SupplyBank.org Project at Oakport

CEQA Analysis/Addendum

June 2023

Prepared for:

City of Oakland
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Project Information

1. Project Title:	SupplyBank.org at Oakport Project #PLN19-070
2. Lead Agency Name and Address:	City of Oakland Planning & Building Department, Bureau of Planning 250 Frank Ogawa Plaza, Suite 2114 Oakland, CA 94612
3. Case Planner:	Richard Walker, Contract City Planner rwalker@interwestgrp.com
4. Project Location:	5601 Oakport Street Oakland, CA Assessor's Parcel Numbers 41-3904-1-5, 41-3903-2-7 and 41-3903-2-8
5. Owner:	East Bay Municipal Utility District (EBMUD)
6. Project Sponsor:	K to College, dba SupplyBank.org Benito Delgado-Olson (510) 967-8978
6. Existing General Plan Designation:	Business Mix
7. Existing Zoning:	Coliseum District 6 (D-CO-6)
8. Requested Permits:	Conditional Use Permit (CUP) for a project over 100,000 sf in the D-CO zone CUP for Civic Extensive Impact Use (EBMUD corporation yard) Design Review Tree Removal Permit Creek Permit Parcel Map Waiver Master Sign Permit The Project will also require subsequent approvals from the following additional agencies: Final long-term lease agreement from EBMUD to SupplyBank.org Development Permit from BCDC for construction within the 100-foot shoreline band Approvals from the San Francisco Bay Regional Water Quality Control Board (RWQCB) pursuant to the Clean Water Act for fill of 'Waters of the State' Other administrative approvals from agencies and utility providers such as EBMUD and PG&E

I - Executive Summary

This CEQA Analysis document provides the required environmental review of the proposed SupplyBank.org development project at 5601 Oakport Street (the Project) at Assessor's Parcel #s 41-3904-1-05, 41-3903-2-07 and 41-3903-2-08, pursuant to the California Environmental Quality Act (CEQA). The intent of this document is to determine whether the Project's effects were adequately examined in an earlier EIR prepared for a community plan, general plan or zoning action, pursuant to CEQA Guidelines Section 15183. The intent of this document is also to determine if the Project qualifies for CEQA streamlining and/or tiering provisions of CEQA Guidelines Section 15168, and to determine whether the additional details as now represented by the Project qualify for an Addendum to a previously prepared EIR pursuant to CEQA Guidelines Section 15164.

The Project site is located within Sub-Area E of the Coliseum Area Specific Plan (CASP) planning area. The Coliseum Area Specific Plan Environmental Impact Report (CASP EIR) was certified in April of 2015. That prior EIR analyzed the environmental impacts associated with implementation of the CASP. The Project is consistent with the land use assumptions adopted as part of the CASP and its subsequent zoning actions, which were fully analyzed in the CASP EIR. Accordingly, the Project qualifies for CEQA streamlining pursuant to CEQA Guidelines Section 15183. The Project is also within the impact envelope of the reasonably foreseeable development program as analyzed in the CASP EIR, providing the basis for use of an Addendum to document the minor changes to that prior EIR attributed to the Project's details, per CEQA Guidelines Section 15164.

This document includes the following information

- The Project Description describes the proposed Project in detail.
- The Project's Consistency with the General Plan and Zoning chapter documents the Project's consistency with the CASP, the City's General Plan Land Use and Transportation Element (LUTE), and applicable zoning regulations.
- The Environmental Checklist identifies the potential environmental impacts of the Project in comparison to the impact findings of the CASP EIR. This chapter also cites the relevant City of Oakland Standard Conditions of Approval (SCAs) and any mitigation measures from the CASP EIR that apply to the Project, and provides substantial evidence to demonstrate that the Project would not cause new or more significant environmental impacts as compared to those impacts previously identified in the CASP EIR.
- The CEQA Determination provides an overview of the conclusions of the environmental analysis of the Project. It also provides the City's determination as to the applicability of CEQA exemptions pursuant to CEQA Guidelines Section 15183, the applicability of streamlining and/or tiering provisions of CEQA Guidelines Section 15168, and the applicability of an Addendum to the CASP EIR per CEQA Guidelines Section 15164 to describe and analyze the additional technical details and minor changes to the CASP EIR as represented by the Project.

II - Purpose of this CEQA Document

The City of Oakland has determined that the SupplyBank.org development project at 5601 Oakport Street (the Project) requires consideration of discretionary actions or approvals. These discretionary actions include, but are not limited to City approvals for Conditional Use Permits (CUP) for a project over 100,000 square feet in the D-CO-6 zone, a CUP for Civic Extensive Impact use, and Design Review. As such, the Project is subject to CEQA.

Pursuant to CEQA Guidelines Section 15061, "*once a lead agency has determined that an activity is a project and subject to CEQA, the lead agency shall determine whether the project is exempt from CEQA*". A project is exempt from CEQA if, "*it is exempt by statute (commencing with CEQA Guidelines Section 15260), or exempt pursuant to a categorical exemption (commencing with CEQA Guidelines Section 15300), and the application of that categorical exemption is not barred by one of the exceptions set forth in Section 15300.2*".

Pursuant to CEQA Guidelines Section 15063(a), "*following preliminary review, the Lead Agency shall conduct an Initial Study to determine if the Project may have a significant effect on the environment*." CEQA Guidelines Section 15063(b) provides that, "*if the agency determines that there is substantial evidence that any aspect of the project, either individually or cumulatively, may cause a significant effect on the environment, the lead agency shall do one of the following:*

- *prepare a subsequent or supplemental Mitigated Negative Declaration or an EIR*
- *use a previously prepared EIR which the Lead Agency determines would adequately analyze the project at hand; or*
- *determine, pursuant to a program EIR, tiering, or another appropriate process, which of a project's effects were adequately examined by an earlier EIR or negative declaration", including projects that are consistent with a community plan, general plan or zoning as described in CEQA Guidelines Section 15183"*

Following preparation of an Initial Study, the Lead Agency shall then "*ascertain which effects, if any, should be analyzed in a later EIR or Negative Declaration*", per CEQA Guidelines Section 15063(c).

One of the purposes of this CEQA document is to evaluate the potential environmental effects of the SupplyBank.org development project (the Project), and to determine whether such impacts were adequately addressed within a prior Program EIR such that CEQA exemptions, streamlining and/or tiering provisions can be applied. This CEQA document incorporates information from the Coliseum Area Specific Plan EIR (CASP EIR) as the applicable prior Program EIR. This document's CEQA Checklist and supporting documentation provides comprehensive review and public information for the basis of CEQA determinations for the Project.

Based on the environmental evaluation as provided in this CEQA Checklist, the Project qualifies for multiple CEQA exemptions, streamlining and/or tiering provisions, each of which separately and independently provides a basis for CEQA compliance. These exemptions and applicable provisions of CEQA related to streamlining and/or tiering are described below.

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 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 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.*"

This analysis considers the applicability of the environmental evaluation prepared in the 2015 Coliseum Area Specific Plan Program EIR (CASP EIR) for the Project. This CEQA document concludes that the 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 off-site effects in the CASP EIR; or 3) were previously identified as significant effects but are determined to have a more severe adverse impact than discussed in the prior CASP EIR. Findings regarding the Project's consistency with applicable General Plan and zoning provisions are included in this document. The Project meets the requirements for a Community Plan Exemption pursuant to CEQA Guidelines Section 15183. The Project is permitted in the zoning district where the Project site is located, and is consistent with the land uses as envisioned for the site in the General Plan and the Coliseum Area Specific Plan. Based on the analysis conducted in this CEQA document and pursuant to CEQA Guidelines Section 15183, the Project qualifies for a Community Plan Exemption.

Program EIRs

CEQA Guidelines Section 15168 (Program EIRs) provides that a prior Program EIR can be used in support of streamlining and/or tiering provisions under CEQA. A Program EIR is an EIR prepared on a series of actions that can be characterized as one large project and that are related geographically and by other shared characteristics. The CASP EIR is a Program EIR, which can be relied on for streamlining and/or tiering under the provisions of CEQA Guidelines Section 15168, which provides that "*subsequent activities in a Program EIR must be examined in the light of the Program EIR to determine whether an additional environmental document must be prepared*." If the lead agency finds that, pursuant to CEQA Guidelines Section 15162, no new effects could occur or no new mitigation measures would be required, the lead agency can approve the activity as being within the scope of the project covered by the Program EIR and no new environmental document would be required.

Based on an examination of the analysis, findings and conclusions of the prior CASP EIR as summarized in this CEQA Checklist, the potential environmental impacts associated with the Project have been adequately analyzed and covered in that prior Program EIR. This CEQA Checklist demonstrates that the Project would not result in substantial changes or involve new information that would warrant preparation of a subsequent EIR per CEQA Guidelines Section 15162, because the level of development now proposed for the Project site is within the broader development assumptions analyzed in that Program EIR.

Addendum to a Prior EIR

Section 15164 of the CEQA Guidelines provides that, "*an addendum to an adopted negative declaration or certified EIR may be prepared if only minor technical changes or additions are necessary, and none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration has occurred.*" CEQA Guidelines section 15162 provides that, for a project covered by a previously certified EIR, preparation of a subsequent EIR or negative declaration (rather than an Addendum) is required only if one or more of the following conditions occur:

- 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
- 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 the previously identified significant effects, or

- new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time of the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
  - the project will have one or more significant effects not discussed in the previous EIR or negative declaration;
  - significant effects previously examined will be substantially more severe than shown in the previous EIR or negative declaration;
  - 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 or negative declaration would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measures or alternative.

An additional purpose of this CEQA document is to update the CASP EIR with the additional technical details and minor changes to the CASP EIR as represented by the Project, and as fully described in the Project Description. The analysis presented in this CEQA document is intended to enable the City to determine whether an Addendum to the CASP EIR, in accordance with CEQA Guidelines section 15164, is the appropriate CEQA document to address the more detailed information specific to the Project. This CEQA document provides information to the lead agency (City of Oakland) to aid in the City's determination of whether any of the conditions described in CEQA Guidelines section 15162 calling for the preparation of a subsequent EIR or Negative Declaration have occurred. This CEQA document references and relies on the analyses completed in the CASP EIR and incorporates the conclusions of the CASP EIR by reference, as appropriate.

No Additional Environmental Review Required

The CEQA Checklist included in this document fully analyzes the environmental impacts of the Project to determine the most appropriate approach for its CEQA documentation. This analysis concludes that the Project is eligible for a Community Plan exemption under CEQA Guidelines Section 15183. The analysis also uses CEQA streamlining and/or tiering provisions under CEQA Guidelines Section 15168 to tier from the analyses completed in the City of Oakland's 2015 CASP EIR. Per CEQA Guidelines Sections 15162 and 15164, the Project is also eligible for the use of an Addendum to the CASP EIR.

The 2015 CASP EIR serves as the previous CEQA document considered in this CEQA Analysis, and that prior EIR is hereby incorporated by reference and can be obtained from the City of Oakland Bureau of Planning at 250 Frank H. Ogawa Plaza, Suite 2114, in Oakland, California 94612. The CASP EIR can also be viewed and downloaded from the City's Current Environmental Review (CEQA/EIR) Documents webpage at: https://www.oaklandca.gov/resources/current-environmental-review-ceqa-eir-documents-2011-2022

Previous Mitigation Measures and Current Standard Conditions of Approval

This CEQA Checklist's analysis assumes implementation of all applicable City of Oakland Standard Conditions of Approval (SCAs), which are included as **Attachment A**. The Project would be required to implement these uniformly applied SCAs to avoid or reduce potential impacts.

This CEQA Analysis evaluates the potential Project-specific environmental effects of the Project and evaluates whether such impacts were adequately covered by the 2015 CASP EIR, to allow the provisions afforded by CEQA Guidelines Sections 15183, 15168 and 15164 to apply. The analysis incorporates by reference the information contained in the previous CEQA document. The Project is legally required to incorporate and/or comply with the applicable requirements and mitigation measures identified in the 2015 CASP EIR. Therefore, the mitigation measures identified in the CASP EIR are assumed included as part of the Project, including those that have been modified to reflect the City's current standard language and requirements.

<u>SCAs in General</u>

The City established its Standard Conditions of Approval and Uniformly Applied Development Standards (SCAs) in 2008, and they have since been amended and revised several times. The City's SCAs are incorporated into new and changed projects as conditions of approval, regardless of a project's environmental determination. The SCAs incorporate policies and standards from various adopted plans, policies, and ordinances, which have been found to mitigate environmental effects to a substantial degree. When a project is approved by the City, all applicable SCAs are adopted as conditions of approval and required, as applicable, to be implemented during project construction and operation. The SCAs are adopted as enforceable conditions of approval and are incorporated and required as part of a project, so they are not listed as mitigation measures.

<u>Prior Mitigations and SCA Application in this CEQA Checklist</u>

Mitigation measures identified in the 2015 CASP EIR that would apply to the Project are also listed in **Attachment A** (SCAMMRP) to this document, which is incorporated by reference into this CEQA Analysis. In addition, SCAs identified in the 2015 CASP EIR, as updated and that would apply to the Project, are also listed in Attachment A to this document. Because the SCAs are mandatory City requirements, the impact analysis for the Project assumes that they will be imposed and implemented, and that the Project Applicant has agreed to do or ensure as part of the Project. The Project is required to comply with all applicable mitigation measures and SCA, even if inadvertently omitted from this CEQA document.

Most of the SCAs that are identified for the Project were identified in the 2015 CASP EIR. As specifically addressed in the SCAMMRP (Attachment A), following certification of the 2015 CASP EIR the City of Oakland has revised and updated its SCAs, and the most current SCAs are identified in this CEQA Checklist.

III - Project Description

This section describes the proposed SupplyBank.org Project at Oakport (the Project) as evaluated in this CEQA Analysis. The following includes a description of the Project site and surroundings, existing site conditions, the proposed development of the site, and required Project approvals.

Project Site

<u>Property Ownership</u>

The Project site involves one legal lot of approximately 66.5 acres (i.e., the Project site), owned by the East Bay Municipal Utility District (EBMUD). Per EBMUD records and a 2023 Title Report, EBMUD originally owned a larger, 127-acre property. In 1968 an approximately 4.7 acre portion of this property was conveyed to the City of Oakland for the 66th Avenue overpass, and in 1983 an approximately 55.6 acre portion of this property was conveyed to the City for City ownership of portions of Damon Marsh and the adjacent City recreational open space/sport field. The remaining approximately 66.5-acre property represents the Project site.

EBMUD also owns an adjacent small 0.8-acre triangular parcel north of East Creek Slough, but this a separate property and not a part of the Project site.

<u>Assessor's Parcels</u>

The Project site is identified under three separate Alameda County Assessor's parcels.[1] For purposes of this document, the three Assessor's parcels are utilized to identify separate portions of the Project site. Assessor's Parcel Number (APN) 41-3903-2-8 is the primary location of the Project (i.e., the Development Area), and APNs 41-3904-1-5 and 41-3903-2-7 are the remaining portions of the property (see **Figure 1**).

APN 41-3903-2-8

This Assessor's parcel is an approximately 15.7-acre portion of the EBMUD property. This APN fronts Oakport Street along its eastern perimeter and Oakport Street/Zhone Way to the southeastern perimeter. This APN is a vacant site with fencing along Oakport Street, but no internal improvements. A levee that was originally constructed for a former railway line generally forms the westerly edge of this APN, and separates this property from the adjacent City of Oakland property and Damon Marsh. Occasionally, EBMUD permits this portion of its property to be used as a temporary circus grounds during the summer and for other seasonal outdoor use and temporary overflow parking, but generally this portion of the EBMUD property remains vacant most of the time.

APN 41-3904-1-5

This Assessor's parcel is an approximately 28.9-acre portion of the EBMUD property, and includes the separate 0.8-acre triangular lot north of East Creek Slough. This Assessor's parcel fronts Oakport Street along its eastern perimeter. East Creek Slough bisects this Assessor's parcel along the lot line between the larger EBMUD property to the south, and the small triangular EBMUD lot to the north. This Assessor's parcel has four driveway entries off Oakport Street.

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[1] Assessor's records are not always the same as legal lots. A parcel is an identification for taxation purposes, while a lot is a recognized subdivision of property with a written legal description.

Figure 1
Project Site

Source: EBMUD, Oakport Property Map, 01/27/23

This portion of the Project site is actively used by EBMUD for a variety of purposes, principally as the site of the Oakport Wet Weather Treatment Facility (Oakport WWF) located on the northerly portion of this parcel. The Oakport WWF is one of three wet weather facilities (also including similar facilities at Point Isabel and San Antonio Creek) that provide primary wastewater treatment through physical removal of solids and chemical disinfection prior to discharge. During dry weather and non-peak flows, EBMUD fully treats wastewater to secondary treatment standards at its main wastewater treatment plant (WWTP) in West Oakland. The three WWFs were built to capture and treat excess untreated wastewater during peak wet-weather flows. The three WWFs discharge, on average, less than ten times per year. This facility is operating under a 2020 Revised Tentative Order that prohibits discharges from each of the three WWFs, consistent with a prior 2007 State Water Board Order that the three WWFs must either meet secondary treatment standards, or cease discharge. A 2014 Consent Decree requires the reduction and eventual cessation of all WWF discharges, beginning with the San Antonio WWF in 2027, and ending with the Oakport WWF in 2035.[2]

South of the Oakport WWF, a portion of this Assessor's parcel is currently used as a construction storage site for EBMUD construction materials (e.g., materials needed for new or replacement water or sewer pipes). This construction storage use includes eight small structures (4 sheds, 3 storage structures and a pipe storage structure). It also includes a large (250-foot by 25-foot) outdoor storage bin used to hold construction materials such as sand and gravel, and much of the remaining portion of this property is used for outdoor storage of pipes (pipe laydown areas), typically placed directly on the ground and/or stacked. This Assessor's parcel is split north-and-south by the Peppermint Gate Access Road, which allows for public access (including vehicles) to the Oakport Field/City soccer fields and to the Bay Trail. EBMUD construction materials storage occurs on both sides of the Peppermint Gate Access Road.

APN 41-3903-2-7

This approximately 21.8-acre portion of the EBMUD property abuts APN 41-3904-1-5 to the west and the separate City-owned property which includes the Oakport Field/City soccer fields to the south. The majority of this Assessor's parcel is submerged lands within the Oakland Estuary/San Leandro Bay, and the remainder is shoreline marsh and uplands near the shoreline. There are no physical improvements on this site, other than a portion of the Bay Trail along the shoreline.

<u>Development Area</u>

The Project involves a lease of a 16.56-acre portion of the Project site from EBMUD to SupplyBank.org to accommodate the proposed development. This 16.56-acre portion of the EBMUD property encompasses all of APN 41-3903-2-8 and a small portion of APN 41-3904-1-5. It is referred to throughout this document as the "Development Area".

For ease of reference, the remainder of APN 41-3904-1-5 is referred to throughout this document as the "Northerly Area", and APN 41-3903-2-7 is referred to as the "Westerly Area".

<u>Other Existing Site Characteristics</u>

None of the three Assessor's parcels that comprise the Project site are identified on a hazardous waste or substances site list as compiled pursuant to Government Code Section 65962.5 (i.e., the properties are not on the Cortese List).

There are no known historic resources within or directly adjacent to the Project site.

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2 San Francisco Bay Regional Water Quality Control Board, *Staff Summary Report: East Bay Municipal Utility District; Point Isabel, San Antonio Creek, and Oakport Wet Weather Facilities; Richmond and Oakland; Contra Costa and Alameda Counties – Reissuance of NPDES Permit*, February 12, 2020, accessed at: https://www.waterboards.ca.gov/rwqcb2/board_info/agendas/2020/February/6c_ssr.pdf

There are currently no sidewalk or bicycle facilities along the Oakport Street frontage of the Project site. The Bay Trail pedestrian and bike trail follows a generally north-south alignment that abuts the westerly side of the Development Area, passes through the City of Oakland property near the soccer fields along the Bay shoreline, and crosses through portions of the Westerly Area and the Northerly Area within the shoreline marsh and uplands. At the northerly portion of the Project site, the Bay Trail crosses a pedestrian bridge over East Creek Slough as it heads further to the north.

Existing landscape includes sparse vegetation and approximately 23 mature trees, only 6 of which are located within the Development Area.

Project Location and Surrounding Land Uses

The Project site is located in the Coliseum industrial neighborhood of East Oakland, immediately north of the Oakland Airport Business Park (a commercial area comprising approximately 400 acres northwest of the Oakland International Airport) and within the Sub-Area E planning area of the City of Oakland's Coliseum Area Specific Plan. The Project site is adjacent to (on the west side of) Interstate 880 (I-880), and a portion of the site forms the shoreline of the Oakland Estuary/San Leandro Bay. The site is approximately 0.25 miles northwest of the Oracle Arena/Oakland Coliseum, approximately 0.7 miles west of the Coliseum Bay Area Rapid Transit District (BART) Station and approximately 3 miles northeast of the Oakland International Airport terminal entrance.

Regional access to the Project site is provided primarily from I-880 via the southbound Zhone Way/northbound 66th Avenue interchange. The Development Area is within the northwest quadrant of this interchange, adjacent to the southbound off-ramp at Zhone Way. Westbound Zhone Way terminates just before the Oakland Estuary/San Leandro Bay at Oakport Street (a frontage road parallel to the freeway), and the Development Area fronts onto Oakport Street at this location.

Land uses within the vicinity (see **Figure 2**) include:

- The East Creek Slough is located immediately to the north of the East Bay Municipal Utility District (EBMUD) Oakport Wet Weather Treatment Plant.
- I-880 is to the immediate east of the Project site, with large-scale warehouse and distribution centers on the east side of the freeway.
- Damon Slough is to the south of the Project site and south of the Zhone Way/66th Avenue interchange, with the Oakland Airport Business Park on the south side of the Slough.
- Damon Marsh and the Oakland Estuary/San Leandro Bay is to the west of the Project Site.
- The southwesterly portion of the Project site, west of the Development Area, is separated from San Leandro Bay by a separate parcel owned by the City of Oakland, which includes improved soccer fields/baseball fields.

Figure 2
Project Location and Vicinity

General Plan Designation and Zoning

The Project site is located within the Coliseum Area Specific Plan (CASP), and specifically in an area identified in the CASP as Sub-Area E. Prior to approval of the CASP, this area had a mix of land use designations pursuant to the City of Oakland Estuary Policy Plan that include Light Industry- 3, General Commercial-2 and Parks. The CASP brought all of Sub-Area E out of the purview of the Estuary Policy Plan area and into the Land Use and Transportation Element (LUTE) Land Use Diagram. The original Draft version of the CASP identified Sub-Area E as appropriate for, “open space and habitat enhancements, with careful consideration of the amenities and environmental attributes of the San Leandro Bay shoreline and improvements to the existing Martin Luther King Jr. Shoreline Park paths and facilities”. This originally intended use of Sub-Area E was predicated on using a portion of Sub-Area E as a mitigation site to offset the fill and development of a separate seasonal wetland area within the Oakland Airport Business Park. However, plans for fill and development of this seasonal wetland were not accepted or approved.[3]

Instead, the City-approved version of the CASP proposes, “*open space and habitat enhancements for Sub-Area E, with careful consideration of the amenities and environmental attributes of the San Leandro Bay shoreline and improvements to the existing Martin Luther King Jr. Shoreline Park paths and facilities, as well as the presence of EBMUD’s existing wet-weather treatment facility and corporation yard in Sub-Area E*.”[4] Specifically, the final, City-approved CASP envisions that, of the property owned by East Bay Municipal Utility District (EBMUD),

- the existing Oakport Wet Weather Treatment Facility would continue operations
- the existing vacant lot fronting Oakport Street at 66th Avenue (i.e., the area generally encompassing the Development Area of the Project site) would be “utilized in a manner that creates and maintains an attractive frontage along Oakport Street”, and
- the waterfront parcels facing East Creek Slough and the San Leandro Bay would be improved to include a combination of open space, wetland and habitat restoration, as well as space for potential future expansion of the existing corporation yard [5]

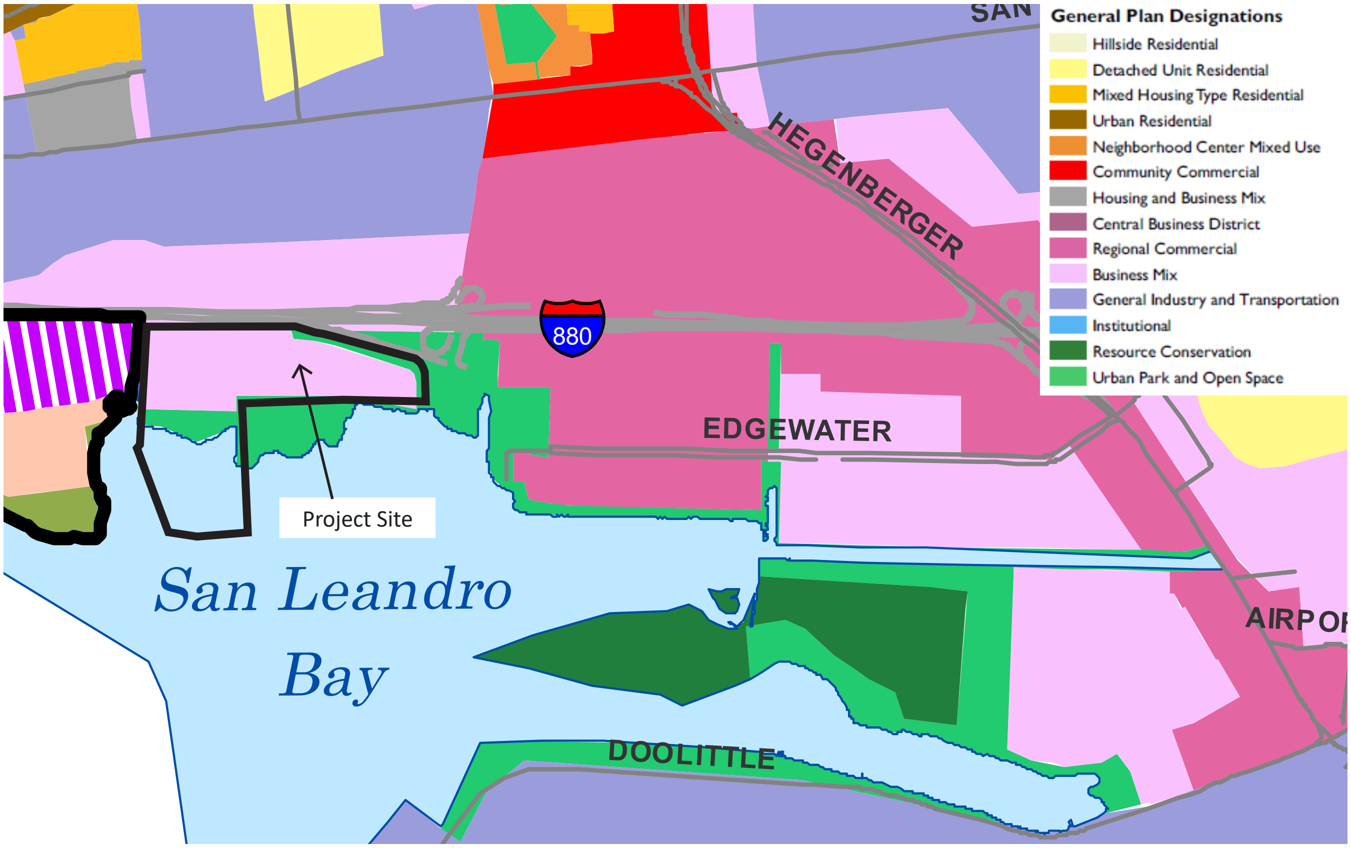
General Plan Designation

The CASP resulted in re-designation of the Development Area and the Northerly Area as Business Mix, to more accurately reflect the site’s current and expected long-term uses (see **Figure 3**). According to the LUTE, the Business Mix classification is, “*a flexible economic development zone which strives to accommodate older industries and anticipate new technologies, including both commercial and industrial operations. These areas contain a wide range of business and business serving activities. Different examples of development that fall into this classification include Edgewater Business Park, commercial or other market-supported development on the freeway frontage along I-880, and portions of West Oakland that have historically been very business intensive*”. The Westerly Area remained under its designation as Urban Park and Open Space.

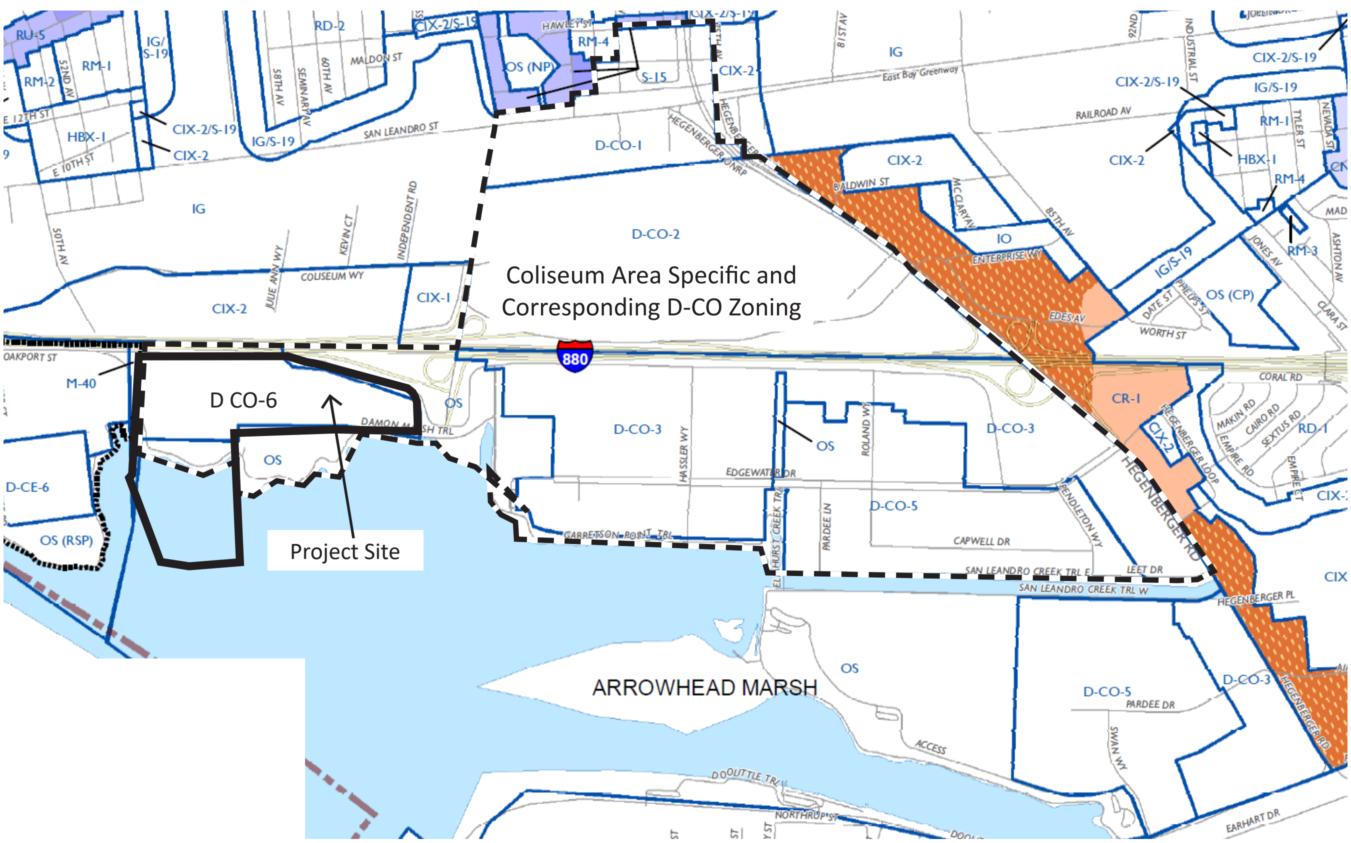
3 The originally proposed CASP included a proposal whereby the possible elimination of restored seasonal wetland and upland habitat might occur in Sub-Area B (within the Airport Business Park), with a potential land swap that would create up to 15 acres of new wetland habitat within Sub-Area E. The new wetland habitat would occur on City-owned open space of approximately 24 acres. The Final approved CASP removed this proposed land swap from consideration as there was no consensus from other involved public agencies (i.e., the Port of Oakland and the East Bay Regional Park District).

