed at approximately the same height as surrounding infrastructure, including the I-880 overpass, and would include highly visible suspension members, no potential impacts are anticipated. Additional lighting and noise from the trail is not expected to impact bird species since the trail would be installed adjacent to existing major roadways, which are already exposed to artificial light from street lights and light and noise from passing vehicles.

Although the potential presence of special-status bird species is low, impacts to these species as well as other nesting birds could occur during project construction activities, particularly during tree removal or trimming. Implementation of SCA BIO-1 would ensure that these impacts are reduced to a less-than-significant level.

Sensitive Natural Communities

Two natural habitats/plant communities of special concern occur within the project area: open water and tidal marsh wetlands. Approximately 0.5 acre of tidal marsh wetlands is located along the banks of the Channel. However, the LM2BT project would not result in direct permanent or temporary impacts to tidal marsh habitat. Indirect impacts such as dust and potential fuel spills from construction equipment could occur, but these impacts are expected to be minimal due to the habitat being far away from the disturbance area and related construction activities.

Open waters occur within the Channel portion of the project site. These open waters provide habitat for a wide variety of waterbirds (ducks, shorebirds, waters, etc.,) throughout the year with the largest concentration in the winter. However, due to its urban setting, the Channel does not provide high quality habitat for marine mammals and fish. Much of the Channel is already shaded by the existing Embarcadero Bridge, I-880, and the UPRR tracks, and therefore habitat value in these areas are reduced for sun-dependent aquatic species along the Channel. The habitat within the Channel is situated within a highly urban setting and supports minimal sensitive habitat.

The proposed project would result in the installation of permanent support columns directly in the water habitat of the Channel that would result in a direct permanent impact to approximately 0.001 acre of open water habitat. Implementation of the project variant would not result in direct permanent impact to open water habitat because no columns would be located within the Channel.

The incremental increase of shading from the trail and bridge would not result in a significant disruption to habitat or species, as the trail and bridge are not expected to inhibit wildlife use in the Channel or to further degrade the habitat value of the open water habitat. Shading is expected to only slightly affect the open water habitat, and those changes are expected to be beneficial to the habitat because light intensity passing through the water column and reaching the estuary floor would be lower as a result of the shading, creating a niche for species that evade avian predators and for aquatic vegetative or invertebrate species that prefer shade over sun.

The proposed project would include temporary indirect effects including construction-related impacts such as shading and other disturbances associated with temporary support, dust, potential fuel spills from construction equipment, and unauthorized activities of equipment or personnel outside designated construction areas, as well as operation effects such as impacts on adjacent habitats caused by

stormwater runoff, traffic and litter. The proposed project would result in temporary minor impacts related to the use of multiple temporary support columns in the water and wetlands, which would affect approximately 0.006 acre of open water/wetland habitat for the duration of 18 months. These impacts would not inhibit wildlife use in the Channel or degrade the habitat value of the open water habitat. The shading caused by the temporary support would not impact vegetation occurring on the Channel floor, given the temporary use of the supports and the overall lack of sensitive vegetation in the project site. The shading caused by the temporary support may provide some benefits, including diffusion of light beneath the water surface, reducing water temperatures, and lowering light intensity, and protection of fish from avian predators.

Areas temporarily affected during construction could negatively impact the Channel if Best Management Practices (BMPs) to prevent siltation during construction are not correctly implemented during construction. However, implementation of the City's SCAs, including those applicable to creek protection (see SCAs HYD-1, HYD-2 and HYD-3), would be required and would ensure that construction-period impacts to water quality would be less-than-significant level because specific and discrete steps would be taken to ensure that the sensitive natural areas of the Channel are not adversely affected by project construction activities. In addition, as a refinement to SCA HYD-1, the following project-specific implementation measures are added to further ensure that potential impacts to sensitive habitats within and near the Channel are reduced to a less-than-significant level. Due to the nature of construction activities (drilled piles in particular) these additional measures would be required to ensure that this impact is less than significant.

b. Construction BMPs

xiv. Prior to vegetation clearing, ground disturbance, or construction, highly visible barriers (such as orange construction fencing) shall be installed around sensitive habitats adjacent to the project footprint within 100 feet of the Channel. No grading or fill activity of any type shall be permitted within these areas (designated environmentally sensitive areas [ESA]). Heavy equipment, including motor vehicles, shall not be allowed to operate within the ESAs. All construction equipment should be operated in a manner so as to prevent accidental damage to nearby preserved areas. All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities shall occur in developed or designated non-sensitive, upland, habitat areas. The designated upland areas shall be located in such a manner as to prevent the runoff from any spills from entering aquatic habitats.

xv. A biologist shall monitor construction of in-water work within the Channel for the duration of project construction to ensure that wildlife species are not affected during construction and that avoidance and minimization measures are properly implemented.

xvi. An employee education program for all construction personnel shall be developed and implemented by the biological monitor prior to the initiation of construction activities. At a minimum, the program shall include the following topics: (1) biology, conservation, and legal status of the marine mammals, fisheries and nesting birds; (2) responsibilities of the biological monitor; (3) delineation and flagging of adjacent habitat; (4) limitations on all movement of those employed on site, including ingress and egress of equipment and personnel, to designated construction zones (personnel

shall not be allowed access to adjacent sensitive habitats); (5) on-site pet prohibitions; (6) use of trash containers for disposal and removal of trash; and (7) project features designed to reduce the impacts to habitat.

xvii. The use of rodenticides, herbicides, insecticides, or other chemicals that could harm open water shall be prohibited.

xviii. The contractor shall be required to develop a site-specific Storm Water Pollution Prevention Plan (SWPPP) that will identify specific best management practices (BMPs) for each construction activity to eliminate or minimize the potential for the discharge of polluted storm water or unauthorized non-storm water. Specific BMPs shall be implemented during project construction so as not to cause or contribute to an exceedance of any water quality standard. In addition, changes to the BMPs such as alternative mechanisms, if necessary, during project design and/or construction shall be implemented in order to achieve the stated goals and performance standards. These may include silt curtains or turbidity curtains that would contain resuspended sediment on site until it settles.

xix. Project construction includes the placement of concrete piles to support the bridge, which shall require concrete, cast-in-drilled-hole piles. If necessary, to minimize impacts of the placement of piles, attenuation methods (e.g., cushion blocks and/or isolation casings) shall be required, if feasible.

These modifications are required to address potential impacts to sensitive habitats that are specific to the LM2BT project and are not already identified in the City's SCAs. The identification of more specific measures to be implemented to ensure that these impacts would be less than significant does not represent a significant effect that would be substantially more severe than those identified and described in the Measure DD EIR.

Jurisdictional Waters and Wetlands

The Measure DD EIR identified Waters of the U.S. and State present within and adjacent to several components of the Lake Merritt and Lake Merritt Channel group of projects, including the proposed project area (i.e., the Channel). All projects within this group are required to obtain the necessary regulatory permits (e.g., USACE permit, RWQCB water quality certification, CDFW Lake or Streambed Alteration Agreement) for activities within or adjacent to waters of the U.S. and State. In addition, the Measure DD EIR identified Mitigation Measure BIO-3a and BIO-3b to ensure that impacts to jurisdictional waters would be less than significant.

Approximately 3.19 acres of the project site is under potential Clean Water Act Section 404 jurisdictional features including "Other Water of the United States" within the Channel. Implementation of the proposed project would have permanent impacts to 0.001 acre of other water (open water Channel) and to 0.004 acre of wetlands (Channel margins). Temporary impacts would occur to 0.061 acre of other waters and wetlands. Implementation of the project variant would result in only temporary impacts to 0.016 acre of other waters and to 0.014 acre of wetlands. The development footprint of the proposed project has been minimized to the maximum extent feasible in order to avoid jurisdictional features.

The proposed project would therefore be required to implement Mitigation Measures BIO-3a and BIO-3b (as modified below and specific to the proposed project), as identified in the Measure DD EIR and as modified and shown below, in order to reduce these impacts to a less-than-significant level. Because the proposed project would result in temporary and permanent impacts associated with the use of supports in open water of the Channel, the applicable resource agencies may require compensatory mitigation, which was not identified in the Measure DD EIR Mitigation Measure BIO-3. Therefore, additional language is added to modify the measure to make this clear. With implementation of this modified measure, impacts to jurisdiction waters would be less than significant.

> Mitigation Measure BIO-3a: All Measure DD-funded activities within jurisdictional waters shall first obtain authorization from the appropriate agencies (USACE, Water Board, CDFW, and BCDC). At a minimum, each activity will likely require a Section 404 Corps permit and Section 401 water quality certification from the Water Board. Creek restoration activities may also require a CDFW Lake or Streambed Alteration Agreement, depending on site-specific conditions.
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> Modified Mitigation Measure BIO-3b: Impacts to jurisdictional wetlands shall be mitigated at a minimum replacement ratio of 1:1 (i.e., 1 acre created [and preserved] for every acre impacted). If feasible, replacement habitat shall be created/preserved in the same general area as the original impact. Off-site mitigation may be approved if the amount of required replacement habitat exceeds that which is available near a given impact site. A wetland mitigation and monitoring plan (MMP) shall be developed for each mitigation site, detailing the mitigation design, wetland planting design, adaptive management, maintenance and monitoring requirements, reporting requirements and success criteria for the created wetlands.
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> OR
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> Compensation mitigation may be required for direct temporary and permanent impacts associated with the use of supports in the open water of the Channel and to comply with Section 10 and Section 404 of the Clean Water Act (CWA) and the California Coastal Act. All of the jurisdictional waters fall under the jurisdiction of the Coastal Commission and the majority of the open water estuarine habitat is under the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) and the Rivers and Harbors Act. It has not been determined at this time if it is necessary to mitigate for the proposed project. However, the final compensatory mitigation program would be expected to fully offset project-related jurisdictional effects by providing 'no net loss' of open water habitat, should this be required by the applicable resource agencies.

These modifications are required to address potential impacts to jurisdictional waters that are specific to the LM2BT project and are not already identified in the Measure DD EIR. These measures reflect current resource agency requirements. However, the Measure DD EIR did identify impacts to jurisdictional waters as a potentially significant impact and recommended mitigation measures in the EIR to reduce this impact to a less-than-significant level. The identification of more specific measures to be implemented to ensure that these impacts would be less than significant does not represent a significant effect that would be substantially more severe than those identified and described in the Measure DD EIR.

Riparian Habitat

The Measure DD EIR concluded that the only component of Measure DD that may result in direct impacts to riparian habitat or other sensitive natural community is the City-wide Creeks Restoration group of projects, and that there would be no impacts related to riparian habitat in any of the other project groups (i.e., Lake Merritt and Lake Merritt Channel group, Waterfront Trail group, and Recreational Facilities group). The project site is not part of the City-wide Creeks Restoration project component of Measure DD and does not include riparian habitat; therefore, the LM2BT project would have no impact on riparian habitats. In addition, there are also no adopted habitat conservation plans or natural community conservation plans that apply to Measure DD projects, thus resulting in no impact to such plans.

Native Resident or Migratory Wildlife Movement, Wildlife Corridors, and Nurseries

Migratory Birds

Several species of migratory waterbirds are known to use the Lake Merritt Channel during the winter (October through March) and are highly sensitive to human disturbance. Construction activities and future recreational use of the Lake Merritt Channel have the potential to disturb wintering waterfowl. Although most construction would occur outside of the wintering period during April through September, some construction activity may be conducted during the period when waterbirds are most abundant (approximately October through March). Construction activities in the Channel during this time would disturb waterbirds and the birds would likely relocate to nearby areas on Lake Merritt and the Oakland Estuary. The Measure DD EIR concluded that this temporary displacement of waterbirds to nearby suitable habitat areas would be less than significant. The operational phase of Measure DD projects would also result in increased disturbance levels to wintering migratory ducks and other waterbirds due to the introduction of small boat traffic in the Channel. Mitigation Measure BIO-4 was recommended to reduce this impact to a less-than-significant level.

Construction of the proposed project or project variant could affect migratory bird species nesting within the project site. However, implementation of SCA BIO-1, which regulates tree removal during the bird nesting season, would ensure that potential impacts to nesting migratory bird species at the project site would be reduced to a less-than-significant level. Implementation of Mitigation Measure BIO-4 would not be required for this project because no impacts associated with use of the Channel by boaters would occur with operation of the bicycle and pedestrian bridge project.

The prevention of bird collisions was not discussed in the Measure DD EIR. However, the City of Oakland requires new development that involves glass and that is either located adjacent to a substantial water body (e.g., Oakland Estuary, Lake Merritt, Lake Merritt Channel, San Francisco Bay, or other reservoir or wetland); or, located immediately adjacent to a recreation area or park larger than 1 acre; or, that includes an existing or proposed substantial vegetated area; to comply with SCAs related to bird collision reduction measures. No glass elements would be constructed with development of the bicycle and pedestrian bridge. Light pollution would be reduced as required by applicable SCAs. Furthermore, the bridge would include suspension members that would be relatively larger, bulkier, and more visible than suspension cables. Because the new bridge would be constructed at approximately the same height as the surrounding bridges, and would include highly visible suspension members, no potential impacts are anticipated. Therefore, impacts related to bird collisions would be less than significant.

Essential Fish Habitat

As previously discussed, the temporary and permanent concrete supports for the bridge would not likely impede movement of fish into and out of the Channel due to the relatively small size of the support. However, conservation measures would be required to ensure that potential impacts to EFH would be reduced to a less-than-significant level. The proposed project and project variant would be required to comply with measures outlined in Modified Mitigation Measure BIO-2. Implementation of this measure would ensure that potential impacts to fish movement within the Channel would be reduced to a less-than-significant level.

Tree and Creek Protection (Criteria 3a and 3b)

The Measure DD EIR determined that a number of protected trees within the Lake Merritt and Lake Merritt Channel group of projects would be removed as a result of implementation of Measure DD. The City of Oakland's Tree Preservation and Removal Ordinance requires a permit for removal of protected trees. A permit is also required if work might damage or destroy protected trees. All protected trees that are removed would be replaced in accordance with the City's Tree Protection Ordinance. In addition, all Measure DD projects are required to comply with SCAs related to tree removal, tree protection and tree permits to reduce impacts to trees to a less-than-significant level.

Eleven trees occur within the project study area, including five trees protected by the Tree Protection Ordinance. Implementation of the proposed project would not result in direct impacts to trees through removal or trimming because these trees are not directly within the alignment of the proposed pathway or within 10 feet of construction activities. However, implementation of the project variant could impact up to six trees, including two protected trees that are situated north of I-880 on the west side of the Channel within the alignment of the project variant. The proposed project and project variant would however comply with SCA BIO-2 related to tree removal, tree protection and tree permits. Compliance with this measure would ensure that protected trees are replaced as required, thus reducing impacts to protected trees to a less-than-significant level.

Components of the Lake Merritt and Lake Merritt Channel group of projects are subject to the City's Creek Protection Ordinance. Construction activities that involve heavy machinery or equipment to excavate or move soil, demolish structures, or to realign stream banks or waterways would be required to comply with SCAs related to hazards, stormwater management and hydrology**.** In addition, Creek Protection permits are also required to minimize erosion and sedimentation to meet C3 requirements pursuant to RWQCB requirements. Compliance with these SCAs and required permits would reduce impacts to water quality and construction-related runoff to a less-than-significant level.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the Measure DD EIR, and a project specific assessment of biological resources, implementation of the proposed project would not substantially increase the severity of significant impacts identified in the Measure DD Final EIR, nor would it result in new significant impacts related to biological resources that were not identified. The proposed project would be required to comply with the above mentioned mitigation measures, modified mitigation measures and SCAs related to bird collisions, bird protection; tree protection, tree removal and tree permitting; erosion control, stormwater management and hazardous materials, which

were identified in the Measure DD EIR and included in Attachment A at the end of the this Environmental Checklist (including SCA BIO-1, SCA BIO-2, SCA HAZ-1, SCA HYD-1, SCA HYD-2, SCA HYD-3, and SCA HYD-4) and, as described in the analysis above, compliance with these measures would ensure that all impacts related to biological resources would continue to be less than significant with the proposed project. Finally, Measure DD projects that have been implemented within the vicinity of the project site have improved wetland and tidal areas north of the site and no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting or analysis for biological resources as described in the Measure DD EIR.

Therefore, no changes have occurred with respect to circumstances surrounding the Measure DD project that would cause significant impacts related to biological resources to which the LM2BT project would contribute considerably, and no new information has been put forward that shows that the project would cause significant biological resources impacts.

	Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
4. CULTURAL RESOURCES Would the project:			
a. Cause a substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines Section 15064.5. Specifically, a substantial adverse change includes 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." The significance of an historical resource is "materially impaired" when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance **and** that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register of Historic Places, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5);	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;	☒	☐	☐

	Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or	☒	☐	☐
d. Disturb any human remains, including those interred outside of formal cemeteries.	☒	☐	☐

Project Setting

The project area consists of ruderal vegetation, tidal marsh, and open water (i.e., the Channel). Structures within the vicinity include the elevated I-880 freeway and the Embarcadero Bridge. No historic buildings are located within or in the immediate vicinity of the project site. The closest historic resources to the project site are located over 1 mile away (including the Municipal Boathouse, Sailboat House, Pergola and Colonade). The Lake Merritt Wild Duck Refuge, which is listed in the National Register of Historic Places and is considered a National Historic Landmark and a City Landmark, is located approximately 1 mile northwest of the project site. Construction of the project would not affect these resources.

The project area primarily consists of imported fill and is unlikely to contain prehistoric archaeological resources, paleontological resources, or human remains interred outside of formal cemeteries, although the potential for accidental discovery of such resources during project construction cannot be discounted. In addition, a cultural resources field investigation conducted within the project area in February 2014 identified the following potential archaeological resources that could be affected by the proposed project and the project variant:

- ***Archaeological Site 1:*** A historic-period archaeological site measuring approximately 300 feet long by 20 feet wide and consisting of a concentration of glass and ceramic fragments on the west bank of the Channel and north of I-880. This site is in the vicinity of the northern touchdown for the project variant;
- ***Archaeological Site 2:*** A historic-period archaeological site consisting of multiple piles that supported the former Western Pacific Railroad trestle. This site is in the Channel immediately south of I-880 and near the construction area for the proposed project; and
- ***Archaeological Site 3:*** A historic-period archaeological site measuring approximately 150 feet long by 20 feet wide consisting of railroad tracks, concrete fragments, and piles. This site is on the east bank of the Channel and south of Embarcadero Bridge, near the location of proposed bridge columns for both the proposed project and the project variant.

The above-noted resources are located within potential areas of temporary and permanent disturbance for both the proposed project and the project variant. These resources may qualify as historical resources under CEQA.

City of Oakland Standard Conditions of Approval. The City of Oakland provides SCAs regarding cultural resources as identified below and in Attachment A.

SCA CUL-1 Archaeological and Paleontological Resources - Discovery During Construction

Requirement: Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented.

In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense.

In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.

When Required: During construction
Initial Approval: N/A
Monitoring/Inspection: Public Works Department

SCA CUL-2 Archaeologically Sensitive Areas – Pre-Construction Measures

Requirement: The project applicant shall implement either Provision A (Intensive Pre-Construction Study) or Provision B (Construction ALERT Sheet) concerning archaeological resources.

Provision A: Intensive Pre-Construction Study

The project applicant shall retain a qualified archaeologist to conduct a site-specific, intensive archaeological resources study for review and approval by the City prior to soil-disturbing activities occurring on the project site. The purpose of the site-specific, intensive archaeological resources study is to identify early the potential presence of history-period archaeological resources on the project site. At a minimum, the study shall include:

a. Subsurface presence/absence studies of the project site. Field studies may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources.

b. A report disseminating the results of this research.

c. Recommendations for any additional measures that could be necessary to mitigate any adverse impacts to recorded and/or inadvertently discovered cultural resources.

If the results of the study indicate a high potential presence of historic-period archaeological resources on the project site, or a potential resource is discovered, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction and prepare an ALERT sheet pursuant to Provision B below that details what could potentially be found at the project site. Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the ALERT sheet, required per Provision B below) and the procedures to follow if any artifacts are encountered, field recording and sampling in accordance with the Secretary of Interior's Standards and Guidelines for Archaeological Documentation, notifying the appropriate officials if human remains or cultural resources are discovered, and preparing a report to document negative findings after construction is completed if no archaeological resources are discovered during construction.

Provision B: Construction ALERT Sheet

The project applicant shall prepare a construction "ALERT" sheet developed by a qualified archaeologist for review and approval by the City prior to soil-disturbing activities occurring on the project site. The ALERT sheet shall contain, at a minimum, visuals that depict each type of artifact that could be encountered on the project site. Training by the qualified archaeologist shall be provided to the project's prime contractor, any project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving), and utility firms involved in soil-disturbing activities within the project site.

The ALERT sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, all work must stop and the City's Environmental Review Officer contacted in the event of discovery of the following cultural materials: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire-cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains (building, ship, wharf); clay roof/floor tiles; stone walls or footings; or gravestones. Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile

drivers, and supervisory personnel. The ALERT sheet shall also be posted in a visible location at the project site.

When Required: Prior to Notice to Proceed
Initial Approval: Bureau of Building
Monitoring/Inspection: Public Works Department

SCA CUL-3 Human Remains - Discovery During Construction

Requirement: Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.

When Required: During construction
Initial Approval: N/A
Monitoring/Inspection: Public Works Department

Historical Resources (Criterion 4a)

As described in the Measure DD EIR, projects that occur within the Lake Merritt and Lake Merritt Channel group may impact subsurface prehistoric archaeological materials that may qualify as historical resources under CEQA. No known historic structures would be impacted. The Measure DD EIR identifies a prehistoric shellmound, CA-ALA-5 near Lakeshore Avenue and the 12th Street reconstruction area; as well as another possible prehistoric site recorded in a road median in a highly disturbed area (Impact CULT 1 [Group 1]). Mitigation Measure CULT-1 is recommended to ensure that impacts to known or potential archeological sites within the 12th Street reconstruction area would be reduced to a less-than-significant level; however, due to the distance from the project area, this specific measure would not apply to the proposed project or the project variant. In addition, the Measure DD EIR identifies Mitigation Measure CULT-2, which would ensure that potential impacts to historic resources within the Group 4, City-wide Creeks areas would be reduced to a less-than-significant level. No other impacts or mitigation measures were identified.

Archaeological Sites 2 and 3, listed above, may qualify as historical or unique archaeological resources due to their significant historical associations with important patterns of events, or their potential to contain important data. Should this be the case, then removal or physical disturbance of these resources would result in the material impairment of their significance, which could result in a significant impact under CEQA.

The status of these resources under CEQA is not known at this time. To address their potential significance and the possibility that a significant impact may occur, the following measures are required prior to project implementation. It should be noted that SCA CUL-2 is appropriate for resources with the potential to contain sub-surface deposits; however, given the nature of the resources described previously (Archaeological Sites 2 and 3), archival research and intensive field review is a more effective approach to identifying potentially significant historical associations than relying on excavation. Therefore, as a refinement to SCA CUL-2, the following project-specific implementation measures are added to ensure that potential impacts to historic-period resources at the site are reduced to a less-than-significant level. These measures would be required to ensure that potential impacts to historic resources would be less than significant.

Provision A: Intensive Pre-Construction Study

The **project** applicant shall retain a qualified archaeologist to conduct a site-specific, intensive archaeological resources study for review and approval by the City prior to soil-disturbing activities occurring on the project site. The purpose of the site-specific, intensive archaeological resources study is to identify early the potential presence of history-period archaeological resources on the project site. At a minimum, the study shall include:

~~a. Subsurface presence/absence studies of the project site. Field studies may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources.~~

~~b. A report disseminating the results of this research.~~

~~c. Recommendations for any additional measures that could be necessary to mitigate any adverse impacts to recorded and/or inadvertently discovered cultural resources.~~

a. An archaeological excavation for Site 1 to determine if historic-period artifacts known to be present at the site would qualify as historical resources for the purposes of CEQA. The excavation phase shall be conducted prior to ground disturbing activities at the site. Diagnostic artifacts, as well as those classes of artifacts for which an adequate sample has not yet been recovered, shall be collected and bagged following photographing and recording of provenance. Mapping of deposits would be coordinated using existing engineering survey controls, and elevation accuracy will be maintained during the excavation to permit provenance controls for artifact recording. All information needed, including soil color or type, elevation, location, photographs, and sketch maps will be gathered as quickly as conditions permit to allow resumption of construction activities. All recovered cultural materials shall be cleaned as appropriate, preserved if necessary, bagged, and tagged or marked so as to permit its identification in an acceptable record system, and in accordance with recognized professional standards. All recovered cultural material shall be analyzed sufficiently to permit identification in accordance with recognized professional standards and submitted to a curation facility, as appropriate. A Final Monitoring Report shall be prepared, describing the results of monitoring, data recovery, and analysis.

b. Archival research and intensive field reviews shall be performed for Site 2 and Site 3 to determine the historic context and evaluative basis for assessing their eligibility for inclusion in the California Register of Historical Resources. The eligibility of the resources would be informed by this research and field review. Based on the results of the research and field review, the resources shall be evaluated for their eligibility for inclusion in the California Register. As part of this evaluation, the resources (#2 and #3) shall be recorded on California Department of Parks and Recreations 523 Series forms.

c. If the results of the California Register indicates that the resources *are not* eligible, then no further protective action (beyond the accidental discovery measures described in SCAs CUL-1 and CUL-3) shall be required. If the resources (Site 2 and Site 3) *are* eligible (i.e., they qualify as historical resources under PRC Section 21084.1) and would be disturbed or removed by project activities, then the features of the site that contribute to their eligibility for the California Register, as described in the evaluation, shall be documented according to the standards and requirements of the Historic American Engineering Record (HAER). The results of the documentation shall be provided to the Northwest Information Center at Sonoma State University; the Environmental Design Library at U.C. Berkeley; and the Oakland Cultural Heritage Survey. The implementation of the mitigation actions described above would reduce this potentially significant impact to a less-than-significant level. This reduction to the impact would be accomplished through the documentation of those physical features of the sites that contribute to their eligibility for the California Register and convey their significance. The creation of a photographic and written record of those physical attributes will offset any potential alteration or removal by the project.

d. If the results of the study indicate a high potential presence of historic-period archaeological resources on the project site, or a potential resource is discovered, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction and prepare an ALERT sheet pursuant to Provision B below that details what could potentially be found at the project site. Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the ALERT sheet, required per Provision B below) and the procedures to follow if any artifacts are encountered, field recording and sampling in accordance with the Secretary of Interior's Standards and Guidelines for Archaeological Documentation, notifying the appropriate officials if human remains or cultural resources are discovered, and preparing a report to document negative findings after construction is completed if no archaeological resources are discovered during construction.

These modifications are required to address potential impacts to cultural resources that are specific to the LM2BT project and are not already identified in the City's SCAs. The identification of more specific measures to be implemented to ensure that these impacts would be less than significant does not represent a significant effect that would be substantially more severe than those identified and described in the Measure DD EIR.

Archaeological and Paleontological Resources (Criteria 4b and 4c)

The Measure DD EIR did not identify any impacts related to known archeological and paleontological resources pursuant to CEQA Guidelines Section 15064.5 or unique archeological resources pursuant to Section 21083.2. The Measure DD EIR concluded that implementation of CULT-1, CULT-2 and the City's SCAs would ensure that, should an archaeological resource be identified during project implementation, impacts would be avoided and, therefore, no significant impacts would occur. With implementation of SCAs CUL-1, CUL-2 (as refined) and CUL-3, which have been updated since adoption of the Measure DD EIR, impacts to archaeological and paleontological resources would continue to be avoided through proper identification, treatment, and recording of any identified resources, and thus these impacts would be less than significant with the LM2BT project.

Human Remains (Criterion 4d)

The Measure DD EIR did not identify any human remains in any of the Measure DD project groups, however the presence of such remains cannot be ruled out. Compliance with SCA CUL-3, which is related to the accidental discovery of human remains and regulates their treatment should they be discovered during construction, would ensure that impacts to such resources would be reduced to a less-than-significant level. The measures identified in the City's current SCAs would also apply to the LM2BT project and would ensure that these impacts would continue to be less than significant.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the Measure DD EIR and site-specific field review for the proposed project, implementation of the proposed project would not substantially increase the severity of significant impacts identified in the Measure DD EIR, nor would it result in new significant impacts related to cultural resources that were not identified in the Measure DD EIR. The project would be required to implement SCAs related to accidental discovery of archeological and paleontological resources and human remains, as identified in Attachment A at the end of the Checklist (including SCA CUL-1, SCA CUL-2, and SCA CUL-3) and, as described in the analysis above, compliance with these measures would ensure that all impacts related to cultural resources would continue to be less than significant with the proposed project. Finally, Measure DD or other projects that have been implemented within the vicinity of the project site, such as improved recreation and open space areas and roadway modifications north of the site, have not resulted in adverse changes to conditions related to cultural resources in the vicinity and no changes in the existing setting or circumstances within the immediate vicinity of the project area have occurred that would substantially change the environmental setting or analysis for cultural resources as described in the Measure DD EIR.

Therefore, no changes have occurred with respect to circumstances surrounding the original project that would cause significant impacts related to cultural resources to which the LM2BT project would contribute considerably, and no new information has been put forward that shows that the project would cause significant impacts to cultural resources.

	Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
5. GEOLOGY AND SOILS Would the project:			
a. Expose people or structures to substantial risk of loss, injury, or death involving: • Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; • Strong seismic ground shaking; • Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, collapse; or • Landslides.	☒	☐	☐
b. Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007, as it may be revised), creating substantial risks to life or property; result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways.	☒	☐	☐

Project Setting

The geology of the Channel and the Oakland Estuary shoreline consists of artificial fill over Bay Mud. Southeast of the Channel, the near surface deposits southeast of the Channel are mapped as Merritt Sand (beach and sand dune). An investigation for a project adjacent to the project area (7th Street and the Channel), indicated surface materials consist of up to 24 feet of poorly compacted fill composed of sandy clay, rock fragments, concrete rubble and debris. Underlying the fill is a medium dense sand or sandy gravel and Bay Mud to a depth of approximately 59 feet; and underlying the Bay Mud is intermittent layers of loose to medium dense clayey sands and dense green sands to about 74 feet, and under that very stiff sandy clay and clay. Surface soils within the Channel region are mapped as Urban Land, which consists of man-made materials and land consisting of heterogeneous fills of unknown origin usually already developed and covered by pavements and structures.

The project area is relatively flat and gently slopes from south to north towards the Channel. The elevation profile along the project alignment varies slightly from approximately 6 to 15 feet above mean sea level ("amsl"), with an average elevation of approximately 10 feet amsl. The project site is underlain by artificial fill over unconsolidated Young Bay Mud. Artificial fill of primarily brown,

medium-grained sands and medium-sized gravel with brick, tile and wood debris was encountered at the southern areas of the project site at depths of over five feet in thickness.[11]

No active faults are located within the project boundaries. The nearest fault to the project area is the Hayward Fault, located approximately 3.3 miles east of the site.

Since certification of the Measure DD EIR, no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting for geology and soils as described in the Measure DD EIR.

City of Oakland Standard Conditions of Approval. The City of Oakland provides SCAs regarding geology and soils as identified below and in Attachment A. Also refer to SCAs HYD-1 and HYD-2, which are also applicable to geology and soils (refer to Chapter IV.8, Hydrology and Water Quality and Attachment A).

SCA GEO-1 Seismic Hazards Zone (Landslide/Liquefaction)

Requirement: The project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant shall implement the recommendations contained in the approved report during project design and construction.

When Required: Prior to 35 percent design approval
Initial Approval: Public Works Department
Monitoring/Inspection: Public Works Department

SCA GEO-2 Construction-Related Permit(s)

Requirement: The project applicant shall obtain all required construction-related permits/approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.

When Required: Prior to approval of construction-related permit
Initial Approval: Public Works Department
Monitoring/Inspection: Public Works Department

[11] Fugro Consultants, Inc., 2012. *Limited Soil Sampling and Analysis Report, Embarcadero Bridge, Oakland, California*. July 23.

SCA GEO-3 Soils Report

Requirement: The project applicant shall submit a soils report prepared by a registered geotechnical engineer for City review and approval. The soils report shall contain, at a minimum, field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The project applicant shall implement the recommendations contained in the approved report during project design and construction.

When Required: Prior to 35 percent design approval
Initial Approval: Public Works Department
Monitoring/Inspection: Public Works Department

Seismic Hazards, Expansive Soils, and Soil Erosion (Criterion 5a and 5b)

The Measure DD EIR determined that implementation of Measure DD projects would not expose people or structures to substantial risk associated with rupture of a known fault and concluded that this potential impact would be less than significant. However, the EIR concluded that violent to very violent ground shaking is expected to occur within the entire Measure DD project area during earthquakes which could cause extensive structural damage to buildings, trails and bridges that are part of the Measure DD project.

The California Building Code designates the entire Measure DD area as within Zone 4, the highest risk category. As such, all components of Measure DD requiring the issuance of a Building Permit are subject to the California Building Code and to the most stringent level of seismic safety engineering. All projects are also required to comply with SCA GEO-1 related to the preparation of a design-level geotechnical investigation prior to the issuance of a grading or building permit. The geotechnical investigation would address seismic hazards, including liquefaction. In addition, the geotechnical investigation must conform to the California Division of Mines and Geology recommendations presented in the Guidelines for Evaluating Seismic Hazards in California, SCMG Special Publication 117. All earthquake and seismic shaking mitigation measures, design criteria and specifications set forth in the geotechnical and soils report will be followed during the design and construction of structures proposed under Measure DD. The EIR determined that potential impacts related to seismic shaking and hazards would be less than significant with implementation of SCA GEO-1.

The Measure DD EIR found that structural damage, warping and cracking of pavements and other infrastructure, and rupture of utility lines may occur if potentially expansive/unstable soils were not considered during design and construction activities. Conformance with SCA GEO-1 would reduce impacts related to shrink-swell soils and settlement to a less-than-significant level. In addition, all Measure DD Projects, except for the City-wide Creeks group, are located in a mapped liquefaction hazard zone. Conformance with SCA GEO-1 would reduce potential impacts related to seismic ground failure to a less-than-significant level.

The Measure DD EIR concluded that there was no indication of wells, pits, swamps, mounds, tanks, vaults or unmarked sewer lines within Measure DD projects sites. Should these hazards be discovered during grading or construction, conformance with the City's Grading Permit requirements and SCAs would reduce this impact to a less-than-significant level.

There are no landfill operations at or near any of Measure DD project sites. As such, the Measure DD EIR concluded that there would be no impact related to this hazard. Similarly, there would be no impact related to soils incapable of adequately supporting the use of septic tanks since none of the project components would require the use of alternative wastewater disposal system.

The Measure DD EIR determined that the potential impact related to landslides would be less than significant. No SCAs or mitigation measure were identified.

The project would construct a pedestrian and bicycle bridge beneath the I-880 structure, across the Channel, over the UPPR tracks and the Embarcadero roadway to connect to the Embarcadero Bridge. The proposed bridge structure would be subject to potential hazards during a seismic event; however, implementation of the City's SCAs would ensure that the structure is designed and built to withstand strong groundshaking and that impacts associated with seismic and soils hazards would be less than significant.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the Measure DD EIR, implementation of the project would not substantially increase the severity of significant impacts identified in the Measure DD EIR, nor would it result in new significant impacts related to geology, soils, and geohazards that were not identified in the Measure DD EIR. The Measure DD EIR did not identify any mitigation measures related to geology, soils, and geohazards, and none would be required for the project. SCAs related to erosion, grading, and sedimentation control would apply, as identified in Attachment A at the end of the Environmental Checklist (including SCA GEO-1, SCA GEO-2, and SCA GEO-3) and, as described in the analysis above, compliance with these measures would ensure that all impacts related to geology and soils would continue to be less than significant with the LM2BT project. Finally, Measure DD or other projects that have been implemented within the vicinity of the project site, such as improved recreation and open space areas and roadway modifications north of the site, have not resulted in adverse changes related to geology and soils (which are highly localized and generally related to specific project site conditions) and no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting or analysis for geology and soils as described in the Measure DD EIR.

Therefore, no changes have occurred with respect to circumstances surrounding the Measure DD project that would cause significant impacts related to geology and soils to which the LM2BT project would contribute considerably, and no new information has been put forward that shows that the project would cause significant geology and soils impacts.

	Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
6. GREENHOUSE GAS AND CLIMATE CHANGE Would the project:			
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, specifically: • For a project involving a land use development, produce total emissions of more than 1,100 metric tons of CO_2e annually AND more than 4.6 metric tons of CO_2e per service population annually. The service population includes both the residents and the employees of the project. The project's impact would be considered significant if the emissions exceed BOTH the 1,100 metric tons threshold and the 4.6 metric tons threshold. Accordingly, the impact would be considered less than significant if the project's emissions are below EITHER of these thresholds.	☒	☐	☐
b. Fundamentally conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions.	☒	☐	☐

Project Setting

Greenhouse gases (GHGs) are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO_2);
- Methane (CH_4);
- Nitrous oxide (N_2O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and
- Sulfur Hexafluoride (SF_6).

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e).

Greenhouse Gas Emissions (Criterion 6a and 6b)

The Measure DD EIR did not evaluate greenhouse gas (GHG) emissions or any potential conflicts with applicable GHG plans or policies. Air quality impacts related to development under the Measure DD Project were evaluated in Section IV.D Air Quality of the EIR.

It is expected that the primary source of GHG emissions that would occur as a result of the project would come from the combustion of fossil fuels by motor vehicles and from electric power generation during construction activities. Measure DD projects include physical improvements to existing parks; acquisition of land for new parks; development of new parks and recreation facilities; clean water measures; restoration and rehabilitation of recreation buildings; and implementation of creek and waterway protection and restoration projects. As such, Measure DD projects are not expected to generate significant vehicle trips or substantial electric power generation upon buildout.

Since the Measure DD EIR did not evaluate GHG emissions, no SCAs or mitigation measures were identified related to this topic. Nonetheless, the potential for environmental effects regarding GHG emissions generally were known or could have been known with exercise of reasonable diligence at the time the Measure DD EIR was certified. Therefore, GHG impacts are not considered "new information of substantial importance" that would trigger preparation of a SEIR. City of Oakland updated its SCAs in July of 2015, which includes SCAs related to GHG emissions. All projects in Oakland that exceed the GHG screening criteria identified by the BAAQMD or exceed 1,100 metric tons of CO_2e annually are required to comply with applicable SCAs related to reducing GHG emissions.

GHG emissions associated with the project would occur over the short-term from construction activities, primarily from equipment construction which would produce combustion emissions. During site preparation and construction of the project, GHGs would be emitted through the operation of construction equipment and from worker and vendor supply vehicles, each of which typically use fossil-based fuels to operate. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change. Project construction emissions were estimated using the Road Construction Emissions Model, Version 7.1.5.1 (RoadMod). Results indicate project construction would result in total GHG emissions of 819 metric tons CO_2e. These temporary emissions would be below the screening-level threshold of 1,100 metric tons of CO_2e; therefore, the LM2BT project's contribution to GHG emissions would not be significant.

The project would involve construction of a bicycle/pedestrian path and bridge. Once completed, the project would not generate GHG emissions or result in new vehicle trips that would contribute to an increase in GHG emissions. Therefore, the project would not cause a long-term increase in GHG emissions and would not exceed the screening criteria or result in annual emissions more than 1,100 metric tons of CO_2e annually.

Conclusion

The project is not expected to generate vehicular trips that would contribute to long-term GHG emissions. However, there would be short-term GHG emissions as a result of motor vehicle and equipment use during the construction of the project, which would be considered less-than-significant because the project's contribution would be less than the screening level threshold for GHG emissions. The project would also not require the substantial use of electric power except for the temporary use during construction activities. The project would use nighttime lighting along the pedestrian and bicycle pathway and bridge for public safety during the operational phase. The emissions associated with electricity generation as a result of the lighting would be minimal.

Implementation of the project would not result in new significant impacts related to the generation of GHG emissions that were not identified in the Measure DD EIR. The Measure DD Final EIR did not identify any mitigation measures or SCAs related to GHG emission reductions, and none would be required for the project. Finally, Measure DD or other projects that have been implemented within the vicinity of the project site, such as improved recreation and open space areas and roadway modifications north of the site, have not resulted in adverse changes related to greenhouse gas emissions (such as might be associated with increased vehicle trips and related emissions) as compared to conditions that could have been anticipated at the time that the Measure DD EIR was certified.

Therefore, no changes have occurred with respect to circumstances surrounding the Measure DD project that would cause significant impacts related to greenhouse gas emissions to which the LM2BT project would contribute considerably, and no new information has been put forward that shows that the project would cause significant greenhouse gas impacts.

	Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
7. HAZARDS AND HAZARDOUS MATERIALS Would the project:			
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;	☒	☐	☐
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;			
Create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors;			
Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (i.e., the "Cortese List") and, as a result, would create a significant hazard to the public or the environment;			
b. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;	☒	☐	☐
c. Result in less than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions; or	☒	☐	☐
Fundamentally impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.			

Project Setting

A Phase I Environmental Site Assessment and hazardous materials analysis of the project area was completed in March 2014.[12] This review identified a medium risk associated with the following hazardous material concerns:

[12] Baseline Environmental Consulting, 2014. Initial Site Assessment, Bay Trail to Lake Merritt Bicycle Pedestrian Bridge. March 5.

- Excavation for project improvements would occur in areas where known volatile organic compounds ("VOCs"), petroleum hydrocarbons, polynuclear aromatic hydrocarbons ("PAHs"), and metals have been identified in soils in past investigations. These contaminants appear to be associated both with historical industrial land uses and from the fill material in the project vicinity, which is of unknown origin. Similar contaminants may be encountered in soil or groundwater during project development;
- Based on previous investigations, groundwater at the site may contain VOCs, petroleum hydrocarbons, and/or PAHs, associated with the former industrial properties that have operated adjacent to the project site since at least 1939, the date of the first available aerial photograph;
- Aerially-deposited lead ("ADL") may be present in exposed shallow soils along roadways at the project site as result of historical vehicle emissions; and
- Petroleum hydrocarbons, PAHs, metals, and herbicides may be present in exposed shallow soils along railroad tracks at the project site as a result of historical railroad construction and operation.

Interim soil remediation efforts are planned for the future Channel Park site as part of the Embarcadero Bridge Replacement Project. Redevelopment of the bridge would encroach upon identified areas of contamination located at the Channel Park site as part of the Brooklyn Basin development. Remediation efforts are currently overseen by the Department of Toxic Substances Control (DTSC). [13] Remediation efforts are expected to be complete prior to construction of the LM2BT project. However, any disturbance of currently or previously contaminated site soils would be further addressed by the LM2BT project as needed.

City of Oakland Standard Conditions of Approval. The City of Oakland provides SCAs regarding hazards and hazardous materials as identified below and in Attachment A. Also refer to SCAs HYD-1, HYD-2, and HYD-3, which are also applicable to hazardous materials releases (refer to Chapter IV.8, Hydrology and Water Quality and Attachment A).

SCA HAZ-1 Hazardous Materials Related to Construction

Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following:

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;

[13] James, Earl, P.G., 2015. DRAFT Memorandum from Erler & Kalinowski to Karen Toth, P.E., Department of Toxic Substances Control. November 25.

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.

When Required: During construction
Initial Approval: N/A
Monitoring/Inspection: Public Works Department

SCA HAZ-2 Site Contamination

a. Environmental Site Assessment Required

Requirement: The project applicant shall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, 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.

When Required: Prior to 95 percent design
Initial Approval: Public Works Department, Environmental Services Division
Monitoring/Inspection: Public Works Department, Environmental Services Division

b. Health and Safety Plan Required

Requirement: 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.

When Required: Prior to Notice to Proceed
Initial Approval: Bureau of Building
Monitoring/Inspection: Public Works Department

c. Best Management Practices (BMPs) Required for Contaminated Sites

Requirement: 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.

When Required: During construction
Initial Approval: N/A
Monitoring/Inspection: Public Works Department

Exposure to Hazards, Hazardous Materials Use, Storage and Disposal (Criterion 7a)

The Measure DD EIR determined that implementation of Measure DD projects within the Lake Merritt group would not result in a significant increase in the routine transport, storage, use or disposal of hazardous materials. In general Measure DD projects would not store hazardous materials and would only temporarily bring hazardous materials to Measure DD sites for maintenance purposes.

The Measure DD EIR concluded that all Measure DD projects have the potential to accidentally release hazardous materials (e.g., fuels, paints) during construction activities, including the transport of hazardous materials; the use of vehicles that could accidentally release hazardous materials such as oils, grease and fuel; and, the temporary storage of hazardous materials. All projects are required to comply with local, State and federal regulations related to the use, storage, transport and disposal of hazardous materials during construction activities. Compliance with these regulations and SCAs related to stormwater pollution prevention and the use of best management practices would reduce this impact to a less than-significant level.

As discussed in the Measure DD EIR, there are potential sources of subsurface contamination within several Measure DD project sites, specifically sites that include the placement of fill, past industrial land uses, and nearby roadways and rail alignments. Fill materials of unknown origin are known around Lake Merritt, the Lake Merritt Channel and the Oakland Waterfront Trail. There is also the possibility that industrial land uses along the Channel and waterfront have contributed to soil and/or groundwater contamination. Similarly, aerially-deposited lead and other contaminants may be present in shallow soil near roadways and rail lines. Subsurface investigations have identified soluble metals above California hazardous waste thresholds around Lake Merritt and the Channel and the Oakland Waterfront Trail. Subsurface investigations also found the presence of PAHs, petroleum hydrocarbons, metals and slag[14] along the Oakland Waterfront Trail. All materials classified as hazardous waste are subject to special handling, management and disposal measures when hauled off-site. Compliance with

[14] Slag refers to the glassy material left over when metals are refined from ore.

SCAs related to the investigation of soil and groundwater prior to the issuance of building permits, the preparation of Phase I and Phase II environmental site assessments (ESAs), and the documentation of remediation of contaminated sites would reduce these impacts to a less-than-significant level. These same measures would apply to development of the project site, as many of these same contaminants have been identified within the project area.

Construction workers involved in grading, excavating or disturbing soil and/or groundwater could be exposed to hazardous materials and hazardous wastes or previously unknown hazardous materials/ wastes which could cause adverse health effects. The preparation of project-specific Health and Safety Plan (HSP) for site workers would reduce this impact to a less-than-significant level. Previously unknown contaminated soil and/or groundwater or other hazards may be encountered during construction activities, which could expose construction workers to adverse health impacts. SCAs related to the handling of suspected contamination encountered during construction would reduce this impact to a less-than-significant level.