4 City of Oakland, Final CASP, April 2015, Chapter 3, Section 3.10, page 73

5 Ibid



Oakland General Plan Land Use Diagram



City of Oakland Zoning Map

Figure 3
City of Oakland General Plan and Zoning

Source: City of Oaklad, accessed at: https://www.oaklandca.gov/resources/general-plan-map , and https://www.oaklandca.gov/resources/zoning-map

The Business Mix classification is intended to create, preserve and enhance areas of the City that are appropriate for a wide variety of business and related commercial and industrial establishments. High impact or large scale commercial retail uses should be limited to sites with direct access to the regional transportation system. These areas may accommodate a mix of businesses such as light industrial, manufacturing, food processing, commercial, bioscience and biotechnology, research and development, environmental technology, business and health services, air, truck and rail-related transportation services, warehouse and distribution facilities, office, and other uses of similar business character. The maximum FAR for this classification is 4.0.[6]

Zoning

Similar to the General Plan amendments, the CASP recommended zoning changes within the CASP Plan Area. Portions of Sub-Area E had previously been zoned Commercial/Industrial Mix (CIX-2), which was intended to create, preserve, and enhance industrial areas appropriate for a wide variety of heavy commercial and industrial establishments. Pursuant to the CASP approvals, the Project site's Development Area and Northerly Area were re-zoned to Commercial Mix District – 6 Industrial Zone (Oakport North), or D-CO-6, and the upland portion of the Westerly Area remained as Open Space (see also **Figure 3**).

According to the Oakland Planning Code (Chapter 17.101H), the D-CO Coliseum Area District Zones Regulations for the D-CO-6 zone are, "*intended to apply to commercial, industrial and institutional areas with strong locational advantages that make possible the attraction of higher intensity commercial and light industrial land uses and development types*". This description of intended land uses in the D-CO-6 zone are also incorporated in the final City-approved version of the CASP.[7]

Permitted land uses within the D-CO-6 zone include the following applicable commercial and industrial land use types:

- *Administrative Industrial Activities*, including administrative offices of non-profit organizations
- *Business Commercial Activities*, including the provision of services of a goods brokerage or processing nature)
- *General Wholesale Sales Commercial Activities*, includes the storage and sale, from the premises, of bulk goods, as well as the storage of such goods on the premises and their transfer therefrom to other firms or individuals)[8]
- *General Warehousing, Storage and Distribution Industrial Activities*, including the warehousing and storage, primarily within enclosed buildings, of commercial goods other than primary storage of hazardous materials, and the associated distribution activities that occur on-site prior to delivery of goods to wholesale and retail outlets or direct shipment to customers. These activities may also include ancillary truck parking and dispatching; and accessory outdoor storage areas where outdoor storage, not including parking and loading areas, does not occupy more than 30% of the total site area. [9]

Other land use types that are permitted within the D-CO-6 zone only upon the granting of a Conditional Use Permit (CUP) include the following:

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6 City of Oakland, Land Use and Transportation Element (LUTE) of the General Plan, March 1998, page 152

7 City of Oakland, Coliseum Area Specific Plan (CASP), 2015 page 146

8 The total floor area devoted to these activities by a single establishment shall only exceed 25,000 square feet upon the granting of a Conditional Use Permit

9 Not including accessory activities, this activity shall take place entirely within an enclosed building, and other outdoor activities shall only be permitted upon the granting of a Conditional Use Permit)

- *General Outdoor Storage Industrial Activities*, which include principal outdoor storage of items for more than 24 hours where such storage activities occupy more than 30% of the site area, the principal storage of goods and materials, equipment or vehicles, as well as the storage of operating equipment for warehouses, such as forklifts, pallets, and racks. This classification includes, but is not limited to, construction trailers, outdoor sheds or accessory portable structures, secondary sites for storage of building materials that are not for resale on-site)[10]
- *Construction Operations Industrial Activities*, which includes enclosed and unenclosed facilities and accessory yards for construction and incidental storage activities and/or fabrication activities performed by construction contractors on lots other than construction sites)
- *Extensive Impact Civic Activities*, including public and public utility corporation or truck yards)
- *Community Assembly Civic Activities*, including temporary uses such as fairs and carnivals

Design Review

Except for projects that are exempt from Design Review as set forth in Section 17.136.025, no building, facility or other associated structure shall be constructed, established or altered in exterior appearance unless plans for the proposal have been approved pursuant to the City's Design Review procedure of Chapter 17.136 of the Oakland Planning Code.

Detailed Project Description, Development Area

Project Overview

SupplyBank.org (the Project applicant) has secured a tentative long-term lease agreement with EBMUD to lease a portion of EBMUD property that comprises the proposed Development Area. SupplyBank.org intends to improve the Development Area to include a new office and warehouse to consolidate their headquarters for its non-profit operations, with additional office space capacity available for rent to other non-profit organizations for similar office use. EBMUD and/or SupplyBank.org also intend to construct additional warehouse space, a workshop and pipe storage and materials storage bins to enable EBMUD to relocate these uses from their current substandard operational conditions at the Northerly Area.

The following provides a description of the SupplyBank.org Project within the Development Area, including site preparation and construction activities, the proposed development characteristics (including proposed relocation of certain existing EBMUD uses from the Northern Area of the Project site to the Development Area), circulation and parking, landscaping and streetscape, and utilities and infrastructure improvements. The Project is summarized in **Table 1**.

[10] Any Outdoor Storage activities to be located within 300 feet of the Oakport Street right-of-way, the Estuary or Bay shoreline, the Damon Slough, Elmhurst Creek, East Creek Slough, or San Leandro Creek top of bank, or any Open Space Zone shall only be permitted upon determination that the proposal conforms to the general use permit criteria. Additionally, such uses must also demonstrate that the activity is screened (e.g., a buffer planting installed along the site exterior), and the proposal will not adversely affect the livability or appropriate development of abutting properties and the surrounding district (in terms of noise, water and pollutant runoff, heavy equipment operation, hours of operation, odor, security, and vehicular traffic).

Table 1: Development Area Project Summary

Project	Amount
Development Area	721,182 SF (16.56 acres)
Gross Building Floor Area (FAR)	293,000 SF (0.4 FAR)
Building Site Coverage, Total	165,000 SF (23%)
Pipe Storage and Materials Bin area	38,000 SF
Parking and Circulation area	394,758 SF (53%)
Parking spaces	323
Truck Loading Spaces	12
Building height	Up to 85 feet

Source: Ware Malcomb, 2019

Development Area Site Preparation

The Project site was originally a tidal marshland. Miscellaneous fill was placed over the marshland in the 1950s and 1960s to create the existing relatively level property, which has a gentle slope from the east down to the west. The miscellaneous, undocumented fill is approximately 5½ to 11 feet in depth, and consists of sand and clay with variable amounts of sand and gravel. Such undocumented fill can result in differential settlement and damage to structures relying on such fill for structural support, and the fill (as is) is not suitable to support the proposed buildings and retaining walls.

Proposed earthwork will include clearing and grubbing the site. Undocumented fill below pavement and hardscape areas would be over-excavated to a minimum depth of 2 feet. This over-excavated subgrade would be compacted and backfilled with structural fill.

In those areas where the materials bin and pipe storage structure are proposed (see further discussion below), the remaining undocumented fill and compressible Bay Mud is anticipated to be reinforced with a Rammed Aggregate Pier (RAP) system installed on a grid pattern. This would eliminate the need for significant over-excavation or deep foundations for these areas, and would allow for the placement of stockpiled materials and retaining wall foundations directly atop the RAP-reinforced subgrade. RAP systems are typically installed after clearing and grubbing, and prior to beginning of fill import and grading.

For the Workshop, the Warehouse and the Office building, it is assumed that steel piles will be driven into firm native soil below the Bay Mud and liquefiable soil layers, as needed to support these proposed buildings. These piles may be pre-drilled prior to pile driving, with the excess space filled with a bentonite slurry. Casing sleeves may also be placed around the piles to separate the piles from direct contact with settling soils. For estimating purposes, it is assumed that the piles would be extended a minimum depth of 65 feet below ground surface.

Following the installation of foundation support systems (the rammed aggregate piers and steel piles), the site would be filled with up to 4 feet of imported soil as required to achieve final grade (see **Figure 4**).

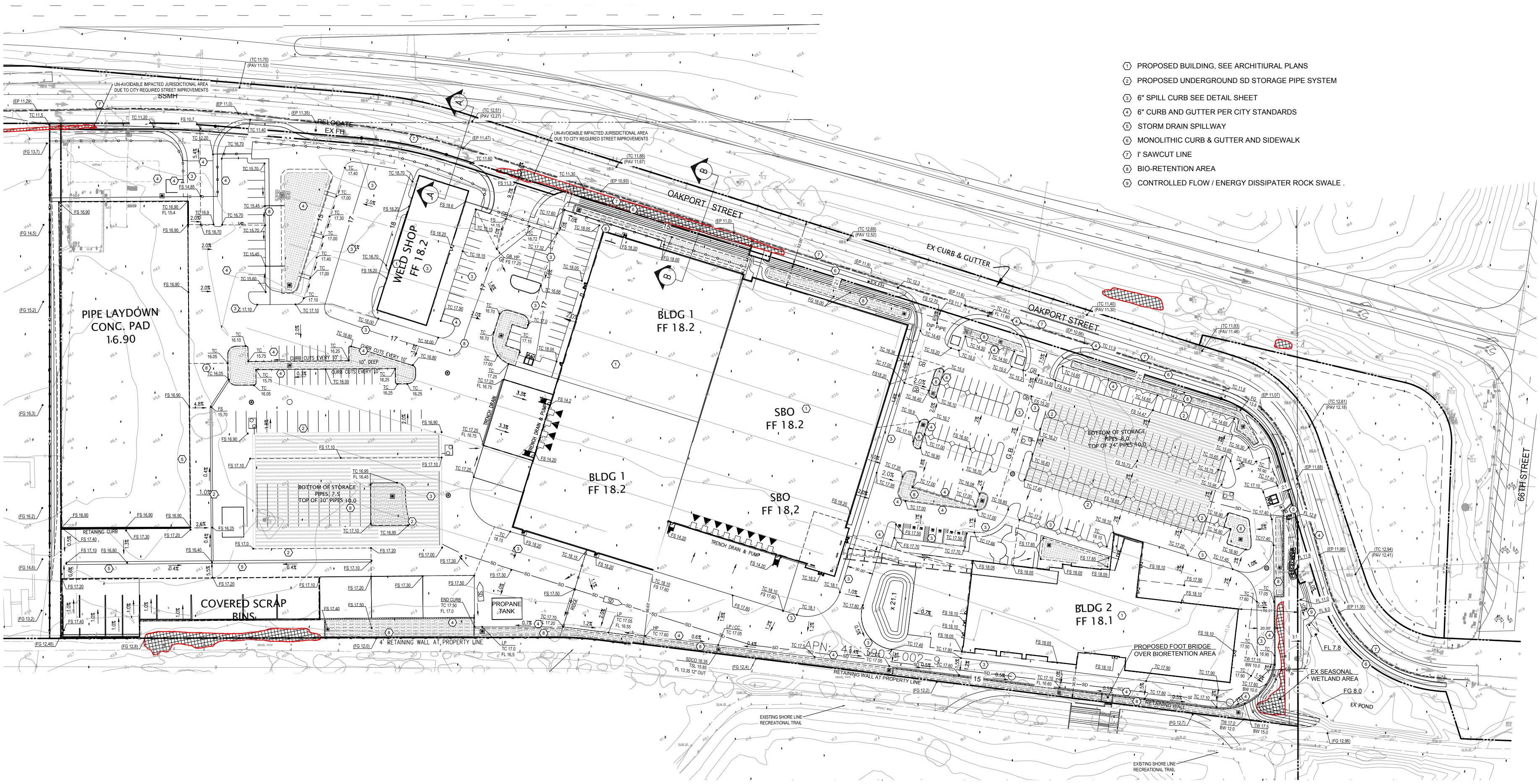


Figure 4

Development Area - Preliminary Grading and Drainage Plan

Source: Ware Malcomb, Sheet C3.0, December 2022

Final grade is intended to raise the ground surface elevation at areas that may otherwise be susceptible to reasonably forecast sea level rise (see Hydrology section of this CEQA Checklist). Based on preliminary earthwork quantities, it is anticipated that the Project may have as much as 8,430 cubic yards (CY) of cut grading/excavation for building foundations and 31,378 CY of fill across the site, for a net balance of 22,941 CY of soil import.[11] Based on default assumptions built into the air quality emissions calculator (CalEEMod 2022 – see Air Quality section of this CEQA Checklist), soil import will involve up to 96 truck trips per day over a period of 15 days, with each truck hauling 16 cubic yards of imported soil.

Based on the relatively shallow depth to groundwater, it is expected that dewatering will be necessary during all cuts and utility trenching, as well as during the pile driving/drilling process (see further discussion in the Noise section of this CEQA Checklist).

Development Plan

As shown on **Figure 5**, the development plan for the Development Area includes construction of four new buildings on this site, as more fully described below.

Office Building

A new 85-foot high, 5-story office building (see **Figure 6**) would be constructed at the southern-most portion of the Development Area. The top floor of this approximately 160,000 square-foot building would be used as the SupplyBank.org headquarters, and remaining capacity in this building (floors 2-4) would be rented to other non-profit organizations for similar office use.

This new office building would be constructed with metal stud framing, and with pre-finished aluminum composite metal panels over concrete walls. The building facades would be comprised of exterior porcelain tile (including a decorative pattern of multi-hued blue colored tile), glass windows and aluminum wall joints, a window system with aluminum storefront windows on the ground floor, and a continuous metal cap across the top of the building. This building would also include space for painted murals to be completed by others.

Warehouse

A new 123,000 square foot warehouse would be constructed in the middle portion of the Development Area (see **Figure 7**). This 55-foot high warehouse would be divided into two spaces. One space would serve as SupplyBank.org materials storage and distribution, and the other space would be reserved for EBMUD storage and materials.

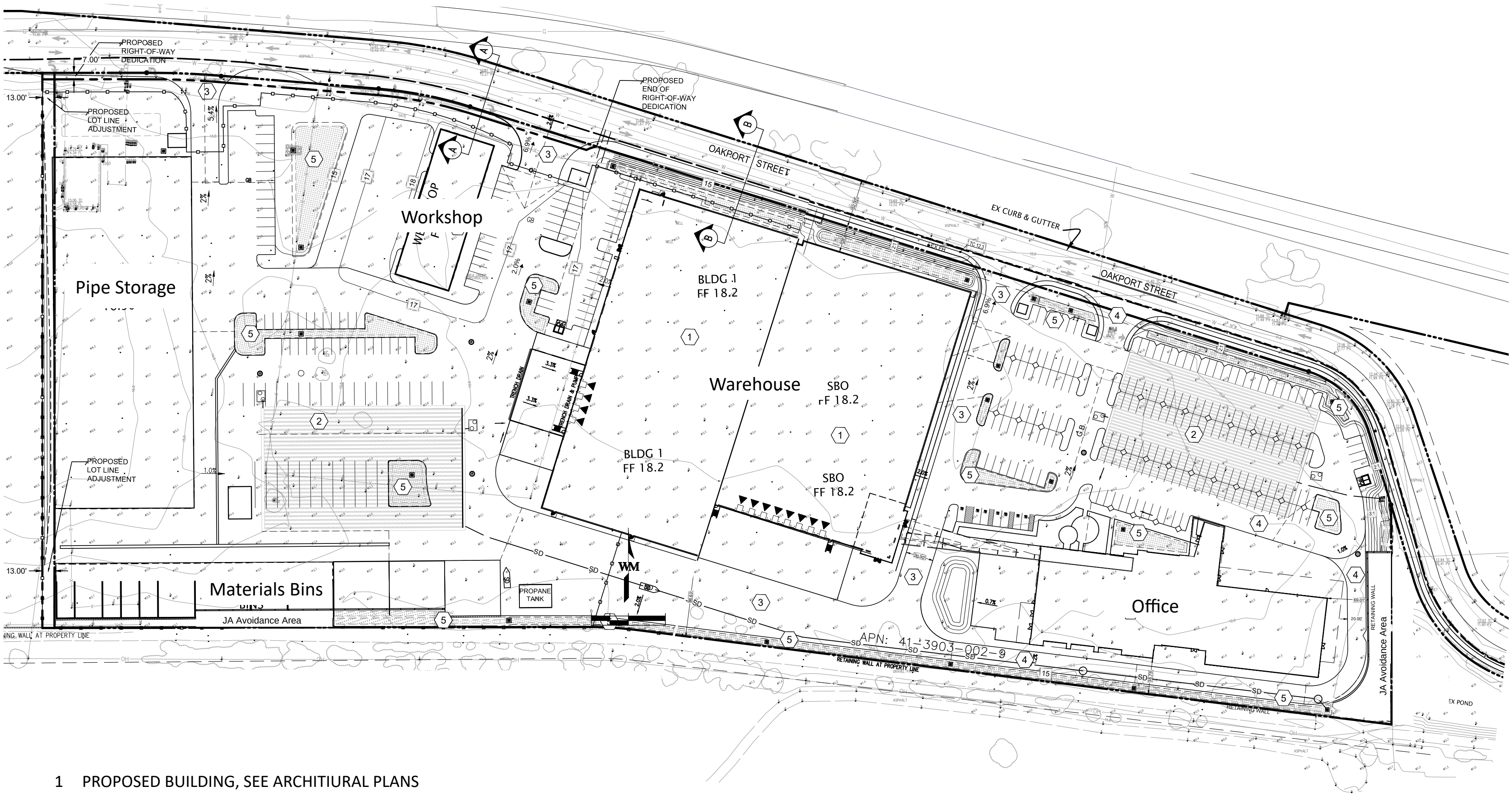
Work Shop

A relatively small (approximately 10,000 square foot) workshop would be constructed on the north-central portion of the Development Area (see **Figure 8**). This 34-foot tall workshop would serve as a replacement for the existing EBMUD weld shop currently located within the Northerly Area. Work conducted within the workshop would include pipe welding and EBMUD training operations.

Pipe Storage Structure

An additional structure to be added would be an approximately 26,000 square-foot pipe and materials storage rack structure. This storage shed would be located on the northerly portion of the Development Area. This would be a 28-foot tall, peaked roofed structure (36 feet high at the peak) with open sides for easy access for forklift operations to store and supply large pipes and other materials used by EBMUD (see also **Figure 8**).

[11] Ware Malcomb, Preliminary Grading and Drainage Plan, Sheet C3.0, January 2019

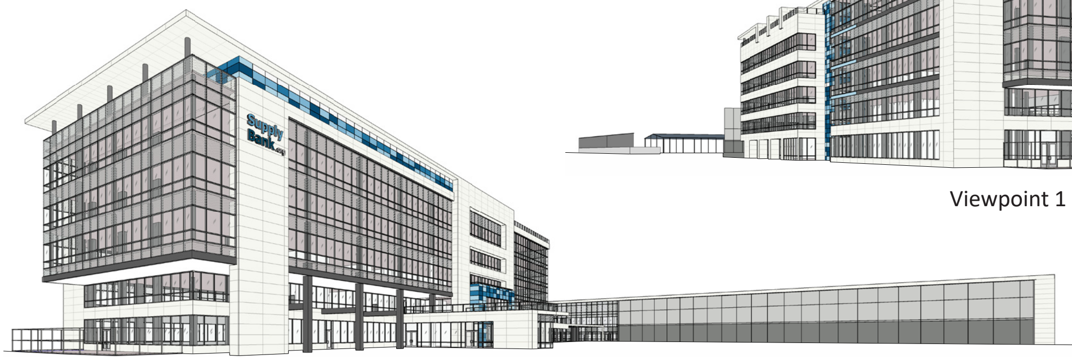


1 PROPOSED BUILDING, SEE ARCHITIURAL PLANS
2 PROPOSED UNDERGROUND SD STORAGE PIPE SYSTEM
3 TRUCK TRAFFIC DRIVEWAY ACCESS
4 AUTOMOBILE DRIVEWAY ACCESS
5 BIO-RETENTION AREA

Figure 5
Development Area - Proposed Site Plan

Source: Ware Malcomb and Barber Surveying, Parcel Map Waiver, December 2022

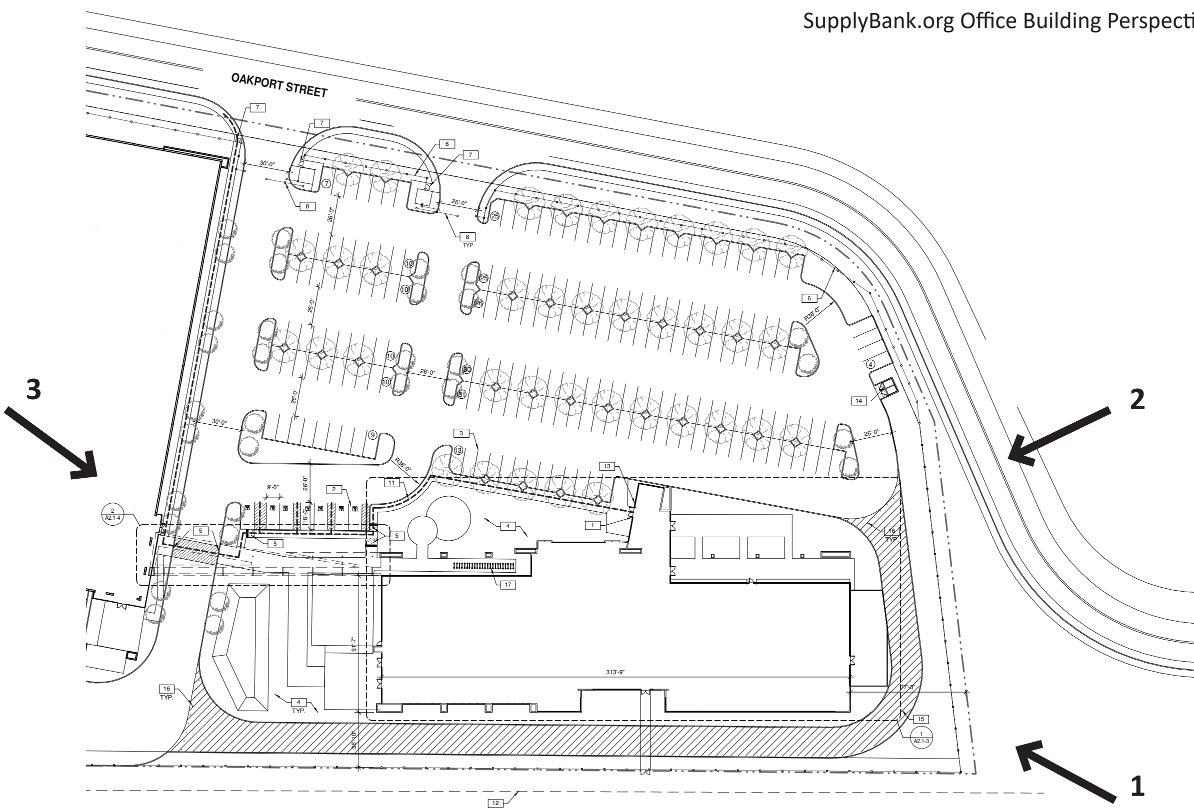
Viewpoint 1



Viewpoint 2

Viewoint 3

SupplyBank.org Office Building Perspective Drawings

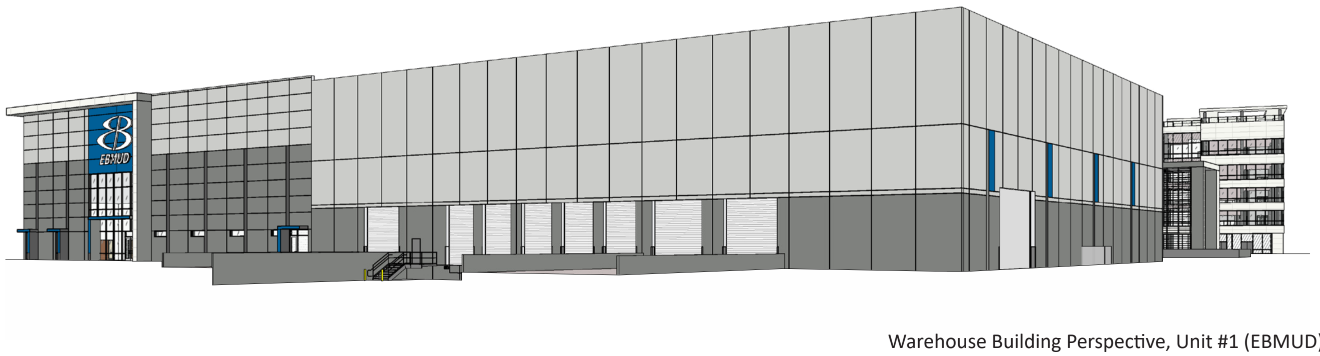


SupplyBank.org Office Building Site Plan

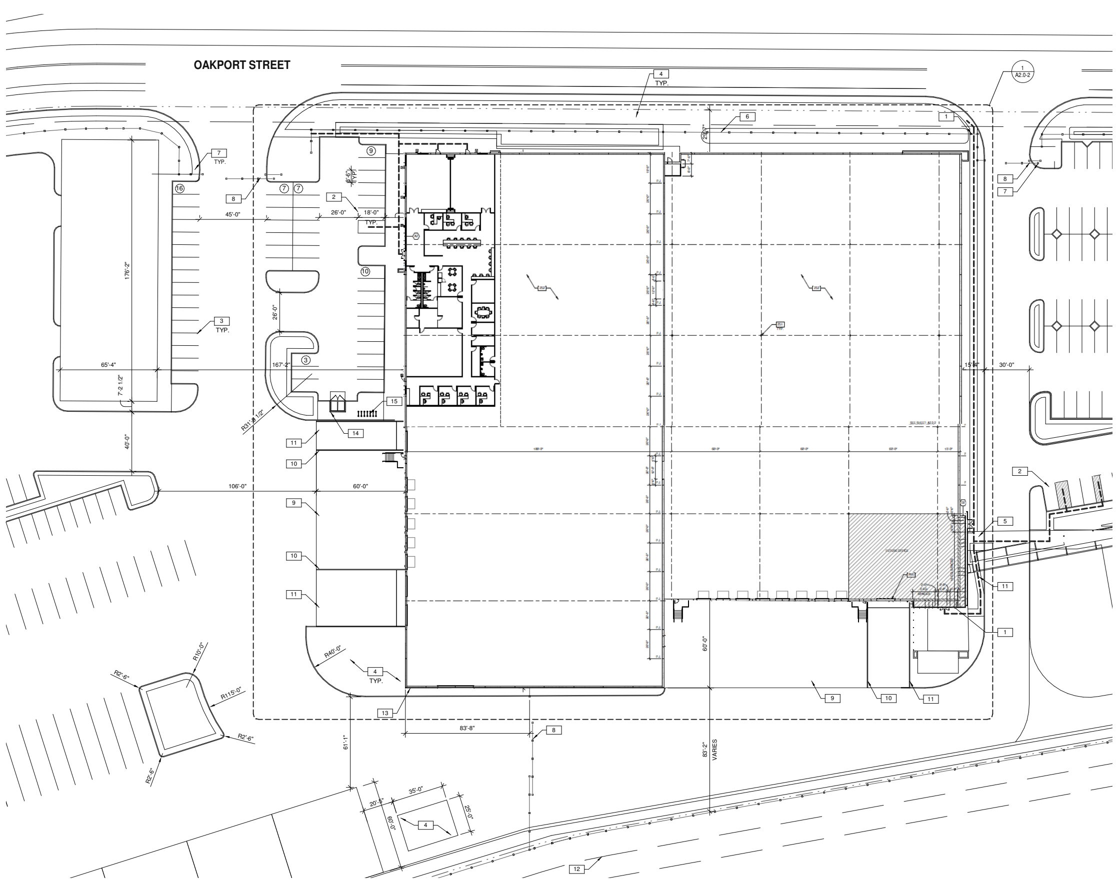
Figure 6
SupplyBank.org Office Building

Source: Ware Malcolm, Sheets A0.1b and A1.1-3, April 3, 2019

Warehouse Building Perspective, Unit #2 (SupplyBank)



Warehouse Building Perspective, Unit #1 (EBMUD)