The project would not store hazardous materials such as pesticides, herbicides, or fuels on site. The project would, however, involve the temporary use of hazardous materials during the short-term construction period and regular routine maintenance of the site. As previously discussed, remediation efforts within the Channel Park and Embarcadero Bridge area are expected to be complete prior to construction of the LM2BT project. However, any disturbance of currently or previously contaminated site soils would be further addressed by implementation of the City's SCAs. The project would be required to comply with all State and local requirements for the handling, transport and disposal of hazardous materials in addition to SCAs HAZ-1, HAZ-2, HYD-1, HYD-2, and HYD-3 related to stormwater pollution prevention and the use of best management practices to prevent the accidental release of hazardous materials.

Hazardous Materials within a Quarter Mile of a School (Criterion 7b)

The Measure DD Final EIR determined that there would be no significant increase in hazardous materials emissions or use of acutely hazardous substances within one-quarter mile of an existing or proposed school following the completion of Measure DD projects.

La Escuelita Elementary School and Laney College are all near the project site. La Escuelita Elementary School is located approximately 0.6 miles northeast of the project site and Laney College is located approximately 0.7 miles northwest of the project site. The LM2BT project would not result in the emission of hazardous materials and, with implementation of SCA HAZ-1 and HAZ-2, which regulate construction-period hazardous materials use and require proper treatment of hazardous soils, project construction would not result in the accidental release of hazardous materials within the vicinity of these schools.

Emergency Access Routes (Criteria 7c)

The Measure DD EIR determined that evacuation routes would not be impacted for project sites that are part of the Oakland Waterfront, Recreational Facilities and City-wide Creeks group of projects. There would be temporary closures for work proposed in the Lake Merritt and Channel area (northern portion) on designated evacuation routes. One mitigation measure was identified for the 12th Street reconstruction project.

The project would also not change the surrounding streets or roadways or limit emergency access or plans. Any temporary roadway closures required during construction of the project would be subject to City of Oakland review and approval, to ensure consistency with City of Oakland requirements.

Conclusion

Based on examination of the analysis, findings and conclusion so of the Measure DD EIR, implementation of the proposed project would not substantially increase the severity of significant impacts identified in the Measure DD EIR, nor would it result in any new significant impacts related to hazards and hazardous materials that were not identified in the Measure DD EIR. SCAs related to the removal, transport and disposal of hazardous materials; PCBs; Environmental Site Assessment reports and remediation; health and safety plans; groundwater and soil contamination; hazardous materials business plans; and site review by the Fire Services Division would apply to the proposed project, as identified in Attachment A at the end of this Environmental Checklist (including SCA HAZ-1, SCA HAZ-2, SCA HYD-1, SCA HYD-2, and SCA HYD-3) and, as described in the analysis above, compliance with these measures would ensure that all impacts related to hazards and hazardous materials would continue to be less than significant with the proposed project. Finally, Measure DD or other projects that have been implemented within the vicinity of the project site, such as improved recreation and open space areas and roadway modifications north of the site, have not resulted in adverse changes related to hazards and hazardous materials (such as the introduction of new sources of hazardous materials emissions or contamination) and no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting or analysis for hazards and hazardous materials as described in the Measure DD EIR.

Therefore, no changes have occurred with respect to circumstances surrounding the Measure DD project that would cause significant impacts related to hazards and hazardous materials to which the LM2BT project would contribute considerably, and no new information has been put forward that shows that the project would cause significant hazards-related impacts.

		Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
8.	**HYDROLOGY AND WATER QUALITY** Would the project:			
a.	Violate any water quality standards or waste discharge requirements; Result in substantial erosion or siltation on or off site that would affect the quality of receiving waters; Create or contribute substantial runoff which would be an additional source of polluted runoff; Otherwise substantially degrade water quality; Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect hydrologic resources.	☒	☐	☐
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or proposed uses for which permits have been granted);	☒	☐	☐
c.	Create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems; Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course, or increasing the rate or amount of flow, of a creek, river, or stream in a manner that would result in substantial erosion, siltation, or flooding, both on or off site	☒	☐	☐
d.	Result in substantial flooding on or off site; Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, that would impede or redirect flood flows; Place within a 100-year flood hazard area structures which would impede or redirect flood flows; or Expose people or structures to a substantial risk of loss, injury, or death involving flooding.	☒	☐	☐

Project Setting

The Channel connects Lake Merritt to the San Francisco Bay and is subject to tidal flows from the Bay. Historically, the Channel was a wide, shallow tidal slough surrounded by tidal wetland and mud flats, and the tidal range of Lake Merritt was similar to that of the Bay. With development the Channel has been confined to a relatively narrow corridor and numerous structures have been built that limit the amount of tidal flow that can enter and exit Lake Merritt in a given tide cycle. Two culverts and a pump station are used at the northern range of the Channel to manage lake levels and reduce the risk of flooding. Stormwater runoff from roadways, street gutters and stormwater conveyance systems collect stormwater and direct it into the Channel.

The site is generally flat and gently slopes towards the Channel. All areas identified for disturbance, either temporary staging for construction access, or as part of the landing structure or grading, are between 1 to 4 feet NAVD88. In the vicinity of Lake Merritt and the Channel, groundwater occurs at a depth of approximately 5 to 10 feet below the ground surface (bgs), which may fluctuate with the tides.

The Federal Emergency Management Agency (FEMA) published preliminary Flood Insurance Rate Map (FIRM) panels for northern Alameda County on April 16, 2015. The project area has an estimate for a 100-year return period flood level of +10.0 feet, NAVD88 (equivalent to +4.35 feet in City of Oakland Datum). FEMA approved the 60-acre Brooklyn Basin Project, located on the same area of half of the proposed bridge structures. Based on this, it is inferred that the extra flood water due to loss of the 60-acree previously-designated floodplain is expected to have no impact on the San Francisco Bay as a recipient of the extra flood water.[15] The project was previously approved by FEMA and will finish the construction by year 2020.

Since certification of the Measure DD EIR, no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting for hydrology and water quality as described in the Measure DD EIR.

City of Oakland Standard Conditions of Approval. The City of Oakland provides SCAs regarding hydrology and water quality as identified below and in Attachment A. Also refer to SCAs HAZ-1 and HAZ-2, which are also applicable to hazardous materials releases (refer to Chapter IV.7, Hazards and Hazardous Materials and Attachment A).

SCA HYD-1 Creek Protection Plan

a. Creek Protection Plan Required

Requirement: The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek. Required BMPs are identified below in sections (b), (c), and (d).

[15] Moffat and Nichol, 2015. *Hydrology and Hydraulics Summary*. October 5.

When Required: Prior to approval of construction-related permit
Initial Approval: Bureau of Planning
Monitoring/Inspection: N/A

b. Construction BMPs

Requirement: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control BMPs to protect the creek during construction. The measures shall include, but are not limited to, the following:

i. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek.

ii. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent degradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected.

iii. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible.

iv. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted.

v. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding.

vi. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains.

vii. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek.

viii. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site.

ix. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution.

x. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work.

xi. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains.

xii. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB).

xiii. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of the City.

When Required: Prior to approval of construction-related permit
Initial Approval: Bureau of Planning
Monitoring/Inspection: N/A

c. Post-Construction BMPs

Requirement: The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion.

When Required: Prior to approval of construction-related permit
Initial Approval: Bureau of Planning
Monitoring/Inspection: N/A

d. Creek Landscaping

Requirement: The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season.

Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival.

When Required: Prior to approval of construction-related permit
Initial Approval: Bureau of Planning
Monitoring/Inspection: N/A

e. Creek Protection Plan Implementation

Requirement: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, all erosion, sedimentation, debris, and pollution control measures shall be monitored regularly by the project applicant. The City may require that a qualified consultant (paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If measures are deemed inadequate, the project applicant shall develop and implement additional and more effective measures immediately.

When Required: During construction; ongoing
Initial Approval: N/A
Monitoring/Inspection: Public Works Department

SCA HYD-2 Creek Dewatering/Diversion

Requirement: The project applicant shall submit a Dewatering and Diversion Plan for review and approval by the City, and shall implement the approved Plan. The Plan shall comply, at a minimum, with the following:

a. All dewatering and diversion activities shall comply with the requirements of all necessary regulatory permits and authorizations from other agencies (e.g., Regional Water Quality Control Board, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and Army Corps of Engineers).

b. All native aquatic life (e.g., fish, amphibians, and turtles) within the work site shall be relocated by a qualified biologist prior to dewatering, in accordance with applicable regional, state, and federal requirements. Captured native aquatic life shall be moved to the nearest appropriate site on the stream channel downstream. The biologist shall check daily for stranded aquatic life as the water level in the dewatering area drops. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Capture methods may include fish landing nets, dip nets, buckets, and by hand. Captured aquatic life shall be released immediately in the nearest appropriate downstream site. This condition does not allow the take or disturbance of any state or federally listed species, nor state-listed species of special concern, unless the applicant obtains a project specific authorization from the California Department of Fish and Wildlife and/or the U.S. Fish and Wildlife Service, as applicable.

c. If any dam or other artificial obstruction is constructed, maintained, or placed in operation within the stream channel, ensure that sufficient water is allowed to pass down channel at all times to maintain native aquatic life below the dam or other artificial obstruction.

d. Construction and operation of dewatering/diversion devices shall meet the standards contained in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board.

e. Coffer dams and/or water diversion system shall be constructed of a non-erodible material which will cause little or no siltation. Coffer dams and the water diversion system shall be maintained in place and functional throughout the construction period. If the coffer dams or water diversion systems fail, they shall be repaired immediately based on the recommendations of a qualified environmental consultant. The devices shall be removed after construction is complete and the site is stabilized.

f. Pumped water shall be passed through a sediment settling device before returning to the stream channel. Velocity dissipation measures are required at the outfall to prevent erosion.

When Required: Prior to approval of construction-related permit
Initial Approval: Bureau of Planning; Bureau of Building
Monitoring/Inspection: Public Works Department

SCA HYD-3 Structures in a Flood Zone

Requirement: The project shall be designed to ensure that new structures within a 100-year flood zone do not interfere with the flow of water or increase flooding. The project applicant shall submit plans and hydrological calculations for City review and approval with the construction-related drawings that show finished site grades and floor elevations elevated above the Base Flood Elevation (BFE).

When Required: Prior to approval of construction-related permit
Initial Approval: Bureau of Building
Monitoring/Inspection: Bureau of Building

SCA HYD-4 Bay Conservation and Development Commission (BCDC) Approval

Requirement: The project applicant shall obtain the necessary permit/approval, if required, from the Bay Conservation and Development Commission (BCDC) for work within BCDC's jurisdiction to address issues such as but not limited to shoreline public access and sea level rise. The project applicant shall submit evidence of the permit/approval to the City and comply with all requirements and conditions of the permit/approval.

When Required: Prior to activity requiring permit/approval from BCDC
Initial Approval: Approval by BCDC; evidence of approval submitted to Bureau of Planning
Monitoring/Inspection: BCDC

Water Quality, Stormwater, and Drainages and Drainage Patterns (Criteria 8a and 8c)

As discussed in the Measure DD EIR, Measure DD projects could result in impacts to water quality during both the construction period and the operational period. During the construction period, grading and excavation activities would result in exposure of soil to runoff and the discharge of groundwater from the excavation. These activities could potentially cause erosion and entrainment of sediment in the runoff. Soil stockpiles and excavated areas would be exposed to runoff and, if not managed properly, the runoff could cause erosion and increased sedimentation and pollutants in stormwater. The potential for chemical release is present at most construction sites given the types of materials used, including fuels, oils, paints and solvents. Once released, these substances could be transported to San Francisco Bay and Lake Merritt in stormwater runoff, dewatering effluent, wash water, and dust control water, potentially reducing water quality. Deposition resulting from construction activities could impact aquatic habitat and other beneficial uses of receiving waters.

The Measure DD EIR concluded that compliance with existing programs and ordinances, including the NPDES General Construction Activity permit administered by the State Water Resources Control Board and the City of Oakland Municipal Code section 13.16.100, would mitigate these impacts to a less-than-significant level. These ordinances and programs require implementation of construction-period Best Management Practices (BMPs) and post-construction Storm Water Management

methods. These requirements are presented in SCAs HYD-1, HYD-2 and HYD-3 which would be applicable to the LM2BT project (see Attachment A).

The Oakland Municipal Code prohibits activities that would result in the discharge of pollutants to Oakland's waterways or the damaging of creeks, creek functions or habitat. Projects that would disturb less than 1.0 acre of land would still be required to comply with mitigation measures identified in existing programs and ordinances related to water quality.

During the operational period of Measure DD projects, some project sites would result in new facilities, parking lots and new landscaping. Operation of these facilities could cause polluted runoff to enter receiving waters, which eventually enter Lake Merritt and San Francisco Bay, which already are considered impaired water bodies. Projects that create 10,000 square feet or more of impervious surface are required to comply with NPDES program requirements; however, the LM2BT project would not be subject to this requirement because it would result in less than 10,000 square feet of disturbance to existing pervious surfaces.[16]

The Measure DD EIR determined that there is the possibility of encountering existing groundwater wells during implementation of Measure DD projects which could result in migration of pollutants to the underlying groundwater aquifer. However, no existing groundwater wells would be affected by the LM2BT project itself, as none are known to be in the project area or its vicinity.

Use of Groundwater (Criterion 8b)

None of the Measure DD projects would involve the use of groundwater pumping. The Measure DD EIR determined that new landscaping, parks and enhanced creek and riparian habitats would improve infiltration and groundwater recharge and that this impact, therefore, would be less than significant. The same conclusion applies to the LM2BT project, which would introduce new landscaping to the site and would result in a minimal amount of new surface pavement, given that most of the proposed pathway would consist of an elevated bridge structure. Groundwater would also not be used or otherwise be affected by the project.

Flooding and Substantial Risks from Flooding (Criteria 8d)

Several components within the Lake Merritt and Channel and Waterfront Trail group of Measure DD projects are located within the 100-year flood zone, including the project site. As discussed in the Measure DD EIR, the projects that are located within the floodplain are designed to improve floodwater conveyance and channel stability to reduce flood hazards. Since no new housing or residential uses are proposed as part of Measure DD projects, the EIR determined that there would be no impacts related to flood hazards or redirection of flood waters. While the EIR did not identify mitigation measures or SCAs related to flood hazards, the City updated the SCAs in July of 2015. All projects built within the floodplain and within the jurisdiction of the Bay Conservation and Development Commission (BCDC) are required to comply with SCAs HYD-3 and HYD-4 related to flood zones and to obtain the necessary permits and approvals from BCDC, as applicable.

[16] Oakland, City of, 2015. Oakland Municipal Code, Chapter 17.11.150, Maximum Impervious Surface.

The Measure DD EIR also concludes that there would be less-than-significant impacts related to dam failure inundation, seiche inundation and sea level rise. No mitigation measures or SCAs were identified. However, SCAs that apply to all projects located within the first 100 feet inland from the shoreline of the San Francisco Bay and Oakland Estuary are required and these would apply to the LM2BT project.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the Measure DD EIR, implementation of the project would not substantially increase the severity of significant impacts identified in the Measure DD EIR, nor would it result in new significant impacts related to hydrology and water quality that were not identified in the Measure DD EIR. The Measure DD EIR identified no mitigation measures related to hydrology and water quality that would apply to the project. The project would be required to implement SCAs related to stormwater, drainages and drainage patterns, water quality, flooding, and sea level rise, as identified in Attachment A at the end of the Environmental Checklist (including SCA HYD-1, SCA HYD-2, SCA HYD-3, and SCA HYD-4) and, as described in the analysis above, compliance with these measures would ensure that all impacts related to hydrology and water quality continue to be less than significant with the project. Finally, Measure DD or other projects that have been implemented within the vicinity of the project site, such as improved recreation and open space areas and roadway modifications north of the site, have in turn resulted in improved stormwater flows and related hydrologic conditions in and around Lake Merritt and the Channel and no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting or analysis for hydrology and water quality as described in the Measure DD EIR.

Therefore, based on the analysis above, no changes have occurred with respect to circumstances surrounding the Measure DD project that would cause significant impacts related to hydrology and water quality to which the LM2BT project would contribute considerably, and no new information has been put forward that shows that the project would cause significant hydrology and water quality-related impacts.

		Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
9.	**LAND USE AND PLANNING** Would the project:			
	a. Physically divide an established community;	☒	☐	☐
	b. Result in a fundamental conflict between adjacent or nearby land uses; or	☒	☐	☐

	Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
c. Fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment.	☒	☐	☐

Project Setting

The project area currently consists primarily of underutilized land along the southern portion of the Channel and is intersected by the elevated I-880 highway and the UPRR tracks. All of the property within the project site is publicly owned. Most of the surrounding area is zoned as urban, light industrial, housing, and business. Laney College and Peralta Community College District offices are located just north of the project area, near the Channel banks. In the vicinity of the project area, remnant recreation trails exist along portions of the Channel banks; however, they are degraded and end just short of the entrance to the Oakland Estuary. There is currently no direct trail connection to the Oakland Waterfront or San Francisco Bay Trail from Lake Merritt and the Channel.

The project site itself is designated Urban Park and Open Space on the City's Land Use and Transportation Map. The project area is also located within the Open Space Resource Conservation (OS -RCA) Area and Linear Park (OS-LP) zoning districts.

Since certification of the Measure DD EIR, no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting for land use and planning as described in the Measure DD EIR.

Division of Existing Community, Conflict with Land Uses, or Land Use Plans (Criteria 9a through 9c)

The Measure DD EIR concluded that implementation of Measure DD projects would not result in any impacts related to a division of an established community or conflict with an adopted habitat conservation plan or natural community plan. There may be temporary closures associated with construction of the projects within Lake Merritt and Lake Merritt Channel project group, but none of the improvements would permanently divide access to or through a neighborhood or established community.

The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying area. The LM2BT project would construct a pedestrian and bicycle bridge that would provide non-motorized access from the Lake Merritt area along the Channel to the San Francisco Bay Trail. The project would enhance accessibility and connectivity in the area and therefore would not result in impacts related to division of an established community.

The project consists of improvements to recreational access and landscaping within the Channel area. No new land uses that do not already exist in the immediate project area would be introduced to the Channel or Oakland Waterfront. Furthermore, the project is not expected to result in land use incompatibility issues or conflicts with adjacent land uses. Therefore, the project would not result in any impacts related to land use conflicts or land use incompatibility.

Furthermore, the project would be consistent with the type and intensity of recreational improvements envisioned by Measure DD, the General Plan (and more specifically the Open Space, Conservation and Recreation Element), the Estuary Policy Plan, and the San Francisco Bay Trail Plan per the objectives of acquiring and constructing water quality and recreation improvements and to provide safe public access for and related to Lake Merritt, Lake Merritt Channel, the Estuary and San Francisco Bay.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the Measure DD EIR, implementation of the project would not substantially increase the severity of significant impacts identified in the Measure DD EIR, nor would it result in new significant impacts related to land use, plans, and policies that were not identified in the Measure DD EIR. The Measure DD EIR did not identify any SCAs or mitigation measures related to land use, and none would be required for the project. Finally, Measure DD or other projects that have been implemented within the vicinity of the project site, such as improved recreation and open space areas and roadway modifications north of the site, have improved existing use of Lake Merritt and the Channel area and improved connectivity in the vicinity of the project site and no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting or analysis for land use and planning as described in the Measure DD EIR.

Therefore, no changes have occurred with respect to circumstances surrounding the Measure DD project that would cause significant impacts related to land use and planning to which the LM2BT project would contribute considerably, and no new information has been put forward that shows that the project would cause significant land use and planning-related impacts.

		Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
10.	**NOISE** Would the project result in:			
	a. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts. During the hours of 7 p.m. to 7 a.m. on weekdays and 8 p.m. to 9 a.m. on weekends and federal holidays, noise levels received by any land use from construction or demolition shall not exceed the applicable nighttime operational noise level standard; Generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code Section 8.18.020) regarding persistent construction-related noise;	☒	☐	☐
	b. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise;	☒	☐	☐
	c. Generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or, if under a cumulative scenario where the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the project vicinity without the project (i.e., the cumulative condition including the project compared to the existing conditions) and a 3 dBA permanent increase is attributable to the project (i.e., the cumulative condition including the project compared to the cumulative baseline condition without the project);	☒	☐	☐

	Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
d. Expose persons to interior L_{dn} or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single-family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24); Expose the project to community noise in conflict with the land use compatibility guidelines of the Oakland General Plan after incorporation of all applicable Standard Conditions of Approval (see Figure 1); Expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupational Safety and Health Administration [OSHA]); or	☒	☐	☐
e. During either project construction or project operation expose persons to or generate ground-borne vibration that exceeds the criteria established by the Federal Transit Administration (FTA).	☒	☐	☐

Project Setting

Motorized traffic on I-880 and the UPRR railroad service are the two primary sources of ambient noise in the vicinity of the project site. A noise study was conducted for the preparation of the Measure DD EIR and determined that ambient noise in the area of the Waterfront Trail group of projects near Estuary Park have an equivalent continuous level of 57.6 L_{eq} and a maximum noise level of 80.7 L_{max}.

Since certification of the Measure DD EIR, no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting for noise as described in the Measure DD EIR.

City of Oakland Standard Conditions of Approval. The City of Oakland provides SCAs regarding noise as identified below and in Attachment A.

SCA NOI-1 Construction Days/Hours

Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours:

a. 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.

b. 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

c. 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.

When Required: During construction
Initial Approval: N/A
Monitoring/Inspection: Public Works Department

SCA NOI-2 Construction Noise

Requirement: 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.

When Required: During construction
Initial Approval: N/A
Monitoring/Inspection: Public Works Department

SCA NOI-3 Extreme Construction Noise

a. Construction Noise Management Plan Required

Requirement: 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:

i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;
ii. 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;
iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;
iv. 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
v. Monitor the effectiveness of noise attenuation measures by taking noise measurements.

When Required: Prior to approval of construction-related permit or Notice to Proceed
Initial Approval: Bureau of Building
Monitoring/Inspection: Public Works Department

b. Public Notification Required

Requirement: 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.

When Required: During construction
Initial Approval: Public Works Department
Monitoring/Inspection: Public Works Department

SCA NOI-4 Operational Noise

Requirement: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of Chapter 17.120 of the Oakland Planning Code and Chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.

When Required: Ongoing
Initial Approval: N/A
Monitoring/Inspection: Public Works Department

Construction and Operational Noise and Vibration, Exposure of Receptors to Noise (Criteria 10a, 10b, 10d, and 10e)

The Measure DD EIR concluded that the Measure DD improvement projects would not substantially increase noise levels over those currently present, expose people to or generate noise levels in excess of standards established in the Oakland General Plan or other applicable standards, or create or develop any new noise sensitive land uses or permanent noise sources that would be incompatible with existing noise sensitive land uses. The EIR found that projects would fully comply with established noise standards and potential impacts on noise sensitive land uses were found to be less than significant. Similarly, the EIR determined that implementation of Measure DD projects would not result in operational noise that would violate the City of Oakland's Noise Ordinance or exceed the maximum allowable receiving noise level standards. Operational noise impacts on noise sensitive land users were also found to be less than significant.

However, short-term construction-related noise associated with implementation of Measure DD projects would occur, including noise generated by worker commute trips and material deliveries and from onsite construction and excavation and grading. The EIR determined that construction related noise impacts related to worker commutes and equipment transport would be less than significant. All projects that involve pile driving must conform to the City's SCAs related to noise in order to reduce noise impacts to less-than-significant levels. These SCAs include limiting extreme noise generating activities to the hours of 8:00 a.m. and 4:00 p.m. and requires the use of noise barriers, sound blankets and implementation of engineering measures to attain the necessary noise attenuation. The EIR concluded that in the Lake Merritt group of projects, implementation of the SCAs related to pile driving may not be feasible at some locations and would therefore result in a significant and unavoidable impact. Conformance with SCAs related to noise would ensure that noise impacts affecting sensitive receptors would remain less than significant. No impacts related to ground-borne vibration noise were found as part of the project.