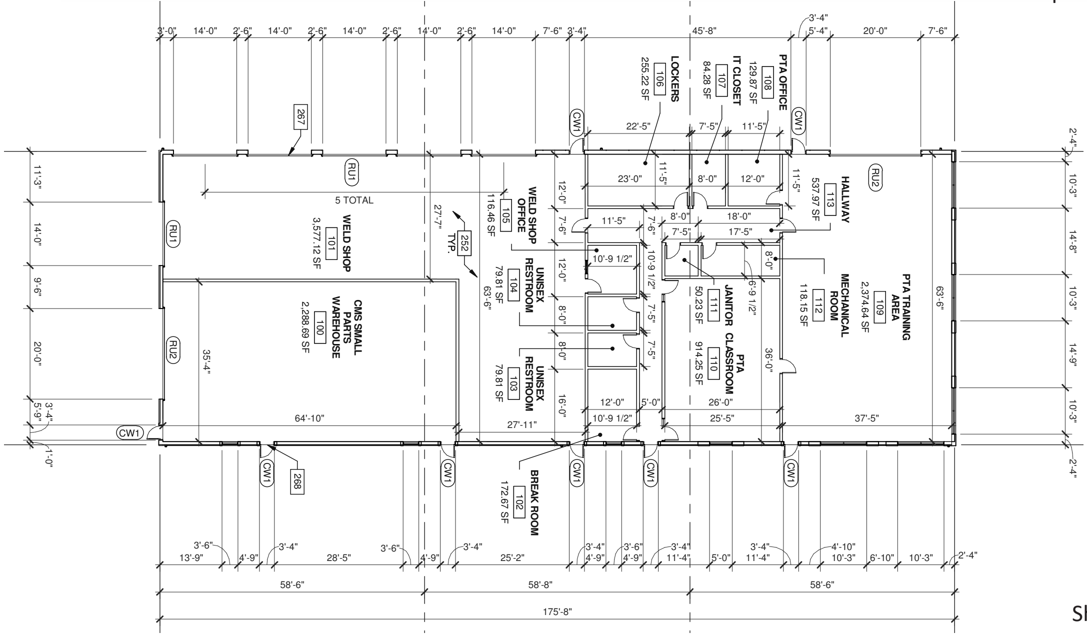


SupplyBank.org Warehouse Building Site Plan

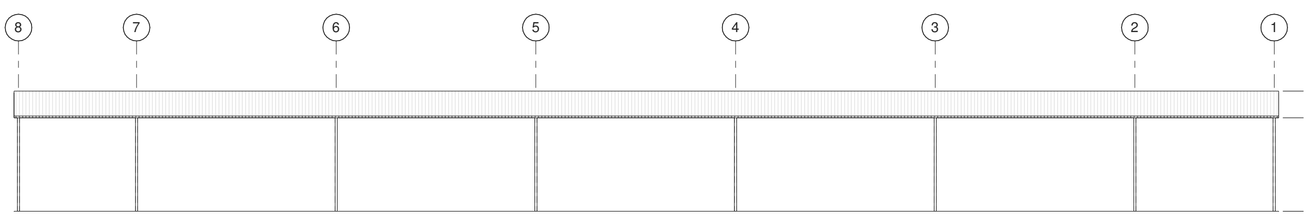
Figure 7
Shared Warehouse Building

Source: Ware Malcolm, Sheets A0.1a and A1.1-2, April 3, 2019

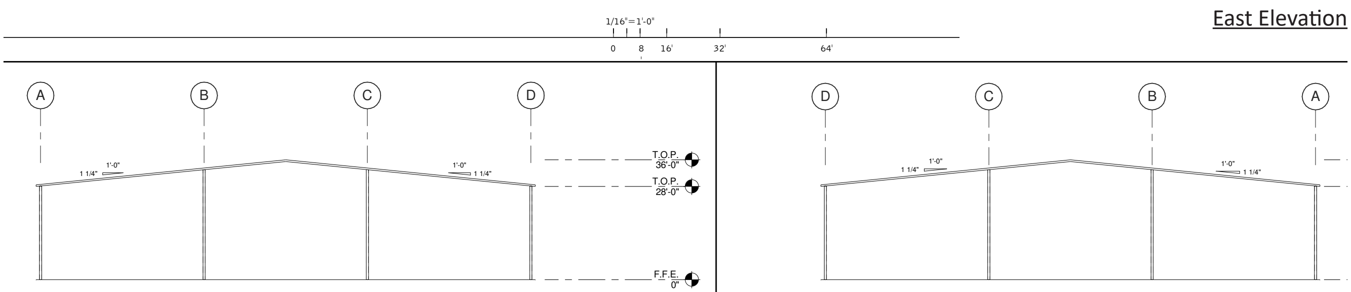
Shop Building, East Perspective



Shop Building, Floor Plan



East Elevation



South Elevation

North Elevation

Pipe Storage Building, Elevations

Figure 8
EBMUD Workshop and Pipe Storage Facilities

Source: Ware Malcolm, Sheets A0.1,A1.1 and A2.1-1, April 3, 2019

Materials Storage Bins

The Development Plan would also include an approximately 12,000 square-foot storage bin used to store and source a variety of building materials, such as sorted sands and gravels. This storage bin facility would be placed along the northwestern portion of the Development Area. It would replace the similar storage bins currently located on the north end of the Project site outside of the Development Area.

Landscape

The Project would include new trees and various landscaping throughout the Development Area.

This landscaping would include the following:

- An approximately 25-foot wide landscaped area with street trees, groundcover and a stormwater planter, plus a 5-foot sidewalk that would run along the Oakport Street frontage of the entire Development Area
- A 20-foot wide EVA comprised of turf-block and lawn would wrap the southerly and westerly sides of the Office Building
- An approximately 8-foot wide landscape area with ornamental trees would be planted along the westerly edge of the Development Area, with a new fence and 4-foot tall retaining wall at the edge of the existing berm.
- Each of the parking lots within the Development Area would have stormwater planters at the end of each parking row, and new trees would be planted in parking lot medians on approximately 25-foot centers, corresponding to 1 tree per each 6 parking spaces (3 parking spaces on each side of the median)
- Each of the new buildings would include a surrounding landscape area, including an entry landscape area at the front of the Office building
- The Project's office building would also include a rooftop terrace

The final landscaping and open space plans would be subject to City approval. An overview of the Project's landscaping and open space amenities is shown on **Figures 9 and 10**.

<u>Circulation, Parking and Frontage Improvements</u>

On-Site Circulation

There is only one current curb cut on Oakport Street that provides access to the Development Area. It is located at the northwestern corner of the Development Area, and provides limited vehicle access to a small parking/turnaround area. Pursuant to the Project, three additional new curb cuts into the Development Area would be added along Oakport Street to improve vehicle access. Two of the new curb cuts and the existing curb cut would be extended into the Development Area to create a circulation loop. This loop would connect between the office and the warehouse (at 30 feet wide), between the warehouse and the weld shop (at 45 feet wide, to accommodate large trucks and delivery vehicles), and between the weld shop and the pipe storage structure (30 feet wide). The interior portion of the circulation loop would widen to between 60 and 70 feet in width to accommodate large vehicle turning movement, including access to 13 loading docks at the rear and side of the warehouse. The fourth curb cut would provide a separate entrance to the office building's surface parking lot.

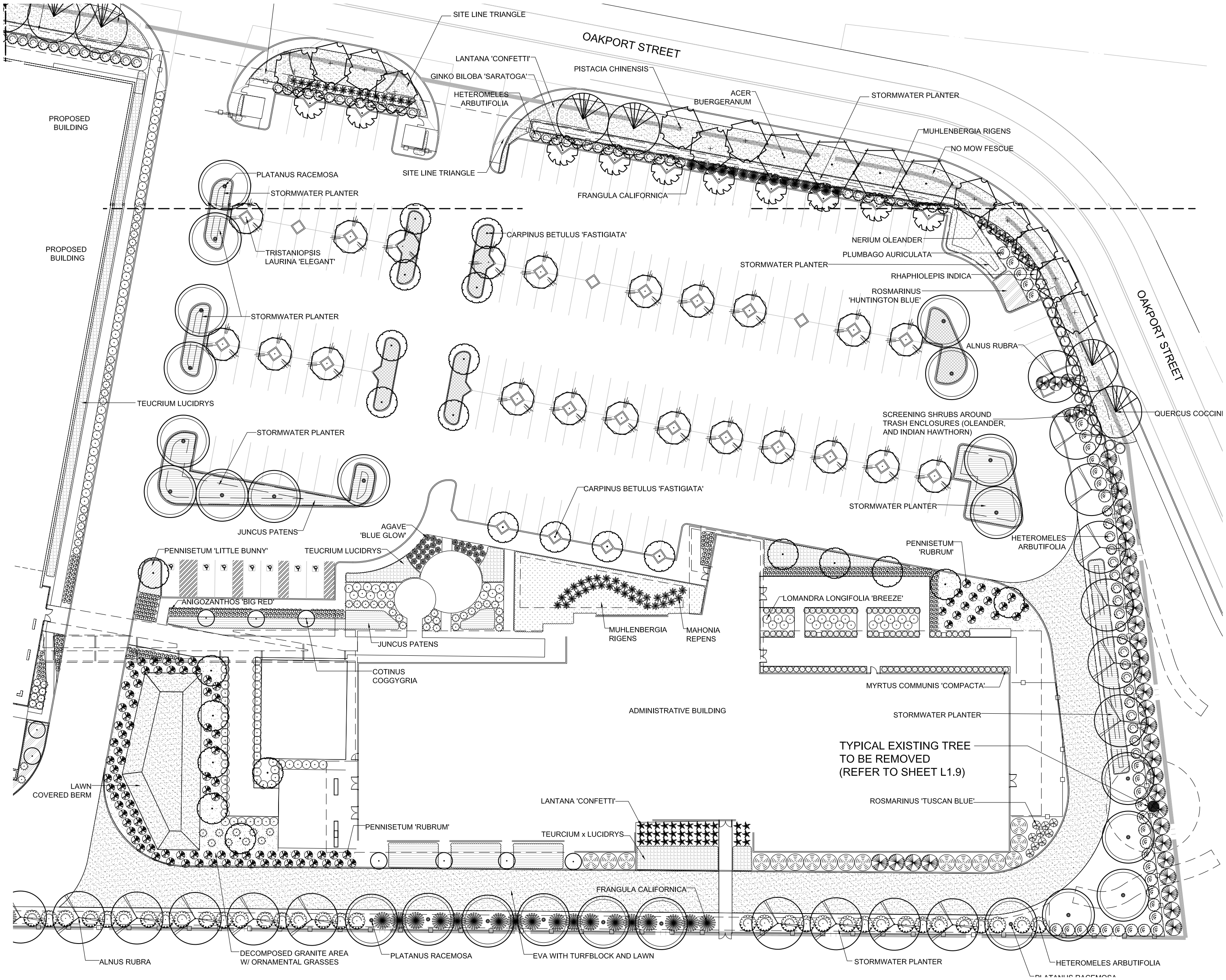


Figure 9
Landscape Plan at Office Building

Source: Thomas Baak & Associates, Sheet L1.1-6, April 2019

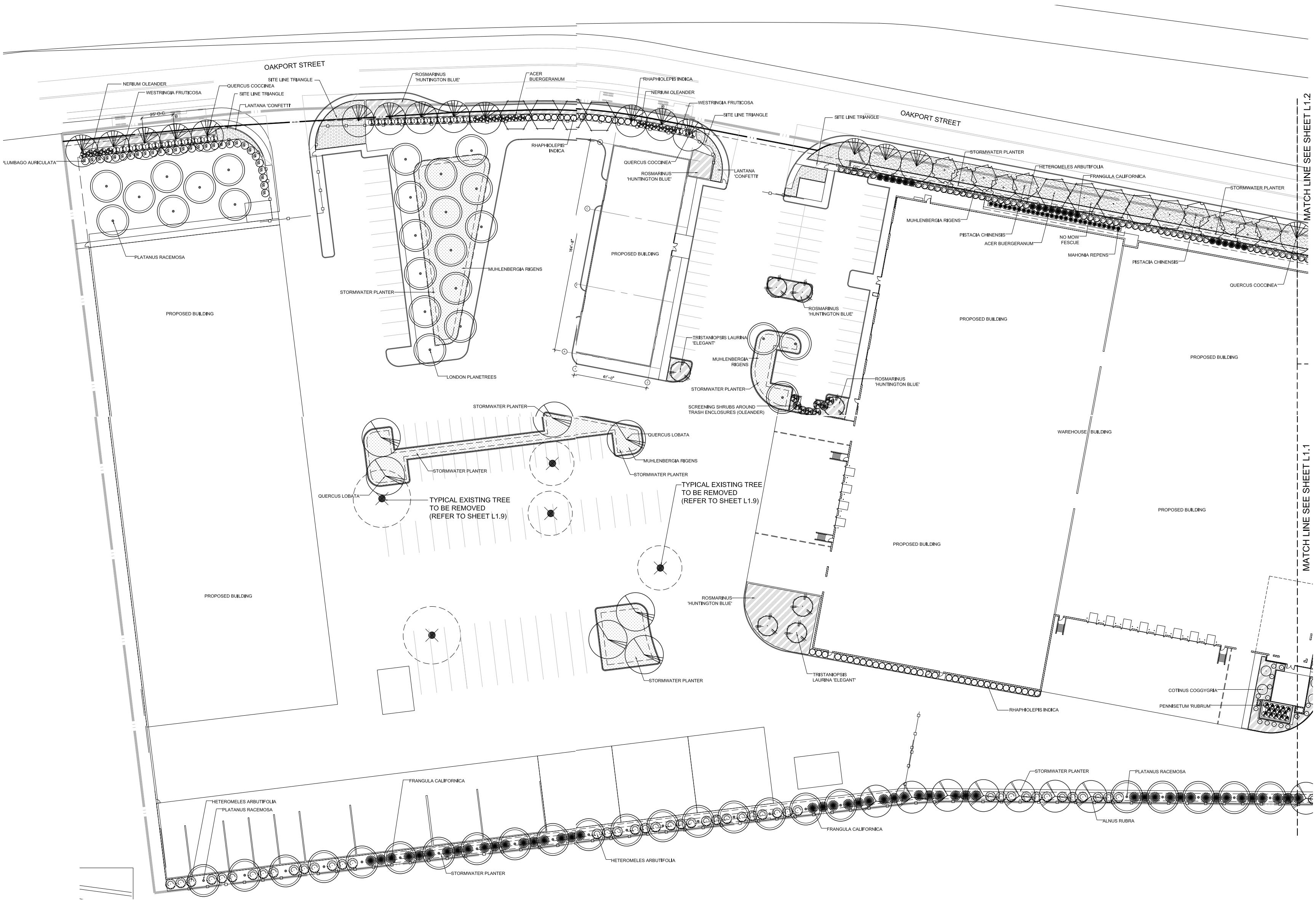


Figure 10
Landscape Plan, Remainder of Development Area

Source: Thomas Baak & Associates, Sheet L1.1-6, April 2019

Parking

Parking would be provided at a number of surface parking lots throughout the site, with 323 total vehicle parking spaces. The primary parking lot for the office building would be at the front (easterly side) of the building, and would include 208 parking spaces, including seven ADA-accessible spaces adjacent to the office building entry. Additional surface parking lots near the warehouse and the workshop would provide an additional 115 parking spaces. There would also be 12 larger truck parking spaces provided in front of the materials storage bins.

The warehouse would provide 13 truck loading bays along the westerly and northerly sides of the warehouse building.

Frontage Improvements

Currently, Oakport Street has very limited frontage improvements. For the nearly 6,000-foot length of Oakport Street from 66th Avenue to the I-880 on-ramp near High Street, Oakport Street has no sidewalk on either side of the street, and curb and gutter improvements are limited to a short 450-foot segment on the easterly side the street near the 66th Avenue interchange. The Project proposes installation of new curb, gutter and sidewalk for a distance of approximately 1,800 feet along the Development Area's frontage on the westerly side of Oakport Street. However, based on City of Oakland street frontage improvement requirements, the City will likely require frontage improvement along the entire approximately 3,050-foot Oakport Street frontage of the entire Project site.

Utilities Plan [12]

There is an existing 12-inch and 16-inch water main within the Oakport Street right-of-way. The Project will connect to this existing water main at two locations (at the north and south ends of the Development Area). A looped water service line would be installed between these connections to serve all new development within the Development Area (including fire service risers inside the office building), with relocation and installation of new fire hydrants per City of Oakland standards. The Project will also install new water meters and separate domestic/irrigation water lines to serve the office building, the warehouse and the workshop, per EBMUD standards.

The Project will also install a new sanitary sewer system within the Development Area. This system includes a sewer cleanout at the southerly portion of the site, a new 8" sewer pipe that runs within the drive aisle in front of the office building and around the rear of the warehouse, to a new sewer lift station located at the northwest corner of the warehouse. From this lift station, a new force main will convey sewer flows up to Oakport Street, where an approximately 300 linear-foot sewer line extension will run within Oakport Street to the terminus of the existing sewer main, which is located near the Peppermint Gate at the approximate mid-point of the Northerly Area.

There is an existing natural gas line within the Oakport Street right-of-way, but the Project shows no new connection to natural gas. All new buildings associated with the Project will be fully electric.

Storm Drain and Storm Water Control Plan

Based on recent site observations, flooding associated with heavy rains currently occurs within the Development Area and in the adjacent area to the south. As indicated in **Table 2**, the Project will substantially increase impervious surfaces within the Development Area, will increase the extent of surface runoff from the property, and would potentially exacerbate this current flooding condition.

[12] See also the Utilities section of this CEQA Checklist

Table 2: Comparison of Pervious and Impervious Surface within the Development Area

	Existing	Proposed Project
Impervious Surface (rooftops and pavement)	0 acres	13.72 acres
Pervious Surface		
Existing Conditions	16.56 acres (entire site)	0.37 acres
Bio-Retention	0 acres	0.69 acres
Landscape	0 acres	1.77 acres
Total:	**16.56**	**16.56 acres**

Source: Ware Malcomb, Preliminary Storm Water Control Plan, Sheet C6.0, April 2019

To address this existing flooding condition, the Project proposes to construct a storm drain system that includes an underground stormwater storage/retention system, and low-impact development (LID) measures such as bio-retention facilities with underdrains distributed throughout the site and along the site perimeter.

The underground stormwater storage/retention system is located in two locations, one under the parking lot in front of the office building, and one under the parking lot behind the warehouse (see prior **Figure 5**, figure note 2). At each of these locations, a series of 24-inch and 30-inch underground storage/retention pipes will be installed. The purpose of these pipes is to collect and retain stormwater flow from the site within the pipes until surface stormwater flows subside. The additional stormwater generated by the Project will then be released into the surrounding storm drain system once peak flows have dissipated, thus not contributing to existing stormwater flooding conditions.

Consistent with the City of Oakland Storm Drainage Design Standards and the Municipal Regional Stormwater Permit (MRP) C.3 provisions and stormwater quality regulations, the Project also proposes to install a series of bio-retention facilities throughout the site. The bio-treatment facilities will be sized appropriately to meet or exceed the minimum treatment area required for each drainage management area within the site. Stormwater flows from impervious surfaces (i.e., rooftops and pavement) will be routed through these bio-retention facilities for water quality treatment prior to discharge into the storm drain system (see further discussion in the Hydrology and Water Quality section of the CEQA Checklist).

Construction Schedule

Standard (Default) Construction Schedule

A detailed construction schedule has not yet been prepared for the Project. The CalEEMod emissions calculator used to calculate anticipated construction-period air quality emissions does generate an estimated construction schedule based on the parameters of construction (e.g., size of new buildings, area of grading, paving and landscape, etc.). According to the default assumptions of the emissions calculator, the Project's total construction schedule is estimated to extend for a period of approximately 1 ½ years (375 days or 75 weeks, assuming a continuous 5-day workweek).

Mitigated Construction Schedule

However, the CASP EIR found state or federally threatened or endangered, or state fully protected bird species potentially occur within the CASP planning area, including the Ridgeway's rail and California black rail, as well as Alameda song sparrow and San Francisco saltmarsh common yellowthroat. Each of these species are associated with salt marsh habitat such as is found adjacent to the Project site. CASP EIR mitigation measures (MM Bio-1A-

1, Pre-construction Nesting Bird Surveys and Buffers) requires that construction activities that occur within 500 feet of Damon Marsh shall only be conducted during the period from August 1 to January 31 to protect potentially nesting Ridgeway's rail, California black rail, Alameda song sparrow and San Francisco saltmarsh common yellowthroat.

Based on this limited 6-month construction window, and assuming the same amount of required construction days but on a 6-day per week schedule, the construction schedule is estimated to be completed in three separate phases:

- Phase 1 would span from August 1 to January 31, 2023, including site preparation, grading, foundation support, and structural framing for the office and warehouse
- Phase 2 would span from August 1 to January 31, 2024, including completion of all exterior construction of the office, warehouse, shop and pipe storage facility
- Phase 3 would span from August 1 to October 9, 2025, including finish construction, paving and landscape installation.

It is expected that Project construction would include excavators, backhoes, graders, scrapers and rubber-tired dozers and haul trucks during site preparation and grading. Building construction would include cranes, forklifts, welders and generators. Paving would include pavers and paving equipment, rollers and air compressors.

Changes outside of the Development Area

No new development activity would occur pursuant to the Project on those portions of the Project Site outside the Development Area. The EBMUD Oakport Wet Weather Treatment Facility (Oakport WWF) on the northerly portion of this property would remain and continue to provide primary wastewater treatment until a revised State Water Board Order may require the cessation of all WWF discharges.

EBMUD's main warehouse, weld shop and maintenance operations would relocate to the new warehouse and workshop within the Development Area, and the current EBMUD pipe and materials storage operations would relocate to the new pipe racks and materials storage structures within the Development Area. The larger of the existing storage structure sheds and the materials bins would be demolished and removed (see **Figure 11**).

Following relocation of these EBMUD operations to the Development Area, the Oakport WWF and its associated sheds would remain, but the other vacated land at the Northerly Area may then be used for temporary outdoor seasonal use (e.g., circus grounds and/or overflow parking), pursuant to a new or modified CUP.

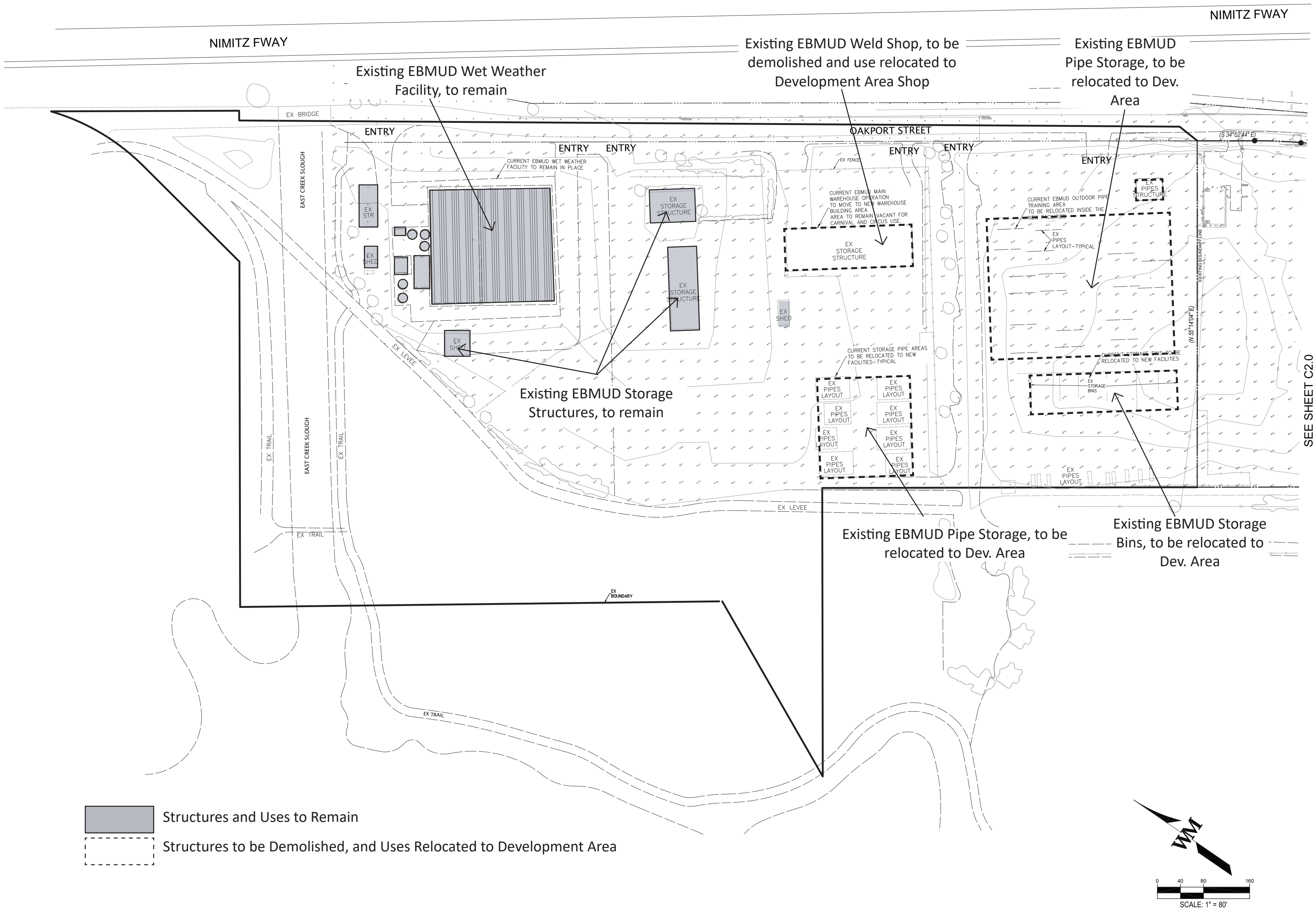


Figure 11
Disposition Plan, Northerly Area (EBMUD)

Source: Ware Malcomb, Sheet C7.0, January 2019

List of Project Approvals Required

City of Oakland

The Project requires the following discretionary actions and approvals from the City of Oakland prior to implementation:

- Conditional Use Permit (or revised CUP to relocate use to the Development Area) for a Civic Extensive Impact activity/facility (EBMUD corporation yard) and/or General Outdoor Storage
- Conditional Use Permit (or revised CUP to relocate use outside of the Development Area for Community Assembly Civic Activities (such as fairs and carnivals)
- Conditional Use Permit for outdoor storage activities located within three hundred (300) feet of the Oakport Street right-of-way, the Estuary or Bay shoreline, Damon Slough, or any Open Space Zone
- Conditional Use Permit for Master Sign Program
- Regular Design Review approval
- Parcel Map Waiver
- Creek Permit
- Tree Protection/Removal Permit

The Project will also require subsequent administrative permits for the following:

- work within and close to the public right-of-way
- grading, stormwater control and building permits

Other Agency Approvals

The Project will also require subsequent approvals from the following additional agencies:

- Long-term lease agreement between EBMUD and SupplyBank.org
- Development Permit from BCDC for construction within the 100-foot shoreline band
- Approvals from the San Francisco Bay Regional Water Quality Control Board (RWQCB) pursuant to the Clean Water Act for fill of ‘Waters of the State’
- Other administrative approvals from other agencies and utility providers such as EBMUD and PG&E

IV - Project's Consistency with the General Plan and Zoning

The following analysis has been conducted to determine whether the proposed Project is consistent with the land use and development assumptions and improvement strategies of the Coliseum Area Specific Plan (CASP), the City General Plan Land Use and Transportation Element (LUTE), and development standards of the Oakland Planning Code, Title 17.

To be considered eligible for CEQA streamlining as a Project Consistent with a Community Plan or Zoning per CEQA Guidelines Section 15183, the Project must be consistent with the development density established by existing zoning, community plan (i.e., the CASP), or general plan policies for which an EIR was certified (i.e., the CASP EIR).

Planning Context, per the Coliseum Area Specific Plan

The Coliseum Area Specific Plan (CASP) was adopted in April of 2015. The CASP was intended to provide a guiding framework for reinventing the City of Oakland's Coliseum area as a major center for sports, entertainment, residential mixed use, and economic growth. Consisting of approximately 800 acres along Interstate 880 (I-880) and Hegenberger Road, the CASP planning area was found to possess important assets to support the creation of a thriving new urban district. The CASP establishes a basis for land use and regulatory policies and public and private investment that will coordinate phased development. The vision expressed in the CASP was to, "revitalize what is currently one of California's largest underdeveloped inner-urban, transit-served areas and create significant long-term value for Oakland and Alameda County".

For purposes of establishing land use and regulatory policies, the CASP planning area was divided into five Sub-Areas (see **Figure 12**), each with a distinct land use program and intended character. The "Coliseum District" includes all of Sub-Area A and a portion of Sub-Area B, and the CASP addresses the Coliseum District in more detail than the other Sub-Areas as it was the focus for early phase redevelopment. Five Sub-Areas were designated within the CASP, and redevelopment of each Sub-Areas can be phased independently to allow improvements to occur over time, based on market growth and demand.

- Sub-Area A was envisioned to be a high-density transit and sports-focused mixed-use district with retail, residential, entertainment, and technology/office uses.
- Sub-Area B is a waterfront district that was envisioned to be a core location for future science and technology uses, as well as light industrial businesses.
- Sub-Area C is intended to allow a range of retail, office and flexible technology and industrial uses that want to co-locate with Sub-Area B.
- Sub-Area D is envisioned to be a district that includes hotels, retail and logistic businesses that benefit from proximity to Oakland International Airport.
- Sub-Area E is a waterfront district that will have continued use by East Bay Municipal Utility District (EBMUD), along with open space recreational uses and natural habitat areas that are designed to enhance the environmental quality of the estuary and the bay waterfront.

The Project site is located within Sub-Area E of the CASP, and the CASP policies and implementation strategies for this Sub-Area, are described in further detail below.