Construction-period activities that involve pile-driving could temporarily expose people in the vicinity to ground-borne vibration or ground-borne noise levels, however, the EIR determined that conformance with SCAs related to noise and conformance to the City's Noise Ordinance for construction activities would ensure potential ground-borne vibration would be avoided or reduced to a less-than-significant level. These include SCAs NOI-1, NOI-2, and NOI-3.

None of the Measure DD projects would generate noise that exceeds the interior noise standard of 45 dBA L_{dn} for nearby residential units, hotels or long-term care facilities. Due to the type of projects (i.e., water quality, creeks, recreation facilities and trails), Measure DD projects would also not

generate substantial noise during operation. The primary source of ambient noise in the area would be ongoing traffic noise.

During construction of the LM2BT project, two types of short-term noise impacts would occur. The first type would result from construction crew commutes and the transport of construction equipment and materials to the project site and would incrementally raise noise levels on access roads leading to the site. The pieces of heavy equipment for grading and construction activities would be moved on site, would remain for the duration of each construction phase, and would not add to the daily traffic volume in the project vicinity. A high single-event noise exposure potential at a maximum level of 55 A-weighted decibels (dBA) maximum instantaneous noise level (L_{max}) from trucks passing at 50 feet would occur. However, the projected construction traffic would be minimal when compared to existing traffic volumes on I-880, Embarcadero Road, and other affected streets. The change in noise associated with construction-related worker commutes and equipment transport noise impacts would be short-term and would not be substantial.

The second type of short-term noise impact is related to noise generated during bridge construction. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated, as well as the noise levels along the project alignment as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Construction of the proposed project is expected to require the use of front-end loaders, bulldozers, water trucks, and pickup trucks. Noise associated with the use of construction equipment is estimated between 55 and 85 dBA L_{max} at a distance of 50 feet from the active construction area for the grading phase. The maximum noise level generated by each front-end loader is assumed to be approximately 80 dBA L_{max} at 50 feet from the front-end loader in operation. Each bulldozer would generate approximately 85 dBA L_{max} at 50 feet. The maximum noise level generated by water trucks and pickup trucks would be approximately 55 dBA L_{max} at 50 feet from these vehicles. Each doubling of the sound source with equal strength increases the noise level by 3 dBA. Each piece of construction equipment operates as an individual point source. The worst-case composite noise level during construction would be 86 dBA L_{max} at a distance of 50 feet from an active construction area.

Impact pile driving is a substantial generator of noise during construction activities, and is implemented as a construction technique to secure structural foundations. However, the columns would be put in place via pre-drilling, which does not generate high noise levels like impact driving; impact pile driving is not part of the project.

The closest noise sensitive receptor (Peralta Community College District offices) is located approximately 300 feet from the project construction area. Therefore, these receptor locations may be subject to short-term noise reaching 71 dBA L_{max} generated by construction activities along the project alignment. This maximum noise level would be below the City's short-term construction noise level thresholds identified in the Municipal Code[17].

[17] Oakland, City of. Oakland Municipal Code Section 17.120.

Traffic Noise (Criterion 10c)

The Measure DD EIR determined that increased noise levels associated with the change in traffic patterns and roadway alignments within the Lake Merritt and Lake Merritt group of projects would be well below the City's significance criterion and that this impact would be less than significant. The EIR concluded that the Waterfront Trail group of project would not generate any significant increases in traffic volumes. Similarly, projects within the City-wide Creeks group would also not increase traffic volumes and would not result in an increase in traffic noise.

The project is a bicycle and pedestrian path and bridge and is not expected to result in an increase in traffic noise due to additional vehicle trips or a change in traffic patterns. Therefore, the LM2BT project is not anticipated to generate significant impacts related to traffic noise.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the Measure DD EIR, implementation of the project would not substantially increase the severity of significant impacts identified in the Measure DD EIR, nor would it result in new significant impacts related to noise that were not identified in the Measure DD EIR. The Measure DD EIR did not identify any mitigation measures related to noise, and none would be necessary for the project. The project would not include impact pile driving and piles would instead be installed via pre-drilling; therefore the significant unavoidable noise impact associated with construction identified in the Measure DD EIR would not apply to the LM2BT project. The project would be required to implement SCAs to reduce construction noise and vibration, achieve interior noise standards, and require mechanical equipment to meet applicable noise performance standards, as identified in Attachment A at the end of the Environmental Checklist (including SCA NOI-1, SCA NOI-2, SCA NOI-3, and SCA NOI-4) and, as described in the analysis above, compliance with these measures would ensure that all impacts related to noise continue to be less than significant with the LM2BT project. Finally, Measure DD or other projects that have been implemented within the vicinity of the project site, such as improved recreation and open space areas and roadway modifications north of the site, have not resulted in adverse changes to related to noise (such as the introduction of new sources of noise that would adversely affect the project area) and no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting or analysis for noise as described in the Measure DD EIR.

Therefore, based on the above analysis, no changes have occurred with respect to circumstances surrounding the Measure DD project that would cause significant impacts related to noise to which the LM2BT project would contribute considerably, and no new information has been put forward that shows that the project would cause significant noise impacts.

	Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
11. PUBLIC SERVICES, PARKS, AND RECREATION FACILITIES. Would the project:			
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 following public services: • Fire protection; • Police protection; • Schools; or • Other public facilities.	☒	☐	☐
b. Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or Include recreational facilities or require the construction or expansion of recreational facilities which might have a substantial adverse physical effect on the environment.	☒	☐	☐

Project Setting

The project site is located in an urban area where public services are already provided. The project site also has an Urban Park and Open Space land use designation and is located within the Open Space Resource Conservation (OS–RCA) Area and Linear Park (OS -LP) zoning districts. All of the property within the project site is publicly owned.

Since certification of the Measure DD EIR, no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting for public services and recreation as described in the Measure DD EIR. As described in the project description, several Measure DD projects have been implemented north of the project study area that have resulted in improved access and recreational opportunities in and around Lake Merritt and the Channel; however, these changes are located north of the project site.

Public Services, Parks and Recreation (Criteria 12a and 12b)

The Measure DD EIR determined that implementation of Measure DD projects would have a less-than-significant impact on police, fire, and park services. Measure DD projects would not construct new residential or commercial spaces and therefore would not increase demand for public services or

parks and recreation. Certain projects would involve the construction or improvement of existing recreational facilities. The EIR determined that these project components would not have a potential adverse physical effect on the environment beyond those discussed in specific topic areas such as biological resources. The purpose of Measure DD projects is to enhance existing recreational opportunities and create new ones. As such, the EIR concluded that these projects would not substantially increase demand for neighborhood parks, regional parks or recreational recreation facilities, such that substantial physical deterioration of the facility would occur or be accelerated. In regards to schools, the EIR determined that implementation of Measure DD projects would have no impact on the school system. No mitigation measures or SCAs related to public services, parks and recreation were identified.

The project would enhance and expand existing recreation opportunities within this area by establishing a connection between existing recreational facilities and parks, specifically between Lake Merritt trails and the Bay Trail. No new recreational facilities, other than a bicycle and pedestrian bridge and pathway, are proposed to be constructed as a result of the project. Due to the nature of the project, there would be a less-than-significant impact to the provision of public services, including maintenance of recreational facilities. The project would likely increase the use of recreational trails and nearby parks due to the increased connectivity; however, this increase would benefit the community as existing open space areas along the Channel would be improved and new recreation opportunities that are currently not offered would be provided.

Conclusion

Implementation of the proposed project would not substantially increase the severity of significant impacts identified in the Measure DD EIR, nor would it result in new significant impacts related to the provision of public services and parks and recreation facilities that were not identified in the Measure DD EIR. The Measure DD EIR did not identify any mitigation measures related to public services, and none would be required for the proposed project. Finally, no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting or analysis for public services and recreation as described in the Measure DD EIR. Improvements that have occurred in and around the Channel and Lake Merritt have improved access and recreational opportunities in the vicinity; however, none of these improvements have occurred within the immediate project study area.

Therefore, no changes have occurred with respect to circumstances surrounding the Measure DD project that would cause significant impacts related to public services and recreation to which the LM2BT project would contribute considerably, and no new information has been put forward that shows that the project would cause significant public service or recreation-related impacts.

	Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
12. TRANSPORTATION AND CIRCULATION Would the project:			
Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit, specifically:			
Traffic Load and Capacity Thresholds	☒	☐	☐
a. At a study, signalized intersection which is located **outside the Downtown area and that does not provide direct access to Downtown**, the project would cause the motor vehicle level of service (LOS) to degrade to worse than LOS D (i.e., LOS E or F) and cause the total intersection average vehicle delay to increase by four (4) or more seconds;			
b. At a study, signalized intersection which is located **within the Downtown area or that provides direct access to Downtown**, the project would cause the motor vehicle LOS to degrade to worse than LOS E (i.e., LOS F) and cause the total intersection average vehicle delay to increase by four (4) or more seconds;	☒	☐	☐
c. At a study, signalized intersection **outside the Downtown area and that does not provide direct access to Downtown** where the motor vehicle level of service is LOS E, the project would cause the total intersection average vehicle delay to increase by four (4) or more seconds;	☒	☐	☐
d. At a study, signalized intersection **outside the Downtown area and that does not provide direct access to Downtown** where the motor vehicle level of service is LOS E, the project would cause an increase in the average delay for any of the critical movements of six (6) seconds or more;	☒	☐	☐
e. At a study, signalized intersection for all areas where the level of service is LOS F, the project would cause (a) the overall volume-to-capacity ("V/C") ratio to increase 0.03 or more or (b) the critical movement V/C ratio to increase 0.05 or more;	☒	☐	☐

		Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
12.	**TRANSPORTATION AND CIRCULATION** Would the project:			
f.	At a study, unsignalized intersection the project would add ten (10) or more vehicles to the critical movement and after project completion satisfy the California Manual on Uniform Traffic Control Devices (MUTCD) peak-hour volume traffic signal warrant;	☒	☐	☐
g.	For a roadway segment of the Congestion Management Program (CMP) Network, the project would cause (a) the LOS to degrade from LOS E or better to LOS F or (b) the V/C ratio to increase 0.03 or more for a roadway segment that would operate at LOS F without the project; or	☒	☐	☐
h.	Cause congestion of regional significance on a roadway segment on the Metropolitan Transportation System (MTS) evaluated per the requirements of the Land Use Analysis Program of the CMP.	☒	☐	☐

Project Setting

The existing project study area consists of areas along the banks of the Channel; no vehicle trips are generated by uses within the existing project site, except occasional construction and maintenance vehicle activities. Existing trails within the vicinity of the site include facilities within the Lake Merritt area to the north; however, these trails terminate on the banks of the Channel north of the project site study area, and the San Francisco Bay Trail to the south. With the exception of local roadways, most of the site is not currently accessible to pedestrians or bicyclists. Roadways within the vicinity of the site include Embarcadero Road and I-880. Existing transit service in the area is provided by the Alameda-Contra Costa (AC) Transit District. The Oakland Jack London Square Train Station (serving Amtrak) is located approximately 0.5 miles to the west of the site and the Lake Merritt Bay Area Rapid Transit (BART) Station is located about 0.75 miles to the northwest of the site.

The project area extends approximately 1,850 linear feet along the Channel, beginning just north of the elevated I-880 structure, and extends south towards the UPRR tracks and terminates at the existing Embarcadero Bridge. The project site includes the Channel itself, a portion beneath the I-880 structure (the 5th Street Viaduct), and a section over the UPRR tracks and the Embarcadero Bridge.

As described above in the project description, implementation of Measure DD projects has resulted in modifications to existing roadways located north of the project study area. None of these changes represent changes to the existing setting or circumstances within the immediate vicinity of the project are, such that the environmental setting for transportation and circulation would be substantially different from that described in the Measure DD EIR for the immediate project area.

City of Oakland Standard Conditions of Approval. The City of Oakland provides SCAs regarding construction-period traffic management as identified below and in Attachment A.

SCA TRA-1 Construction Activity in the Public Right-of-Way

a. Obstruction Permit Required

Requirement: 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 and sidewalks.

When Required: Prior to approval of construction-related permit
Initial Approval: Bureau of Building
Monitoring/Inspection: Public Works Department

b. Traffic Control Plan Required

Requirement: In the event of obstructions to vehicle or bicycle travel lanes, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian detours, including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The project applicant shall implement the approved Plan during construction.

When Required: Prior to construction commencement in affected area
Initial Approval: Public Works Department, Transportation Services Division
Monitoring/Inspection: Public Works Department

c. Repair of City Streets

Requirement: 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. All damage that is a threat to public health or safety shall be repaired immediately.

When Required: Prior to Notice of Completion
Initial Approval: N/A
Monitoring/Inspection: Public Works Department

Criteria 13a through 13h

The Measure DD EIR identified impacts to study intersections that would result with implementation of various roadway improvements that would occur under the Lake Merritt and Lake Merritt Channel group of projects. The EIR also found that implementation of the project components would reduce traffic hazards. One goal of Measure DD was to improve bicycle and pedestrian safety and circulation within specified areas of the City. The EIR determined that Measure DD would not conflict with adopted policies, plans and programs supporting pedestrian and bicycle transportation. The project was found to be consistent with the adopted Oakland Bicycle Master Plan and Pedestrian Master Plan. It would improve bikeway connectivity and pedestrian access around Lake Merritt and along the

Lake Merritt Channel and would complete linkages along the Oakland Waterfront. The EIR also found that Measure DD would not fundamentally conflict with adopted policies, plans, or programs supporting transit use. The Measure DD Implementation Project may improve use of BART and AC Transit due to the improved pedestrian linkages in the area served by these transit operators.

The project would provide bicycle and pedestrian connections along the Channel between 7th Street and the Oakland Estuary, completing the link between Lake Merritt and the Bay Trail. No roadway improvements or modifications would occur with implementation of the project. Once constructed, the path would connect existing trails from north of I-880 to the Embarcadero Bridge, where pedestrians and bicyclists could either continue east along Embarcadero Road or west towards the Bay Trail. The pathway would be of sufficient width to accommodate pedestrians and bicyclists and potential conflicts with motorists would be avoided due to the separated path of non-motorized travel.

The project would provide the bicycle and pedestrian connections consistent with the City's adopted policies, plans, or programs supporting bicycle and pedestrian transportation. The project would support bicycle and pedestrians and would not result in any changes to motor vehicle level of service or delay at intersections within the City. The project would improve bicycle and pedestrian connectivity for existing facilities and would not result in any impacts related to transportation or circulation.

In addition, because the project would be constructed within areas of the public right-of-way, including at and across Embarcadero Road and the Embarcadero Bridge, the project would be subject to SCA TRA-1, which requires development of a construction-period traffic control plan. Throughout the construction timeline, there would be a steady flow of trucks accessing the project site for off hauling excavated material and/or to deliver fill material for the landing areas that would need finished grade adjustments. It is anticipated that, depending on the variant selected, up to roughly 500 truck trips could be necessary for the project. Access to the site would need to occur at varying locations throughout the project area. Access to the site would be from the west side of the Channel from the adjacent City Fire Department Training facility via Victory Court or the 45-foot UPRR Franchise strip; the east side of the Channel from Peralta Community College and the EBMUD Treatment facility; and from the Embarcadero roadway for the portion of the project within Channel Park. To help mitigate potential conflicts between construction truck traffic and the general traveling public, flaggers would be required in the project vicinity throughout the active construction timeline.

In addition, on a few specific occasions, special truck access would be required at the site for the delivery of major equipment components, such as, a crane for lifting and positioning of bridge spans in place. The Embarcadero roadway happens to be a part of the statewide Extra Legal Load Network (ELLN) which can be used to accommodate any extra-large delivery vehicles, if necessary.

All truck traffic would be required to meet the City of Oakland ordinance standards throughout the project duration.

Implementation of SCA TRA-1 would ensure that through vehicle and bicycle traffic would not be substantially impeded during the construction period and that appropriate traffic control measures would be in place to avoid traffic and circulation impacts.

Conclusion

Implementation of the project would not substantially increase the severity of significant impacts identified in the Measure DD EIR, nor would it result in new significant impacts related to transportation and circulation that were not identified in the Measure DD EIR. The Measure DD EIR identified nine mitigation measures related to transportation and circulation, however, the project would not result in impacts to the intersections identified in the mitigation measures, therefore, they are not applicable to the project. The project would be required to implement SCA TRA-1 to reduce construction-period transportation impacts, as identified in Attachment A at the end of the Environmental Checklist and, as described in the analysis above, compliance with this measure would ensure that all impacts related to traffic and circulation continue to be less than significant with the proposed project. Finally, no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting or analysis for transportation and circulation as described in the Measure DD EIR. Modifications to existing roadways that have occurred as a result of Measure DD projects have occurred north of the project study area, and although these improvements do not directly affect the project site, access and connectivity through the Lake Merritt area has improved since certification of the Measure DD EIR.

Therefore, based on the above analysis, no changes have occurred with respect to circumstances surrounding the Measure DD project that would cause significant impacts related to transportation and circulation to which the LM2BT project would contribute considerably, and no new information has been put forward that shows that the project would cause significant transportation and circulation impacts.

	Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
13. UTILITIES AND SERVICE SYSTEMS Would the project:			
a. Exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board;	☒	☐	☐
Require or result in construction of new storm water drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects;			
Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects;			

	Equal or Less Severity of Impact Previously Identified in EIR	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
b. Exceed water supplies available to serve the project from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects;	☒	☐	☐
c. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects; Violate applicable federal, state, and local statutes and regulations related to solid waste;	☒	☐	☐
d. Violate applicable federal, state and local statutes and regulations relating to energy standards; or Result in a determination by the energy provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects.	☒	☐	☐

Project Setting

Multiple subsurface utility lines are located within the project site and are visible as they cross the Channel between the UPRR tracks and Embarcadero Bridge. Two utility service platforms are also located on the eastern side of the Channel, adjacent to the Embarcadero Bridge abutment. These utility lines include a high pressure sewer line as well as jet fuel lines for the Oakland Airport. The project would be designed around these existing utility lines and no modifications to these facilities would be required. However, overhead electrical lines that exist along the east side of the Embarcadero Bridge would be undergrounded as part of the project.

Since certification of the Measure DD EIR, no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting for utilities and infrastructure as described in the Measure DD EIR.

City of Oakland Standard Conditions of Approval. The City of Oakland provides SCAs regarding utilities and infrastructure as identified below and in Attachment A.

SCA UTI-1 Construction and Demolition Waste Reduction and Recycling

Requirement: The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/ modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.

When Required: Prior to Notice to Proceed
Initial Approval: Public Works Department, Environmental Services Division
Monitoring/Inspection: Public Works Department, Environmental Services Division

SCA UTI-2 Underground Utilities

Requirement: The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.

When Required: During construction
Initial Approval: N/A
Monitoring/Inspection: Public Works Department

Water, Wastewater, and Stormwater (Criteria 14a and 14b)

The Measure DD EIR concluded that all project components of Measure DD would have a less-than-significant impact on water supplies and water facilities. The EIR also determined that none of the project components would generate wastewater that would cause wastewater treatment requirements to be exceeded. The only project component of Measure DD that would produce wastewater is the East Oakland Sports Complex. All other projects would either result in a less-than-significant impact or no impact on wastewater treatment capacity and facilities.

The Measure DD EIR concluded that implementation of Measure DD projects would not require the construction of new storm drain facilities or the expansion of existing facilities. With the exception of the Measure DD Recreational Facilities project group, all other project groups would have no impact on stormwater.

The project would construct a bicycle and pedestrian pathway and bridge to provide a non-motorized connection between Lake Merritt and the Oakland Estuary. No increase in demand for water services or wastewater collection services would result with implementation of the project. The City's SCAs applicable to stormwater requirements would be implemented to ensure that potential impacts related to stormwater infrastructure would be less than significant.

Solid Waste Services (Criterion 14c)

As stated in the Measure DD EIR, all construction activities are required to comply with the City of Oakland requirements for waste reduction and recycling. In addition, contaminated soils may be removed during construction activities and such soils would be disposed of in an approved landfill. The EIR determined that none of the projects would be in violation of federal, State or local statutes and regulations in regards to solid waste. Nor would Measure DD projects result in the construction or expansion of landfill facilities. The EIR found impacts related to solid waste to be less than significant. These same conclusions would apply to the LM2BT project.

Energy (Criterion 14d)

The Measure DD EIR determined that all projects would be required to comply with Title 24, California's Energy Efficiency Standards for non-residential building. The EIR concluded that none of the projects would violate applicable regulations related to energy standards and as such determined that projects would either have no impact or less-than-significant impact related to energy.

The project would include lighting for public safety. The project would connect to existing energy sources to provide the required lighting and would not require the construction or expansion of existing energy facilities. Although existing overhead electrical facilities would be undergrounded by the project, the City would be required to coordinate with PG&E and obtain all necessary permits to modify existing infrastructure (per SCA UTI-2).

Conclusion

Implementation of the project would not substantially increase the severity of significant impacts identified in the Measure DD EIR, nor would it result in new significant impacts related to the provision of utilities that were not identified in the Measure DD EIR. The Measure DD EIR did not identify any mitigation measures related to utilities, and none would be required for the project. The Measure DD EIR also did not identify Conditions of Approval for any of the Measure DD project components. However, in July 2015, the City has updated the City's Standard Conditions of Approval (SCAs) that apply to all projects including the project. These SCAs include the following: SCA UTI-1 related to construction and demolition waste reduction and recycling and SCA UTI-2, requiring all projects to place utilities underground. Finally, Measure DD projects that have been implemented within the vicinity of the project site, such as improved recreation and open space areas and roadway modifications north of the site, have not resulted in changes to existing utility service systems or infrastructure that could adversely affect the project site and no changes in the existing setting or circumstances within the vicinity of the project area have occurred that would substantially change the environmental setting or analysis for utilities and infrastructure as described in the Measure DD EIR.

Therefore, based on the analysis above, no changes have occurred with respect to circumstances surrounding the original project that would cause significant impacts related to utilities and infrastructure to which the proposed project would contribute considerably, and no new information has been put forward that shows that the proposed project would cause significant utilities and infrastructure-related impacts.

ATTACHMENT A

Standard Conditions of Approval and Mitigation Monitoring and Reporting Program

This Standard Conditions of Approval and Mitigation Monitoring and Reporting Program (SCAMMRP) is based on the CEQA Analysis prepared for the Lake Merritt to Bay Trail Bicycle/Pedestrian Bridge Project.

This SCAMMRP is in compliance with Section 15097 of the CEQA Guidelines, which requires that the Lead Agency "adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects." The SCAMMRP lists mitigation measures ("MM") recommended in the EIR and identifies mitigation monitoring requirements, as well as the City's Standard Conditions of Approval ("SCA") identified in the EIR as measures that would minimize potential adverse effects that could result from implementation of the project, to ensure the conditions are implemented and monitored.

All MMs and SCAs identified in the CEQA Analysis, which is consistent with the measures and conditions presented in the Broadway Valdez District Specific Plan Environmental Impact Report (EIR), are included herein. To the extent that there is any inconsistency between the SCA and MM, the more restrictive conditions shall govern; to the extent any MM and/or SCA identified in the CEQA Analysis were inadvertently omitted, they are automatically incorporated herein by reference.

- The first column identifies the SCA and MM applicable to that topic in the CEQA Analysis.
- The second column identifies the monitoring schedule or timing applicable to the Project.
- The third column names the party responsible for monitoring the required action for the Project.

The project sponsor is responsible for compliance with any recommendations in approved technical reports, all applicable mitigation measures adopted and with all conditions of approval set forth herein at its sole cost and expense, unless otherwise expressly provided in a specific mitigation measure or condition of approval, and subject to the review and approval of the City of Oakland. Overall monitoring and compliance with the mitigation measures will be the responsibility of the Planning and Zoning Division. Prior to the issuance of a demolition, grading, and/or construction permit, the project sponsor shall pay the applicable mitigation and monitoring fee to the City in accordance with the City's Master Fee Schedule.

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Aesthetics, Shadow and Wind		
SCA AES-1 (SCA 16) Graffiti Control Requirement: 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). When Required: Ongoing Initial Approval: N/A Monitoring/Inspection: Public Works Department		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
SCA AES-2 (SCA 17) Landscape Plan a. ***Landscape Plan Required*** Requirement: 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. When Required: Prior to approval of construction-related permit Initial Approval: Public Works Department Monitoring/Inspection: N/A b. ***Landscape Installation*** Requirement: 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. When Required: Prior to Notice of Completion Initial Approval: Public Works Department Monitoring/Inspection: Public Works Department c. ***Landscape Maintenance*** Requirement: 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. When Required: Ongoing Initial Approval: N/A Monitoring/Inspection: Public Works Department		
SCA AES-3 (SCA 18) Lighting Requirement: 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. When Required: Prior to Notice of Completion Initial Approval: N/A Monitoring/Inspection: Public Works Department		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Air Quality		
SCA AIR-1 (SCA 19) Construction-Related Air Pollution Controls (Dust and Equipment Emissions) Requirement: The project applicant shall implement all of the following applicable air pollution control measures during construction of the project: **[BASIC CONTROLS (apply to ALL construction sites)]** 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. Pave all roadways, driveways, sidewalks, etc. within one month of site grading or as soon as feasible. In addition, building pads should be laid within one month of grading or as soon as feasible 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. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either 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 California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points. h. 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 five minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations"). i. 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. j. Portable equipment shall be powered by electricity if available. If electricity is not available, propane or natural gas shall be used if feasible. Diesel engines shall only be used if electricity is not available and it is not feasible to use propane or natural gas.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
[**ENHANCED CONTROLS: All "Basic" controls listed above plus the following controls if the project involves**: • 114 or more single-family dwelling units; • 240 or more multi-family units; • Nonresidential uses that exceed the applicable screening size listed in the Bay Area Air Quality Management District's CEQA Guidelines; • Demolition permit; • Simultaneous occurrence of more than two construction phases (e.g., grading and building construction occurring simultaneously); • Extensive site preparation (i.e., the construction site is four acres or more in size); or • Extensive soil transport (i.e., 10,000 or more cubic yards of soil import/export).] k. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. l. All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph. m. Install sandbags or other erosion control measures to prevent silt runoff to public roadways. n. Hydroseed or apply (non-toxic) soil stabilizers to inactive construc-tion areas (previously graded areas inactive for one month or more). o. Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. p. Install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of the construction site to minimize wind-blown dust. Wind breaks must have a maximum 50 percent air porosity. q. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. r. Activities such as excavation, grading, and other ground-disturbing construction activities shall be phased to minimize the amount of disturbed surface area at any one time. s. All trucks and equipment, including tires, shall be washed off prior to leaving the site. t. Site accesses 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. u. All equipment to be used on the construction site and subject to the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") must meet emissions and performance requirements one year in advance of any fleet deadlines. Upon request by the City, the project applicant shall provide written documentation that fleet requirements have been met.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
v. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings). w. All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM. x. Off-road heavy diesel engines shall meet the California Air Resources Board's most recent certification standard. y. Post a publicly-visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours. When Required: During construction Initial Approval: N/A Monitoring/Inspection: Public Works Department		
[**The following condition applies to all projects that meet all of the following criteria**: a. The project involves any of the following sensitive land uses: i. Residential uses (new dwelling units); or ii. New or expanded schools, daycare centers, parks, nursing homes, or medical facilities; and b. The project is located within 1,000' (or other distance as specified below) of one or more of the following sources of air pollution: i. Freeway; ii. Roadway with significant traffic (at least 10,000 vehicles/day); iii. Rail line (except BART) with over 30 trains per day; iv. Distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating Transportation Refrigeration Units (TRU) per day, or where the TRU unit operations exceed 300 hours per week; v. Major rail or truck yard (such as the Union Pacific rail yard adjacent to the Port of Oakland); vi. Ferry terminal; vii. Stationary pollutant source requiring a permit from BAAQMD (such as a diesel generator); viii. Within 0.5 miles of the Port of Oakland or Oakland Airport; ix. Within 300 feet of a gas station; or x. Within 300 feet of a dry cleaner with a machine using PERC (or within 500 feet of a dry cleaner with two or more machines using PERC); and c. The project exceeds the health risk screening criteria after a screening analysis is conducted in accordance with the Bay Area Air Quality Management (BAAQMD) CEQA Guidelines.]		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Biological Resources		
SCA BIO-1 (SCA 26) Tree Removal During Bird Breeding Season Requirement: To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird breeding season of February 1 to August 15 (or during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work and shall be submitted to the City for review and approval. If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest. When Required: Prior to removal of trees Initial Approval: Bureau of Building Monitoring/Inspection: Public Works Department		
SCA BIO-2 (SCA 27) Tree Permit a. Tree Permit Required Requirement: Pursuant to the City's Tree Protection Ordinance (OMC chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit. When Required: Prior to Notice to Proceed Initial Approval: Permit approval by Public Works Department, Tree Division; evidence of approval submitted to Bureau of Building Monitoring/Inspection: Public Works Department b. Tree Protection During Construction Requirement: Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist: i. 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 shall be securely fenced off at a distance from the base of the tree to be determined by the project's consulting arborist. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
ii. Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall 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 shall be minimized. No change in existing ground level shall occur within a distance to be determined by the project's consulting arborist from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree. iii. No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the project's consulting arborist 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 shall be operated or stored within a distance from the base of any protected trees to be determined by the project's consulting arborist. Wires, ropes, or other devices shall 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, shall be attached to any protected tree. iv. Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration. v. If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Department and the project's consulting arborist shall make a recommendation to the City Tree Reviewer as to whether the damaged tree can be preserved. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall 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. vi. All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations. When Required: During construction Initial Approval: Public Works Department, Tree Division Monitoring/Inspection: Public Works Department		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
c. Tree Replacement Plantings Requirement: Replacement plantings shall be required for tree removals for the purposes of erosion control, groundwater replenishment, visual screening, wildlife habitat, and preventing excessive loss of shade, in accordance with the following criteria: i. No tree replacement shall be required for the removal of nonnative 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. ii. Replacement tree species shall consist of Sequoia sempervirens (Coast Redwood), Quercus agrifolia (Coast Live Oak), Arbutus menziesii (Madrone), Aesculus californica (California Buckeye), Umbellularia californica (California Bay Laurel), or other tree species acceptable to the Tree Division. iii. Replacement trees shall be at least twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate. iv. Minimum planting areas must be available on site as follows: • For Sequoia sempervirens, three hundred fifteen (315) square feet per tree; • For other species listed, seven hundred (700) square feet per tree. v. In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee in accordance with the City's Master Fee Schedule may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians. vi. The project applicant shall install the plantings and maintain the plantings until established. The Tree Reviewer of the Tree Division of the Public Works Department may require a landscape plan showing the replacement plantings and the method of irrigation. Any replacement plantings which fail to become established within one year of planting shall be replanted at the project applicant's expense. When Required: Prior to Notice of Completion Initial Approval: Public Works Department, Tree Division Monitoring/Inspection: Public Works Department		
Modified Mitigation Measure BIO-2a: To avoid adverse impacts to special-status fish species, including green sturgeon, longfin smelt, Pacific herring, federally listed salmonids (chinook salmon, Coho salmon, and steelhead), and EFH, pile driving shall either be avoided or occur within the June 1 to November 30 work window in accordance with National Marine Fisheries Service (NMFS) guidelines. Any pile driving occurring outside this period will require informal or formal consultation with the NMFS (for listed salmonids and Essential Fish Habitat [EFH])		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
and California Department of Fish and Wildlife (CDFW) (for Pacific herring) prior to the Army Corps of Engineers' (USACE) issuance of a Section 404 permit for impacts to waters of the U.S. Modified Mitigation Measure BIO-2b: Consultation with the NMFS regarding effects to EFH in the Channel would be required for the proposed project and the project variant. At a minimum, conservation measures shall be implemented to reduce impacts to EFH associated with the construction of the proposed project and the project variant, as follows. 1. Temporary piles shall be completely removed rather than cutting or breaking off if the pile is structurally sound. 2. The suspension of sediments and disturbance of the substrate shall be minimized when removing temporary piles. Measures to help accomplish this include, but are not limited to, the following: ○ When practicable, temporary piles shall be removed with a vibratory hammer, rather than the direct pull or clamshell method. ○ Temporary piles shall be slowly removed to allow sediment to slough off at, or near, the mudline. ○ The operator shall first hit or vibrate the temporary pile to break the bond between the sediment and pile to minimize the potential for the pile to break, as well as reduce the amount of sediment sloughing off the pile during removal. ○ A ring of clean sand shall be placed around the base of the temporary pile. This ring shall contain some of the sediment that would normally be suspended. ○ Temporary piles shall be encircled with a silt curtain that extends from the surface of the water to the substrate. 3. Each pass of the clamshell shall be completed to minimize suspension of sediment if temporary pile stubs are removed with a clamshell. 4. All holes left by the temporary piles shall be filled with clean, native sediments if possible. 5. Temporary piles shall be placed on a barge equipped with a basin to contain all attached sediment and runoff water after removal. Creosote-treated timber piles shall be cut into short lengths to prevent reuse, and all debris, including attached, contaminated sediments, shall be disposed of in an approved upland facility. 6. Use of treated wood timbers or pilings shall be avoided to the extent practicable. Use of alternative materials such as untreated wood, concrete, or steel is recommended. 7. Erosion control and stabilization measures shall be incorporated to reduce erosion potential. 8. Spoils and construction-related trash shall be properly disposed of.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Mitigation Measure BIO-3a: All Measure DD-funded activities within jurisdictional waters shall first obtain authorization from the appropriate agencies (USACE, Water Board, CDFW, and BCDC). At a minimum, each activity will likely require a Section 404 Corps permit and Section 401 water quality certification from the Water Board. Creek restoration activities may also require a CDFW Lake or Streambed Alteration Agreement, depending on site-specific conditions. Modified Mitigation Measure BIO-3b: Impacts to jurisdictional wetlands shall be mitigated at a minimum replacement ratio of 1:1 (i.e., 1 acre created [and preserved] for every acre impacted). If feasible, replacement habitat shall be created/preserved in the same general area as the original impact. Off-site mitigation may be approved if the amount of required replacement habitat exceeds that which is available near a given impact site. A wetland mitigation and monitoring plan (MMP) shall be developed for each mitigation site, detailing the mitigation design, wetland planting design, adaptive management, maintenance and monitoring requirements, reporting requirements and success criteria for the created wetlands. OR Compensation mitigation may be required for direct temporary and permanent impacts associated with the use of supports in the open water of the Channel and to comply with Section 10 and Section 404 of the Clean Water Act (CWA) and the California Coastal Act. All of the jurisdictional waters fall under the jurisdiction of the Coastal Commission and the majority of the open water estuarine habitat is under the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) and the Rivers and Harbors Act. It has not been determined at this time if it is necessary to mitigate for the proposed project. However, the final compensatory mitigation program would be expected to fully offset project-related jurisdictional effects by providing 'no net loss' of open water habitat, should this be required by the applicable resource agencies.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Cultural Resources		
SCA CUL-1 (SCA 29) Archaeological and Paleontological Resources - Discovery During Construction Requirement: Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented. In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense. In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant. When Required: During construction Initial Approval: N/A Monitoring/Inspection: Public Works Department		

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	Schedule	**Responsibility**
SCA CUL-2 (SCA 30) Archaeologically Sensitive Areas – Pre-Construction Measures Requirement: The project applicant shall implement either Provision A (Intensive Pre-Construction Study) or Provision B (Construction ALERT Sheet) concerning archaeological resources. **Provision A: Intensive Pre-Construction Study** The project applicant shall retain a qualified archaeologist to conduct a site-specific, intensive archaeological resources study for review and approval by the City prior to soil-disturbing activities occurring on the project site. The purpose of the site-specific, intensive archaeological resources study is to identify early the potential presence of history-period archaeological resources on the project site. At a minimum, the study shall include: ~~a. Subsurface presence/absence studies of the project site. Field studies may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources.~~ ~~b. A report disseminating the results of this research.~~ ~~c. Recommendations for any additional measures that could be necessary to mitigate any adverse impacts to recorded and/or inadvertently discovered cultural resources.~~ a. An archaeological excavation for Site 1 to determine if historic-period artifacts known to be present at the site would qualify as historical resources for the purposes of CEQA. The excavation phase shall be conducted prior to ground disturbing activities at the site. Diagnostic artifacts, as well as those classes of artifacts for which an adequate sample has not yet been recovered, shall be collected and bagged following photographing and recording of provenance. Mapping of deposits would be coordinated using existing engineering survey controls, and elevation accuracy will be maintained during the excavation to permit provenance controls for artifact recording. All information needed, including soil color or type, elevation, location, photographs, and sketch maps will be gathered as quickly as conditions permit to allow resumption of construction activities. All recovered cultural materials shall be cleaned as appropriate, preserved if necessary, bagged, and tagged or marked so as to permit its identification in an acceptable record system, and in accordance with recognized professional standards. All recovered cultural material shall be analyzed sufficiently to permit identification in accordance with recognized professional standards and submitted to a curation facility, as appropriate. A Final Monitoring Report shall be prepared, describing the results of monitoring, data recovery, and analysis. b. Archival research and intensive field reviews shall be performed for Site 2 and Site 3 to determine the historic context and evaluative basis for assessing their eligibility for inclusion in the California Register of Historical Resources. The eligibility of the resources would be informed by this research and field review. Based on the results of the		

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research and field review, the resources shall be evaluated for their eligibility for inclusion in the California Register. As part of this evaluation, the resources (#2 and #3) shall be recorded on California Department of Parks and Recreations 523 Series forms. c. If the results of the California Register indicates that the resources are not eligible, then no further protective action (beyond the accidental discovery measures described in SCAs CUL-1 and CUL-3) shall be required. If the resources (Site 2 and Site 3) are eligible (i.e., they qualify as historical resources under PRC Section 21084.1) and would be disturbed or removed by project activities, then the features of the site that contribute to their eligibility for the California Register, as described in the evaluation, shall be documented according to the standards and requirements of the Historic American Engineering Record (HAER). The results of the documentation shall be provided to the Northwest Information Center at Sonoma State University; the Environmental Design Library at U.C. Berkeley; and the Oakland Cultural Heritage Survey. The implementation of the mitigation actions described above would reduce this potentially significant impact to a less-than-significant level. This reduction to the impact would be accomplished through the documentation of those physical features of the sites that contribute to their eligibility for the California Register and convey their significance. The creation of a photographic and written record of those physical attributes will offset any potential alteration or removal by the project. d. If the results of the study indicate a high potential presence of historic-period archaeological resources on the project site, or a potential resource is discovered, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction and prepare an ALERT sheet pursuant to Provision B below that details what could potentially be found at the project site. Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the ALERT sheet, required per Provision B below) and the procedures to follow if any artifacts are encountered, field recording and sampling in accordance with the Secretary of Interior's Standards and Guidelines for Archaeological Documentation, notifying the appropriate officials if human remains or cultural resources are discovered, and preparing a report to document negative findings after construction is completed if no archaeological resources are discovered during construction. **Provision B: Construction ALERT Sheet** The project applicant shall prepare a construction "ALERT" sheet developed by a qualified archaeologist for review and approval by the City prior to soil-disturbing activities occurring on the project site. The ALERT sheet shall contain, at a minimum, visuals that depict each type of artifact that could be encountered on the project site. Training by the qualified archaeologist shall be provided to the project's prime contractor,		

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any project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving), and utility firms involved in soil-disturbing activities within the project site. The ALERT sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, all work must stop and the City's Environmental Review Officer contacted in the event of discovery of the following cultural materials: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire-cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains (building, ship, wharf); clay roof/floor tiles; stone walls or footings; or gravestones. Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel. The ALERT sheet shall also be posted in a visible location at the project site. When Required: Prior to Notice to Proceed Initial Approval: Bureau of Building Monitoring/Inspection: Public Works Department		
SCA CUL-3 (SCA 31) Human Remains - Discovery During Construction Requirement: Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant. When Required: During construction Initial Approval: N/A Monitoring/Inspection: Public Works Department		

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	Schedule	**Responsibility**
Geology, Soils and Geohazards		
SCA GEO-1 (SCA 36) Seismic Hazards Zone (Landslide/ Liquefaction) Requirement: The project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant shall implement the recommendations contained in the approved report during project design and construction. When Required: Prior to 35 percent design approval Initial Approval: Public Works Department Monitoring/Inspection: Public Works Department		
SCA GEO-2 (SCA 33) Construction-Related Permit(s) Requirement: The project applicant shall obtain all required construction-related permits/approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction. When Required: Prior to approval of construction-related permit Initial Approval: Public Works Department Monitoring/Inspection: Public Works Department		
SCA GEO-3 (SCA 34) Soils Report Requirement: The project applicant shall submit a soils report prepared by a registered geotechnical engineer for City review and approval. The soils report shall contain, at a minimum, field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The project applicant shall implement the recommendations contained in the approved report during project design and construction. When Required: Prior to 35 percent design Initial Approval: Public Works Department Monitoring/Inspection: Public Works Department		

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	Schedule	**Responsibility**
Hazards and Hazardous Materials		
SCA HAZ-1 (SCA 39) Hazardous Materials Related to Construction Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: 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. When Required: During construction Initial Approval: N/A Monitoring/Inspection: Public Works Department		

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SCA HAZ-2 (SCA 40) Site Contamination a. Environmental Site Assessment Required Requirement: The project applicant shall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, 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. When Required: Prior to 95 percent design Initial Approval: Public Works Department, Environmental Services Division Monitoring/Inspection: Public Works Department, Environmental Services Division b. Health and Safety Plan Required Requirement: 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. When Required: Prior to Notice to Proceed Initial Approval: Bureau of Building Monitoring/Inspection: Public Works Department c. Best Management Practices (BMPs) Required for Contaminated Sites Requirement: 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. When Required: During construction Initial Approval: N/A Monitoring/Inspection: Public Works Department		

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Hydrology and Water Quality		
SCA HYD-1 (SCA 54) Creek Protection Plan a. Creek Protection Plan Required Requirement: The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek. Required BMPs are identified below in sections (b), (c), and (d). When Required: Prior to approval of construction-related permit Initial Approval: Bureau of Planning Monitoring/Inspection: N/A b. Construction BMPs Requirement: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control BMPs to protect the creek during construction. The measures shall include, but are not limited to, the following: i. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek. ii. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent degradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected. iii. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible. iv. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted.		

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v. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding.		
vi. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains.		
vii. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek.		
viii. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site.		
ix. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution.		
x. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work.		
xi. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains.		
xii. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB).		
xiii. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of the City.		

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xiv. Prior to vegetation clearing, ground disturbance, or construction, highly visible barriers (such as orange construction fencing) shall be installed around sensitive habitats adjacent to the project footprint within 100 feet of the Channel. No grading or fill activity of any type shall be permitted within these areas (designated environmentally sensitive areas [ESA]). Heavy equipment, including motor vehicles, shall not be allowed to operate within the ESAs. All construction equipment should be operated in a manner so as to prevent accidental damage to nearby preserved areas. All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities shall occur in developed or designated non-sensitive, upland, habitat areas. The designated upland areas shall be located in such a manner as to prevent the runoff from any spills from entering aquatic habitats.		
xv. A biologist shall monitor construction of in-water work within the Channel for the duration of project construction to ensure that wildlife species are not affected during construction and that avoidance and minimization measures are properly implemented.		
xvi. An employee education program for all construction personnel shall be developed and implemented by the biological monitor prior to the initiation of construction activities. At a minimum, the program shall include the following topics: (1) biology, conservation, and legal status of the marine mammals, fisheries and nesting birds; (2) responsibilities of the biological monitor; (3) delineation and flagging of adjacent habitat; (4) limitations on all movement of those employed on site, including ingress and egress of equipment and personnel, to designated construction zones (personnel shall not be allowed access to adjacent sensitive habitats); (5) on-site pet prohibitions; (6) use of trash containers for disposal and removal of trash; and (7) project features designed to reduce the impacts to habitat.		
xvii. The use of rodenticides, herbicides, insecticides, or other chemicals that could harm open water shall be prohibited.		
xviii. The contractor shall be required to develop a site-specific Storm Water Pollution Prevention Plan (SWPPP) that will identify specific best management practices (BMPs) for each construction activity to eliminate or minimize the potential for the discharge of polluted storm water or unauthorized non-storm water. Specific BMPs shall be implemented during project construction so as not to cause or contribute to an exceedance of any water quality standard. In addition, changes to the BMPs such as alternative mechanisms, if necessary, during project design and/or construction shall be implemented in order to achieve the stated goals and performance standards. These may include silt curtains or turbidity curtains that would contain resuspended sediment on site until it settles.		