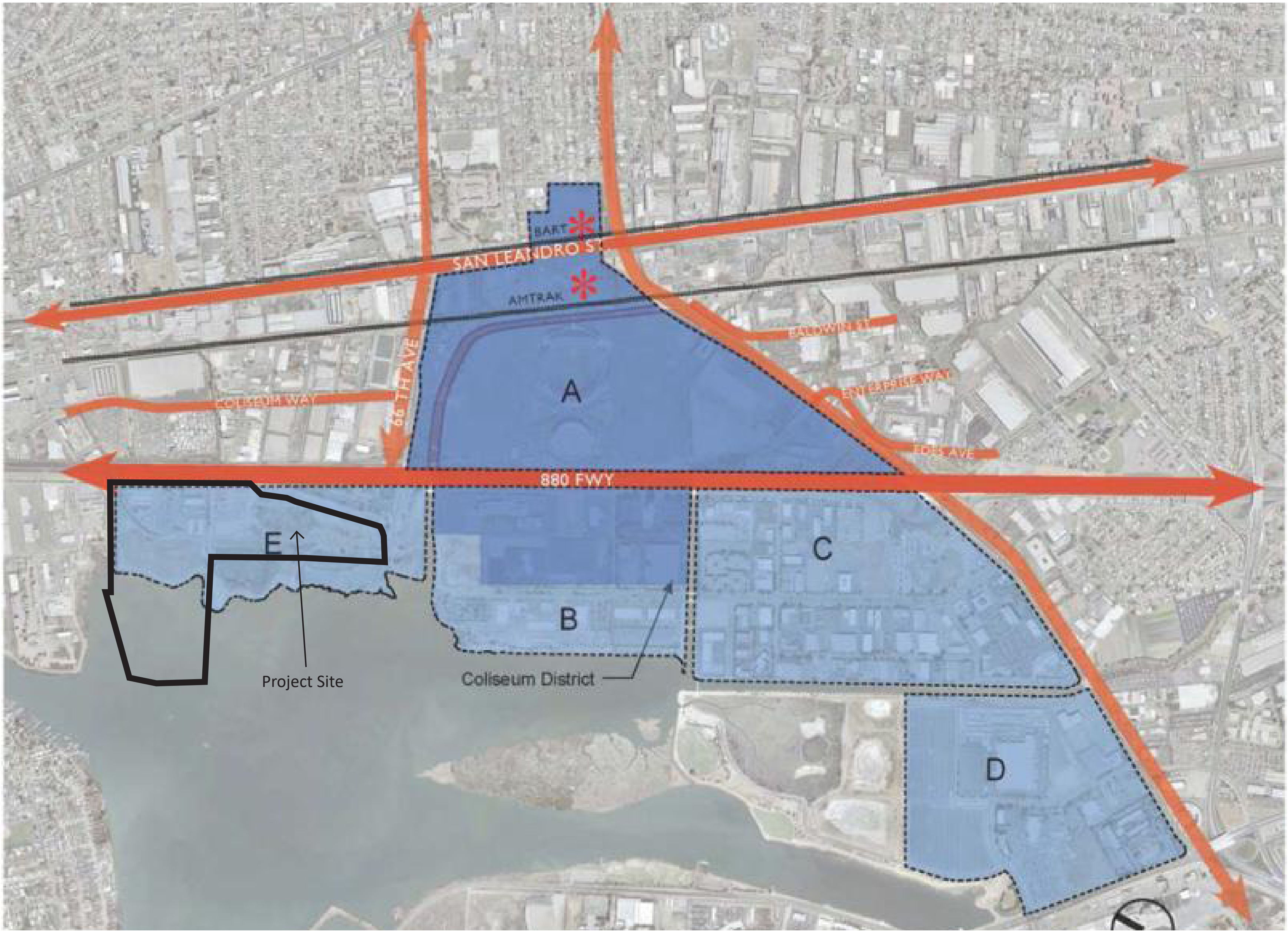


Figure 12
Coliseum Area Specific Plan Boundaries and Sub-Areas

Source: City of Oakland, *Final CASP Figure 3-1*, April 2015

CASP Land Use Strategy for Sub-Area E

The CASP proposed open space and habitat enhancements for Sub-Area E, with careful consideration of the amenities and environmental attributes of the San Leandro Bay shoreline and improvements to the existing Martin Luther King Jr. Shoreline Park paths and facilities, as well as the presence of EBMUD's existing wet-weather treatment facility and corporation yard. The City-owned open spaces should be improved to include wetland and habitat restoration, and for the recreation areas (such as the existing soccer field), improved with better fields, parking and waterfront trails.

The CASP envisioned that, for those parcels owned by East Bay Municipal Utility District (EBMUD);

- the existing Oakport Wet Weather Treatment Facility would remain and continue operations until such time as its operations may be ceased pursuant to a RWQCB prohibitions on discharge
- the existing vacant lot fronting Oakport Street at 66th Avenue (i.e., the area generally encompassing the Development Area of the Project site) would be "utilized in a manner that creates and maintains an attractive frontage along Oakport Street", with a Business Mix land use designation that allows future commercial development, and
- the waterfront parcels facing East Creek Slough and the San Leandro Bay would be improved to include a combination of open space, wetland and habitat restoration, as well as space for potential future expansion of the existing corporation yard

CASP General Plan Amendments for Sub-Area E

Sub-Area E was the only portion of the CASP that was located within the City of Oakland's Estuary Policy Plan (EPP) planning area, rather than the LUTE. In 2013, the City adopted the Central Estuary Area Plan, which brought the objectives and policies of the older EPP up to date with planning conditions in the Central Estuary area. However, Sub-Area E was not part of the Central Estuary Area Plan update, and remained one of the few "left-over" portions of the prior EPP not addressed by the newer Central Estuary Area Plan. Pursuant to the CASP, the City took the opportunity to re-designate lands within Sub-Area E to be consistent with the intent of the CASP, and the new General Plan land use designations for Sub-Area E pursuant to the CASP included:

- Amending the General Plan land use designations for those City-owned properties from "General Commercial 2" and "Light Industrial 3" (per the prior EPP), to "Urban Park and Open Space"
- Amending the EBMUD-owned Oakport facility property near East Creek Slough along I-880 (i.e., generally referring to the Northerly Area) from "Light Industrial 3" to "Business Mix"
- Amending the EBMUD-owned vacant lot at Oakport Street/66th Avenue (i.e., generally referring to the proposed Development Area) from "Light Industrial 3" and " General Commercial 2" (per the prior EPP), to "Business Mix", and
- Adding and adjusting the "Urban Park and Open Space" land use designation along Damon Slough, and encompassing a band of Open Space area along the San Leandro Bay shoreline (i.e., generally referring to the Westerly Area)

CASP Zoning Amendments for Sub-Area E

Consistent with the General Plan amendments effected by the CASP, the City established a new zoning district, the D-CO-6 zone, which now applies to those City-owned and EBMUD-owned properties along Oakport Street, from East Creek Slough to 66th Avenue within Sub-Area E. The new D-CO-6 zone replaced the prior Industrial (M-40) zoning that had applied to these properties for decades.

The D-CO-6 Zone is intended to apply to commercial, industrial and institutional areas with strong locational advantages that make possible the attraction of higher-intensity commercial and light industrial land uses and development types. This zone does not permit residential activities.

Consistency with General Plan (Business Mix) Land Use Provisions

Per the Oakland General Plan's LUTE, the Business Mix classification is, "*a flexible economic development zone, which strives to accommodate older industries and anticipate new technologies, including both commercial and industrial operations. These areas contain a wide range of business and business serving activities. Different examples of development that would fall into this classification include Edgewater Business Park, commercial or other market-supported development on the freeway frontage along l-880, and portions of West Oakland that have historically been very business intensive*."[13]

Intent: The Business Mix classification is intended to create, preserve and enhance areas of the City that are appropriate for a wide variety of business and related commercial and industrial establishments. High impact industrial uses including those that have hazardous materials on site may be allowed provided they are adequately buffered from residential areas. High impact or large scale commercial retail uses should be limited to sites with direct access to the regional transportation system. The desired character and uses in the Business Mix classification may, "accommodate a mix of businesses such as light industrial, manufacturing, food processing, commercial, bioscience and biotechnology, research and development, environmental technology, business and health services, air, truck and rail-related transportation services, warehouse and distribution facilities, office, and other uses of similar business character.

Consistency: The Project represents a mix of economic development uses that includes both commercial (non-profit) and industrial-type (EBMUD corporation yard) operations located on the freeway frontage along l-880. Specifically, the Project would include new warehouse and distribution facilities and office use, as well as relocated and improved light industrial-type uses at the Workshop and Pipe Storage facility. These uses are fully consistent with the intent of the Business Mix land use classification.

Intensity/Density: The maximum FAR for this classification is 4.0. In some Business Mix locations, zoning should establish lower intensities to establish or maintain campus-like business settings. In others, uses and development standards should offer maximum flexibility. In areas where higher impact uses are located, buffing strategies will need to be developed.

Consistency: The Project's proposed Development Area is approximately 16.56 acres (or 721,182 square feet) in size. With a proposed gross building floor area of 293,000 square feet (inclusive of the Office, the Warehouse and the Workshop), the Project would have an FAR of 0.4. By including the Pipe Storage and Materials Bin area in the FAR calculation, the Project would have an FAR of nearly 0.46. This FAR is below the maximum FAR for this classification of 4.0, and the lower intensity seeks to establish a more campus-like business setting. The proposed intensity of development pursuant to the Project is fully consistent with the intensity established for the Business Mix land use classification. The Project would be buffered by the remaining EBMUD property to the north. Waterfront open space, creeks and a freeway abut the Project site to the west, south and east.

Consistency with D-CO-6 Zoning Regulations

The Coliseum Area Commercial Mix District- 6 Industrial Zone for Oakport North (the D-CO-6 zone) is intended to apply to commercial, industrial and institutional areas with strong locational advantages that make possible

[13] City of Oakland, LUTE (1998), page152

the attraction of higher intensity commercial and light industrial land uses and development types. The specific development standards and regulations of the D-CO-6 zone are addressed below.

Permitted and Conditionally Permitted Facilities: Table 17.101H.02 of the Oakland Planning Code lists the permitted, conditionally permitted, and prohibited facilities in the D-CO-6 Zone.

Consistency: The individual elements of the proposed Project are compared to the permitted and conditionally permitted land uses of the D-CO-6 zone in **Table 3**, below. The proposed facilities are either permitted uses (the Office, Warehouse and Workshop), or permitted with a CUP per these regulations. A CUP is part of the Project application materials. The Project's proposed Pipe Storage structure and Materials Bins would be considered outdoor storage activities (the Pipe Storage structures does have a roof enclosure, but no side enclosures), and would be located within 300 feet of the Estuary and the adjacent Open Space zone. The Materials Bin would be screened by perimeter landscaping and would not affect the development of abutting properties (which include the City soccer fields).

Table 3: Permitted and Conditionally Permitted Facilities

Facilities (per Table 17.101H.02 of the Oakland Planning Code)	Permitted or Conditionally Permitted	Applicable Project Facility	Consistency
Commercial Administrative Office	Permitted	Office Building	**Consistent**: The Project's Office Building is a permitted facility within the D-CO-6 zone
General Warehousing, Storage and Distribution	Permitted [1]	Warehouse	**Consistent**: The Project's Warehouse Building is a permitted facility within the D-CO-6 zone
Custom or Light Manufacturing	Permitted	Workshop	**Consistent**: The Project's Workshop Building is a permitted facility within the D-CO-6 zone
General Outdoor Storage	Conditional	Pipe Storage Materials Bin	**Consistent, with CUP**: The Project's Pipe Storage Structure and Materials Bin are conditionally permitted facilities and require a CUP

Notes:

1: Warehousing, storage and distribution activity shall take place entirely within an enclosed building

2. Any Outdoor Storage activities to be located within three hundred (300) feet of the Oakport Street right-of-way, the Estuary or Bay shoreline, the Damon Slough, Elmhurst Creek, East Creek Slough or San Leandro Creek top of bank, or any Open Space Zone shall only be permitted upon determination that the proposal conforms to general use permit criteria and to all of the following additional use permit criteria:
   - The activity is screened in a manner as determined by the Planning Director, including but not limited to, buffer planting installed along the site exterior; and
   - The proposal will not adversely affect the livability or appropriate development of abutting properties and the surrounding district in terms of noise, water and pollutant runoff, heavy equipment operation, and hours of operation, odor, security and vehicular traffic.

Source: Oakland Planning Code, Table 17.101H.02

Property Development Standards: Table 17.101H.03 of the Oakland Planning Code prescribes development standards specific to the D-CO-6 Zone.

Consistency: The individual elements of the proposed Project are compared to the development standards of the D-CO-6 zone in **Table 4**, below. The Project is fully consistent with these development standards.

Table 4: D-CO-6 Zoning Standards

Development Standard	D-CO-6 Req'mt	Project Site/Development Area	Consistency
Lot width, mean	25 feet	2,900 feet / 1,360 feet	Consistent
Frontage	25 feet	3,050 feet / 1,450 feet	Consistent
Lot area	10,000 sf.	Approx. 2.89 million sf / 721,182 square feet	Consistent
Minimum front setback	10 feet	At nearest building (Workshop) = 22'-7"	Consistent
Maximum height	85 feet	Tallest building (Office) = 85 feet	Consistent
Fence height at Open Space zones	8 feet	4-foot retaining wall	Consistent
Maximum non-residential FAR	4.0	721,182 sf = 0.1 FAR lot/ 0.4 FAR dev. Area	Consistent
Site landscaping (% of lot area)	5%	2.3 acres = 3% lot/ 14% of Dev. Area	Consistent

Source: Oakland Planning Code, Table 17.101H.03

Special Regulations for Large-Scale Developments: Pursuant to OPC section 17.101H.080, no development that involves more than 100,000 square feet of new floor area shall be permitted, except upon the granting of a conditional use permit (CUP) or a planned unit development approval. A CUP is also required to address certain activities at the Project, including accessory welding, a public utility yard, group assembly and sign facilities.

Consistency: The Project exceeds 100,000 square feet of new building space and will include land use activity types that require a CUP, and will be required to obtain a CUP as part of Project entitlements.

Conclusions

A finding of Project consistency with applicable zoning, community plan (Coliseum Area Specific Plan) or General Plan policies as evaluated in a prior program EIR (i.e., the CASP EIR) is required for the Project to qualify for CEQA streamlining per CEQA Guidelines Section 15183. As demonstrated above, the Project is consistent with the General Plan land use designation for the site, and its proposed intensity of development is consistent with (lower than) the maximum 4.0 FAR for the Business Mix classification. Other than those standards for which the Project applicant requests consideration of a CUP, the Project is consistent with applicable D-CO-6 zoning standards that apply to the site. As such, the Project qualifies as a Project that is consistent with a Community Plan, General Plan and/or zoning, pursuant to CEQA Guidelines Section 15183.

V - Reliance on a Prior Program EIR

Whereas the prior section of this CEQA Analysis provides substantial evidence to demonstrate the Project is consistent with the development assumptions of the General Plan and zoning, the Project is therefore eligible for consideration of CEQA streamlining pursuant to CEQA Guidelines Section 15183. The City of Oakland prepared an EIR for the Coliseum Area Specific Plan (the CASP EIR) that is applicable to the Project and its site, and that EIR provides programmatic environmental review of subsequent development, such as the Project. The CASP EIR presented an analysis of the environmental impacts associated with adoption and implementation of the CASP. Specifically, it evaluated the physical and land use changes from potential development that could occur pursuant to the CASP, and impacts were described at a level of detail that was consistent with the level of detail provided in the CASP.

CASP EIR as a Program EIR

One of the purposes of the CASP EIR was to comprehensively assess the entirety of potential environmental impacts of the proposed CASP. This environmental review was used to analyze the series of actions pursuant to the CASP characterized as one large project, and focused on broad policy alternatives and mitigation measures that apply to the CASP as a whole, consistent with CEQA Guidelines Section 15168 as a program EIR. This approach provided the City and other responsible agencies with the ability to consider program-wide mitigation measures and cumulative impacts that might be slighted in a case-by-case analysis approach. Preparation of this broader-level document was intended to simplify the task of preparing subsequent project-level environmental documents for future projects pursuant to the CASP, for which the details were not known at that time.

CASP EIR as a Project-Level EIR

Where feasible and where an adequate level of detail was available, the CASP EIR also provided a project-level analysis to eliminate or minimize the need for subsequent CEQA review of subsequent projects that could occur pursuant to the CASP. Project-level impacts of reasonably foreseeable development was analyzed to the extent that the details of such impacts could be assessed. The analysis of potential physical environmental impacts was based on reasonable assumptions about future development that could occur within the CASP planning area.

Assumed Development Plans

The assumed future development pursuant to the CASP was described in the CASP EIR Project Description, and included the following major development assumptions for individual sub-Areas of the CASP planning area.

Coliseum District

New development within the Coliseum District was anticipated to include a new Stadium, a new Ballpark and a new Arena. It also assumed an accompanying mixed-use development that included three new hotels, 525,000 square feet of new event-based retail space, 190,000 square feet of neighborhood-serving and convenience retail space, up to 1.5 million square feet of new science and technology oriented building space. Residential development was assumed to include up to 340 new residential units in low- to mid-rise townhome-types buildings and 3,660 new residential units in high-rise residential towers.

Project Buildout within Sub-Areas B, C and D

Buildout of the remaining portions of the CASP planning area was less defined than build out of the Coliseum District. The CASP EIR's buildout scenario included the following additional major development program elements:

- Within a portion of Sub-Area B, the CASP EIR considered a mixed-use waterfront residential district of 10 acres, with 1,750 new residential units and 59,000 square feet of neighborhood-serving retail uses, all adjacent to a new 12-acre inlet of San Leandro Bay.
- For the remaining majority of Sub-Area B, the CASP EIR assumed an "Innovation Gateway" science and technology district that would accommodate a total buildout of up to approximately 3.5 million square feet of technology and office uses.
- Private redevelopment was assumed in the CASP EIR within Sub-Area C, with 5.1 million square feet of new uses that would be supportive of institutional science and technology uses. Such uses were assumed to include advanced technology and other manufacturing, research and development and test product design, and sales and finance uses supporting technology businesses.
- Redevelopment of Sub-Area D was assumed to include approximately 2 million square feet of non-residential development space that was supportive of airport-related economic development, including larger logistics and distribution businesses.

Sub-Area E

The CASP Draft EIR assumed that Sub-Area E might potentially involve a land exchange that could create up to 15 acres of new wetland habitat, in exchange for development of the 8-acre Edgewater Seasonal Wetland in Sub-Area B. The Draft EIR noted that, "before implementation of such a land swap could occur, EBMUD would need to become a willing partner in this concept, in exchange for financial or real estate considerations." [14] The Draft EIR also noted that the Edgewater Seasonal Wetland was a wetland mitigation site established by the Port of Oakland, with ownership transferred to the East Bay Regional Park District (EBRPD). The EBRPD would also need to be a willing partner in such a land exchange involving fill and redevelopment of the Edgewater Seasonal Wetland, and any such land exchange would be, "subject to numerous subsequent permitting and regulatory requirements of other regional, state and federal agencies with jurisdiction. Not until such time as the details of the project elements are known, permits from responsible agencies are sought, and the requirements and conditions of the responsible regulatory agencies specific to these Project elements are fully known, can any determination be made as to the efficacy of this strategy."[15]

As acknowledged in the CASP Final EIR, many of the regional, state and federal agencies with jurisdiction over the Edgewater Seasonal Wetland, as well as EBMUD and EBRPD, commented on the unprecedented nature of this proposed land swap, the unlikelihood of either property being transferred, and the inadequacy of the proposed mitigation. The City of Oakland recognized that, "it could not compel (and would not seek to compel) EBRPD or EBMUD to enter into any negotiations or discussions regarding the sale or exchange of ownership" of their respective lands.[16] Accordingly, the City revised the Final CASP to indicate alternative plans for the waterfront in Sub-Area B (one with, and one without development of Edgewater Seasonal Wetland and the Bay inlet). The Final CASP also provided a revised development assumption for Sub-Area E, whereby the existing vacant lot fronting Oakport Street at 66th Avenue (i.e., the area generally encompassing the Development Area of the Project site) would be re-zoned as a Commercial Mix District- 6 Industrial Zone (D-CO-6), and "utilized in a manner that creates and maintains an attractive frontage along Oakport Street" (see **Figure 13**). [17]

[14] City of Oakland, CASP Draft EIR, page 3-57

[15] City of Oakland, CASP Draft EIR, page 4.3-56

[16] City of Oakland, CASP Final EIR page 4-18

[17] City of Oakland, Final Coliseum Area Specific Plan, page 73

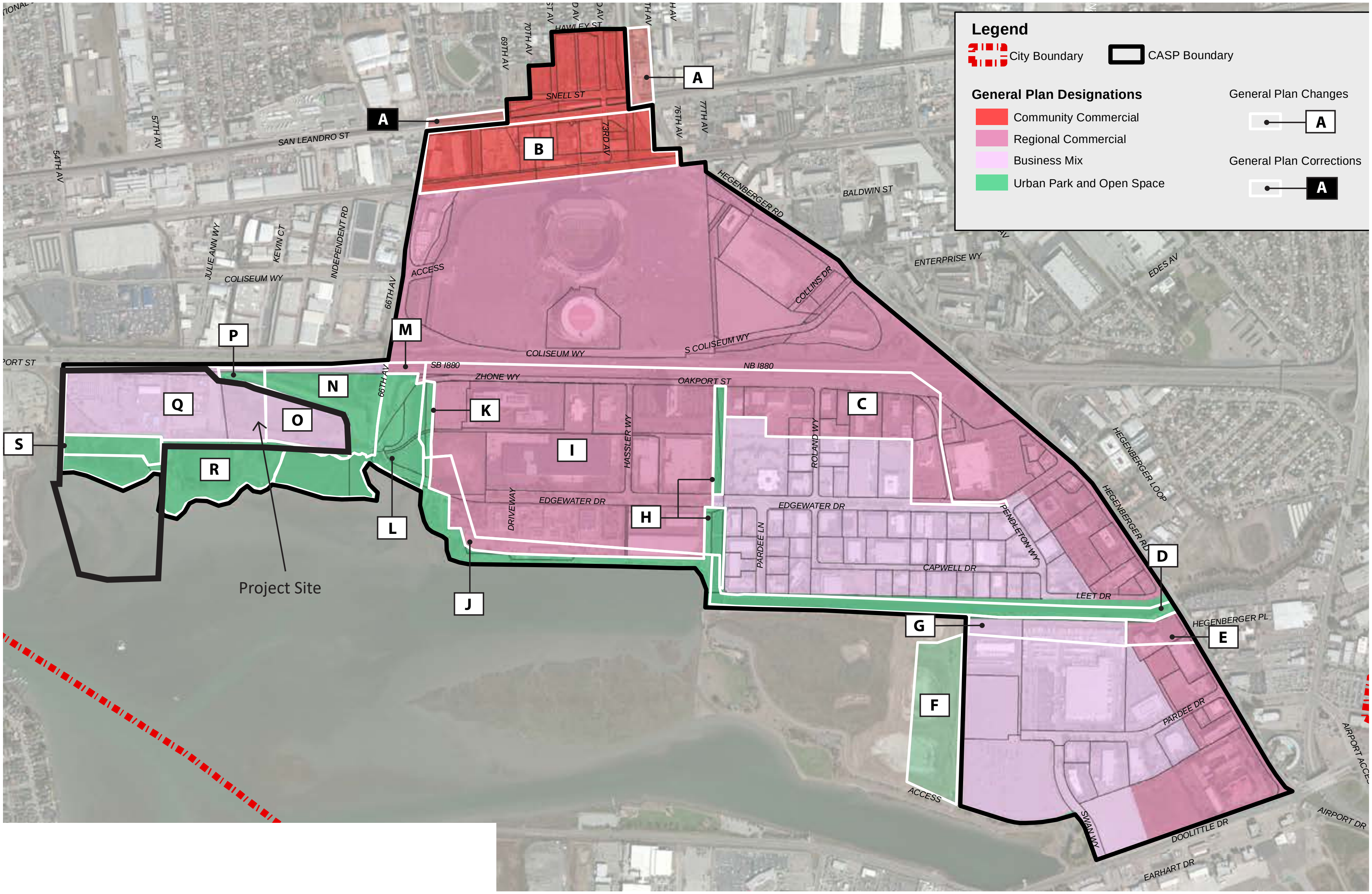


Figure 13
Coliseum Area Specific Plan General Plan Amendments

Source: City of Oakland, *Final CASP Revised Figure 4.9-5*, April 2015

Summary of CASP EIR's Identified Impacts and Mitigation Measures

Table 2-1 of the CASP EIR provides a summary of potential environmental impacts, applicable Standard Conditions of Approval, recommended mitigation measures, and the resulting level of significance after implementation of all mitigation measures.

For the majority of potential impacts (70 of the CEQA threshold criteria), the CASP EIR found less than significant effects, or effects that would be less than significant with implementation of required City of Oakland SCAs.

For 12 different environmental criteria under the topics of biological resources, hydrology, land use, noise, and multiple traffic-related criteria, the CASP EIR found these impacts to be reduced to levels of less than significant with implementation of additional mitigation measures. Of these mitigation measures, only the following measures were found necessary to address potential impacts that might occur outside of the Coliseum District (or outside of Sub-Area A), and thus potentially applicable to the Project. Of these mitigation measures, only those identified in the list below as "applicable", apply to the Project.

- MM Aesthetics 7: Wind Study - not applicable because the Project does not meet the criteria of having structures within 100 feet of San Leandro Bay that would exceed 100 feet in height)
- MM Bio 1A-1: Pre-construction Nesting Bird Surveys and Buffers - applicable
- MM Bio 1A-2: In-water Work Restrictions – not applicable because the Project does not propose any in-water work
- MM Bio 1A-3: Salt Marsh Protection - applicable
- MM Bio 1A-4: Public Access Design - applicable
- MM Bio 1B-1: In-Bay Dredge Requirements – not applicable because the Project does not propose any in-Bay dredge
- MM Bio 1B-2: Seasonal Wetland Restoration Plan - not applicable because the Project would not impact wetlands and associated habitat for special status species at the Edgewater Seasonal Wetland
- MM Bio 2A-4: Coastal Scrub Restoration – not applicable because the Project does not include installation of pedestrian or vehicular bridges across Elmhurst Creek, does not propose pilings or abutments on creek banks, and would not result in removal of coastal scrub vegetation associated with Elmhurst Creek
- MM Bio 2A-5: Realigned Portion of Elmhurst Creek – not applicable because the Project does not propose any alignment or day-lighting of any portion of Elmhurst Creek
- MM Bio 3-2: Herbicide / Pesticide Control - applicable
- MM Land-7A: FAA Part 77 Surfaces – not applicable because none of the Project's structures exceed 159.3 feet above mean sea level or otherwise exceed the applicable Part 77 surfaces of the Oakland International Airport Land Use Compatibility Plan, or exceed 200 feet above the ground level of the site
- MM Land-7B: Oakland Airport Influence Area Disclosure - applicable
- MM Land-8A: BCDC Issuance of Major Permit(s) - applicable
- MM Land-8B: Compliance with Bay Plan Dredging Policies – not applicable because the Project does not propose any excavation or dredging within the Bay, Damon Slough or Elmhurst Creek
- MM Land-9: Tidelands Trust – not applicable because the Project site is not owned by the Port of Oakland or subject to the Port's Tidelands Trust Land Grant obligations

For 5 different environmental criteria under the topics of air quality, biological resources, cultural resources, noise, plus multiple traffic-related criteria, the CASP EIR found these impacts could not be reduced to levels of less than significant even with implementation of reasonable and feasible mitigation measures, and these impacts were found to be significant and unavoidable. Due to the potential for the following significant unavoidable impacts, a Statement of Overriding Consideration was adopted as part of the City's certification of the 2015 CASP EIR and approval of the CASP.

Construction Emissions

Construction activities pursuant to the CASP buildout were found to generate regional ozone precursor emissions and regional particulate matter emissions. For most individual development projects, construction emissions will be effectively reduced to a level of less than significant with implementation of required City of Oakland Standard Conditions of Approval. However, larger individual construction projects may generate emissions of criteria air pollutants that would exceed the City's thresholds of significance. Even with implementation of additional mitigation (MM Air 6A-1: Reduced Construction Emissions), the CASP EIR could not find with certainty that emissions of ROG and NOx could be reduced to below threshold levels, and this impact was conservatively deemed to be significant and unavoidable.

Operational Emissions

New development pursuant to the CASP would result in operational average daily emissions of criteria pollutants that would exceed applicable threshold criteria. Even with implementation of SCAs (specifically SCA Trans-1: TDM Program), the CASP EIR found this impact to be significant and unavoidable.

Habitat Modifications

Future development pursuant to the CASP, particularly development related to the proposed Bay Inlet cut, and proposed fill of the Edgewater Freshwater Marsh, were found to have a substantial adverse effect on habitat for candidate, sensitive or special status species. The CASP EIR determined that the details of these elements of the CASP were not fully identified, permits from responsible agencies had not been sought, and the requirements and conditions of responsible regulatory were unknown at the time. The efficacy of any recommended mitigation measures could also not be fully determined, and this impact was deemed significant and unavoidable.

Demolition of the Oakland Coliseum

The CASP EIR determined that future development of the Coliseum District would result in ultimate demolition of the Oakland Coliseum and potentially the Arena, causing a substantial adverse change in the significance of the Oakland Coliseum and Arena Complex, a historical resource as defined in CEQA Guidelines. Demolition of the Oakland Coliseum was identified as the only feasible option to move forward with development within the Coliseum District. Even with identified mitigation, this impact was found to be significant and unavoidable.

Noise Exposure

The CASP EIR found that future development of new sports and special events venues in the Coliseum District would generate operational noise that would exceed the City of Oakland Noise Ordinance at new, on-site sensitive receivers. No feasible mitigation was found capable of reducing game-day and special event noise from the new stadium and ballpark, and this impact was found significant and unavoidable.

Traffic

The CASP EIR found numerous traffic-related impacts attributable to the CASP buildout scenarios, all based on level-of-service (LOS) or other measures of traffic congestion or delay. These LOS-based thresholds are no longer applicable as CEQA criteria. Although the CASP EIR found multiple traffic congestion impacts to be significant and unavoidable, these impacts are no longer relevant to CEQA and not considered significant and unavoidable effect appropriate for CEQA streamlining or tiering purposes.

Intended Use of the CASP EIR

Adoption of the Specific Plan

Under CEQA, the City of Oakland was the Lead Agency for the proposed CASP, and relied on the CASP EIR to serve as the CEQA-required environmental documentation for consideration of approval of the CASP. The City certified that it had reviewed and considered the information in the CASP EIR prior to approval of the CASP, and that the CASP EIR has been completed in conformity with the requirements of CEQA. The CASP EIR also provided the environmental review necessary for City decision-makers to consider and approve certain General Plan amendments and re-zoning actions, including reclassification of the Project site to Business Mix and rezoning the Project site to D-CO-6.

Individual Projects

The CASP EIR was also intended to provide sufficient detail to enable the City to make informed site-specific decisions on development within the CASP planning area. The CASP EIR indicates the City's intent to, "use the streamlining and tiering provisions of CEQA to the maximum feasible extent so that future environmental review of specific private development projects and public improvement projects carried out in furtherance of the CASP are expeditiously undertaken, without the need for repetition and redundancy". Specifically, the CASP EIR indicates that, pursuant to CEQA Guidelines Sections 15164, 15168, 15183 and 15183.3, future environmental analyses for individual project may be tiered from the CASP EIR:

- CEQA Guidelines Section 15183 provides that projects consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. This streamlines the review of such projects and reduces the need to prepare repetitive environmental studies.
- CEQA Guidelines Sections 15164 allows for the preparation of an Addendum to a certified EIR when certain conditions are satisfied;

As indicated in the CASP EIR, "these are examples of possible streamlining/tiering mechanisms that the City may pursue, and do not dictate the City's approach to future environmental review of specific projects. To the extent reasonable and feasible, this EIR [the CASP EIR] will be used to streamline the environmental review of other subsequent development and environmental enhancement projects located within Sub-Areas B, C, D and E. As individual actions pursuant to the proposed Project [the CASP] are proposed for implementation, the City will consider whether the action's environmental effects were fully disclosed, analyzed, and as needed, mitigated within this EIR. The City will also consider whether the individual action warrants preparation of a subsequent or supplemental environmental document, or whether the action warrants preparation of focused environmental review limited to certain site-specific issues."

VI - CEQA Checklist

Introduction

This CEQA Analysis document provides the following Checklist prepared by the City of Oakland (as Lead Agency), intended to provide the City of Oakland's decision-making body (i.e., the Oakland Planning Commission) with information as to the potential environmental effects of the proposed Project. Consistent with CEQA Guidelines, this Checklist contains an identification of potential environmental effects of the Project, using a checklist method that includes adequate explanation and evidence to support the Checklist entries. This Checklist includes information to determine whether the Project would result in significant effects that are peculiar to the Project or its site, or would result in impacts that were not analyzed as significant effects in an earlier Program EIR (i.e., the 2015 CASP EIR).

Specifically, the analysis contained in the following CEQA Checklist provides an assessment of whether the Project qualifies for an exemption as a Project Consistent with a Community Plan and its EIR pursuant to CEQA Guidelines 15183, and whether it qualifies for tiering and streamlined environmental review as a Project Consistent with a prior Program EIR pursuant to CEQA Guidelines Section 15168. The following Checklist evaluates the potential environmental impacts of the Project in relation to the impacts identified in the 2015 CASP EIR. The analysis determines whether the potential impacts of the Project were fully evaluated and disclosed in the CASP EIR, and whether uniformly applied development policies or standards (i.e., SCAs) as identified in the CASP EIR would apply to the Project. It also determines whether the Project would have significant effects on the environment that may be peculiar to the Project or to the site. This CEQA Checklist incorporates by reference the discussion and analysis of all potential environmental impact topics as presented in the CASP EIR, and references to this prior EIR include citations to the page or pages where this information is found. This CEQA Checklist provides a determination of whether the Project would result in an equal or less severe impact than previously identified in the 2015 CASP EIR, or if the Project would result in a new impact or a substantial increase in the severity of a significant impact as disclosed in the prior CASP EIR.

If the severity of a potential impact of the Project would be the same as or less than the severity of the impact as described in the CASP EIR, the checkbox for “Equal or Less Severe” is checked. If the checkbox is marked as “New or Substantial Increase in Severity”, that would indicate that the Project's impacts are either:

- peculiar to the Project or the Project site, per CEQA Guidelines Section 15183
- not identified in the CASP EIR (the prior Program EIR), including off-site and cumulative impacts, per CEQA Guidelines Section 15183
- due to substantial changes in the project, per CEQA Guidelines Section 16162 and 15168
- due to substantial changes in circumstances under which the project will be undertaken, per CEQA Guidelines Section 15162
- due to substantial new information that was not known at the time the CASP EIR was certified, per CEQA Guidelines Sections 15162 and 15183

In such a circumstance, a new EIR would be required for the Project, focused on those topics that might be indicated as new or substantially more severe effects.

The analysis contained in the following CEQA Checklist also provides an assessment of whether the Project qualifies for an Addendum to the 2015 CASP EIR, in accordance with CEQA Guidelines section 15164. This Checklist evaluates whether any of the new and/or more detailed information specific to the Project and its site may have one or more significant effects that were not discussed in the prior CASP EIR, or may result in significant effects previously examined but that will be substantially more severe than was shown in the prior

CASP EIR. This Checklist also considers whether mitigation measures that are considerably different from those analyzed in the previous CASP EIR would substantially reduce one or more significant effects of the Project, but the Project applicant declines to adopt such measures. If none of the circumstances identified above would occur, the environmental review for the Project may be accomplished with an Addendum to the CASP EIR, in accordance with CEQA Guidelines section 15164.

The CEQA Checklist references and relies on the analyses completed in the CASP EIR, and incorporates the conclusions of the CASP EIR by reference, as appropriate.

This CEQA Checklist identifies potential environmental effects of the Project using a checklist method, with adequate explanation and evidence to support the Checklist entries and conclusions. These explanations include narrative analysis of the Project. The CEQA Checklist uses the following acronyms for CEQA conclusions:

- No Impact - for environmental factors that would not be affected in any manner
- LTS - for less than significant impacts
- LTS w/SCAs or LTS w/MM - for impacts that would be reduced to LTS with implementation of identified City of Oakland Standard Conditions of Approval (or SCAs) and/or mitigation measures (MMs) as identified in an applicable prior program EIR (i.e., the CASP EIR), and
- SU - for significant and unavoidable impacts

Given the timespan between preparation of the CASP EIR and preparation of this CEQA Checklist, there are variations in the specific environmental topics addressed, and the significance criteria applied. Any significant differences are noted. The CASP EIR's significance criteria have been consolidated and abbreviated in this CEQA Checklist for administrative purposes. Where appropriate, the significance criteria have been updated to reflect current City of Oakland significance criteria established after the 2015 CASP EIR was prepared and that now apply to the Project. Current CEQA topics that were not addressed in the 2015 CASP EIR are now applicable to the Project, and fully addressed in this CEQA Checklist. These topics include:

- vehicle miles travelled (rather than operational level of service) for transportation impacts
- energy
- tribal cultural resources, as a separate topic rather than under the cultural resource category
- wildland fires

Aesthetics

Would the Project:	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	Relationship to CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Mitigation, Standards and Requirements	Project Conclusions: Resulting Level of Significance
a) Have a substantial adverse effect on a public scenic vista?	LTS	■	☐	-	LTS
b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway? c) Substantially degrade the existing visual character or quality of the site and its surroundings?	LTS	■	☐	-	LTS
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? e) 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?	LTS with SCA	■	☐	SCA Aesthetics-1: Lighting Plan	LTS with SCA
f) Introduce landscape that would now or in the future cast substantial shadows on existing solar collectors? g) 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? h) Cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space? i) Cast shadow on an historic resource, as defined by CEQA Guidelines section 15064.5(a), such that the shadow would materially impair the resource's historic significance?	No Impact	■	☐	-	No Impact
j) Create winds that exceed 36 mph for more than one hour during daylight hours during the year?	LTS with MM	■	☐	NA	No Impact

Scenic Vistas

CASP EIR Conclusions [18]

The CASP EIR (Impact Aesthetics 1B) found that future development pursuant to the CASP would not have a substantial adverse effect on a public scenic vista. New development was not found to block or otherwise adversely affect scenic views or scenic resources. The CASP planning area was considered essentially built out and generally limited in terms of scenic views. Development pursuant to the CASP would not adversely affect views across San Leandro Bay, and would improve public access to the shoreline.

Project Analysis

The Oakland General Plan identifies significant public scenic vistas as views of the Oakland hills from the flatlands, views of downtown and Lake Merritt, views of the shoreline, and panoramic views from Skyline Boulevard, Grizzly Peak Boulevard and other hillside locations. Based on the Project's location and surrounding development, the Project would not affect views of the Oakland hills, views of downtown or Lake Merritt, or panoramic views from hillside locations. The Project's effects on views of the Bay and Bay shoreline are addressed below.

The Development Area of the Project site represents one of few remaining undeveloped properties along the Oakland shoreline between I-880 and San Leandro Bay. Along I-880 (which is not a designated scenic highway) from High Street to Hegenberger Road, virtually all public views of the shorelines and across the Bay are obstructed by existing industrial and office development. Although the proposed Development Area and much of the other EBMUD property remains undeveloped, views across the Development Area and adjacent EBMUD properties from I-880 cannot see the shoreline or much of San Leandro Bay because of the Bay's lower elevation. Views of distant hills on the west side of San Francisco Bay on the Peninsula are momentarily visible across the site (see **Figure 14**). The Project's new development would obstruct a portion of this distant view, but views across the remaining undeveloped EBMUD property would remain. Whereas this view is a scenic vista, it can be seen for only a few seconds of travel time on I-880 before being blocked by other development. Obstruction of this very narrow scenic vista by the Project would not be considered significant and would not be a substantial loss of a scenic view or vista seen by substantial numbers of the public.

Public scenic vistas and views of San Leandro Bay from the Bay Trail west of the Project's proposed development (see also **Figure 14**) would remain unobstructed by the Project.

Consistent with the conclusions of the CASP EIR, the Project would not have a substantial adverse effect on a scenic vista.

Scenic Resources and Visual Character

CASP EIR Conclusions [19]

The CASP EIR (Impact Aesthetics 2) found that future development pursuant to the CASP would not substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings located within a state or locally designated scenic highway. The CASP EIR found no designated or eligible scenic highways in or adjacent to the CASP planning area.

[18] City of Oakland, CASP Draft EIR, beginning at page 4.1-14

[19] City of Oakland, CASP Draft EIR, beginning at page 4.1-15

View of Project Site from I-880 (to the east, looking west)

View from Bay Trail Adjacent to (west of) the Project site , looking northwest

Figure 14
Views To and From the Development Area

Source: Google Earth, 2023

The CASP EIR (Impact Aesthetics 3) found that future development pursuant to the CASP would not substantially degrade the existing visual character or quality of the planning area or its surroundings. The CASP planning area was found to contain a mix of land uses that range from industrial and asphalt dominated, to modest landscaped office parks, and open space along the Bay shoreline. Views into the CASP planning area would look upon new buildings and landscaping, rather than parking lots. Consequently, this impact was found to be less than significant, and no mitigation measures were needed.

Project Analysis

Although the Project site remains undeveloped, there are no significant scenic resources (such as rock outcroppings or historic buildings) on the site. The site does contain several trees, but these trees are not visually significant features of the landscape. The visual character of the Project site's surroundings is that of light industrial and office development, generally consistent with the character of the Project. The Project would not substantially conflict with the visual character of its surroundings.

Consistent with the conclusions of the CASP EIR, the Project would not substantially damage scenic resources. The Project is located in an urbanized area of similar visual character. The Project would not conflict with applicable zoning and other regulations governing scenic quality, and would be subject to the City Design Review process pertaining to the overall aesthetics of the proposed development.

Light & Glare

CASP EIR Conclusions [20]

The CASP EIR (Impact Aesthetics 4) found that future development pursuant to the CASP could create new sources of substantial light or glare that could adversely affect day or nighttime views in the area, but these new light sources would be consistent with the existing light and glare conditions in the area. The CASP EIR determined that the planning area is already an urbanized environment with associated light and glare. Taller structures would introduce light from upper story office and residential uses, as well as ground level lighting associated with commercial uses and office or residential entryways. Individual developments would not be expected to change or affect day or nighttime views from increased light or glare to a significant extent. Such projects would be subject to standard project review and approval processes, including SCA Aesthetics-1: Lighting Plan, which would minimize potential impacts resulting from lighting and ensure that lighting and glare effects remain less than significant. No mitigation measures were found necessary.

Project Analysis

The Project's proposed Lighting Plan (Sheet PS1.0 of the Project application submittal) indicates that there are generally five major types of outdoor lighting to be provided pursuant to the Project. This includes ten cobra-hooded LED streetlights to be placed along the Project frontage on Oakport Street and 10 hooded LED pole-mounted parking lot lights. Outdoor hooded LED sconces would be placed at the entries to the Warehouse and Workshop and at the Materials Bin, multiple hanging LED dome lights would hang under the roof of the Pipe Storage facility, and safety lighting would be added along the easterly façade of the Office building. Based on the Lighting Plan analysis prepared for the Project (see **Figure 15**), the lighting plan generally provides for the following light levels at and surrounding the site:[21]

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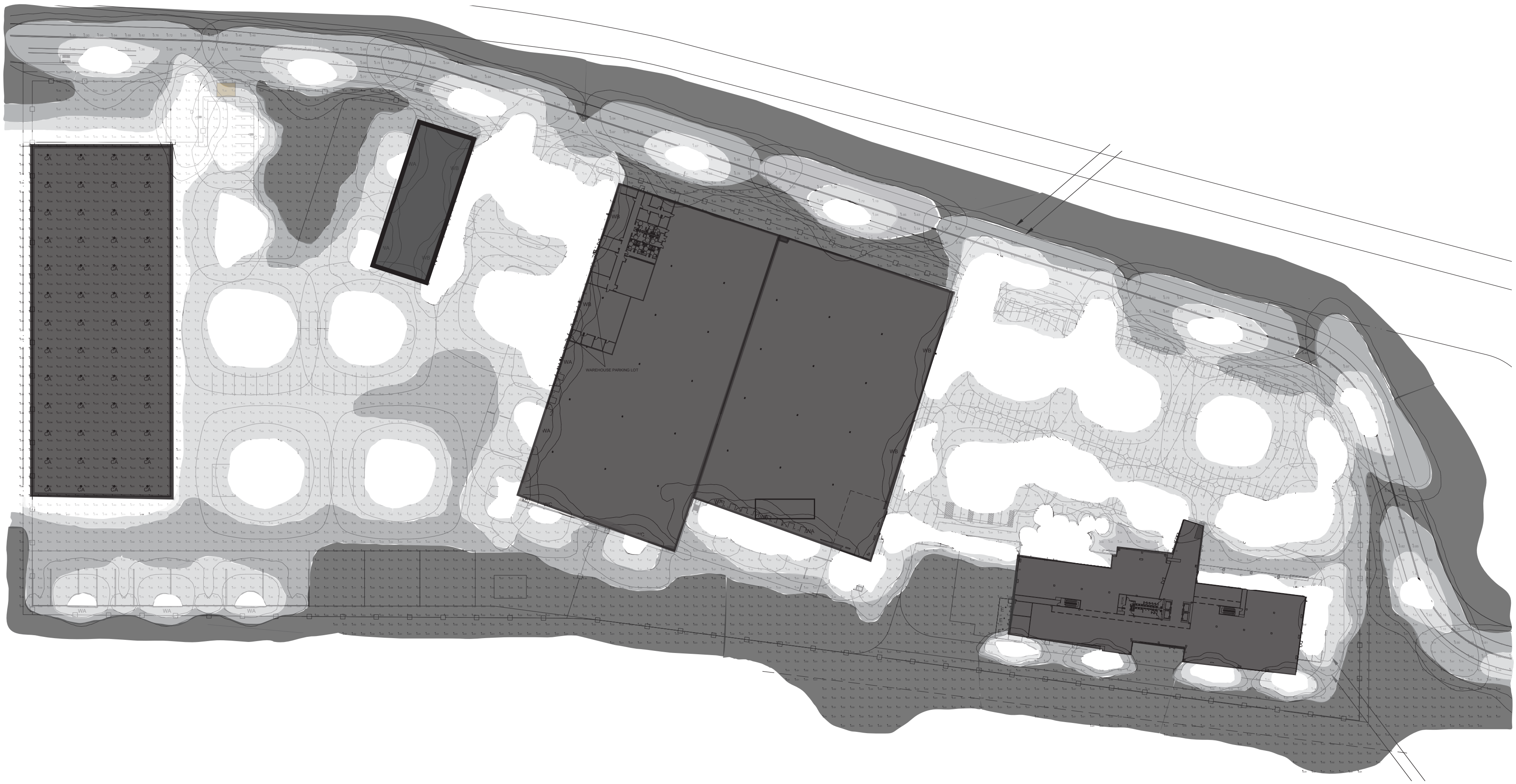
[20] City of Oakland, CASP Draft EIR, beginning at page 4.1-15

[21] AGI Lighting Analysis, using AGI32 lighting software in conformance with IES specifications, see Ware Malcomb Sheet PS1.0, January 2019



0 to 0.5 Footcandles (horizontal footcandles at grade)

0.5 to 1.0 Footcandles

1.0 to 2.0 Footcandles

Greater than 2.0 footcandles

Figure 15
Development Area Lighting Plan

Source: Associated Lighting Representatives, Inc., Sheet PS1.0, January 2019

- Streetlights provide between 2 and 3 foot-candles of horizontal light across the full project frontage on Oakport Street (City lighting specifications to be determined by City)
- Parking lot light standards provide an average of approximately 2 foot-candles of horizontal light across all on-site parking area (compared to Illuminating Engineering Society [IES]recommendations of 0.75 to 3 foot-candles for urban areas)[22]
- Safety lighting at the Project buildings provide an average of approximately 3 to 5 foot-candles of horizontal light at building entries and across the front façade of the Office (compared to IES recommendations of 3 foot-candles for safety lighting at building exteriors)
- Lighting fixtures for the Materials Bins and the Pipe Storage facilities provide an average of approximately 10 to 12 foot-candles of horizontal light at within these facilities (compared to IES recommendations of 5 to 20 foot-candles for warehouse and storage of bulky items).

AGI's Lighting Analysis also demonstrates that horizontal light at off-site locations drop to near zero (0.01 to 0.02 foot-candles) at points 30 to 35 feet from the property boundary.

There is nothing about the Project or its site that would require an exception to any policies or regulations in the General Plan, Planning Code or Uniform Building Code addressing the provision of adequate light related to appropriate uses.

<u>Applicable Standard Conditions of Approval</u>

The following City of Oakland SCA is cited in the CASP EIR as an effective means for addressing light and glare, and would apply to the Project.

❖ ***SCA Aesthetics-1, Lighting Plan***: Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties.

Consistent with the conclusions of the CASP EIR, the Project's effects related to light and glare impacts will be fully addressed through implementation of City SCAs, and this impact would be reduced to less than significant.

<u>Shadows</u>

CASP EIR Conclusions [23]

The CASP EIR (Impact Aesthetics 5) found that future development pursuant to the CASP could introduce additional new buildings and landscape in the planning area, but this new development would not cast substantial shadows on existing solar collectors. It would not cast shadows that substantially impair the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors. New buildings would not cast shadows that substantially impair the beneficial use of a public park, lawn, garden, or open space; and would not cast shadows that materially impair the significance of an historic resource.

Project Analysis

Consistent with the conclusions of the CASP EIR, the Project would not cast substantial shadows on existing solar collectors, as no such solar collectors are within the Project vicinity. The Project would not cast shadows that

[22] EIS standards as provided in "IES Recommended Light Levels - Waypoint's Quick Reference Guide, accessed at https://waypointlighting.com/uploads/2/6/8/4/26847904/ies_recommended_light_levels.pdf

[23] City of Oakland, CASP Draft EIR, beginning at page 4.1-16

substantially impair the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors. The Project's new buildings would not cast shadows that substantially impair the beneficial use of a public park or open space; and would not cast shadows that materially impair the significance of an historic resource. The Project would not have a shadow-related CEQA impact.

Wind

CASP EIR Conclusions [24]

The CASP EIR (Impact Aesthetics 7B) found that future development pursuant to the CASP could create winds that exceed 36 mph for more than one hour during daylight hours during the year. Portions of the CASP planning area are located adjacent to San Leandro Bay, and development may ultimately be proposed that would include new structures taller than 100 feet in height (measured to the roof) along the shoreline. Wind effects at these locations could be significant.

The CASP EIR required implementation of Mitigation Measure Aesthetics 7 that would require any structures proposed within 100 feet of San Leandro Bay and that would exceed 100 feet in height must undertake a wind study. The wind analysis must consider the project's contribution to wind impacts to on- and off-site public and private spaces. Based on the findings of the wind analysis, the structure must be redesigned to prevent it from creating winds in excess of 36 mph for more than one hour during daylight hours. The CASP EIR found that implementation of Mitigation Measure Aesthetics 7 would reduce this impact to a less than significant level.

Project Analysis

Although portions of the Project site are within 100 feet of San Leandro Bay, the Project does not include any structures that would exceed 100 feet in height (the tallest Project building is the Office, at 85 feet). No wind study is required of the Project and no adverse effects increasing wind or wind tunnels would occur.

CEQA Conclusions Pertaining to Aesthetics

The analysis presented above examines whether there are any Project-specific significant effects related to aesthetics that are peculiar to the Project or its site, finding none. The Project would have no aesthetic impacts that were not previously analyzed in the CASP EIR, would have no off-site or cumulative aesthetic impacts not discussed in the prior CASP EIR, and would not result in any aesthetic impacts that are more severe than as discussed in the prior CASP EIR. There are no aesthetics-related impacts that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as pertains to aesthetic resources. Only minor technical additions related to the specifics of the Project and its site have been identified, and these minor additions to the CASP EIR are appropriately disclosed in this Addendum to the CASP EIR.

[24] City of Oakland, CASP Draft EIR, beginning at page 4.1-21

Agriculture and Forestry Resources

Would the Project:	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	Relationship to CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Standards and Requirements	Project Conclusions: Resulting Level of Significance
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	No Impact	■	☐	-	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact	■	☐	-	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	No Impact	■	☐	-	No Impact
d) Result in the loss of forestland or conversion of forestland to non-forest use?	No Impact	■	☐	-	No Impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?	No Impact	■	☐	-	No Impact

The CASP EIR found that implementation of the CASP would not have significant environmental impacts on agriculture or forest resources, as no such resources exist within the CASP planning area.[25]

There is no new information or evidence to suggest that agricultural or forest resources now exist within the CASP planning area. The California Department of Conservation's Farmland Mapping and Monitoring Program identifies the Project site as urban, and not an area of agricultural or forest resource importance. The Project would have no impact on these resource types.[26]

[25] City of Oakland, CASP Draft EIR, page 2-2

[26] California, State of, Department of Conservation, *Farmland Mapping and Monitoring Program*, accessed November 2022 at: https://maps.conservation.ca.gov/DLRP/CIFF/

CEQA Conclusions Pertaining to Agriculture

The analysis presented above examines whether there are any Project-specific significant effects related to agriculture or forest resources that are peculiar to the Project or its site, finding none. The Project would have no agricultural or forest resource impacts that were not previously analyzed in the CASP EIR, would have no off-site or cumulative agriculture or forest impacts not discussed in the prior CASP EIR, and would not result in any agriculture or forest impacts that are more severe than as discussed in the prior CASP EIR. There are no agricultural or forest related impacts that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as related to agricultural or forest resources. Only minor technical additions related to the Project and its site have been identified, and these minor additions to the CASP EIR are appropriately disclosed in this Addendum to the CASP EIR.

Air Quality

Would the Project:	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	Relationship to CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Standards and Requirements	Project Conclusions: Resulting Level of Significance
Plan-Level Impacts a) Fundamentally conflict with or obstruct implementation of the applicable air quality plan, not include special overlay zones containing goals, policies, and objectives to minimize potential Toxic Air Contaminant (TAC) impacts, or Not identify existing and planned sources of odors with policies to reduce potential odor impacts?	LTS	■	☐	-	NA
Project-level Impacts b) During project construction, result in average daily emissions of 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10)?	LTS with SCAs	■	☐	SCA Air-1, Dust Controls – Construction Related SCA Air-2, Criteria Air Pollutant Controls - Construction Related	LTS w/ SCA
c) During construction, expose sensitive receptors to substantial pollutant concentrations, resulting in an increase in cancer risk level greater than 10 in one million, a non-cancer risk (chronic or acute) hazard index greater than 1.0, or an increase of annual average PM2.5 of greater than 0.3 micrograms per cubic meter, or d) Under cumulative conditions, result in a cancer risk level greater than 100 in a million, a non-cancer risk (chronic or acute) hazard index greater than 10.0, or annual average PM2.5 of greater than 0.8 micrograms per cubic meter?	LTS with SCA	■	☐	SCA Air-2, Criteria Air Pollutant Controls - Construction Related SCA Air-3, Diesel Particulate Matter Controls-Construction Related/Diesel Particulate Matter Reduction Measures	LTS
e) During operation, result in average daily emissions of 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10), or result in maximum annual emissions of 10 tons per year of ROG, NOx, or PM2.5 or 15 tons per year of PM10?	SU	■	☐	City SCAs pertaining to required TDM, energy efficiency, water conservation and waste generation	LTS
f) 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 an increase in cancer risk level greater	LTS with SCA	■	☐	SCA Air-4, Stationary Sources of Air Pollution (Toxic Air Contaminants)	LTS w/ SCA

than 10 in one million, a non-cancer risk (chronic or acute) hazard index greater than 1.0, or an increase of annual average PM2.5 of greater than 0.3 micrograms per cubic meter? g) Under cumulative conditions, result in a cancer risk level greater than 100 in a million, a non-cancer risk (chronic or acute) hazard index greater than 10.0, or annual average PM2.5 of greater than 0.8 micrograms per cubic meter? h) During operation, expose sensitive receptors to substantial pollutant concentrations?					
i) Frequently and for a substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people?	LTS	■	□	SCA Air-5, Truck-Related Risk Reduction Measures (Toxic Air Contaminants)-	No Impact
j) Contribute to carbon monoxide (CO) concentrations exceeding the California Ambient Air Quality Standards (CAAQS) of nine parts per million (ppm) averaged over eight hours and 20 ppm for one hour?	LTS	■	□	-	LTS

Consistency with the Applicable Air Quality Plan

CASP EIR Conclusions [27]

The CASP EIR (Impact Air-1) found that adoption and implementation of the CASP would not fundamentally conflict with or obstruct implementation of any control measures of the applicable Clean Air Plan, and the CASP demonstrates reasonable efforts to implement Clean Air Plan control measures.

At the time the CASP was adopted and its EIR was certified in 2015, the applicable Clean Air Plan was the Bay Area 2010 Clean Air Plan, which served to update the Bay Area Ozone Plan in compliance with the requirements of Chapter 10 of the California Health & Safety Code. The 2010 Clean Air Plan provided an integrated, multi-pollutant strategy to improve air quality, protect public health, and protect the climate. The primary goals of the 2010 Clean Air Plan were to attain air quality standards, reduce population exposure and protect public health in the Bay Area, and to reduce greenhouse gas emissions and protect the climate. The 2010 CAP includes fifty-five control measures that addressed transportation, mobile source measures applicable to construction equipment, land use and local impact measures, and energy and climate measures. The CASP EIR determined that implementation of the CASP would not interfere with implementation of any of the Clean Air Plan's control measures, this impact was found to be less than significant, and no mitigation measures were required.

The CASP EIR (Impact Air-2) also concluded that new development pursuant to the CASP would be located near existing and planned sources of toxic air contaminants and within 500 feet of freeways and high-volume

[27] City of Oakland, CASP Draft EIR, beginning at page 4.2-42

roadways containing 100,000 or more average daily vehicle trips. Special overlay zones containing development standards that minimize potential exposure of sensitive receptors to toxic air contaminants were required pursuant to the CASP EIR, to be implemented pursuant to City of Oakland Standard Conditions of Approval (SCAs). New residential development planned within areas of concern from TAC emissions are subject to those SCAs. [28]

Project Analysis

Pursuant to the BAAQMD's CEQA Guidelines, proposed plans (such as the CASP) must analyze the Plan's consistency with the applicable Clean Air Plan, including consistency with current control measures, and projected VMT or vehicle trips increase relative to its projected population increase. However, individual projects are subject to project-level analysis pursuant to separate BAAQMD CEQA Guidelines addressing project-specific effects related to construction and operational-related criteria air pollutant emissions, construction and operational-related emissions of TACs or fine particulate matter, and odors. Those analyses are provided below.

Whereas this document supports a conclusion that the Project is consistent with the CASP, and the CASP was determined to be consistent with the then-applicable Clean Air Plan, the Project is similarly consistent with the now-current Clean Air Plan.

The Project does not include any residential development, and as such is not subject to special overlay zones related to the exposure of sensitive receptors to toxic air contaminants, or SCA requirements to implement project-specific measures to reduce potential health risks.

Construction-Period Fugitive Dust

CASP EIR Conclusions [29]

The CASP EIR (Impact Air-4) concluded that during construction, individual development projects pursuant to the CASP will generate short-term emissions of fugitive dust from demolition, grading, hauling and construction activities. Construction-related fugitive dust emissions would vary from day to day depending on the level and type of activity, silt content of the soil, and the weather. In the absence of mitigation, construction activities may result in significant quantities of dust, and local visibility and PM10 and PM2.5 concentrations may be adversely affected on a temporary and intermittent basis.

The CASP EIR concluded that if a project complies with specified dust control measures, it would not result in a significant impact related to construction period dust emissions. In order to be protective of the health of nearby residences, as well as to reduce dust emissions that could affect regional air quality, all future development pursuant to the CASP is required to implement BAAQMD-recommended construction period dust control measures pursuant to the City's SCAs, and to comply with the requirements found under the City Municipal Code (Section 15.36.100; Dust Control Measures). These measures include both "Basic" and "Enhanced" measures. The City of Oakland considers implementation of effective and comprehensive dust control measures (Best Management Practices) as the threshold of significance for fugitive dust emissions (both PM10 and PM2.5); if a project complies with specified dust control measures, it would not result in a significant impact related to construction period dust emissions. With implementation of these SCAs, temporary construction-period fugitive dust emissions were found to be controlled to a less than significant level.