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xix. Project construction includes the placement of concrete piles to support the bridge, which shall require concrete, cast-in-drilled-hole piles. If necessary, to minimize impacts of the placement of piles, attenuation methods (e.g., cushion blocks and/or isolation casings) shall be required, if feasible. When Required: Prior to approval of construction-related permit Initial Approval: Bureau of Planning Monitoring/Inspection: N/A c. Post-Construction BMPs Requirement: The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion. When Required: Prior to approval of construction-related permit Initial Approval: Bureau of Planning Monitoring/Inspection: N/A d. Creek Landscaping Requirement: The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season. Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival. When Required: Prior to approval of construction-related permit Initial Approval: Bureau of Planning Monitoring/Inspection: N/A e. Creek Protection Plan Implementation Requirement: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, all erosion, sedimentation, debris, and pollution control measures shall be monitored regularly by the project applicant. The City may require that a qualified consultant (paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If measures are deemed inadequate, the project applicant shall develop and implement additional and more effective measures immediately. When Required: During construction; ongoing Initial Approval: N/A Monitoring/Inspection: Public Works Department		

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SCA HYD-2 (SCA 55) Creek Dewatering/Diversion Requirement: The project applicant shall submit a Dewatering and Diversion Plan for review and approval by the City, and shall implement the approved Plan. The Plan shall comply, at a minimum, with the following: a. All dewatering and diversion activities shall comply with the requirements of all necessary regulatory permits and authorizations from other agencies (e.g., Regional Water Quality Control Board, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and Army Corps of Engineers). b. All native aquatic life (e.g., fish, amphibians, and turtles) within the work site shall be relocated by a qualified biologist prior to dewatering, in accordance with applicable regional, state, and federal requirements. Captured native aquatic life shall be moved to the nearest appropriate site on the stream channel downstream. The biologist shall check daily for stranded aquatic life as the water level in the dewatering area drops. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Capture methods may include fish landing nets, dip nets, buckets, and by hand. Captured aquatic life shall be released immediately in the nearest appropriate downstream site. This condition does not allow the take or disturbance of any state or federally listed species, nor state-listed species of special concern, unless the applicant obtains a project specific authorization from the California Department of Fish and Wildlife and/or the U.S. Fish and Wildlife Service, as applicable. c. If any dam or other artificial obstruction is constructed, maintained, or placed in operation within the stream channel, ensure that sufficient water is allowed to pass down channel at all times to maintain native aquatic life below the dam or other artificial obstruction. d. Construction and operation of dewatering/diversion devices shall meet the standards contained in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board. e. Coffer dams and/or water diversion system shall be constructed of a non-erodible material which will cause little or no siltation. Coffer dams and the water diversion system shall be maintained in place and functional throughout the construction period. If the coffer dams or water diversion systems fail, they shall be repaired immediately based on the recommendations of a qualified environmental consultant. The devices shall be removed after construction is complete and the site is stabilized. f. Pumped water shall be passed through a sediment settling device before returning to the stream channel. Velocity dissipation measures are required at the outfall to prevent erosion. When Required: Prior to approval of construction-related permit Initial Approval: Bureau of Planning; Bureau of Building Monitoring/Inspection: Public Works Department		

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	Schedule	**Responsibility**
SCA HYD-3 (SCA 56) Structures in a Flood Zone Requirement: The project shall be designed to ensure that new structures within a 100-year flood zone do not interfere with the flow of water or increase flooding. The project applicant shall submit plans and hydrological calculations for City review and approval with the construction-related drawings that show finished site grades and floor elevations elevated above the Base Flood Elevation (BFE). When Required: Prior to approval of construction-related permit Initial Approval: Bureau of Building Monitoring/Inspection: Bureau of Building		
SCA HYD-4 (SCA 57) Bay Conservation and Development Commission (BCDC) Approval Requirement: The project applicant shall obtain the necessary permit/approval, if required, from the Bay Conservation and Development Commission (BCDC) for work within BCDC's jurisdiction to address issues such as but not limited to shoreline public access and sea level rise. The project applicant shall submit evidence of the permit/approval to the City and comply with all requirements and conditions of the permit/approval. When Required: Prior to activity requiring permit/approval from BCDC Initial Approval: Approval by BCDC; evidence of approval submitted to Bureau of Planning Monitoring/Inspection: BCDC		

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Noise		
SCA NOI-1 (SCA 58) Construction Days/Hours Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours: a. 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. b. 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. c. 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. When Required: During construction Initial Approval: N/A Monitoring/Inspection: Public Works Department		

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SCA NOI-2 (SCA 59) Construction Noise Requirement: 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. When Required: During construction Initial Approval: N/A Monitoring/Inspection: Public Works Department		

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SCA NOI-3 (SCA 60) Extreme Construction Noise a. Construction Noise Management Plan Required Requirement: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), 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: i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings; ii. 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; iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site; iv. 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 v. Monitor the effectiveness of noise attenuation measures by taking noise measurements. When Required: Prior to approval of construction-related permit or Notice to Proceed Initial Approval: Bureau of Building Monitoring/Inspection: Public Works Department b. Public Notification Required Requirement: 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. When Required: During construction Initial Approval: Public Works Department Monitoring/Inspection: Public Works Department		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
SCA NOI-4 (SCA 64) Operational Noise Requirement: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City. When Required: Ongoing Initial Approval: N/A Monitoring/Inspection: Public Works Department		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Transportation and Circulation		
SCA TRA-1 (SCA 68) Construction Activity in the Public Right-of-Way a. Obstruction Permit Required Requirement: 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 and sidewalks. When Required: Prior to approval of construction-related permit Initial Approval: Bureau of Building Monitoring/Inspection: Public Works Department b. Traffic Control Plan Required Requirement: In the event of obstructions to vehicle or bicycle travel lanes, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian detours, including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The project applicant shall implement the approved Plan during construction. When Required: Prior to construction commencement in affected area Initial Approval: Public Works Department, Transportation Services Division Monitoring/Inspection: Public Works Department c. Repair of City Streets Requirement: 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. All damage that is a threat to public health or safety shall be repaired immediately. When Required: Prior to Notice of Completion Initial Approval: N/A Monitoring/Inspection: Public Works Department		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Utilities and Service Systems		
SCA UTI-1 (SCA 74) Construction and Demolition Waste Reduction and Recycling Requirement: The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center. When Required: Prior to approval of construction-related permit Initial Approval: Public Works Department, Environmental Services Division Monitoring/Inspection: Public Works Department, Environmental Services Division		
SCA UTI-2 (SCA 75) Underground Utilities Requirement: The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities. When Required: During construction Initial Approval: N/A Monitoring/Inspection: Public Works Department		

ATTACHMENT B

Criteria for Use of Addendum
Per CEQA Guidelines Sections 15162, 15164 And 15168

Section 15164(a) of the California Environmental Quality Act (CEQA) Guidelines states that "a lead agency or responsible agency shall prepare an addendum to a previously certified EIR [Environmental Impact Report] if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." Section 15164(e) states that "a brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR."

As discussed in detail in Section IV, Environmental Checklist of this document, the analysis in the Measure DD EIR is considered for this assessment under Sections 15162 and 15164.

Project Modifications

In November 2002, Oakland voters passed a $198,250,000 bond measure entitled Oakland Trust for Clean Water, Safe Parks (Measure DD). This bond measure authorizes funding for physical improvements to existing parks; acquisition of land for new parks; development of new parks and recreation facilities; clean water measures; restoration and rehabilitation of recreation buildings; and implementation of creek and waterway protection and restoration activities.

Measure DD authorizes the City to issue bonds that fund two types of activities or actions: those that would provide improved or new recreational opportunities for Oakland's citizens and those that would improve water quality at Lake Merritt and creeks located throughout Oakland. The components and activities funded by Measure DD are grouped as follows:

- Lake Merritt and Lake Merritt Channel Improvements (Group 1)
- Oakland Waterfront Trail and Access Improvements (Group 2)
- North and East Oakland Recreational Facilities (Group 3)
- City-wide Creeks Restoration, Preservation and Acquisition (Group 4)

The Measure DD EIR described and evaluated the components of the above-listed activities. In July 2007 the City of Oakland prepared the Measure DD Draft EIR and the Final EIR was certified in February 2008.

While a new bridge connecting Lake Merritt to the Oakland Estuary along the Lake Merritt Channel was not specifically described and evaluated as a specific project in the Measure DD EIR because it is a program-level document, the LM2BT project clearly fits within the Measure DD project objectives and as a component within the group of projects that were evaluated at a program level in the

Measure DD EIR. Specifically, the proposed LM2BT project would further the objectives of the Measure DD Project, as follows:

Lake Merritt and Lake Merritt Channel Improvements (Group 1)

- Connect the isolated southern shoreline of Lake Merritt with surrounding cultural, civic, and urban districts;
- Enhance the connection between Lake Merritt, the Lake Merritt Channel, and the Oakland Estuary;
- Improve bicycle and pedestrian safety and circulation;
- Provide safe public spaces; and
- Support the following objectives for parks and recreation as set forth in the OSCAR Element:
    - Maintain an urban park…system which provides open space for outdoor recreation, psychological and physical well-being, and relief from the urban environment;
    - Protect scenic views and improve visual quality;
    - Protect the ecology and promote the beneficial uses of Oakland's creeks, lakes, and near-shore waters; and
    - Improve personal safety and reduce crime in Oakland's parks.

Oakland Waterfront Trail and Access Improvements (Group 2)

- Support the following objectives for the waterfront as set forth in the Estuary Policy Plan:
    - Create a clear and continuous system of public access along the Estuary shoreline;
    - Develop opportunities for recreational activities that are oriented to the waterfront and serve identified neighborhood needs;
    - Improve and clarify regional access to Oakland's waterfront;
    - Improve pedestrian and bicycle circulation; and
- Support the following objectives for the parks, recreation and the waterfront as set forth in the Open Space, Conservation, and Recreation (OSCAR) Element:
    - Maintain an urban park…system which provides open space for outdoor recreation, psychological and physical well-being, and relief from the urban environment;
    - Develop a system of linear parks and trails which: (a) links existing parks together; (b) provides safe, convenient access to open space from residential areas and employment centers; (c) provides places to hike, bike, and experience Oakland's scenery; and (d) provides a means of moving from one place to another without an automobile; and
    - Increase physical and visual access to the Oakland shoreline and create new opportunities for shoreline recreation.

North and East Oakland Recreational Facilities (Group 3)

- Provide additional recreation facilities in East Oakland.

City-wide Creeks Restoration, Preservation and Acquisition (Group 4)

- Support the following objectives of the Oakland Creek Protection Ordinance:
  - Safeguard and preserve creeks and riparian corridors in a natural state;
  - Preserve and enhance creekside vegetation and wildlife;
  - Prevent activities that would contribute significantly to flooding, erosion or sedimentation, or that would destroy riparian areas or would inhibit their restoration;
  - Enhance recreational and beneficial uses of Creeks;
  - Control erosion and sedimentation;
  - Protect drainage facilities;
  - Protect the public health and safety, and public and private property; and
  - Protect and enhance the water quality of Oakland's watercourses, water bodies, and wetlands in a manner pursuant to and consistent with the federal Clean Water Act.

Overall, compared to the group of projects evaluated in the Measure DD EIR, the proposed project would not introduce different or additional land uses within the project area that were not contemplated in the Measure DD EIR, and would not result in a greater level of development than previously analyzed. The proposed project would represent a minor change in the Measure DD Project, and such changes were anticipated in the Measure DD EIR.

Conditions for Addendum

None of the following conditions for preparation of a subsequent EIR per Sections 15162(a) and 15168 apply to the proposed project:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

  (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

  (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

  (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or Mitigation measures or alternatives which are considerably different from those analyzed

in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Project Consistency with Sections 15162 and 15168 of the CEQA Guidelines

Since certification of the Measure DD EIR, including its subsequent addenda, no changes have occurred in the circumstances under which the proposed project would be implemented, that would change the severity of the proposed project's physical impacts, as explained in the CEQA Checklist in Section IV of this document. No new information has emerged that would materially change the analyses or conclusions set forth in the Final EIR.

Furthermore, as demonstrated in the CEQA Checklist, the proposed project would not result in any new significant environmental impacts, result in any substantial increases in the significance of previously identified effects, or necessitate implementation of additional or considerably different mitigation measures than those identified in the Measure DD EIR, nor render any mitigation measures or alternatives found not to be feasible, feasible. The effects of the proposed project would be substantially the same as those reported in the Measure DD EIR. The proposed project would not result in any new significant and unavoidable impacts that were not previously identified in the Measure DD EIR.

The analysis presented in this CEQA Checklist, combined with the prior Measure DD EIR analysis, demonstrates that the proposed project would not result in significant impacts that were not previously identified in the EIR. The proposed project would not result in a substantial increase in the significance of impacts, nor would the proposed project contribute considerably to cumulative effects that were not already accounted for in the certified Measure DD EIR. Overall, the proposed project's impacts are similar to those identified and discussed in the Measure DD EIR, as described in the CEQA Checklist, and the findings reached in the EIR are applicable.

ATTACHMENT C

Project Consistency with Community Plan or Zoning
Per CEQA Guidelines Section 15183

Section 15183(a) of the California Environmental Quality Act (CEQA) Guidelines states that "…projects which are consistent with the development density established by the existing zoning, community plan, or general plan policies for which an Environmental Impact Report (EIR) was certified shall not require additional environmental review, except as may be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site."

As discussed in detail in Section IV of this document, the analysis in the Measure DD EIR is considered the qualified planning level CEQA document for this assessment, pursuant to CEQA Guidelines Section 15183.

Proposed Project

The proposed project encompasses an area located along the southern portion of the Lake Merritt Channel, generally where the Channel meets the Oakland Estuary in the City of Oakland. The project site encompasses the eastern and western banks of the Channel beginning just north of the elevated I-880 overpass and extends south to the existing Embarcadero Bridge. The proposed project would construct an elevated pedestrian and bicycle path that would provide access from the Lake Merritt Channel to the new Embarcadero Bridge by the Oakland Estuary, closing the existing gap in the regional bicycle and pedestrian trail system between Lake Merritt trails and the San Francisco Bay Trail.

The proposed project would implement the 2002 Ballot Measure DD, the City of Oakland General Plan, the Estuary Plan, and the San Francisco Bay Trail Plan and would support adopted policy objectives to provide recreation improvements and safe public access to Lake Merritt, the Lake Merritt Channel, the Oakland Estuary and the San Francisco Bay.

Project Consistency

As determined by the City of Oakland Bureau of Planning, the proposed land uses are permitted in the zoning district in which the project is located, and is consistent with the bulk, density, and land uses envisioned for recreational access and use in the area. The project consists of a 100-foot tall bridge that would connect existing recreational facilities and is a permitted use within the area. The analyses of environmental effects that could be peculiar to the project but were not analyzed in the Measure DD EIR are evaluated in Chapter IV, Environmental Checklist of this Addendum. No significant impacts that were not already considered in the Measure DD EIR were identified. Therefore, the proposed project is eligible for consideration of an exemption under California Public Resources Code Section 21083.3, and Section 15183 of the CEQA Guidelines.

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ATTACHMENT D

Arborist Report

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ARBORIST REPORT

LAKE MERRITT TO BAY TRAIL - BICYCLE / PEDESTRIAN BRIDGE

CITY OF OAKLAND, ALAMEDA COUNTY, CALIFORNIA

Submitted to:

Gary Antonucci
Moffat and Nichol
1300 Clay Street, Suite 550
Oakland, California 94602

Prepared by:

LSA Associates, Inc.
157 Park Place
Pt. Richmond, California 94801
510.236.6810

Project No. MAN1202

LSA

November 17, 2015

TABLE OF CONTENTS

FIGURES

TABLES

INTRODUCTION

The proposed Lake Merritt to Bay Trail Bicycle and Pedestrian Bridge Project (LM2BT Bridge project or project) would construct a new pedestrian and bicycle path to connect the existing pathway on the east side of the Lake Merritt Channel (Channel) to the elevated Embarcadero Bridge. The elevated pathway would form an "S" curve along the proposed alignment. The new pathway would begin on the east side of the Channel, cross to the west side of the Channel and continue beneath the Interstate-880 (I-880) bridge overpass. The path would then cross back to the east side of the Channel where it would rise above the Union Pacific Railroad (UPRR) tracks and Embarcadero Road and curve around to terminate at the reconstructed Embarcadero Bridge. A total of 11 trees were surveyed within the limits of the Biological Study Area (BSA).

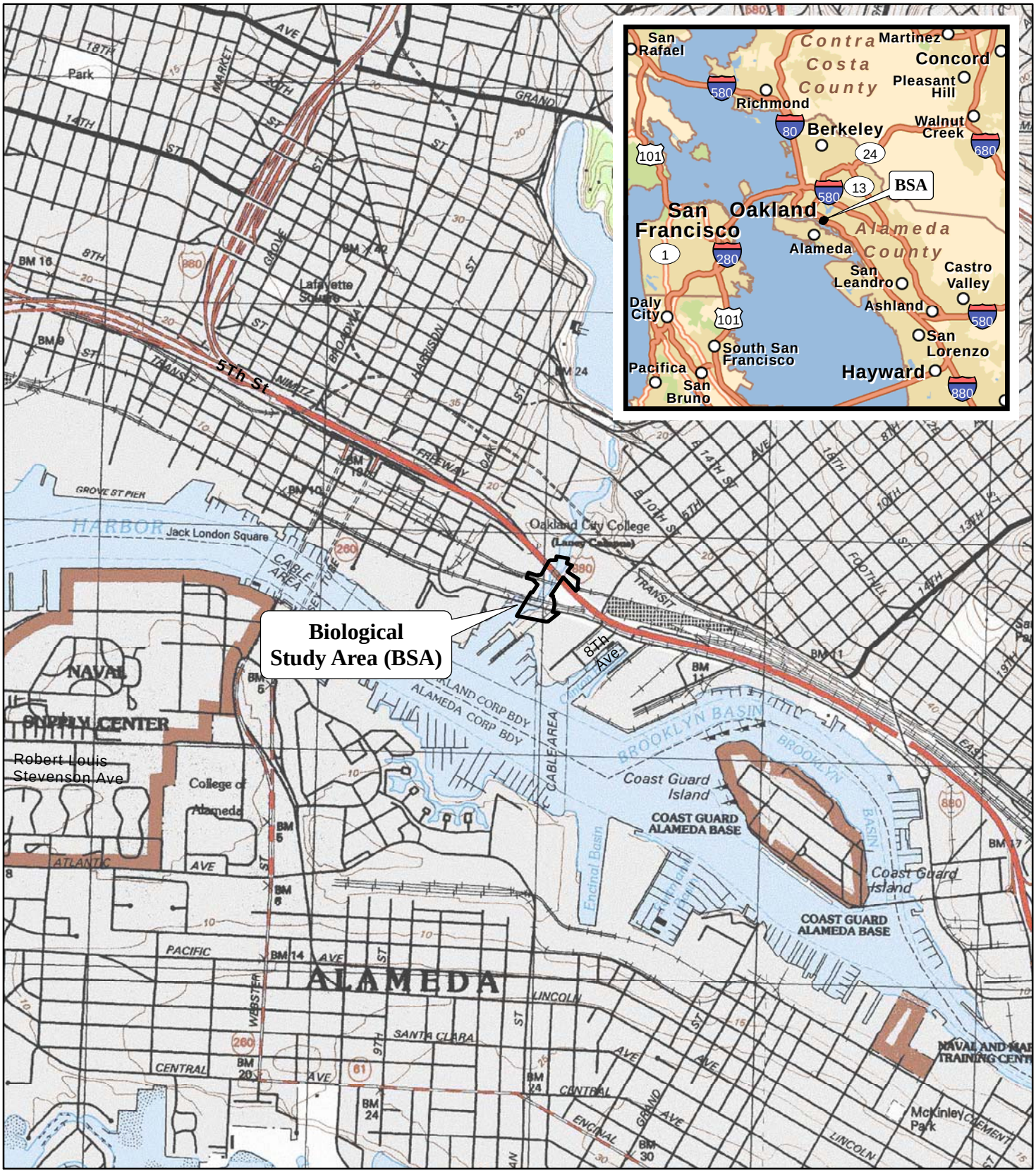
PROJECT LOCATION AND DESCRIPTION

The BSA is located on both sides of Channel between Embarcadero Road and East 8th Street in Oakland, Alameda County, California (Figure 1, 37.791595 -122.62655). Trees within the study area are mature to over-mature trees planted within institutional and park-like settings. Trees were surveyed on parcels owned by the City of Oakland (Estuary Park and Oakland Fire Department) and the Peralta Community College District (Lake Merritt Channel Park). Tree locations and numbers are shown on Figure 2.

REGULATORY CONTEXT

Local Permits. Title 12, Chapter 12.36 of the Oakland Municipal Code (Protected Trees Ordinance) requires that a permit be obtained prior to removing protected trees from either City-owned or private property. Protected trees are defined as follows:

- Any coast live oak (*Quercus agrifolia*) larger than 4 inches (in) diameter-at-breast-height (DBH).
- Any tree that is larger than 9 inches DBH, except eucalyptus (*Eucalyptus* sp.) trees or Monterey pines (*Pinus radiata*).
- Monterey pine trees are protected only on City property and in development-related situations where 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, or in development-related situations involving five or fewer trees per acre, public posting of such trees and written notice of proposed tree removal to the Office of Parks and Recreation is required per Section 12.36.070A and Section 12.36.080A.



LSA

FIGURE 1

0 1000 2000
FEET

SOURCE: USGS 7.5-minute Topo Quad - *Oakland West, Calif.* (1980).

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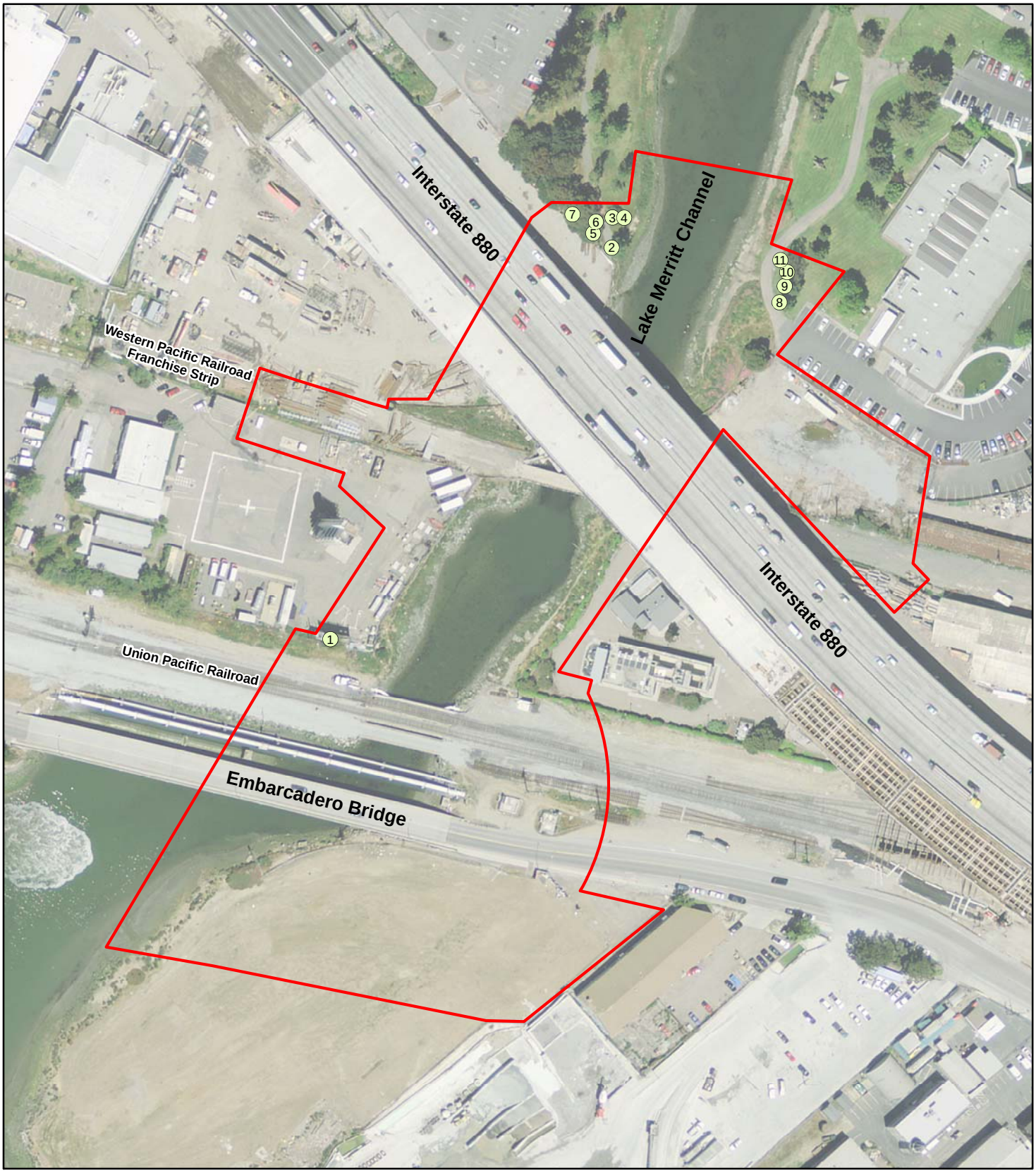
Lake Merritt to Bay Trail
Bicycle and Pedestrian Bridge Project
Oakland, Alameda County, California

Project Location



LSA

LEGEND

Biological Study Area

1 Tree

FIGURE 2

Lake Merritt to Bay Trail
Bicycle and Pedestrian Bridge Project
Oakland, Alameda County, California

Tree Map

N

0 75 150
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SOURCE: USGS Orthoimagery (04/2011).