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28 City of Oakland, CASP Draft EIR, beginning at page 4.2-44

29 City of Oakland, CASP Draft EIR, beginning at page 4.2-47

Project Analysis

Short-term emissions of fugitive dust associated with construction of the Project would occur primarily during demolition, site preparation and grading activities at the site. The Project's proposed grading plan anticipates that site preparation work will include clearing and grubbing the site, over-excavating up to 2 feet of undocumented fill, and then compacting and backfilling these areas with structural fill. The proposed grading plan also intends to raise the ground surface elevation at areas that may otherwise be susceptible to reasonably forecast sea level rise (see Hydrology section of this CEQA Checklist). Based on preliminary earthwork quantities, it is anticipated that the Project may have as much as 8,430 cubic yards (CY) of cut grading/excavation for building foundations, 31,378 CY of fill across the site, for a net balance of 22,941 CY of soil import.[30] Each of these activities are sources of construction-period dust emissions.

<u>Applicable Standard Conditions of Approval</u>

The following City of Oakland SCAs are cited in the CASP EIR as effective means for addressing fugitive dust emissions from all construction projects within the City, and would apply to the Project.

❖ ***SCA Air-1, Dust Controls – Construction Related***: The project applicant shall implement all of the following applicable Basic dust control measures during construction of the project:

a) Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.
b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
d) Limit vehicle speeds on unpaved roads to 15 miles per hour.
e) All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph.
f) All trucks and equipment, including tires, shall be washed off prior to leaving the site.
g) Site 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.

Because the Project involves extensive site preparation (the construction site more than four acres in size) and involves extensive soil transport (more than 10,000 CY of soil import), the following additional Enhanced dust control measures during construction of the project:

h) Apply and maintain vegetative ground cover (e.g., hydro-seed) or non-toxic soil stabilizers to disturbed areas of soil that will be inactive for more than one month. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).
i) 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.
j) When working at a site, install appropriate windbreaks (e.g., trees, fences) on the windward side(s) of the site, to minimize wind-blown dust. Windbreaks must have a maximum 50 percent air porosity.

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30 Ware Malcomb, et.al., Project Application Submittal Materials, Sheet ___, April 4, 2019

k) 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.

l) 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.

Consistent with the conclusions of the CASP EIR, the Project's effects related to fugitive dust emissions during construction will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.

Construction Period Criteria Pollutant Emissions

CASP EIR Conclusions [31]

The CASP EIR (Impact Air-5B) determined that construction activities pursuant to the CASP will generate regional ozone precursor emissions and regional particulate matter emissions from construction equipment exhaust. For most individual development projects, construction emissions will be effectively reduced to a level of less than significant with implementation of required City of Oakland SCAs. However, larger individual construction projects may generate emissions of criteria air pollutants that would exceed the City's thresholds of significance, and this impact was found to be significant and unavoidable.

The CASP EIR did not quantify construction-period emissions for buildout of the CASP because of the high number of variables and the unknown nature of these variables. However, based on BAAQMD screening criteria, the CASP EIR found that if future development projects met certain criteria, those individual construction projects would be unlikely to result in a significant impact from criteria air pollutant and precursor emissions. Relevant to the Project, those criteria included the following:

- 277,000 square feet of commercial retail or office space, or
- 259,000 square feet (or 540 employees) within a light- or heavy- industrial building

These screening criteria also require that all Basic construction mitigation measures would be included in the project design and implemented during construction, and that construction-related activities would not include demolition; simultaneous occurrence of more than two construction phases; extensive site preparation for grading, cut/fill or earth movement); or extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

The CASP EIR concluded that those construction projects that cannot meet these criteria may result in construction-period emissions exceeding City threshold levels for individual project-level effects. The CASP EIR considered that such large construction projects were likely to occur pursuant to buildout of the CASP, and implementation of SCAs may not be fully capable of reducing criteria pollutants during construction. In particular, the CASP EIR concluded that it could not reliably be assumed that ROG emissions from application of architectural coatings would be reduced to 54 pounds per day or less. Therefore, this impact was conservatively considered significant and unavoidable.

[31] City of Oakland, CASP Draft EIR, beginning at page 4.2-52

Project Analysis

The Project does not meet the screening criteria identified in the CASP EIR as a project unlikely to result in a significant impact from criteria air pollutant and precursor emissions. The combination of the 160,000 square-foot office building (representing approximately 58% of the office screening criteria) and the 132,000 square-foot warehouse and workshop (representing approximately 51% of the light industrial screening criteria) exceed size limit criteria. Additionally, the Project does involve extensive material transport (approximately 22,941 CY of soil import), requiring haul truck activity.

Accordingly, the Project's construction-period criteria pollutant emissions have been calculated using the CalEEMod (version 2022.1.1.13) emissions calculator. Project-specific information was entered into the CalEEMod calculator, including the following:

- the Project site's precise location
- the square footage of each building to be constructed, total paved area (parking and circulation) and landscaped area; and
- the extent of grading operations, including the amount of projected soil import

CalEEMod default values were used for all emissions calculation related to on-road vehicle emission factors, off-road equipment emission factors, worker and vendor trip length, ROG emission values from architectural coatings, and electricity consumption.

The Project's construction emissions were calculated under two separate construction schedules, both schedules assuming that construction would begin on August 1, 2023. The first construction schedule is a standard CalEEMod-generated schedule, with construction phase durations based on similar projects of a similar size. The second construction schedule analyzes a limited construction window that only allow for construction to occur between August 1 and January 31 of each year, consistent with mitigation measures intended to protect special status birds and nesting birds (including potentially nesting Ridgeway's rail, California black rail, Alameda song sparrow and San Francisco saltmarsh common yellowthroat) at the adjacent Damon Marsh – see the biology section of this CEQA Checklist. The CalEEMod results for construction emissions are included in **Appendix B** and summarized below in **Table 5**.

Table 5: Regional Air Pollutant Emissions during Construction

	Reactive Organic Gases	Nitrogen Oxides	PM10, Exhaust	PM2.5, Exhaust
Standard Construction Schedule				
Average Daily Emissions, 2023	0.81 lbs/day	8.21 lbs/day	0.33 lbs/day	0.31 lbs/day
Average Daily Emissions, 2024	1.15 lbs/day	9.42 lbs/day	0.37 lbs/day	0.34 lbs/day
Average Daily Emissions, 2025	8.73 lbs/day	0.32 lbs/day	0.01 lbs/day	0.01 lbs/day
Annual Emissions, 2023	0.15 tons/yr	1.50 tons/yr	0.06 tons/yr	0.06 tons/yr
Annual Emissions, 2024	0.21 tons/yr	1.72 tons/yr	0.07 tons/yr	0.06 tons/yr
Annual Emissions, 2025	1.59 tons/yr	0.06 tons/yr	0.00 tons/yr	0.00 tons/yr
Limited Construction Window Schedule				
Average Daily Emissions, 2023	0.99 lbs/day	9.61 lbs/day	0.39 lbs/day	0.36 lbs/day
Average Daily Emissions, 2024	0.70 lbs/day	5.75 lbs/day	0.22 lbs/day	0.21 lbs/day
Average Daily Emissions, 2025	9.02 lbs/day	2.06 lbs/day	0.08 lbs/day	0.07 lbs/day
Annual Emissions, 2023	0.18 tons/yr	1.75 tons/yr	0.07 tons/yr	0.06 tons/yr
Annual Emissions, 2024	0.153tons/yr	1.05 tons/yr	0.04 tons/yr	0.04 tons/yr
Annual Emissions, 2025	1.65 tons/yr	0.37 tons/yr	0.01 tons/yr	0.01 tons/yr
Thresholds:				
Daily Threshold	54 lbs/day	54 lbs/day	82 lbs/day	54 lbs/day
Annual Threshold	10 tons/yr	10 tons/yr	15 tons/yr	10 tons/yr
Exceed Threshold, Either Schedule?	**No/No**	**No/No**	**No/No**	**No/No**

Source: Lamphier-Gregory, CalEEMod results included as Appendix B

As shown, under either construction schedule scenario, the Project's construction-period emissions of criteria pollutants would not exceed threshold levels, and this impact would be less than significant. This conclusion is reached prior to including any construction-period emission reductions.

Applicable Standard Conditions of Approval

Regardless of comparison to construction-period criteria pollutant thresholds, the following City of Oakland SCAs are cited in the CASP EIR as effective means for further addressing cumulative construction-period criteria pollutants from all construction projects within the City, and would apply to the Project.

- ***SCA Air-2, Criteria Air Pollutant Controls - Construction Related***: The project applicant shall implement all of the following control measures for criteria air pollutants during construction of the project, as applicable:
  a) Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use, or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.

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

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

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

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

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

Consistent with the conclusions of the CASP EIR, the Project’s effects related to criteria pollutant emissions during construction will be fully addressed through implementation of City SCAs, and this impact would be less than significant.

Construction Period Toxic Air Contaminant (TAC) Emissions

CASP EIR Conclusions [32]

The CASP EIR (Impact Air-6B) determined that construction of individual development projects pursuant to the CASP will generate construction-related toxic air contaminant (TAC) emissions from fuel-combusting construction equipment and mobile sources that could exceed thresholds for cancer risk, chronic health index, acute health index or annual average PM2.5 concentration levels. However, construction-related TAC emissions would be reduced to a less than significant level with implementation of required City of Oakland SCAs.

Construction activities may generate construction-related toxic air contaminant (TAC) emissions from fuel-combusting construction equipment and mobile sources. Project construction activities would produce DPM and PM2.5 emissions due to exhaust emissions from equipment such as loaders, backhoes, and cranes, as well as haul truck trips. These emissions could result in elevated concentrations of DPM and PM2.5 at nearby receptors (both new and existing residences). Sensitive receptors in proximity to these emissions (generally within 200 meters) could be subject to increased cancer risk, chronic health problems and acute health risk. Due to the variable nature of construction activity, the generation of TAC emissions in most cases would be temporary, especially considering the short amount of time such equipment is typically within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations (e.g., typically within 1,000 feet). The CASP EIR noted that current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities, resulting in difficulties with producing accurate estimates of increased health risk. Nevertheless, the CASP EIR concluded that implementation of SCA’s calling

32 City of Oakland, CASP Draft EIR, beginning at page 4.2-58

implementation of construction-related Best Management Practices to substantially reduce the more typical construction-related TAC emissions would reduce health risks to nearby sensitive receptors to a less than significant level.

Project Analysis

The Project's construction activities will generate construction-related toxic air contaminant (TAC) emissions from fuel-combusting construction equipment and mobile sources. Specifically, the Project's construction activities would produce DPM and PM2.5 emissions from equipment exhaust from diesel-powered loaders, backhoes, cranes, as well as haul truck trips. These emissions could result in elevated concentrations of DPM and PM2.5, and any sensitive receptors in proximity to these emissions could be subject to increased cancer risk.

The CASP EIR's identified range of susceptibility to health risks from construction TAC emissions was 200 meters (or 656 feet). A more standard health-risk concern is for sensitive receptors within 1,000 feet. The nearest sensitive residential receptors to the Project site are at San Leandro Street/Seminary Avenue, Lion Creek Crossing at San Leandro Street/66th Avenue, and at San Leandro Street/53rd Avenue (see **Figure 16**). Each of these residential areas are about 3,000 feet or more from the Project site. Due to the variable and temporary nature of construction activity and the substantial distance between the Project site and any sensitive residential receptors, the Project's construction activity is not anticipated to result in the exposure of sensitive receptors to substantial concentrations of construction-related TAC emissions. Furthermore, the best practices as included in SCA Air-2, Criteria Air Pollutant Controls - Construction Related (see above) would apply to the Project. These best practices include minimizing idling times on all diesel-fueled vehicles, and requiring that all equipment to be used at the construction site comply with the requirements of California Air Resources Board's Off-Road Diesel Regulations. These regulations are specifically intended to reduce oxides of nitrogen (NOx), diesel particulate matter (DPM), and other criteria pollutant emissions from in-use, off-road diesel-fueled vehicles.

Based on the temporary nature of construction activity, the substantial distance between the Project site and any sensitive receptors, and the requirements to minimize TAC emissions from diesel-powered construction equipment and vehicles, this impact of the Project would be less than significant.

Figure 16
Nearest Off-Site Sensitive Residential Receptors

Applicable Standard Conditions of Approval

Regardless of this CEQA conclusion, the following SCA applies to all projects involving construction activities involving greater than 100 dwelling units or 50,000 square feet of non-residential floor area, or any project involving construction activities involving greater than 50 dwelling units or 25,000 square feet of non-residential floor area for any area defined as needing “Best Practices” or needing “Further Study” on the BAAQMD Healthy Places Map, which typically applies within 1,000 feet of a freeway or along major thoroughfares.

- ***SCA Air-3, Diesel Particulate Matter Controls-Construction Related/Diesel Particulate Matter Reduction Measures***: The project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to diesel particulate matter (DPM) from construction emissions. The project applicant shall choose one of the following methods:

  a) The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with current guidance from the California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment to determine the health risk to sensitive receptors exposed to DPM from project construction emissions. The HRA shall be submitted to the City (and the Air District if specifically requested) for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then DPM reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, DPM reduction measures shall be identified to reduce the health risk to acceptable levels as set forth under subsection b below. Identified DPM reduction measures shall be submitted to the City for review and approval prior to the issuance of building permits and the approved DPM reduction measures shall be implemented during construction.

  -or

  b) All off-road diesel equipment shall be equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by CARB. The equipment shall be properly maintained and tuned in accordance with manufacturer specifications. This shall be verified through an equipment inventory submittal and Certification Statement that the Contractor agrees to compliance and acknowledges that a significant violation of this requirement shall constitute a material breach of contract.

The current Tier 4 emission standards have been phased-in from 2008 through 2015 for the sale of all new off-road heavy-duty diesel engines. Recent studies show that off-road heavy-duty diesel engines meeting Tier 4 standards (CARB’s most recent certification standard for off-road heavy-duty diesel engines) result in reductions of PM and NOx emissions by about 90% as compared to prior Tier 2 and Tier 3 engines. [33]

Consistent with the findings of the CASP EIR, the applicable SCA Air-3 (above) requires the Project to either conduct an HRA prior to construction and implement diesel emission reductions as identified in that HRA, or implement Verified Diesel Emission Control Strategies for control of construction-related TAC emissions. Either of these approaches would control construction-related TAC emissions to levels of less than significant, and no additional mitigation is required.

[33] DieselNet, accessed at: https://dieselnet.com/standards/us/nonroad.php

Operational Criteria Pollutant Emissions

CASP EIR Conclusions [34]

The CASP EIR (Impact Air-7B) found that new development pursuant to the CASP would result in average daily operational emissions of more than 54 pounds per day or 10 tons per year of ROG, NOX or PM2.5, and more than 82 pounds per day or 15 tons per year of PM10. In aggregate, buildout of the entire CASP would result in total operational emissions of criteria pollutants that would greatly exceed project-level thresholds, and each individual development project as envisioned under the CASP would incrementally contribute to this overall total. However, based on BAAQMD screening criteria, the CASP EIR found that if future development projects met certain criteria, those individual projects would be unlikely to result in a significant impact from operational criteria air pollutant and precursor emissions. Relative to the Project, those criteria included the following:

- 346,000 square feet of general office space, or
- 540,000 square feet (or 1,250 employees) within a light-industrial building

The CASP EIR found it likely that certain individual projects pursuant to the CASP may exceed these screening level size limitations. The impact of individual development projects pursuant to this Plan, as well as the aggregate of all development assumed pursuant to the CASP was conservatively considered to generate criteria air pollutants and ozone precursor emissions at a level that would be significant and unavoidable. The CASP EIR cited City Standard Condition of Approval pertaining to parking and traffic management that would apply to all subsequent development projects involving 50,000 square feet or more of new non-residential space, requiring preparation of a Transportation Demand Management (TDM) plan capable of reducing single-occupant vehicle use, which would reduce criteria air pollutants and ozone precursor emissions, but may or may not be fully effective in reducing emissions to below threshold levels. The CASP EIR conservatively generate criteria air pollutants and ozone precursor emissions at a level that would be significant and unavoidable.

Project Analysis

The Project does meet the screening criteria identified in the CASP EIR as a project unlikely to result in a significant impact from operational-based criteria air pollutant and precursor emissions. The combination of the 160,000 square-foot office building (representing approximately 46% of the office screening criteria) and the 132,000 square-foot warehouse and workshop (representing approximately 24% of the light industrial screening criteria) do not add together in an amount that exceeds the size limit screening criteria.

To validate this conclusion, the Project's operational criteria pollutant emissions have been calculated using the CalEEMod (version Soft Release 2022) emissions calculator. Project-specific information was entered into the CalEEMod calculator, including the following:

- the Project site's precise location
- the square footage of each building and landscaped area[35]
- Project-specific trip generation rates and VMT (per Fehr & Peers' Preliminary Transportation Assessment, August 2022)

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34 City of Oakland, CASP Draft EIR, beginning at page 4.2-63

35 New building space as analyzed in the CalEEMod emissions calculator includes the office, warehouse and shop. The pipe storage structure and materials bins were not included in this analysis as these uses are not new, but rather are existing uses being relocated within the Project site.

- No use of natural gas – all CalEEMod default values for natural gas energy (kBtu) were converted to electricity (kWh)

CalEEMod default values were used for the assumed fleet mix, vehicle emission factors, operational sources, architectural coating re-application rate, total energy use, water and wastewater consumption, and solid waste generation. The results of operational emissions modeling for the Project are included in **Appendix C**, and summarized in **Table 6**, below.

Table 6: Project's Operational Emissions of Criteria Pollutants

	Criteria Air Pollutants (lbs/day)			
Category	ROG	NOx	PM10 (emissions)	PM2.5 (emissions)
Project Emissions				
Area	8.44	0.05	0.01	0.01
Energy	0.00	0.00	0.00	0.00
Transportation	6.60	8.17	0.13	0.12
Total, lbs/day	15.0	8.23	0.14	0.13
Threshold (Exceed?)	54 (No)	54 (No)	82 (No)	54 (No)
Total, tons/yr.	2.75	1.50	0.03	0.02
Threshold (Exceed?)	10 (No)	10 (No)	15 (No)	10 (No)

Source: CalEEMod Version 2022 Soft Release (see Appendix C)

As demonstrated in Table 6, the Project's predicted average daily and annual operational-generated emissions of ROG, NOx, PM10 and PM2.5 criteria air pollutants are below the operational significance thresholds as recommended by the BAAQMD and as relied on in the CASP EIR. Therefore, the Project's operational air quality impacts related to cumulatively considerable net increases of these non-attainment criteria pollutants would be less than significant, and no additional mitigation is required. Regardless of this finding, the Project will be subject to City SCAs pertaining to required TDM, energy efficiency, water conservation and waste generation, and implementation of these SCAs will further reduce the Project's operational criteria pollutant emissions.

New Sources of Operational Toxic Air Contaminants

CASP EIR Conclusions [36]

The CASP EIR (Impact Air-9) found that new sources of operational TACs pursuant to CASP buildout would not result in an increase in cancer risk level greater than 10 in one million, a non-cancer risk (chronic or acute) hazard index greater than 1.0, or an increase of annual average PM2.5 concentration of greater than 0.3 micrograms per cubic meter.

The CASP EIR did not identify any specific stationary sources of air pollution pursuant to the CASP, but as a practical matter, California building code requires back-up diesel generators for all buildings in excess of 70 feet in height for elevator safety. Back-up electricity may also be required for other anticipated uses pursuant to the

[36] City of Oakland, CASP Draft EIR, beginning at page 4.2-66

CASP. The CASP EIR cited existing regulations that require operators of back-up diesel generators to obtain a permit and an Authority to Construct from the BAAQMD, and the District would evaluate emissions based on size and require Best Available Control Technology, if warranted. Per its Policy and Procedure Manual, the BAAQMD would deny an Authority to Construct or a Permit to Operate for any new or modified source of TACs that exceeds a cancer risk of 10 in one million or a chronic or acute hazard index of 1.0 at an adjacent receptor location.

The additional incremental health impacts associated with TAC emissions from traffic on major roadways as generated by CASP buildout were also evaluated in the CASP EIR. CAL3QHCR (the USEPA's approved/preferred model for roadway modeling) was used to estimate air pollutant concentrations generated from CASP-related traffic. Modeled sensitive receptors in the vicinity were identified. The CASP EIR's analysis concluded that the human health impact resulting from traffic generated by the CASP on the maximum exposed on-site and off-site sensitive residential receptors would be less than significant.

Project Analysis

The Project's architectural drawings indicate that the proposed office building will include a bank of elevators, and back-up emergency power will be required for these elevators. It is currently unknown but possible that the warehouse may also rely on back-up power for hoists or lifts as may be used for stacking material within the warehouse.[37] There are no other known source of significant stationary sources of TAC emissions associated with the Project.

The Project's contribution of traffic to the surrounding major roadways represents a small component of the assumed buildout of the CASP. Whereas the CASP EIR found that traffic attributed to buildout of the CASP would not result in significant human health impacts on the maximum exposed on-site and off-site sensitive residential receptors, the Project's small increment of traffic and associated TAC emissions would be less than as assumed in the CASP EIR, and therefore less than significant.

<u>Applicable Standard Conditions of Approval</u>

The following SCA applies to the Project, as the Project involves a stationary pollutant source requiring a permit from BAAQMD, including but not limited to back-up diesel generators.

- ***SCA Air-4, Stationary Sources of Air Pollution (Toxic Air Contaminants)***: The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to on-site stationary sources of toxic air contaminants. The project applicant shall choose one of the following methods:

  a) The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk associated with proposed stationary sources of pollution in the project. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted

[37] The Project's proposed warehouse is not intended to store or distribute materials that require refrigeration, so no back-up power is needed for refrigeration in the warehouse in the event of a power emergency.

to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable.

- or -

b) The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: 1) installation of non-diesel fueled generators, if feasible, or 2) installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible.

With implementation of this SCA, the health risks associated with on-site stationary sources of TAC emissions (assumed limited to emergency generators) would be reduced to a level of less than significant, and no additional mitigation measures are warranted.

The following additional SCA also applies to the Project, as the Project includes new truck loading docks and will presumably have a truck fleet registered to the project applicants and/or operators.

❖ ***SCA Air-5, Truck-Related Risk Reduction Measures (Toxic Air Contaminants)***

a) *Truck Loading Dock*: The project applicant shall locate proposed truck loading docks as far from nearby sensitive receptors as feasible.

b) *Truck Fleet Emission Standards*: The project applicant shall comply with all applicable California Air Resources Board (CARB) requirements to control emissions from diesel engines and demonstrate compliance to the satisfaction of the City. Methods to comply include, but are not limited to new clean diesel trucks, higher-tier diesel engine trucks with added Particulate Matter (PM) filters, hybrid trucks, alternative energy trucks, or other methods that achieve the applicable CARB emission standard. Compliance with this requirement shall be verified through CARB's Verification Procedures for In-Use Strategies to Control Emissions from Diesel Engines.

As indicated above, the nearest sensitive residential receptors are more than 3,000 feet from the Project, and the Project's loading docks are all located toward the rear (westerly side) of the warehouse. Compliance with CARB's verification procedures for In-Use Strategies to Control Emissions from Diesel Engines will ensure that diesel emissions attributed to on-site operational mobile source TAC emissions would be reduced to levels consistent with CARD standards, and therefore less than significant.

Odors

CASP EIR Conclusions [38]

The CASP EIR (Impact Air-3) found that future development pursuant to the CASP would not expose a substantial number of people to existing or new objectionable odors. The CASP EIR included a screening analysis conducted in accordance with the recommendations in the BAAQMD Guidelines to determine the presence of any odor sources in the vicinity of the Project area. Only two businesses are within 2 miles of the CASP planning area received three or more odor complaints over the past three years. Neither business exceeded the threshold as described by the BAAQMD CEQA Air Quality Guidelines (of 5 confirmed complaints per year averaged over three years). Given the infrequent occurrence of odor complaints, the potential for new sensitive receptors within the Project area to be affected by objectionable odors affecting a substantial number of people was found to be less

[38] City of Oakland, CASP Draft EIR, beginning at page 4.2-46

than significant. The CASP EIR also found that the CASP's proposed land use plan did not include any of the odor producing sources of particular concern as defined by the BAAQMD.

Project Analysis

Similar to the CASP EIR conclusions, the Project is not affected by objectionable odors, nor does it represent a new source of odors of particular concern as defined by the BAAQMD. The Project's impacts related to odors would be less than significant.

Carbon Monoxide Emissions

CASP EIR Conclusions [39]

The CASP EIR relied on City thresholds and BAAQMD CEQA Guidelines, which indicate that localized CO concentrations should be estimated for projects in which, a) project-generated traffic would conflict with an applicable congestion management program established by the County Congestion Management Agency, b) project-generated traffic would increase traffic volumes at affected intersections to more than 44,000 vehicles per hour, or c) project-generated traffic would increase traffic volumes to more than 24,000 vehicles per hour at locations where vertical and/or horizontal mixing is substantially limited, such as tunnels, parking garages, bridge underpasses, natural or urban street canyons, and below-grade roadways. The CASP EIR concluded that the projected future maximum hourly traffic volumes under CASP buildout, and at all study intersections, would be significantly less than 44,000 vehicles, would not exceed the project-specific hourly traffic volume thresholds, and this impact was found to be less than significant.

Project Analysis

Whereas the CASP EIR concluded that full CASP buildout would not exceed the project-specific hourly traffic volume thresholds, and the Project represents only a small increment of CASP buildout, then the traffic generated by the Project would not make a substantial contribution to carbon monoxide (CO) concentrations, and this impact of the Project would be less than significant.

CEQA Conclusion Pertaining to Air Quality

The analysis presented above examines whether there are any Project-specific significant effects related to air quality that are peculiar to the Project or its site, finding none. The Project would have no air quality impacts that were not previously analyzed in the CASP EIR, would have no off-site or cumulative air quality impacts not discussed in the prior CASP EIR, and would not result in any air quality impacts that are more severe than as discussed in the prior CASP EIR. There are no air quality-related impacts that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as pertains to air quality. The air quality analysis presented above provides minor technical additions related to the specific air quality effects of the Project, and these minor technical additions to the CASP EIR that are specific to the Project are appropriately disclosed in this Addendum to the CASP EIR.

[39] City of Oakland, CASP Draft EIR, beginning at page 4.2-64

Biological Resources

Would the Project:	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	New or Substantial Increase in Severity	Project Conclusions: Applicable Mitigation, Standards and Requirements	Resulting Level of Significance
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 Game or U.S. Fish and Wildlife Service?	LTS with SCAs and MMs (see footnote 37, below)	■	☐	SCA Bio-1, Tree Removal during Breeding Season SCA Bio-2: Bird Collision Reduction SCA Bio-3: Tree Removal Permit SCA Aesthetics-1: Lighting Plan SCA Geo-4: Erosion and Sedimentation Control Plan, SCA Hydro-2: Creek Protection Plan, SCA Haz-2, Hazardous Materials Related to Construction, SCA Noise-3, Extreme Construction Noise, and SCA Noise-6, Operational Noise CASP EIR MM Bio 1A-1, Pre-construction Nesting Bird Surveys and Buffers Project Recommendation related to CASP EIR MM Bio-1A-1 CASP EIR MM Bio 1A-3, Salt Marsh Protection CASP EIR MM Bio 1A-4, Public Access Design	LTS with SCAs, CASP EIR MMs and Project Recommend ation
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service? c) 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	LTS with MM (none of the CASP EIR MMs are directly applicable to the Project)	■	☐	SCA General-1, Regulatory Permits and Authorizations from Other Agencies, including: Least Environmentally Damaging Practicable Alternative" (LEDPA),and Compensatory Mitigation	LTS with SCAs

removal, filling, hydrological interruption, or other means?					
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	LTS with SCAs and MM	■	□	SCA Bio-1, Tree Removal during Bird Breeding Season SCA Bio-2, Bird Collision Reduction Measures SCA Aesthetics-1, Lighting Plan CASP EIR's Further Recommendations Pursuant to SCA Aesthetics-1 CASP EIR MM Bio 3-2, Herbicide / Pesticide Control SCA Bio-3, Tree Removal Permit, SCA Geo-4, Erosion and Sedimentation Control Plan, SCA Haz-2, Hazardous Materials Related to Construction, SCA Noise-3, Extreme Construction Noise, and SCA Noise-6, Operational Noise	LTS with SCAs and CASP EIR MMs
e) Fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code Chapter 12.36) by removal of protected trees under certain circumstances?	LTS with SCAs	■	□	SCA Bio-3, Tree Permit SCA Bio-1, Tree Removal during Bird Breeding Season Recommendation Pursuant to SCA Bio-3: Landscape Plan Species	LTS with SCA
f) Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources?	LTS with SCAs	■	□	SCA Hydro-2, Creek Protection Plan	LTS with SCA
g) Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan?	LTS with SCAs and MM	■	□	-	LTS

Special Status Species

CASP EIR Conclusions [40]

The CASP EIR (Impact Bio-1B) found that future development pursuant to the CASP could have a substantial adverse effect, either directly or through habitat modifications on special status species, a significant and unavoidable impact.[41] For the purposes of the CASP EIR, special status species included:

- Listed, proposed for listing, or a candidate for listing as threatened or endangered under the Federal Endangered Species Act
- Listed, or a candidate for listing, as rare, threatened or endangered under the California Endangered Species Act
- Designated “Special Concern” or “Fully Protected” species by California Department of Fish and Wildlife (CDFW)
- Protected by the Federal Marine Mammal Protection Act
- Raptors (birds of prey), which are specifically protected by California Fish & Game Code Section 3503.5, which prohibits the take, possession, or killing of raptors and owls, their nests, and their eggs
- Those that may be considered rare or endangered pursuant to Section 15380(b) of the CEQA Guidelines (such as those listed as “Special Animals” by CDFW, which include species on CDFW’s watchlist, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, and colonial nesting birds.
- Listed in the Special Plants, Bryophytes, and Lichens List as defined by the CDFW California Natural Diversity Data Base, or
- Listed as California Rare Plant Rank (RPR) 1-3 as defined by the California Native Plant Society’s Inventory of Rare and Endangered Plants of California

Table 4.3A-1 in Appendix 4.3A of the CASP EIR provides a review of 46 special-status wildlife species, and Table 4.3B-1 in Appendix 4.3B provides a review of 33 plant species considered to have some potential for occurrence in the CASP planning area. The tables include the status, habitat requirements and potential for each species to occur within the CASP planning area or adjacent habitats. The CASP EIR identifies the following types of effects on special-status species that are known or suspected to occur along the Bay front, such as the vicinity of the Project site.