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METHODS

On January 23, 2015, LSA's certified arborist Tim Milliken (WE5539A) surveyed trees within the BSA. All single-stemmed trees measuring 4 inches in diameter or greater at 4.5 feet above the natural grade, and multi-stemmed trees with the sum of the diameters measuring 10 inches or greater, were surveyed and assessed. The tree species, measurements, and condition were recorded in field notes. The position of each tree on the aerial photograph (Figure 2) was estimated based on present field conditions observed during the survey. Using the classification method in Oakland's tree ordinance, these trees were classified as protected or non-protected based on a combination of native status and/or DBH.

The tree survey consisted of the following six procedures:

1. Identify each live tree to species;
2. Mark the position of each tree on the tree map (Figure 2);
3. Measure the trunk diameter of each tree (including trees with multiple trunks) at a point 4.5 feet above the natural grade (DBH);
4. Measure the approximate radial extent of canopy drip line;
5. Evaluate the health and structural condition of each tree in accordance with the following classifications:
    - ***Good*** - A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species;
    - ***Fair*** - Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care;
    - ***Poor*** - Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated;
6. Determine whether the tree is a protected tree as defined by the City's tree ordinance.

RESULTS

A total of 11 trees were surveyed within the BSA.[1] The data for the trees is summarized in Table A and depicted on Figure 2. Table B contains the data on the trees surveyed within the study area including: tree identification number, species name (common and scientific), DBH, number of stems, removed or retained, overall condition, and protected status.

REMOVED TREES

Up to six trees, including one Fremont cottonwood (*Populus fremontii*), one Lombardy poplar (*Populus fremontii*), and four Monterey pine (*Pinus radiata*), may be removed as a result of Alternative A-East. Construction activities may impact one or more of these trees at the non-elevated trail segment of Alternative A-East where the trail terminates north of Interstate 880. The four Monterey pines are not considered protected trees under the City's tree ordinance, since less than five pines would be removed. The one Fremont cottonwood and one Lombardy poplar are considered protected trees.

Alternative A-West will not result in any impacts to protected or non-protected trees.

RETAINED TREES

The proposed project will retain the five other trees and possibly one or more of the six potentially removed trees within the study area. These trees include three protected trees: two blackwood acacia (*Acacia melanoxylon*) and one coast redwood (*Sequoia sempervirens*). The two other coast redwood trees are dead and therefore, are not considered protected.

[1] LSA's arborist made an incidental observation of portions of the project site on August 10, 2015, and noted that three western sycamore (*Platanus racemosa*) trees had been recently planted on a berm in an area north of I-880 on the southeastern bank of the Channel.

Table A: Number of Trees by Species, Protective Status, and Disposition at the Lake Merritt to Bay Trail BSA.

Species	No. of Trees by Species	No. of Protected Trees by Species	No. of Trees to be Removed	No. of Trees to be Retained
Blackwood acacia (*Acacia melanoxylon*)	2	2	0	2
Monterey pine (*Pinus radiata*)	4	0	0-4	0-4
Fremont cottonwood (*Populus fremontii*)	1	1	0-1	0-1
Lombardy poplar (*Populus nigra 'Italica'*)	1	1	0-1	0-1
Coast redwood (*Sequoia sempervirens*)	3	3	0	3
Total Trees	**11**	**7**	**0-6**	**5-11**

Table B: Data for Trees within the Lake Merritt to Bay Trail BSA.

Tree #	Common Name (*Species Name*)	DBH (inches)	Num. of stems	Remove or Retain	Condition	Status (Protected or Non-Protected)
1	Blackwood acacia (*Acacia melanoxylon*)	18	2	Retain	Good	Protected
2	Fremont cottonwood (*Populus fremontii*)	24	2	Remove?	Fair	Protected
3	Monterey pine (*Pinus radiata*)	18	1	Remove?	Fair	Non-protected
4	Lombardy poplar (*Populus nigra* 'Italica')	12	1	Remove?	Good	Protected
5	Monterey pine (*Pinus radiata*)	10	1	Remove?	Poor	Non-protected
6	Monterey pine (*Pinus radiata*)	18	1	Remove?	Poor	Non-protected
7	Monterey pine (*Pinus radiata*)	24	1	Remove?	Poor	Non-protected
8	Coast redwood (*Sequoia sempervirens*)	24	1	Retain	Dead	Non-protected
9	Coast redwood (*Sequoia sempervirens*)	24	1	Retain	Dead	Non-protected
10	Blackwood acacia (*Acacia melanoxylon*)	24	1	Retain	Good	Protected
11	Coast redwood (*Sequoia sempervirens*)	24	1	Retain	Good	Protected

CONCLUSIONS AND RECOMMENDATIONS

The Alternative A-East may require removal of two protected trees and four non-protected trees. The Alternative A-West will require the no removal of trees either protected or non-protected. The following standard recommendations should be adhered to if trees are within the construction vicinity and work areas.

TREE PROTECTION MEASURES

Tree Avoidance. The project design should avoid as many protected trees as feasible. The project design should consider placement of utility services and irrigation lines outside of avoided trees dripline when feasible. Preserved trees on the project site should be avoided during the construction phase by following best management practices as outlined in the following paragraphs.

Tree Maintenance during Construction Root Zones. Tree roots often extend far beyond the canopy dripline. Excavation work within the dripline of avoided trees shall be done with light equipment or by hand whenever possible to avoid tearing of large diameter roots. Root pruning should always be performed with a sharp blade taking care not to tear root tissue.

Tree Protection Fencing. Prior to the start of construction, Tree Protection Fencing (TPF) should be installed. The TPF should be maintained during the construction process to prevent direct damage to trees and their growing environment. The TPF should consist of blaze orange barrier fencing supported by metal "T rail" fence posts. The TPF should be placed at a distance that is at or outside of the drip lines of avoided trees to the extent feasible based on the limits of the area to be graded. The TPF should be installed as part of the site preparation before construction activities or tree removal/trimming begins and should be installed under the supervision of a qualified arborist. The TPF should not be altered in any way that would increase the encroachment on the avoided trees during construction activities.

Use of Heavy Equipment. Heavy machinery should not be allowed to operate (excavation, grading, drainage and leveling) or park within the dripline of avoided trees unless approved by a qualified arborist.

Storage of Construction Materials and Debris. Construction materials (e.g., gravel, aggregate, heavy equipment) or project debris and waste material should not be placed adjacent to or against the trunks of avoided trees. Disposal or depositing of oil, gasoline, chemicals or other harmful materials within the dripline or in drainage channels, swales or areas that may lead to the dripline is prohibited.

Monitoring. A certified arborist should be retained for periodic monitoring of the project site and the health of trees to be avoided. The certified arborist shall be present whenever activities that may pose a potential threat to the health of the trees to be avoided may occur.

Incidental Damage to Protected Trees. The attachment of wires, signs, and ropes to any protected tree is strictly prohibited.

Trimming. All pruning of any trees shall be performed by a licensed contractor familiar with International Society of Arboriculture pruning guidelines and shall comply with the guidelines established by the International Society of Arboriculture; Best Management Practices; Tree Pruning and any special conditions as determined by a certified arborist. A certified arborist shall coordinate all activities involving protected trees.

When pruning retained trees within the project area the following guidelines should be followed:

1. Although no specific branch or branches are recommended for removal from avoided trees, it is recommended that dead, crossed and/or malformed limbs be removed under the supervision of a certified arborist.
2. If the trimming of tree canopy is required to allow the movement of construction machinery, all branches to be removed should be pruned back to an appropriate sized lateral or to the trunk by following standard pruning guidelines.

SUMMARY

- A total of 11 trees were identified within the project study area.
- Five of the 11 surveyed trees are considered protected trees by the City's tree protection ordinance. Of these, one is a native coast redwood.
- Alternative A-East may remove up to six trees, including two trees that are considered protected trees by the City's ordinance. Alternative A-West would not result in the removal of any trees.
- Removal of the two trees protected by the City's tree protection ordinance (the Fremont cottonwood and Lombardy poplar) would require a tree removal permit from the City.

This arborist report was prepared by:
Tim Milliken
ISA Certified Arborist (WE5539A)

ATTACHMENT E

Request for Verification of Jurisdictional Delineation

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LSA ASSOCIATES, INC.
157 PARK PLACE
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510.236.3480 FAX
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CARLSBAD
FRESNO
IRVINE
PALM SPRINGS
RIVERSIDE
ROCKLIN
SAN LUIS OBISPO

July 30, 2015

Katerina Galacatos
South Branch Chief
U. S. Army Corps of Engineers
1455 Market Street, 16th Floor
San Francisco, CA 94103-1398

Subject: Request for Verification of Jurisdictional Delineation, Lake Merritt to Bay Trail Bicycle and Pedestrian Bridge Project, City of Oakland, Alameda County, California

Dear Katerina:

On behalf of Moffatt & Nichol and the City of Oakland, LSA Associates, Inc. (LSA) is requesting verification of the extent of U.S. Army Corps of Engineers (Corps) jurisdiction under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act on the Lake Merritt to Bay Trail Bicycle and Pedestrian Bridge Project Study Site, City of Oakland, Alameda County, California. This letter reports the results of a delineation performed by LSA of the potential extent of waters of the United States, including wetlands, on the study site.

SITE DESCRIPTION

The study site is located in the City of Oakland along both sides of the Lake Merritt Channel, spanning between the Embarcadero East and Interstate 880 crossings of the channel (Figures 1 and 2). The study site comprises portions of APN 18-430-1-8, -1-11, -1-12, -1-17; 18-440-11; 18-455-4-4, -9-2, -9-3, -10, -15-2, -16, -17, and -18 and has an area of approximately 8.83 acres. The site is located within unsectioned rancho lands, Townships 1 and 2 South, Range 4 West, on the Oakland West, California, 7.5 minute USGS quadrangle, centered at approximately 37.793° N latitude and 122.262° W longitude.

The study site is centered on the Lake Merritt Channel and extends for approximately 1,000 feet from 200 feet downstream of Embarcadero East to approximately 200 feet upstream from Interstate 880. Within the study site, the channel is crossed by Embarcadero East, two elevated pipelines, one active and one abandoned Union Pacific railroad bridges, an additional elevated pipeline, an additional abandoned railroad bridge, and 12 lanes of Interstate 880. The lands abutting the channel comprise imported or dredged fill. Some of the channel banks are steep rip-rap, some are partially vegetated fill soils, and some have been recently restored to a more gentle slope and planted with native brackish marsh species. Site elevations range from sea level to approximately 10 feet above mean sea level. Land uses surrounding the study site include the Jack London Aquatic Center, an Oakland fire department training facility, Laney College and Peralta Community College facilities, industrial storage areas, parkland, and paved multi-use trails parallel to a reach of the channel.

Vegetation in the tidal edges of the Lake Merritt Channel includes pickleweed (*Salicornia pacifica*), fleshy jaumea (*Jaumea carnosa*), marsh gumplant (*Grindelia stricta*), and saltgrass (*Distichlis spicata*). Vegetation on the portions of the study site away from the channel includes Italian rye (*Festuca perennis*), hare barley (*Hordeum murinum* ssp. *leporinum*), ripgut brome (*Bromus diandrus*), wild oats (*Avena* spp.), annual fescue (*Festuca* sp.), harding grass (*Phalaris aquatica*), common mallow (*Malva neglecta*), and bur clover (*Medicago polymorpha*). Site trees include blackwood acacia (*Acacia melanoxylon*), Monterey pine (*Pinus radicata*), Lombardy poplar (*Populus nigra* "Italica'), Fremont cottonwood (*Populus fremontii*), and coast redwood (*Sequoia sempervirens*).

Soils on the study site are mapped only as Urban Land and Water.[1] Urban Land is not listed as hydric. The portions of the Merritt Lake Channel bank within the tidal range are by definition hydric.

The study site drains into the Merritt Lake Channel, a tidal traditional navigable water of the United States. Merritt Lake Channel drains to Alameda Bay, a subdivision of San Francisco Bay, approximately 500 feet west of the study site.

REGULATORY BACKGROUND

Clean Water Act Jurisdiction

The Corps is responsible under Section 404 of the Clean Water Act (CWA) to regulate the discharge of fill material into waters of the United States. Waters of the United States and their lateral limits are defined in 33 CFR Part 328.3 (a) and include streams that are tributaries to navigable waters and their adjacent wetlands. The lateral limits of jurisdiction for a non-tidal stream are measured at the line of the Ordinary High Water Mark (OHWM) or the limit of adjacent wetlands. Any permanent extension of the limits of an existing water of the United States, whether natural or man-made, results in a similar extension of Corps jurisdiction.

Waters of the United States fall into two categories: wetlands and non-wetland waters. Wetlands include marshes, meadows, seep areas, floodplains, basins, and other areas experiencing extended seasonal soil saturation and dominated by wetland plant cover. Non-wetland waters include water bodies and watercourses such as rivers, streams, lakes, springs, ponds, coastal waters, and estuaries.

Waters and wetlands that cannot trace a continuous hydrological connection to a navigable water of the United States are not tributary to waters of the United States. These are termed "isolated wetlands." Isolated wetlands are jurisdictional when their destruction or degradation can affect interstate or foreign commerce.

In general, a Corps permit must be obtained before placing fill in wetlands or other waters of the United States. The type of permit depends on the acreage involved and the purpose of the proposed fill.

[1] Web Soil Survey. Available at http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx, accessed 14 May 2015.

Rivers and Harbors Act Jurisdiction

The Corps administers Section 10 of the Rivers and Harbors Act, which prohibits "the unauthorized obstruction or alteration of any navigable water of the United States." Obstruction or alteration includes construction either in or over a navigable water, excavation or deposition of material, or any other work affecting the course, location, condition or capacity of such waters.

Section 10 jurisdiction extends shoreward to the line of Mean Higher Water (MHW), and includes areas behind dikes that are below the MHW line and which were likely below MHW when Section 10 was adopted as law in 1899. Areas that have been filled to elevations above MHW are not subject to Section 10 jurisdiction, provided that the filling was carried out under a Corps permit.

METHODS

The field investigations of potentially jurisdictional wetlands occurring on the study site were conducted using the routine determination method given in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the revised procedures in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (Arid West Supplement) (U.S. Army Corps of Engineers 2008). This methodology entails examination of specific sample points within potential wetlands for hydrophytic vegetation, hydric soils, and wetland hydrology. By the federal definition, all three parameters must be present for an area to be considered a wetland.

Hydrophytic plant species are listed by the U.S. Fish and Wildlife Service in *National List of Plant Species That Occur in Wetlands* (Reed 1988). The *National List* identifies five categories of plants according to their frequency of occurrence in wetlands. The categories are:

Obligate wetland plants (OBL)	Plants that occur almost always in wetlands
Facultative wetland plants (FACW)	Plants that usually occur in wetlands
Facultative plants (FAC)	Plants that are equally likely to occur in wetlands or non-wetlands
Facultative upland plants (FACU)	Plants that usually occur in uplands
Obligate upland plants (UPL)	Plants that occur almost always in non-wetlands

An area is generally considered to have hydrophytic vegetation when more than 50 percent of the dominant species in each stratum (tree, shrub, and herb) are in the obligate wetland, facultative wetland, or facultative categories.

Hydric soils are defined by criteria set forth by the National Technical Committee for Hydric Soils (NTCHS). These criteria are given in the *Wetlands Delineation Manual* and are based on depth and duration of soil saturation. Hydric soils are commonly identified in the field by using indirect indicators of saturated soil, technically known as redoximorphic features. These features are caused by anaerobic, reduced soil conditions that are brought about by prolonged soil saturation. The most common redoximorphic features are distinguished by soil color, which is strongly influenced by the frequency and duration of soil saturation. Hydric soils tend to have dark (low chroma) colors which are often accompanied by reddish mottles (iron mottles), reddish stains on root channels (oxidized

rhizospheres), or gray colors (gleying). The Arid West Supplement contains descriptions of numerous federally-recognized hydric soil indicators.

Under natural conditions, development of hydrophytic vegetation and hydric soils are dependent on a third characteristic, wetland hydrology. This criterion is met if the area experiences inundation or soil saturation to the surface for a period equal to at least five (5) percent of the growing season (about 14 days in the region of the study site) in a year of median rainfall. In most cases, this criterion can only be measured directly by monitoring of the site through an entire wet season. In practice, the hydrological status of a particular area is usually evaluated using indirect indicators. Some of the indicators that are commonly used to identify wetland hydrology include biotic crusts and oxidized rhizospheres around roots. The Arid West Supplement gives thorough descriptions of numerous federally-recognized indicators of wetland hydrology.

FIELD METHODS

LSA soil scientist Chip Bouril investigated the site on May 15, 2015. The last significant rainfall occurred in April.

Wetland boundaries and sample point locations were mapped using a global position system (GPS) receiver with sub-meter accuracy. Wetland boundaries were determined by following a combination of the limits of hydrophytic vegetation, the limits of observed wetland hydrology, topographic breaks, and aerial ortho-photo interpretation.

LSA established 5 sample points on the study site. Their locations are shown on Figure 3.

OBSERVATIONS

Section 404 Other Waters of the United States

The open, fully tidal waters of the Lake Merritt Channel are delineated as an Other Water of the United States. On most of the banks of the channel, this jurisdiction extends to the channel bank elevation where brackish marsh vegetation begins (at the approximate Mean High Water elevation). Along non-vegetated reaches of the bank such as bridge abutments and rip-rap, the Other Waters jurisdiction extends up to the elevation of Higher High Water. The portion of the Lake Merritt Channel delineated as an Other Water of the United States has a potential jurisdictional area of approximately 117,020 sq. ft. (2.69 acres).

Section 404 Wetlands

Many of the banks of the Lake Merritt Channel within the study site are vegetated with hydrophytic brackish marsh species as described previously. In addition to this vegetation within the channel's tidal range, at some locations the hydrophytic vegetation extends higher up the bank than the Higher High Water elevation.

Sample Point 2 was placed within the tidal range along the vegetated bank of the channel to document typical characteristics. Pickleweed occurred in the middle to upper tidal range and marsh gumplant occurred at the upper edge of tidal influence. While the soil, disturbed sandy fill, did not show any

redoximorphic mottling, both hydric soil and wetland hydrology criteria were met by the evidence of tidal inundation and therefore soil saturation earlier in the day.

Sample Point 3 was placed on a bench within the tidal range along a reach of the channel bank that had recently been graded and planted as part of a restoration project. The planted vegetation, pickleweed and salt grass, meets hydrophytic vegetation criteria and is thriving. Similar to conditions at Sample Point 2, this location also receives daily tidal inundation and thus meets jurisdictional hydric soil and wetland hydrology criteria. Sample Point 4, above the Higher High Water elevation, is predominantly vegetated with ruderal non-hydrophytic species and fails to meet jurisdictional wetland criteria.

The portion of the banks of the Lake Merritt Channel vegetated with hydrophytic vegetation are delineated as wetlands with a total potential jurisdictional area of approximately 21,700 sq. ft. (0.50 acres).

Section 10 Rivers and Harbors Act Jurisdiction

The MHW elevation, the extent of Rivers and Harbors Act jurisdiction at the project site, is mapped as the boundary between the vegetated channel banks and the unvegetated mud flats exposed at low tides along the edges of the Lake Merritt Channel. The area of the Lake Merritt Channel potentially jurisdictional under Section 10 is approximately 116,160 sq. ft. (2.67 acres).

All other areas of the study site are above the elevation of MHW and are therefore not subject to Section 10 jurisdiction.

Other Observations

Sample Point 1 was placed in a shallow, ephemerally puddled, depression within a recently graded flat area paved with an aggregate base. Although its dominant plant cover of English plantain meets hydrophytic vegetation criteria, no wetland hydrology or hydric soil indicators were observed.

Sample Point 5 was placed at a top of bank location under a canopy of a Fremont cottonwood. Other than the cottonwood and salt grass, none of the dominant vegetation species are hydrophytic. There were no indicators of hydric soil or wetland hydrology.

A parking and materials storage area southeast of Sample Point 4 contained tire ruts in a shallow ephemerally puddled area, but is incidental to ongoing commercial use and is non-jurisdictional.

Other than these areas described, no other evidence of potential waters of the United States was observed on the site outside the Lake Merritt Channel.

CONCLUSIONS

Potential Clean Water Act Section 404 jurisdictional features identified on the Lake Merritt to Bay Trail Bicycle and Pedestrian Bridge Project Study Site comprise Other Waters of the United States in the Lake Merritt Channel with a jurisdictional area of 2.69 acres and wetlands along the banks of the Lake Merritt Channel with a jurisdictional area of 0.50 acre, for a total potential jurisdictional area of 3.19 acres.

Potential Rivers and Harbors Act Section 10 jurisdiction identified on the Lake Merritt to Bay Trail Bicycle and Pedestrian Bridge Project Study Site comprise the portion of the Lake Merritt Channel below mean high water elevation with a jurisdictional area of 2.67 acres.

Potential jurisdictional features, project site boundaries, and sample point locations are mapped on Figure 3, which is attached.

The findings and conclusions presented in this report, including the location and extent of other waters subject to regulatory jurisdiction, represent the professional opinion of LSA. These findings and conclusions should be considered preliminary until verified by the Corps.

Please contact me or Dan Sidle at (510) 236-6810 to schedule a verification visit.

Sincerely,

LSA ASSOCIATES, INC.