- Direct removal or fill of areas of coastal salt marsh could directly affect the salt marsh harvest mouse (State and federally endangered) and the salt marsh wandering shrew (Species of Special Concern, or SSC).
- Three special status bat species, including the Townsend’s big-eared bat, pallid bat and silver-haired bat (recognized as SSC by CDFW) potentially roost in structures and trees within the CASP planning area.

40 City of Oakland, CASP Draft EIR, beginning at page 4.3-44

41 The impact analysis presented in the CASP EIR also considered potential direct impacts to special status species that could occur pursuant to the Draft CASP’s proposed creation of a new Bay inlet, which would create approximately 12 acres of open water within San Leandro Bay. The CASP EIR also considered potential impacts attributed to a Draft CASP proposal to fill the existing approximately 8 acres of Coastal and Valley freshwater marsh at the Edgewater Seasonal Wetland, and to develop this site for new waterfront residential uses (with replacement wetland habitat elsewhere). These elements of the Draft CASP were not approved by the City or the Port, they are not related to any development plans of the Project, and are no longer pertinent to any components of the final, City-approved CASP. Accordingly, the summary of impacts presented here does not address creation of a Bay inlet or fill of the Edgewater Seasonal Wetland.

Creeks, sloughs and open water provide suitable foraging habitat for special-status and more common bats. The demolition or renovation of structures and removal of mature trees could affect bat species if roosting individuals are present, or if maternity roosts have been established.

- Ridgway's rail, California black rail, California brown pelican, California least tern, peregrine falcon and western snowy plover all occur within the CASP planning area and vicinity. Of these currently or now de-listed birds, the Ridgeway's rail and California black rail nest in coastal salt marshes, including Damon Marsh just west of the Project site. California brown pelican, California least tern, and western snowy plover may forage in the open waters of the Bay but are not expected to nest in the CASP planning area. Peregrine falcon is expected to forage in portions of the CASP planning area.
- Several bird species recognized as SSC or for which roosting colonies are of concern to CDFW are known from the CASP planning area and could be affected by future development. Alameda song sparrow and San Francisco saltmarsh common yellowthroat nest in tidal coastal salt marshes along the edges of San Francisco Bay. East Creek Slough, Damon Slough, Elmhurst Creek and San Leandro Creek provide foraging for the great blue heron, great egret, snowy egret, California gull, double-crested cormorant and other species. Adjacent marshes, creeks, sloughs and Bay waters also provide foraging habitat for most of these species.
- Potential impacts on raptors (birds of prey) are known or suspected from the CASP planning area, including American kestrel, burrowing owl, Cooper's hawk, northern harrier, osprey, red-tailed hawk and white-tailed kite.
- Special-status fish and marine mammals known from the open waters of the Bay and creeks include steelhead trout, green sturgeon, longfin smelt, Pacific herring, Pacific harbor seals and California sea lions.

The CASP EIR determined that construction activities could directly affect individuals, and could indirectly affect these species by reducing the quality of habitats or attracting predators. Sediment from fill soils throughout the CASP planning area could be released by construction-related erosion and wash contaminants into Bay waters, adversely affecting aquatic-dependent species. Other indirect impacts on special status birds and bats could occur from construction-related disturbance from noise, vibrations from pile driving, new sources of light and traffic, as well as direct impacts through removal of nesting and roosting habitat.

The CASP EIR found that potential impacts associated with construction activity that may result in sediment or contamination of the surrounding creeks and sloughs, marshes or open water would be reduced through implementation of City of Oakland SCAs that require Erosion and Sedimentation Control Plans, Best Management Practices for Soil and Groundwater Hazards and Creek Protection Plans. Implementation of these SCAs were found to substantially reduce impacts on special-status species that could otherwise be adversely affected by downstream sedimentation and contamination resulting from work adjacent to and within creek corridors.

The CASP EIR cites several City of Oakland SCAs that would be protective of nesting birds and roosting bats, including Operational Noise Controls, and limitations on Pile Driving and Other Extreme Noise Generators, as well as controls on night lighting. For projects where tree removal is necessary, the CASP EIR cited SCAs for Tree Removal Requirements during Breeding Season, Tree Removal Permits and Tree Protection during Construction. For projects involving creekside properties, the CASP EIR cited SCAs for Creek Protection Plans and Creek Landscaping. The CASP EIR also recommended additional mitigation measures to replace and/or supersede certain provisions of the City's SCAs because of the special sensitivity and extended nesting and migratory period associated with Ridgeway's rails, California black rails and raptors. The CASP EIR determined that impacts to special status species resulting from the majority of construction activity and operations pursuant to the CASP would be reduced to less than significant levels with implementation of regulatory permits and authorizations (e.g., NPDES permits or Waste Discharge permits from RWQCB, Streambed Alteration Agreements from California Department of Fish & Wildlife, , 404 permits from the U.S. Army Corps of Engineers, and Biological Opinions from the U.S. Fish & Wildlife Service) implementation of applicable City of Oakland SCAs, and additional mitigation measures identified in the CASP EIR to further address direct and indirect impacts to special status species and habitat.[42]

Project Analysis

According to the Biology Assessment prepared for the Project (Environmental Collaborative, 2023 - see **Appendix D**), the Project would directly affect a highly disturbed area that has very little potential for presence of any special-status species. While special-status species may occur in the nearby tidal marsh and aquatic habitats of San Francisco Bay, the Project site (including the wetlands/Waters of the State as described below) are not directly adjacent to these habitats and do not provide suitable habitat for any special-status species due to past and current land use (including a high degree of anthropogenic disturbance including repeated fill, grading, homeless encampments, trash, etc.). The dense development surrounding the Project site effectively cuts the Project site off from in-migration of sensitive species from populations occurring outside Oakland further to the north, east and south.[43]

However, the Project site's proximity to Damon Marsh could result in indirect impacts on known occurrences of Ridgeway's rail, California black rail, and other special-status birds and mammals. **Figure 17** shows the location of the Project site in relation to the surrounding existing development and natural habitat of Damon Marsh, open waters of the Bay and nearby creek corridors.

<u>Applicable Standard Conditions of Approval</u>

As concluded in the CASP EIR, implementation of City of Oakland SCAs that require erosion and sedimentation control plans, Best Management Practices for soil and groundwater hazards and Creek Protection Plans would serve to address any potential indirect effects of Project construction on water quality and aquatic-dependent special-status species associated with the nearby habitat of the Bay and creeks. Potential impacts on nesting birds and roosting bats would generally be addressed through SCAs that call for preconstruction surveys as part of tree removal requirements during breeding season and construction controls required as part of operational noise controls, limitations on pile driving and other extreme noise generators, and controls of night-time lighting through preparation of a lighting plan.

A number of the biological-related SCAs identified in the CASP EIR due to the proximity of future development to highly sensitive habitat areas such as Damon Marsh would apply to the Project. These include controls on pile driving and other construction related disturbance, and controls on night lighting. Controls would also be required as part of building design to limit the risk of bird collision, which is of particular concern given the proposed height and proximity of the Project's office building to Damon Marsh and open waters of the Bay. The risk of bird collision with new structures applies to both special-status species and more common bird species. Exterior treatment and night lighting issues are to be addressed as part of the Bird Collision Reduction Plan called for in the City's SCAs. Additional analysis of the risk of bird collision associated with the proposed Project is provided below under Species Movement, Migration, or Nursery Sites.

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42 The CASP EIR also found that impacts related to the CASP-proposed Bay Inlet cut, and fill and development of the Edgewater Seasonal Wetland to be significant and unavoidable. Due in part to these findings as well as regulatory agency comments on the efficacy of these CASP proposals, the Bay Inlet cut and fill, and development of the Edgewater Seasonal Wetland were not carried forward in local (City and Port) approvals of the CASP.

43 First Carbon Solutions, *Supplemental Information and Alternatives Analysis for the Report of Waste Discharge for the Supplybank.Org Offices & Distribution Facility*, April 3, 2022, page 5

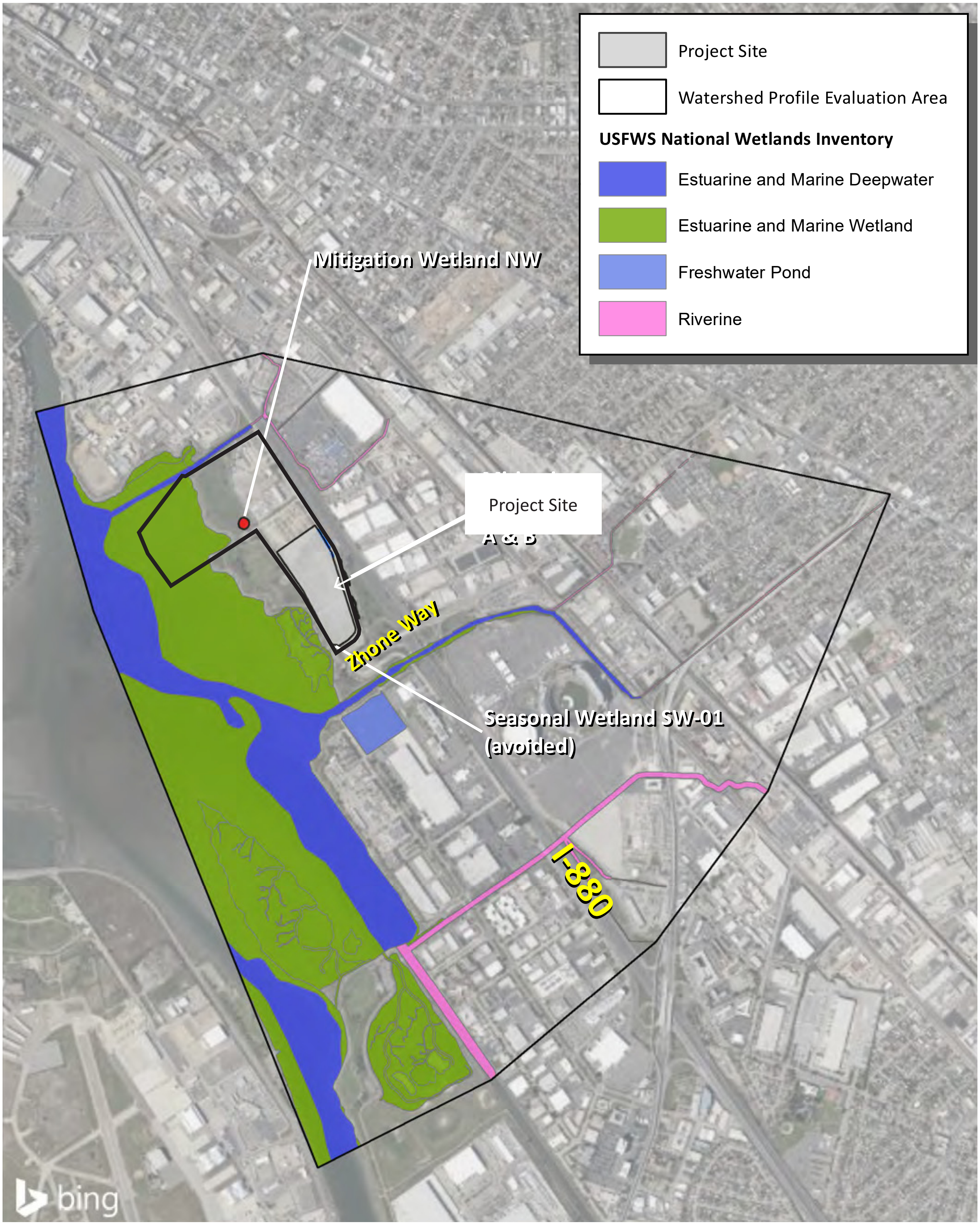

Figure 17
Watershed Profile and Habitat Types

Source: FirstCarbon Solutions, *Draft Compensatory Mitigation and Monitoring Plan*, April 1, 2022

The following City of Oakland SCAs (as updated) are cited in the CASP EIR as an effective means for addressing direct and indirect impacts to special-status species and their habitat, and would apply to the Project.

- ***SCA General-1, Regulatory Permits and Authorizations from Other Agencies***: The project applicant shall obtain all necessary regulatory permits and authorizations from applicable resource/regulatory agencies including, but not limited to the Regional Water Quality Control Board, Bay Area Air Quality Management District, Bay Conservation and Development Commission, California Department of Fish and Wildlife, U. S. Fish and Wildlife Service and Army Corps of Engineers, and shall comply with all requirements and conditions of the permits/authorizations. The project applicant shall submit evidence of the approved permits/authorizations to the City, along with evidence demonstrating compliance with any regulatory permit/authorization conditions of approval.
- ***SCA Bio-1, Tree Removal during Breeding Season***: 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).
    a) 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.
    b) 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 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.
- ***SCA Bio-2: Bird Collision Reduction*** (see sub-section pertaining to Species Movement, Migration, or Nursery Sites, below)
- ***SCA Bio-3: Tree Removal Permit*** (see sub-section pertaining to Consistency with Tree Protection Ordinance, below)
- ***SCA Aesthetics-1: Lighting Plan*** (see Aesthetics section of this Checklist)
- ***SCA Geo-4: Erosion and Sedimentation Control Plan*** (see Geology section of this Checklist)
- ***SCA Haz-2, Hazardous Materials Related to Construction*** (see Hazards Section of this Checklist)
- ***SCA Hydro-2, Creek Protection Plan*** (see Hydrology section of this Checklist)
- ***SCA Hydro-4, Vegetation Management on Creekside Properties*** (see Hydrology section of this Checklist)
- ***SCA Noise-3, Extreme Construction Noise*** (see Noise Section of this Checklist)
- ***SCA Noise-6, Operational Noise*** (see Noise Section of this Checklist)

<u>CASP EIR Mitigation Measures</u>

The CASP EIR recommended specific mitigation measures in addition to City SCAs because of the sensitivity and extended nesting and migratory period associated with Ridgeway's rails, California black rails and raptors. Given the proximity of the Project site to Damon Marsh, the following CASP EIR mitigation measures apply to the

Project and serve to further address potential adverse impacts on special-status species. The following mitigation measures would further minimize or avoid potential adverse impacts on special-status species associated with Damon Marsh and the remaining natural habitat in the vicinity of the Project site.

- ***CASP EIR MM Bio 1A-1, Pre-construction Nesting Bird Surveys and Buffers***: The following mitigation measures are recommended to address potential impacts to special status birds and nesting birds:
  - a) A qualified biologist shall conduct pre-construction surveys for construction activities between February 15 and September 30 to identify and subsequently avoid nesting areas for special status and migratory bird species. Surveys shall be designed and be of sufficient intensity to document rail and raptor nesting within 500 feet of planned work activities and within 50 feet for passerine nesting activity.
  - b) Construction activities within 500 feet of Damon Marsh and Arrowhead Marsh shall be conducted during the period from August 1 to January 31 to protect potentially nesting Ridgeway's rail, California black rail, Alameda song sparrow and San Francisco saltmarsh common yellowthroat.
  - c) If Ridgeway's rails, California black rails or raptors are found to be nesting within or adjacent to the planned work area, a minimum 100-foot wide buffer shall be maintained between construction activities and the nest location.
  - d) For Alameda song sparrow, San Francisco saltmarsh common yellowthroat and all other protected birds, a 50-foot buffer shall be maintained.
  - e) Buffer zones may be reduced in consultation with a qualified biologist.
  - f) Buffers shall be maintained until the young have fledged and are capable of flight, or by September 30.

To address potential impacts on special status terrestrial mammals, the CASP EIR recommended the following additional mitigation measure:

- ***CASP EIR MM Bio 1A-3, Salt Marsh Protection***: All core habitat areas for salt marsh harvest mouse (i.e., pickleweed-dominated salt marsh habitat within Damon Marsh and Arrowhead Marsh) shall be avoided and protected. If construction activities are within 100 feet of these areas, site-specific buffers shall be established in coordination with a qualified biologist, approved by USFWS or CDFW as appropriate.
  - a) Buffers shall be designed to preclude changes to water and soil salinity and flooding/inundation regime. The buffers shall be at least 100 feet wide or extend to the current boundary of existing roads or development (includes vacant but graded lots and filled building pads). The qualified biologist may modify these buffers depending on site conditions.
  - b) The construction work area shall be fenced on the side closest to salt marsh habitat to delineate the extent of construction, preclude construction personnel and equipment from entering non-work areas, and prevent debris from entering avoided habitats. The construction boundary fencing may also inhibit movement of species such as the salt marsh harvest mouse and salt marsh wandering shrew into the construction area.
  - c) The qualified biologist shall be present during work on-site until the construction barrier fencing is installed, instruction of workers has been conducted, and any direct habitat disturbance has been completed. After that time, the contractor or permittee shall designate a person to monitor on-site compliance with all minimization measures.
  - d) The monitor and qualified biologist shall have the authority to halt construction that might result in impacts that exceed anticipated levels

❖ ***CASP EIR MM Bio 1A-4, Public Access Design***: All new or additional public access to San Francisco Bay, the Bay shoreline, Damon Marsh and San Leandro Creek shall be implemented in a manner consistent with the San Francisco Bay Conservation and Development Commission's Public Access Design Guidelines for the San Francisco Bay, in particular its recommendations for avoiding adverse effects on wildlife. These Design Guidelines include the following:

a) Preparation of individual site analyses to generate information on wildlife species and habitats existing at the site, and the likely human use of the site
b) Employing appropriate siting, design and management strategies (such as buffers or use restrictions) to reduce or prevent adverse human and wildlife interactions
c) Planning public access in a way that balances the needs of wildlife and people on an areawide scale, where possible
d) Providing visitors with diverse and satisfying public access opportunities to focus activities in designated areas and avoid habitat fragmentation, vegetation trampling and erosion
e) Evaluating wildlife predator access and control in site design
f) Retaining existing marsh and tidal flats and restoring or enhancing wildlife habitat, wherever possible

As noted above, the CASP EIR MM Bio 1A-1 calls for a restriction on construction activities within 500 feet of Damon Marsh during the period from August 1 to January 31, to protect nesting Ridgeway rail and other salt marsh bird species. The CASP EIR concluded that with implementation of City SCAs and the proposed mitigation measures, potential impacts to special status species and their habitats would be reduced to a level of less than significant. The City did not receive any comments from the USFWS or other relevant agencies regarding this mitigation measure and thus the conclusions reached in the CASP EIR receive a conclusive presumption of validity. However, in conducting a Biological Resource Assessment for the Project, Environmental Collaborative noted that the USFWS typically considers any disturbance within 700 feet direct line of sight of occupied nesting habitat to be a potential take of the federally endangered Ridgeway's rail. Some low growing trees and shrubs occur along the western edge of the Project site and could serve as partial screening between construction activities and suitable nesting habitat in Damon Marsh. But unless further consultation is provided with the USFWS to confirm any adjustments to standard setback requirements, the 500-foot distance specified in CASP EIR MM Bio 1A-1 could be determined insufficient by USFWS. As a result, this document recommends that the City increase this restriction to 700 feet for purposes of this Project through the imposition of a condition of approval to adhere to current USFWS considerations.

❖ ***Project Recommendation related to CASP EIR MM Bio-1A-1***:

a) Construction activities within <u>700</u> feet of Damon Marsh and Arrowhead Marsh shall be conducted during the period from August 1 to January 31 to protect potentially nesting Ridgeway's rail, California black rail, Alameda song sparrow and San Francisco saltmarsh common yellowthroat.

SCA General-1 calls for obtaining all necessary regulatory permits and authorizations from applicable resource agencies, including but not limited to the U.S. Fish and Wildlife Service and U.S. Army Corps of Engineers. As addressed below (see Wetlands, Riparian Habitat and other Sensitive Natural Communities), the U.S. Army Corps of Engineers has determined that no federally regulated wetlands or waters would be affected by the Project (i.e., the Project does not require a federal permit from the Corps). Without such a federal permit (or nexus), the Corps would not engage in Section 7 consultation with the U.S. Fish and Wildlife Service to ensure that actions the Corps may fund, authorize, permit or otherwise carry out will not jeopardize the continued existence of any listed species or adversely modify designated critical habitats.

Separately, Section 10 of the Endangered Species Act (ESA) is designed to regulate a wide range of activities affecting plants and animals designated as endangered or threatened, and the habitats upon which they depend. The ESA prohibits activities that would adversely affect protected species and their habitats. The mitigation measures identified in CASP EIR Mitigation Measures Bio 1A-1 and Bio 1A-3 call for pre-construction surveys, construction period limitations, and construction activity buffers (such as the recommended 700-foot disturbance setback during the Ridgeway's rail's nesting season) that are consistent with typical USFWS standards for avoiding impacts to sensitive species. With implementation of these measures and recommended buffer distance, the Project would avoid impacts to protected species and their habitats, such that regulatory permits and authorizations from resource agencies would not be applicable.

Consistent with the conclusions of the CASP EIR, the Project's effects related to special status species and their habitat will be fully addressed through implementation of City SCAs and existing regulations, as well as CASP EIR mitigation measures, and this impact would be reduced to less than significant.

Wetlands, Riparian Habitat and other Sensitive Natural Communities

CASP EIR Conclusions

The CASP EIR (Impact Bio-2B) found that future development pursuant to the CASP could have a substantial adverse effect on wetlands, riparian habitat, Waters of the State and other sensitive natural communities as identified in local or regional plans, policies and regulations.

The original version of the CASP envisioned a development concept within the Oakland Airport Business Park (Sub-Area B) that would result in the removal (fill) of the Edgewater Seasonal Wetland to accommodate new waterfront residential use. It also envisioned creation of a new Bay inlet that would create approximately 12 acres of open water within San Leandro Bay by excavating/dredging other portions of Sub-Area B to create new waterfront edge as an attraction and amenity for new development. The CASP Draft EIR found that these development concepts would have substantial adverse effects on sensitive species, wetlands, riparian habitat and other sensitive natural communities. As part of a broad mitigation plan to address these impacts, the CASP's Draft EIR identified a potential land exchange involving the current Project site that could create up to 15 acres of new wetland habitat in exchange for development of the 8-acre Edgewater Seasonal Wetland. The CASP Draft EIR noted that, "before implementation of such a land swap could occur, EBMUD would need to become a willing partner in this concept, in exchange for financial or real estate considerations." [44] The Draft EIR also noted that the Edgewater Seasonal Wetland was already a wetland mitigation site established by the Port of Oakland, with ownership transferred to the East Bay Regional Park District (EBRPD), and that the EBRPD would need to be a willing partner. Such a land exchange would also be, "subject to numerous subsequent permitting and regulatory requirements of other regional, state and federal agencies with jurisdiction. Not until such time as the details of the project elements are known, permits from responsible agencies are sought, and the requirements and conditions of the responsible regulatory agencies specific to these Project elements are fully known, can any determination be made as to the efficacy of this mitigation strategy."[45]

In response to comments from numerous public agencies, the Final version of the CASP was revised to indicate alternative plans, both with and without fill and development of Edgewater Seasonal Wetland and a Bay inlet. The Final CASP also provided a revised development assumption for Sub-Area E, assuming it would not be used as a wetland mitigation site. This revised development assumption was that the existing vacant lot fronting Oakport Street at 66th Avenue (i.e., the area generally encompassing the Development Area of the Project site) would be re-zoned as a Commercial Mix District-6 Industrial Zone (D-CO-6), and "*utilized in a manner that creates and maintains an attractive frontage along Oakport Street*". The CASP's Final EIR acknowledged that,

[44] City of Oakland, CASP Draft EIR, page 3-57

[45] City of Oakland, CASP Draft EIR, page 4.3-56

"*Until such time as the details of a potential land exchange are known, the parties to such a potential exchange express an interest, permits from responsible agencies are sought, and the requirements and conditions of the responsible regulatory agencies are fully known, no determination can be made as to the efficacy of this mitigation strategy*." Therefore, impacts to special status species and wetland habitat resulting from the proposed filling and development of Edgewater Seasonal Wetland were considered significant and unavoidable. The City's CEQA process concluded that only if a potential applicant were to invest the effort necessary to prepare a fully detailed and complete mitigation plan as required pursuant to MM Bio 1A-2, and all required steps including agreements, agency permits and approvals were obtained to the satisfaction of all responsible agencies, will any future development of the Edgewater Seasonal Wetland site be considered. Further, the Port of Oakland (which has land use jurisdiction at the Edgewater Seasonal Wetland site), did not certify the CASP EIR. Since the time that the CASP EIR was certified and the CASP was approved by the City in 2015, there have been no proposals or further suggestions regarding fill of Edgewater Seasonal Wetland to accommodate new waterfront residential use, and no proposals or suggestions for creating a new Bay inlet. No agencies have expressed any interest in a land exchange and no permits from responsible agencies have been sought. While still identified as an option in the CASP, it is reasonable to conclude that fill of Edgewater Seasonal Wetland, creation of a new Bay inlet, and use of the Project site for compensatory wetland mitigation is no longer a reasonably foreseeable scenario.

The CASP EIR also determined that potential impacts caused by other construction activities near sensitive communities along the edges of waterways would be fully addressed through implementation of City SCAs, which acknowledge the regulatory permits and authorizations needed from other regulatory agencies in addition to the City of Oakland, and requiring compliance with all conditions as may be issued by these applicable agencies including the Regional Water Quality Control Board (RWQCB). Other SCAs required of construction at or near the edges of waterways or Waters of the State require implementation of Best Management Practices (BMPs) for soil and groundwater hazards, and preparation and implementation of Creek Protection Plans.

The CASP Final EIR also acknowledged the role of the Regional Water Quality Control Board's independent authority to regulate the discharge of fill material to wetlands outside the jurisdiction of the Corps.[46] The CASP Final EIR also recognized the Bay Conservation and Development Commission's jurisdiction over dredging, filling and public access within 100 feet of the mean high tide line within San Francisco Bay, and over open water, marshes, mudflats, and the first 100-feet inland from the shoreline, as well as portions of most creeks, rivers, sloughs and tributaries that flow into San Francisco Bay.[47]

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46 The CASP Final EIR cited the Porter-Cologne Water Quality Control Act as, "implementing the federal Clean Water act (CWA), and providing a mechanism for protecting the quality of the State's waters, providing independent authority to the RWQCB to regulate the discharge of fill material to wetlands outside the jurisdiction of the Corps. The RWQCB protects all waters in its regulatory scope, but has special responsibility for isolated wetlands and headwaters. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. If a proposed project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to Waters of the State, the RWQCB has the option to regulate such activities under its State authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements."

47 The CASP EIR also acknowledged that "the Bay Conservation and Development Commission (BCDC) regulates dredging, filling and public access within 100 feet of the mean high tide line within San Francisco Bay, and has jurisdiction over open water, marshes, mudflats, and the first 100-feet inland from the shoreline, and portions of most creeks, rivers, sloughs and tributaries that flow into San Francisco Bay. BCDC permits will be required for all work within their jurisdictional boundaries. BCDC's Bay Plan policies to maximize public access opportunities also seek to minimize potentially significant adverse impacts upon wildlife. All proposed new or additional public access to San Francisco Bay and the Bay shoreline must be implemented in a manner consistent with the BCDC's Public Access Design Guidelines, in particular its recommendations for avoiding adverse effects on wildlife."

Project Analysis

Several wetland delineation have been conducted, and several wetlands-related documents have been prepared for the Project, addressing a Study Area that includes the proposed Development Area, the broader Project site and the immediately surrounding area generally south of Peppermint Gate Access Road. The following section of this CEQA Checklist relies on these delineations and documents, as are cited and referenced below.