CHIP BOURIL

Chip Bouril
Wetland Scientist

Attachments: Figure 1: Regional Location Map
Figure 2: Site Location Map
Figure 3: Delineation Map
Data Sheets 1 through 5

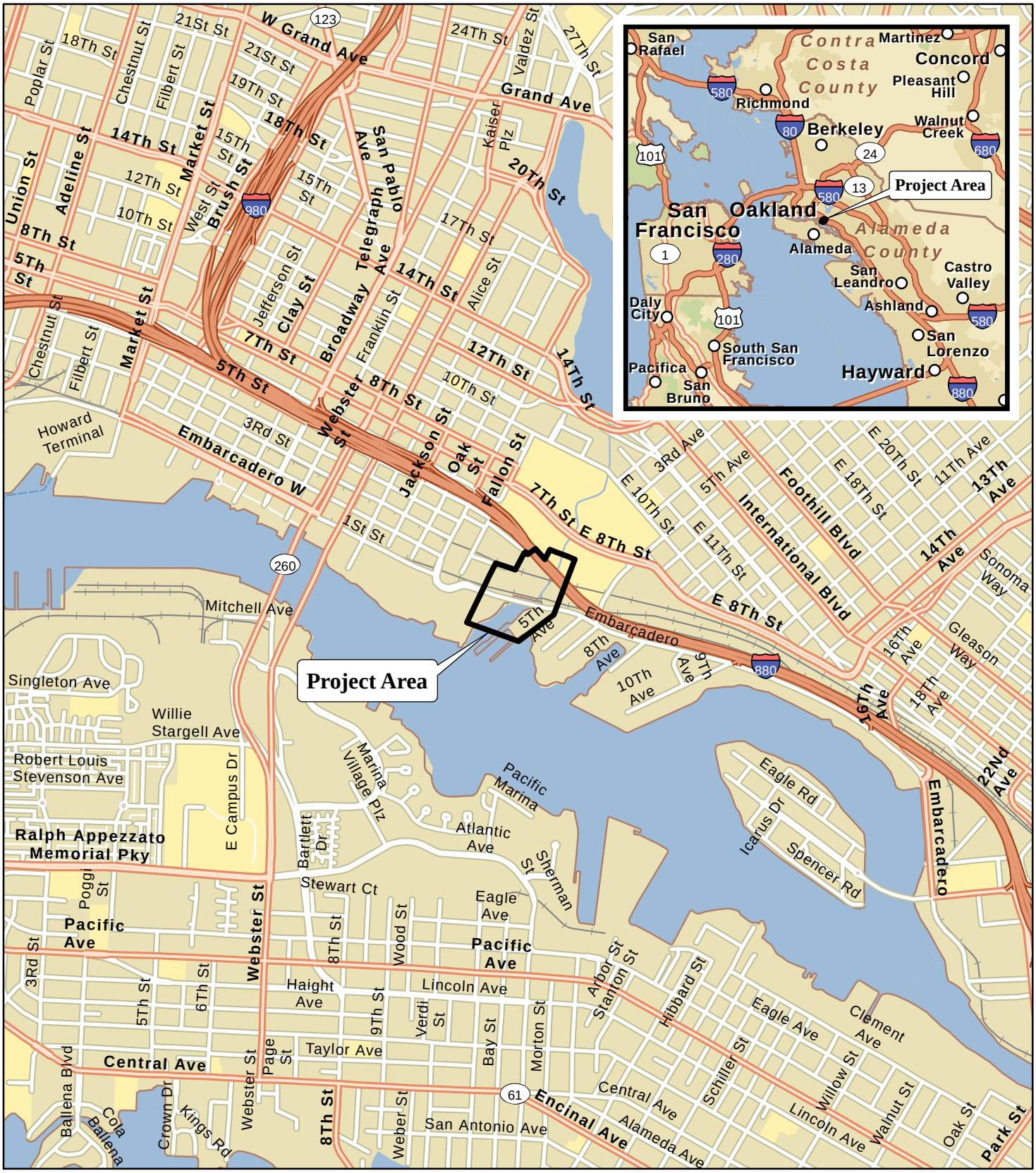
cc: Gary Antonucci, Moffatt & Nichol

REFERENCES

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical report Y-87-1, U.S. Army Engineers Waterways Experiment Station, Vicksburg, Mississippi.

Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2014. The National Wetland Plant List: 2014 Update of Wetland Ratings. Phytoneuron 2014-41: 1–42. Published 2 April 2014. ISSN 2153 733X. Available at: http://www.phytoneuron.net/2014Phytoneuron/41PhytoN-2014NWPLupdate.pdf

U. S. Army Corps of Engineers (Corps). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U. S. Army Engineer Research and Development Center.



LSA

FIGURE 1

Bay Trail to Lake Merritt Bicycle Pedestrian Bridge Project
Oakland, Alameda County, California

Regional Location

SOURCE: ESRI StreetMap North America (2012)

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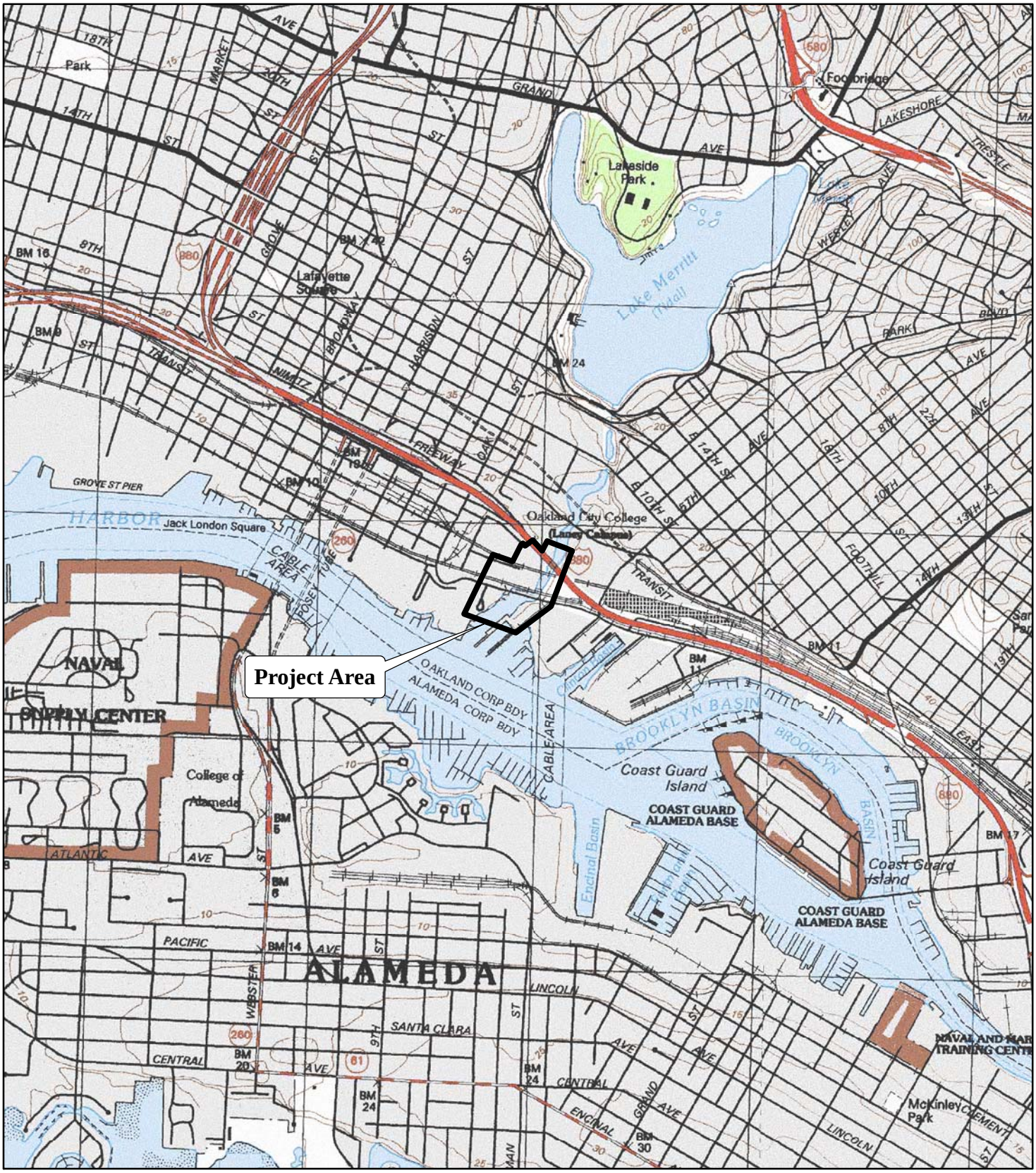

LSA

FIGURE 2

N

0 1000 2000

FEET

Bay Trail to Lake Merritt Bicycle Pedestrian Bridge Project
Oakland, Alameda County, California

Project Area

SOURCE: USGS 7.5-minute Topo Quads - *Oakland West, Calif.* (1980) and *Oakland East, Calif.* (1980).

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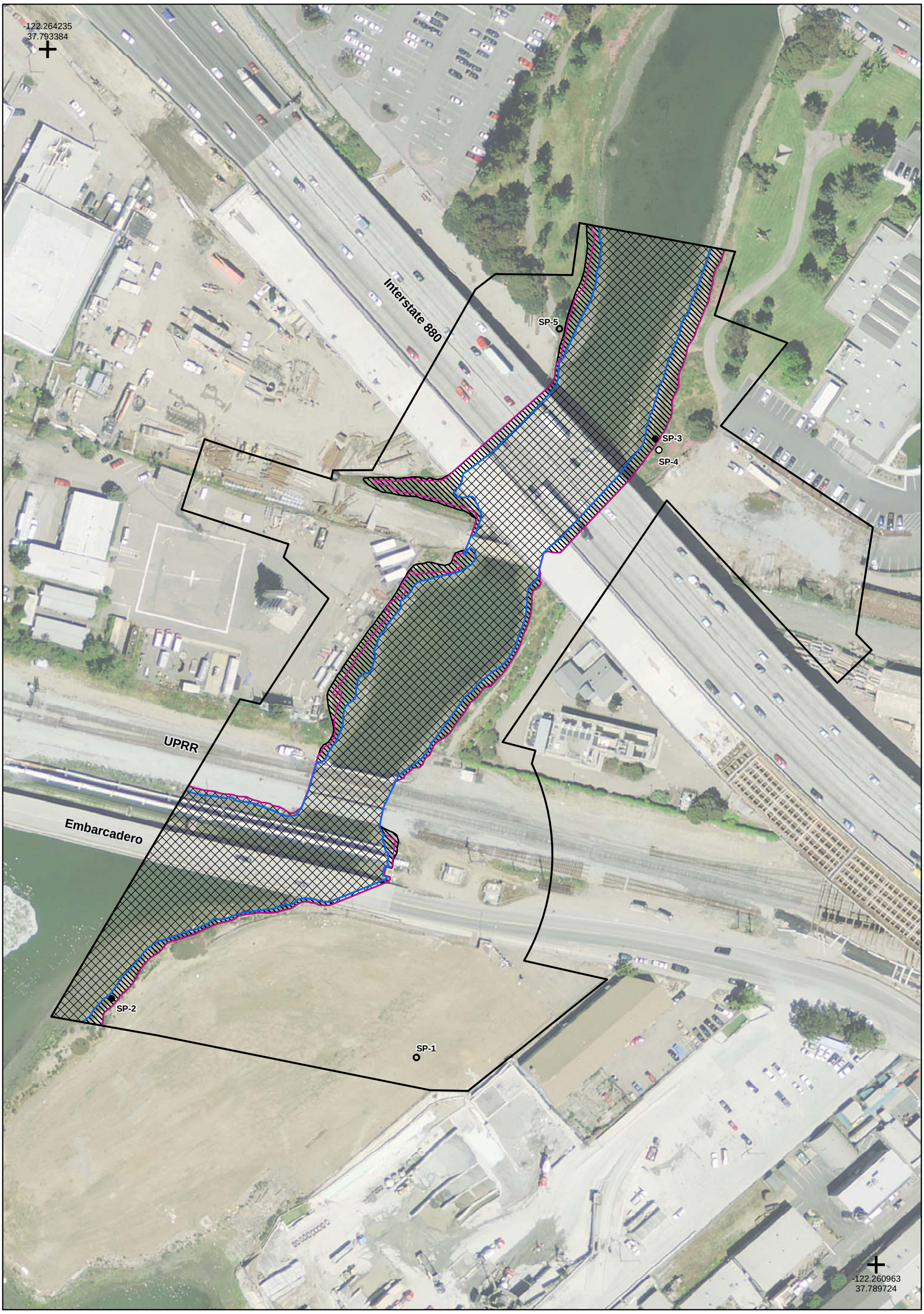


LSA

LEGEND

- Delineation Study Area
- Mean High Water (Section 10)
- Higher High Water
- Wetland Sample Point
- Non-wetland Sample Point

POTENTIAL WATERS OF THE UNITED STATES

- Wetland
- Other Waters

1 inch = 100 feet

0 50 100
FEET

SOURCE: USGS Orthoimagery (04/2011).

I:\MAN1202\GIS\Maps\Delineation\Figure 3_Potential Waters of the US.mxd (11/6/2015)

FIGURE 3

Bay Trail to Lake Merritt
Bicycle/Pedestrian Bridge Project
Oakland, Alameda County, California

Potential Waters of the United States

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: Lake Merritt to Bay Trail Bicycle and Pedestrian Bridge Project City/County: Oakland/Alameda Sampling Date: 15 May 2015

Applicant/Owner: Moffat &Nichol State: CA Sampling Point: 1

Investigator(s): C. Bouril Section, Township, Range: Unsectioned, T1S, T2S, R4W, Oakland West Q

Landform (hillslope, terrace, etc.): FLAT Local relief (concave, convex, none): _____ Slope (%): <2

Subregion (LRR): LRR C Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Urban Land (146), Water (162) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____ Soil _____ or Hydrology _____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.

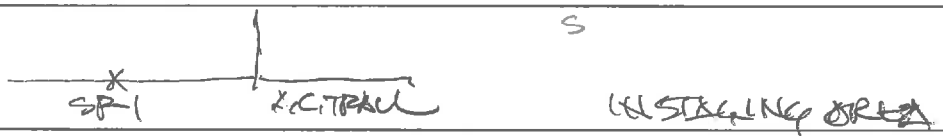
Hydrophytic Vegetation Present? Yes X No _____

Hydric Soil Present? Yes _____ No X

Wetland Hydrology Present? Yes _____ No X

Is the Sampled Area within a Wetland? Yes _____ No X

Remarks:



VEGETATION

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: _____)			
1. PLANTAGO LANCEOLATA	10	X	FAC
2. BACCHARIS PILULARIS	<5		UPL
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____.

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

— Dominance Test is >50%
— Prevalence Index is ≤3.0[1]
— Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)
— Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____.

Remarks:

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR4/3		—				GR	ROAD BASE

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5) (LRR C)
- ____ 1 cm Muck (A9) (LRR D)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matrix F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)
- ____ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ____ 1 cm Muck (A9) (LRR C)
- ____ 2 cm Muck (A10) (LRR B)
- ____ Reduced Vertic (F18)
- ____ Red Parent Material (TF2)
- ____ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ____

Depth (inches): ____

Hydric Soil Present? Yes ____ No X

Remarks:

NO INDICATORS

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1) (**Nonriverine**)
- ____ Sediment Deposits (B2) (**Nonriverine**)
- ____ Drift Deposits (B3) (**Nonriverine**)
- ____ Surface Soil Cracks (B6)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Water-Stained Leaves (B9)
- ____ Salt Crust (B11)
- ____ Biotic Crust (B12)
- ____ Aquatic Invertebrates (B13)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres along Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Plowed Soils (C5)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ____ Water Marks (B1) (**Riverine**)
- ____ Sediment Deposits (B2) (**Riverine**)
- ____ Drift Deposits (B3) (**Riverine**)
- ____ Drainage Patterns (B10)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Shallow Aquitard (D3)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VERY LOCALIZED SFC. STAIN / TRACE ALLUVIAL PONDING, NOT INDICATOR

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: Lake Merritt to Bay Trail Bicycle and Pedestrian Bridge Project City/County: Oakland/Alameda Sampling Date: 15 May 2015

Applicant/Owner: Moffat &Nichol State: CA Sampling Point: 2

Investigator(s): C. Bouril Section, Township, Range: Unsectioned, T1S, T2S, R4W, Oakland West Q

Landform (hillslope, terrace, etc.): BANK Local relief (concave, convex, none): _____ Slope (%): 10-30

Subregion (LRR): LRR C Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Urban Land (146), Water (162) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____ Soil _____ or Hydrology _____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____

Hydric Soil Present? Yes X No _____

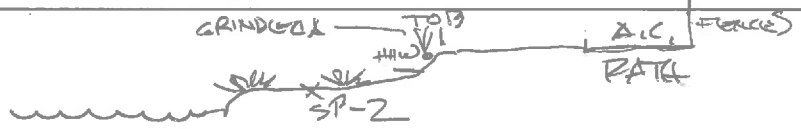
Wetland Hydrology Present? Yes X No _____

Is the Sampled Area within a Wetland? Yes X No _____

Remarks:

N

INTIDE ZONE



VEGETATION

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: 10' D)			
1. SALICORNIA PACIFICA	25	X	OBL
2. GRINDELIA STRICTA	10	X	FACW
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____.

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

— Dominance Test is >50%
— Prevalence Index is ≤3.0[1]
— Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)
— Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____.

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR4/3						FS	
1-1½	7.5YR4/3						LS	
1½-10	10YR4/3-5/3						COS	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

IN TIDE RANGE = DAILY INUNDATION

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C5)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

IN TIDE ZONE = DAILY INUNDATION

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: Lake Merritt to Bay Trail Bicycle and Pedestrian Bridge Project City/County: Oakland/Alameda Sampling Date: 15 May 2015

Applicant/Owner: Moffat &Nichol State: CA Sampling Point: 3

Investigator(s): C. Bouril Section, Township, Range: Unsectioned, T1S, T2S, R4W, Oakland West Q

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): <5

Subregion (LRR): LRR C Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Urban Land (146), Water (162) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____ Soil _____ or Hydrology _____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.

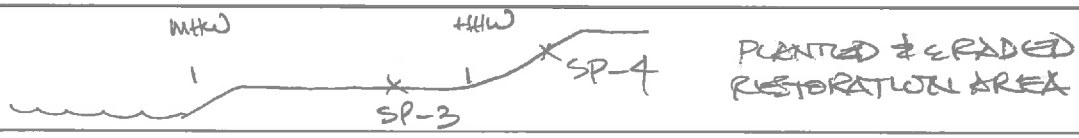
Hydrophytic Vegetation Present? Yes X No _____

Hydric Soil Present? Yes X No _____

Wetland Hydrology Present? Yes X No _____

Is the Sampled Area within a Wetland? Yes X No _____

Remarks:



VEGETATION

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: _____			
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
Total Cover: _____			
Herb Stratum (Plot size: _____)			
1. SALICORNIA PACIFICA PLANTED	10	X	OBL
2. DISTICHLIS SPICATA PLANTED	10	X	FAC
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover: _____			
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
Total Cover: _____			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____.

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

— Dominance Test is >50%
— Prevalence Index is ≤3.0[1]
— Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)
— Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____.

Remarks:

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5) (LRR C)
- ____ 1 cm Muck (A9) (LRR D)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matrix F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)
- ____ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ____ 1 cm Muck (A9) (LRR C)
- ____ 2 cm Muck (A10) (LRR B)
- ____ Reduced Vertic (F18)
- ____ Red Parent Material (TF2)
- ____ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks: NO SOIL PIT BECAUSE RESTORATIONAL PLANTING LOCATION IS BELOW HHW, ∴ HYDRIC

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1) (**Nonriverine**)
- ____ Sediment Deposits (B2) (**Nonriverine**)
- ____ Drift Deposits (B3) (**Nonriverine**)
- ____ Surface Soil Cracks (B6)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Water-Stained Leaves (B9)
- ____ Salt Crust (B11)
- ____ Biotic Crust (B12)
- ____ Aquatic Invertebrates (B13)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres along Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Plowed Soils (C5)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ____ Water Marks (B1) (**Riverine**)
- ____ Sediment Deposits (B2) (**Riverine**)
- ____ Drift Deposits (B3) (**Riverine**)
- ____ Drainage Patterns (B10)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Shallow Aquitard (D3)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No ? Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: DAILY TIDAL INUNDATION, ∴ DAILY SATURATION

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: Lake Merritt to Bay Trail Bicycle and Pedestrian Bridge Project City/County: Oakland/Alameda Sampling Date: 15 May 2015

Applicant/Owner: Moffat &Nichol State: CA Sampling Point: 4

Investigator(s): C. Bouril Section, Township, Range: Unsectioned, T1S, T2S, R4W, Oakland West Q

Landform (hillslope, terrace, etc.): SLOPE Local relief (concave, convex, none): ? Slope (%): 40+

Subregion (LRR): LRR C Lat: Long: Datum:

Soil Map Unit Name: Urban Land (146), Water (162) NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation ____ Soil ____ or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____ Soil ____ or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X

Hydric Soil Present? Yes ____ No X

Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:

VEGETATION

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: ____)			
1. AVENA SP.	15	X	UPL
2. GRINDELIA STRICTA	10		FACW
3. HORDEUM MURINUM	15	X	FACU
4. BROMUS DIANDRUS	15	X	UPL
5. FESTUCA PERENNIS	15	X	FAC
6. PHALARIS AQUATICA	15	X	FACU
7. FOENICULUM VULGARE	5		UPL
8. POLYPOGON MONSPELIENSIS	10		FACW
Total Cover: 100			
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____.

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	—	x 1 =	
FACW species	20	x 2 =	40
FAC species	15	x 3 =	45
FACU species	30	x 4 =	120
UPL species	35	x 5 =	175
Column Totals:	100 (A)		380 (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:

— Dominance Test is >50%

— Prevalence Index is ≤3.0[1]

— Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)

— Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR4/1		—				L	
6-10	7.5YR4/3		7.5YR4/4	30				
	~10YR5/4							

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ___ No X

Remarks: SOIL APPEARS TO BE RECENT FILL: ORGANIC TOPSOIL OVER SAND SUBSOIL
CURRENT ANOXIC CONDITIONS UNLIKELY

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C5)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ~1/4 Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: NO INDICATORS

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: Lake Merritt to Bay Trail Bicycle and Pedestrian Bridge Project City/County: Oakland/Alameda Sampling Date: 15 May 2015

Applicant/Owner: Moffat &Nichol State: CA Sampling Point: 5

Investigator(s): C. Bouril Section, Township, Range: Unsectioned, T1S, T2S, R4W, Oakland West Q

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): 5

Subregion (LRR): LRR C Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Urban Land (146), Water (162) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____ Soil _____ or Hydrology _____ Significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____ Soil _____ or Hydrology _____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.

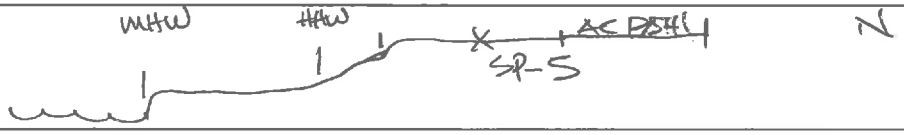
Hydrophytic Vegetation Present? Yes _____ No X

Hydric Soil Present? Yes _____ No X

Wetland Hydrology Present? Yes _____ No X

Is the Sampled Area within a Wetland? Yes _____ No X

Remarks:



VEGETATION

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. POPULUS FREMONTII	30	X	FAC
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: _____)			
1. MEDICAGO POLYMORPHA	20	X	FACU
2. AVENA SP.	10		UPL
3. BROMUS DIANDRUS	20	X	UPL
4. FESTUCA PERENNIS	10		FAC
5. MALVA NEGLECTA	20	X	UPL
6. DISTICHLIS SPICATA	20	X	FAC
7.			
8.			
Total Cover:			
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = >3

Hydrophytic Vegetation Indicators:

— Dominance Test is >50%

— Prevalence Index is ≤3.0[1]

— Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet)

— Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-5	10YR3/2		—				L	
5-6+	"		—				GRVLS	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5) (LRR C)
- ____ 1 cm Muck (A9) (LRR D)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matrix F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)
- ____ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ____ 1 cm Muck (A9) (LRR C)
- ____ 2 cm Muck (A10) (LRR B)
- ____ Reduced Vertic (F18)
- ____ Red Parent Material (TF2)
- ____ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ____

Depth (inches): ____

Hydric Soil Present? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1) (**Nonriverine**)
- ____ Sediment Deposits (B2) (**Nonriverine**)
- ____ Drift Deposits (B3) (**Nonriverine**)
- ____ Surface Soil Cracks (B6)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Water-Stained Leaves (B9)
- ____ Salt Crust (B11)
- ____ Biotic Crust (B12)
- ____ Aquatic Invertebrates (B13)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres along Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Plowed Soils (C5)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ____ Water Marks (B1) (**Riverine**)
- ____ Sediment Deposits (B2) (**Riverine**)
- ____ Drift Deposits (B3) (**Riverine**)
- ____ Drainage Patterns (B10)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Shallow Aquitard (D3)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: NO HYD