Federally Jurisdictional Wetlands

The 1972 amendments to the Clean Water Act established federal jurisdiction over "waters of the United States". The Clean Water Act provides authority for the US EPA and the U.S. Department of the Army to define "waters of the United States" in regulations. Since the 1970s, the EPA and the Department of the Army have defined "waters of the United States" by regulation, and those regulations have been amended multiple times, and have been subject to three Supreme Court decisions. In its most recent rule of December 30, 2022, the EPA and Department of the Army affirmed that, "*waters of the United States generally include the territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide; tributaries; lakes and ponds, and impoundments of jurisdictional waters; and adjacent wetlands*." They also determined that federal jurisdiction for tributaries, adjacent wetlands, and additional waters must meet either a 'relatively permanent' standard (i.e., relatively permanent, standing or continuously flowing waters, or waters with a continuous surface connection to such relatively permanent waters) or a 'significant nexus' standard (if the waterbody (alone or in combination) significantly affects the chemical, physical or biological integrity of traditional navigable waters, the territorial seas or interstate waters). The 2022 rule also codifies eight exclusions from the definition of "waters of the United States", including ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water; water-filled depressions created in dry land incidental to construction activity; and swales and erosional features (e.g., gullies, small washes) that are characterized by low volume, infrequent or short duration flow.[48]

WRA Environmental Consultants prepared an Aquatic Resources Delineation Report in October of 2019 (see **Appendix E**). The 2019 delineation concluded there was an estimated 0.24 acres of construction-related depressions, 0.03 acres of wetland drainage ditch, and a 0.02-acre potentially Corps-jurisdictional wetland on the Project site.[49] In July of 2020 and on behalf of SupplyBank.org, First Carbon Solutions submitted the WRA Delineation Report's Wetland Delineation and Preliminary Jurisdictional Determination map to the U.S. Army Corps of Engineers, requesting an approved jurisdictional determination of the extent of waters of the United States. In the Corps' response of March 8, 2021 (see **Appendix F**), the Corps found that the seasonal wetland, wetland drainage ditch and construction-related depressions, "*accurately depict the extent and location of wetlands and ditches within the boundary area of the site that are **not** subject to U.S. Army Corps of Engineers' regulatory authority under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act. These particular water bodies are non-jurisdictional waters pursuant to 33 C.F.R. §§ 328.3(b) (1) and 328.3(b) (5).*" This approved determination of no waters of the U.S. (see **Figure 18**) was based on the conditions of the site as verified during a field investigation of March 4, 2020, a review of available digital photographic imagery, and a review of other data included in the applicant's submittal. This approved jurisdictional determination will expire in five years from the date of the Corps' determination, unless new information or a change in field conditions warrants a revision to the delineation map prior to the expiration date.[50]

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48 US EPA, as cited at: https://www.epa.gov/wotus/revising-definition-waters-united-states

49 WRA, Inc., *Aquatic Resources Delineation Report*, October 29, 2019

50 Department of the Army, SF District of the US Army Corps of Engineers, Subject: File Number 2020-00081S, March 8, 2021

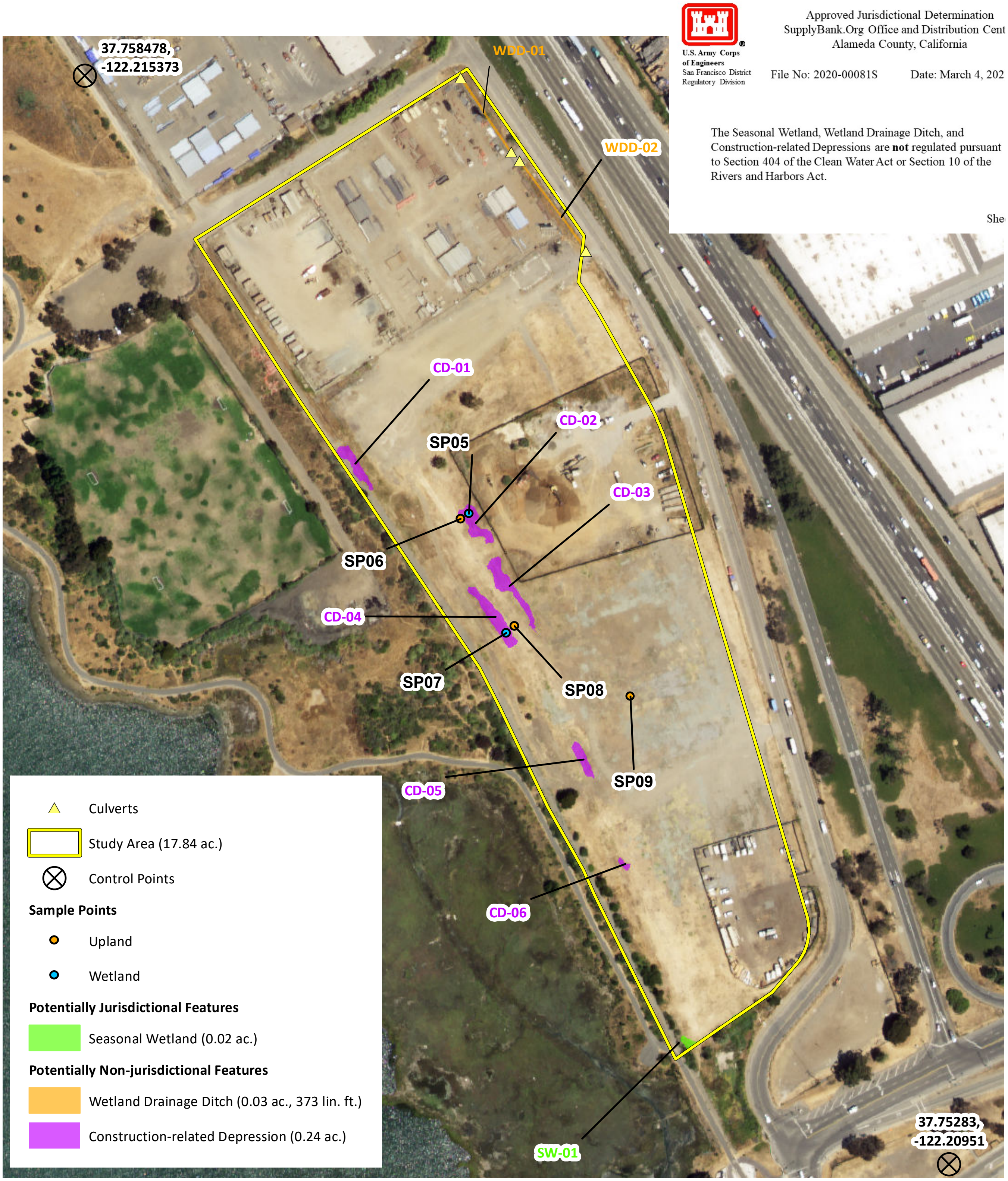

Figure 18
Wetland Delineation and US Army Corps Jurisdictional Determination

Source: WRA 2019, US Army Corps of Engineers, March 2021

The Corp's jurisdictional letter of March 2020 also notes that, "The current absence of jurisdictional waters of the United States within the boundary area of the site does not obviate any requirement to obtain other federal, State or local approvals necessitated by law", and that, "If waters of the State" are potentially present, the site may be subject to regulation by the California Regional Water Quality Control Board, San Francisco Bay Region, under the Porter-Cologne Water Quality Control Act".[51]

RWQCB Jurisdiction – Waters of the State

The Porter-Cologne Water Quality Control Act authorizes the State Water Resources Control Board and its Regional Water Quality Control Boards (Water Boards) to regulate discharges of waste, which includes discharges of dredged or fill material that may affect the quality of waters of the state. It also defines "waters of the state" broadly to include "*any surface water or groundwater within the boundaries of the state*." Waters of the state includes all waters of the U.S. (as defined above), plus natural wetlands, wetlands created by modification of a surface water of the state, and artificial wetlands that meet any of the following criteria: a) approved by an agency as compensatory mitigation for impacts to other waters of the state; b) specifically identified in a water quality control plan as a wetland or other water of the state; c) resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or d) greater than or equal to one acre in size, unless they were constructed, and currently used and maintained for a variety of purposes including industrial or municipal wastewater treatment or disposal; settling of sediment; detention, retention, infiltration or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program; treatment of surface waters; agricultural crop irrigation or stock watering; fire suppression; industrial processing or cooling; active surface mining; log storage; treatment, storage, or distribution of recycled water; maximizing groundwater recharge; or fields flooded for rice growing.[52] The Water Boards' permitting authority relies on wetland delineations as verified by the U.S. Army Corps of Engineers, and/or a delineation of wetland areas potentially impacted by a project not delineated or verified by the Corps, but using the methods described in the three federal documents (collectively referred to as "1987 Manual and Supplements") to determine whether the area meets the State definition of a wetland.

Following the Corps' verification delineating no waters of the U.S., several additional delineations were conducted and reports prepared at the RWQCB's request, to more accurately represent conditions for potential seasonal wetlands and waters of the State. These additional reports include First Carbon Solutions (FCS) in February 2021 (see **Appendix G**),[53] First Carbon Solutions in April 3, 2022[54] (see **Appendix H**), LSA in August 2022 [55] (see **Appendix I**) and LSA in October 2022[56] (see **Appendix J**).

These subsequent efforts captured potential jurisdictional waters of the State along the Oakport Street right-of-way that were outside the study area limits of the previous wetland delineations. Potential jurisdictional wetland boundaries were mapped based on a combination of the limits of hydrophytic vegetation, evidence of wetland hydrology, and hydric soil indicators. The results of these delineations and reports was summarized in

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[51] Ibid

[52] State Water Resources Control Board, *State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*, April 2, 2019 and revised April 6, 2021

[53] First Carbon Solutions, *Delineation of Aquatic Resources of Additional Areas at the Oakport Street Project and Regulatory Considerations*, February 1, 2021

[54] First Carbon Solutions, *Supplemental Information and Alternatives Analysis for the Report of Waste Discharge for the Supplybank.Org Offices & Distribution Facility*, April 3, 2021

[55] LSA, *Request for Verification of Jurisdictional Delineation, SupplyBank.Org/Oakport Street Study Site*, August 4, 2022

[56] LSA, Section 404(B) (1) Alternatives Analysis, October 2022

LSA's Request for Verification of Jurisdictional Delineation letter of August 2022 (see **Appendix I**), which identifies the following potentially jurisdictional Waters of the State:

- *Seasonal Wetland SW-01:* In 2019, WRA mapped SW-01 in the southwestern corner of the Study area. The vegetation cover meets the hydrophytic vegetation criterion, but there are no hydric soil indicators or wetland hydrology indicators other than tire ruts. The second sample point is located along the northern edge of a larger basin that likely seasonally ponds and appears to have ponded after an October atmospheric river storm. This basin meets jurisdictional wetland criterion as waters of the State, and is mapped as Seasonal Wetland 01, with a potential jurisdictional area of 1,290 square feet (0.030 acre).
- *Seasonal Wetland D*: This feature consists of a small basin that drains to a storm drain culvert. The vegetation at this location meets the hydrophytic vegetation criterion and the soil contained common redoximorphic mottling, but there was no evidence of wetland hydrology. The feature containing hydrophytic plant cover is mapped as Seasonal Wetland D, with a potential jurisdictional area of 170 square feet (0.004 acre). This feature is located off of the Project site, along the easterly side of Oakport Street.
- *Seasonal Wetland E*: This feature is a small basin situated further north of Seasonal Wetland D along the easterly Oakport Street frontage, and meets the three criteria as a jurisdictional wetland. It occupies an area of 865 square feet (0.020 acre). This feature is also located off of the Project site, along the easterly side of Oakport Street.
- *Construction Depression CD-01*: This construction-generated depression is located at the western edge of the Project site, near Damon Marsh. The elevation within this depression is slightly lower than the maintained graded pad to its east and the abandoned gravel railroad bed to its west. This feature is mapped as a potential jurisdictional area of 2,840 square feet (0.065 acre).
- *Oakport Street Drainage Ditches*: Located along the easterly boundary of the Project site adjacent to Oakport Street, there are a series of swales, culverts and rough ditch segments that extend from the Peppermint Gate Road access drive all the way down to an access gate at about the center of the Development Area. The larger of these features is mapped as Seasonal Wetland Puddle C. This swale is a constructed drainage underlain by a gravel base and covered by a layer of sediment washed in from the graded area to the west. The swale shows clear evidence of ponding. The swale has a potential jurisdictional area of 3,310 square feet (0.076 acre). Other segments of the Oakport drainage ditch are individually mapped as WDD-01 (nearest the Peppermint Gate Road access drive) through WDD-06 (leading into Seasonal Wetland SW-01 in the southwestern corner of the Project site near the Oakport Street/Zhone Way intersection). The full extent potential jurisdictional waters along this drainage consists of an area of 0.217 acre.
- *Construction Depressions CD-02 – CD-06*: These consist of construction-related depressions that were mapped in the 2019 WRA delineation, but are no longer present. The interior area of the Project site has been bladed as part of routine maintenance, and no longer has vegetation nor topographic evidence of these construction-related depressions. In 2019, the vegetation included both hydrophytic and non-hydrophytic species, but total vegetation cover was only about 1 percent and there was no evidence of hydric soils or wetland hydrology. The extent of these previous construction depressions was estimated at 0.240 acre.
- *RWQCB-Determined Channel*: During the applicant's discussions and permitting process with the RWQCB (see further discussion, below), the RWQCB also indicated that there is sufficient evidence to identify a drainage channel that extends from the previously identified Wetland Drainage Ditch WDD-05

to the separate WDD-06, making a connection of 0.024 acres of drainage channels that qualify as Waters of the State.

By 2022, the Project site had been scraped and vegetation was cut shortly in advance of the field survey effort, obscuring and eliminating some of the seasonal wetland features observed during the 2019 delineation. Based on the conditions observed in 2022, the 2022 delineation determined that SW-01 occupied an estimated 0.03 acre, and is a “potential waters of the United States”. It concluded that in total, an estimated 0.221 acres of waters of the State were present on the Project site.

As documented in LSA’s October 2022 Alternatives Analysis, which was submitted as part of the permit application to the RWQCB (see **Appendix J**), the Study Area currently supports 0.244 acres of seasonal wetlands and 0.027 acre of other waters of the State, with a total potential jurisdictional area of 0.271 acre. In addition, approximately 0.240 acre of potential seasonal wetlands that were located in the central portion of the site but likely removed during maintenance activities on the spring of 2022. As specified by the RWQCB during permitting negotiations with the applicant, these features are to be included in the assessment of the Project’s impact on waters of the State. Therefore, the overall total potential jurisdictional area of Waters of the State is 0.511 acre (see **Figure 19**).

Project Impacts

The Project as originally proposed would result in approximately 0.455 acre of permanent impacts to wetlands and other waters of the State, as indicated in **Table 7**. Permanent impacts would result from placement of fill and grading on the Project site, installation of retaining walls, and from construction of covered materials bins and construction of City-required improvements to Oakport Street (including street widening, street frontage planter, curb and gutter, and concrete sidewalk). Impacts to the estimated 0.240 acre of former potential seasonal wetlands in the central portion of the Project site that were graded away during prior maintenance activities are also included in the permanent impact total shown in Table 7.

LEGEND
- Study Site
- Wetland Sample Point
- Non-wetland Sample Point

WATERS OF THE STATE
- Wetland

WATERS OF THE STATE Only
- Wetland
- Other Waters (Culvert)
- RWQCB-determined Channel

Figure 19
Potential Waters of the State, at Development Area and Vicinity

Source: LSA, *Section 401(B)(1) Alternatives Analysis*, Figure 4: Potential Waters of the State, October 2022

Table 7: Potential Project Impacts to Waters of the State			
	Area (acres)	Retained with Proposed Project	Impacted Wetlands/ Waters of the State
Wetland Features			
Seasonal Wetland SW-01	0.030	0.030	
Construction Depression CD-01	0.065		0.065
Seasonal Wetland E	0.020	0.020	
Seasonal Wetland D	0.004	0.004	
Seasonal Wetland Ditch WDD-01 and WDD-02	0.026		0.026
Seasonal Wetland Ditch WDD-03 through WDD-06 and Puddle C	0.099		0.099
Wetland Features Subtotal:	**0.244**	**0.054**	**0.190**
Other Waters of the State			
Culverts-01, -02 and -03	0.003	0.002	0.001
RWQCB-Determined Channel	0.024		0.024
Other Waters, subtotal:	**0.027**	**0.002**	**0.025**
Additional Potential Seasonal Wetlands Removed			
Graded Seasonal Wetlands	0.240		0.240
Total Wetlands and Other Waters of the State:	**0.511**	**0.056**	**0.455**

Source: LSA, *SupplyBank.org Office & Distribution Center Project, Section 404 (B)(1) Alternatives Analysis*, October 2022 (**Appendix J**J

Applicable Standard Conditions of Approval

The following City of Oakland SCAs are cited in the CASP EIR, and are standard requirements for projects that may have an adverse effect on resources within the jurisdiction of other agencies (specifically including the RWQCB and Waters of the State), and apply to the Project.

- ***SCA General-1, Regulatory Permits and Authorizations from Other Agencies***: The project applicant shall obtain all necessary regulatory permits and authorizations from applicable resource/regulatory agencies. These regulatory agencies include, but are not limited to the Regional Water Quality Control Board, Bay Area Air Quality Management District, Bay Conservation and Development Commission, California Department of Fish and Wildlife, U. S. Fish and Wildlife Service, and Army Corps of Engineers. The project applicant shall comply with all requirements and conditions of the permits/authorizations. The project applicant shall submit evidence of the approved permits/authorizations to the City, along with evidence demonstrating compliance with any regulatory permit/authorization conditions of approval.
- SCA Geo-4: Erosion and Sedimentation Control Plan (see Geology section of this Checklist)
- SCA Haz-2, Hazardous Materials Related to Construction (see Hazards Section of this Checklist)
- SCA Hydro-2, Creek Protection Plan (see Hydrology section of this Checklist)

With implementation of SCA Geo-4, Haz-2 and Hydro-2, the Project would not result in a discharge of harmful substances to Waters of the State.

Project Plans pursuant to City SCAs

Consistent with CASP EIR requirements and SCA General-1, the Project sponsor has sought permits and authorizations from the RWQCB pursuant to the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (*Procedures*).

Alternatives Analysis

LSA's October 2022 *Alternatives Analysis* was prepared to analyze the Project's compliance with the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures) administered by the RWQCB, which went into effect on May 28, 2020. The purpose of the analysis was to analyze the Project's compliance with the *Procedures*, and to identify the "Least Environmentally Damaging Practicable Alternative" (LEDPA).[57] The *Alternatives Analysis* identifies two alternatives in addition to the Project. One of those alternatives (Alternative 3) is described as a Partial Avoidance along the Western and Southern Property Boundaries. It was prepared to test the practicability of avoiding impacts to seasonal wetlands CD-01 and SW-1 in the western and southern areas of the Project site by modifying and relocating Project improvements. This alternative includes completion of improvements to the Oakport Street frontage along the Development Area, including street widening, street frontage planter, curb and gutter, and a concrete sidewalk. Alternative 3 also includes the following:

- The grading plan for the Project nearest to the proposed office building and adjacent to the seasonal wetland identified as SW-01 near Oakport Street would be adjusted to include a retailing wall that would hold back the proposed fill at this location and avoid impacting this wetland feature (see **Figure 20)**.
- A portion of the Materials Bin and the proposed bio-retention area along the westerly property line would be adjusted to the east, such that fill of the wetland feature identified as CD-01 (approximately 0.065 acres) can be avoided (see also **Figure 20**).
- Alternative 3 also includes construction of street widening, street frontage planters, curbs and gutters, and concrete sidewalks along the Development Area frontage of Oakport Street (see **Figure 21**). These improvements would result in an unavoidable impact to the wetlands and Other Waters features of the drainage ditch along Oakport Street.
- All other components of the Project would remain, including the construction of the Office building, Warehouse building, Workshop and pipe and materials storage facilities, as well as internal circulation, landscaping and parking.

[57] LSA, *Supplybank.org Office & Distribution Center Project, Section 404 (B)(1) Alternatives Analysis*, October 2022

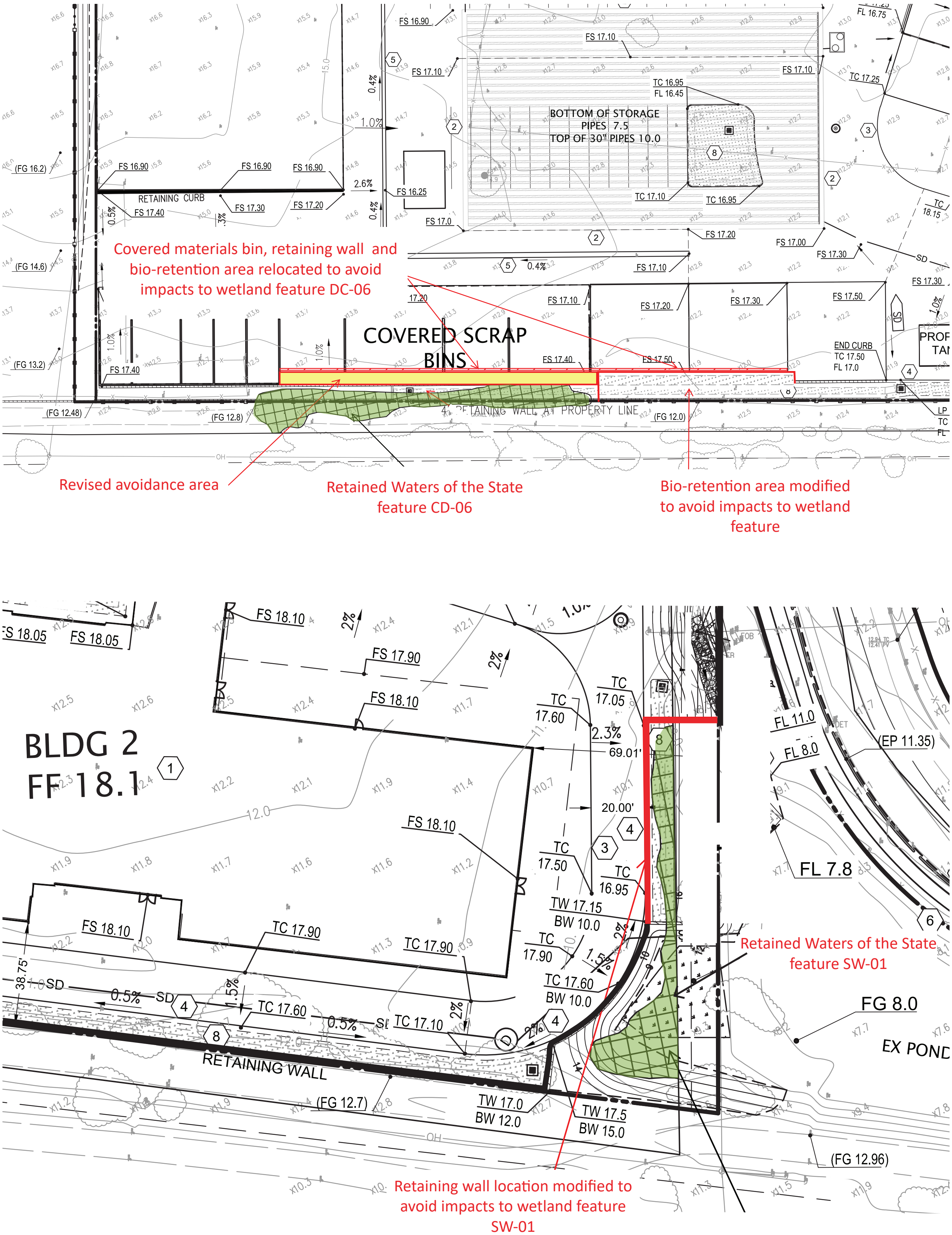
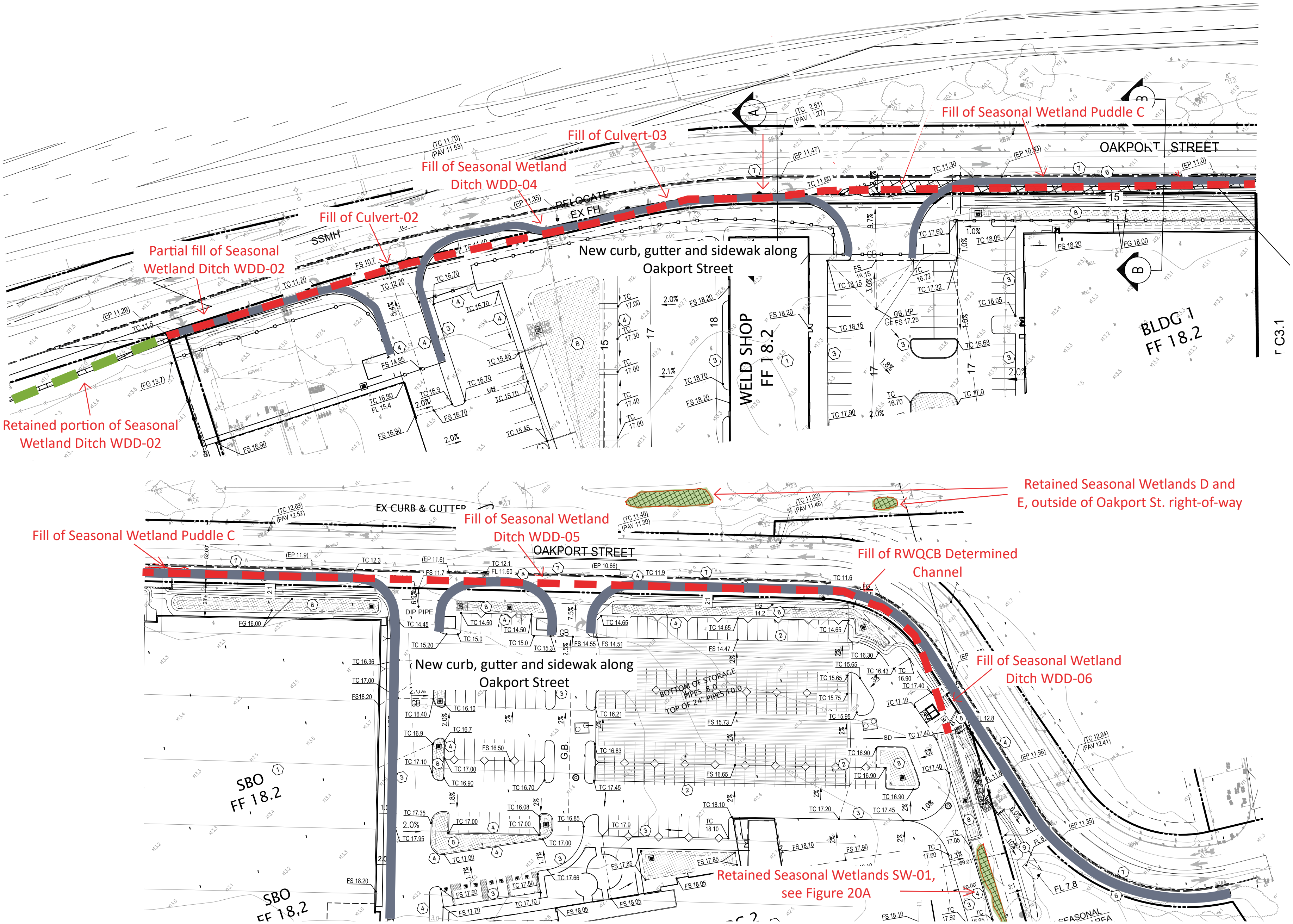


Figure 20
Partial Avoidance of Waters of the State, SW-02 and CD-06

Source: LSA, Section 404(B)(1) Alternatives Analysis, Figure 6b, October 2022 and Ware Malcomb



Source: LSA, Section 404(B)(1) Alternatives Analysis, Figure 6b, October 2022 and Ware Malcomb

Figure 21
Partial Avoidance of Waters of the State, Fill at Oakport Frontage

Alternative 3 was found to result in permanent impacts to 0.371 acres of wetlands and other Waters of the State due to completion of improvements to Oakport Street frontage at the Development Area (0.131 acre) and accounting for the previously delineated seasonal wetlands that were graded during maintenance activities (0.240 acre). Compared to the applicant's proposed Project, Alternative 3 would result in an 18 percent reduction in impacts to Waters of the State as compared to the Project. The LSA *October 2022 Alternatives Analysis* found that Alternative 3 was practicable in terms of cost, technology and logistics, and that it would reduce impacts to seasonal wetlands CD-01 and SW-1 with relatively minor revisions to the Project's site plan. All other components of the Project as proposed would remain. Because Alternative 3 would result in a reduction of impacts as compared to the original Project, Alternative 3 was found to be the Least Environmentally Damaging Practicable Alternative to the Project, and is now the proposed Project as reflected in the current application, and would presumably be implemented as a refined Project design as a permit requirement by the RWQCB.

However, Alternative 3 did not fully contemplate City-required frontage improvements for the entire Project site, from the 66th Avenue interchange to East Creek Slough, which the City has indicated to be a likely requirement of the Project. These additional improvements would result in an additional increment of approximately 0.021 acres of impacts to Waters of the State, as shown in **Table 8**.

Table 8: Potential Impacts to Waters of the State, with Modified Alternative 3 Scenario

	Area (acres)	Retained with Alternative 3 / Full City-Required Improvements	Impacted Wetlands/ Waters of the State with Alternative 3 / Full City-Required Improvements
Wetland Features			
Seasonal Wetland SW-01	0.030	0.030	0.000
Construction Depression CD-01	0.065	0.065	0.000
Seasonal Wetland E	0.020	0.020	0.000
Seasonal Wetland D	0.004	0.004	0.000
Seasonal Wetland Ditch WDD-01 and WDD-02	0.026	0.019 / 0.00	0.007/ 0.026
Seasonal Wetland Ditch WDD-03 through WDD-06 and Puddle C	0.099	0.000	0.099
Wetland Features Subtotal:	**0.244**	**0.138 /0.119**	**0.106 / 0.125**
Other Waters of the State			
Culverts-01, -02 and -03	0.003	0.002 / 0.000	0.001 / 0.003
RWQCB-Determined Channel	0.024		0.024
Other Waters, subtotal:	**0.027**	**0.002 / 0.000**	**0.025 / 0.027**
Additional Potential Seasonal Wetlands Removed			
Graded Seasonal Wetlands	0.240	0.000	0.240
Total Wetlands and Other Waters of the State:	**0.511**	**0.140 / 0.119**	**0.371 / 0.392**
Original Project Impacts to Wetlands and Other Waters of the State (see Table 7, above):		0.056	0.455
Relative Reduction in Impacts			-18.5% / -13.8%

Source: LSA, SupplyBank.org Office & Distribution Center Project, Section 404 (B)(1) Alternatives Analysis, October 2022, see Appendix J)

Compensatory Mitigation

Although Alternative 3 (with or without full improvements to Oakport Street) provides for avoidance of certain wetland features and other Water of the State, it still results in the loss of approximately 0.371 to 0.392 acres of wetlands and other Waters of the State. Accordingly, the Project applicant is proposing to provide compensation for the loss of permanent impacts and temporary wetland functions, including the previous loss of the estimated 0.24 acre of seasonal wetland features on the Project site. The proposed wetland mitigation consists of a 1.1-acre compensatory mitigation area where a seasonal wetland of higher quality would be established, located northwest of the Project site on the Westerly Area lands owned by EBMUD (see **Figure 22**).

Figure 22
Wetlands Compensatory Mitigation Site

Source: Ware Malcomb, December 2022

This compensatory mitigation provides for a replacement ratio of 3:1 for the loss of graded seasonal wetlands previously removed, and a replacement ratio of between 2.5:1 and 3:1 for the loss of wetland features and other Waters of the State from the drainage along the Development Area / full Project site frontage along Oakport Street.

Pursuant to SCA General-1, RWQCB approval is a condition of any City approvals, to be completed prior to grading permit issuance. Detailed engineering plans for the proposed compensatory wetland mitigation site would be prepared if this conceptual mitigation approach is approved by the RWQCB. Design measures associated with the proposed compensatory mitigation shall include:

- Native wetland and riparian species would be planted/seeded in coordination with a qualified restoration ecologist to maximize revegetation success. Woody riparian plantings may include live woodcuttings, container plants, or nursery stock.
- Native trees that are not considered riparian but that thrive in the vicinity of the project site (i.e., oak (Quercus spp.) may be planted to increases the probability for success of native riparian species establishment.
- Irrigation shall be provided for the first 2 years, as necessary depending on rainfall. However, watering shall be kept to the minimum amount needed to keep the cuttings and seedlings alive and in a relatively vibrant condition. This will encourage root growth and adaptation to the California climate, as the intent is to establish self-sustaining native habitat.
- Browse protection cages shall be installed and maintained as needed. Browse protection cages shall be removed after the trees have become well established and tolerant of browse damage.
- If current naturally vegetated upland areas adjacent to the mitigation site are impacted by construction of these wetlands, these areas will be revegetated with a native upland seed mix.

Consistent with the CASP EIR and SCA General-1: Regulatory Permits and Authorizations from Other Agencies, the Project applicant has coordinated with the RWQCB and other agencies to initiate necessary regulatory permits and authorizations for the Project. If the RWQCB accepts the avoidance strategies of Alternative 3 (or as modified based on City-required street frontage improvements) and the proposed off-site compensatory mitigation of new wetlands creation, as evidence by approved permits and/or authorizations from the RWQCB (including a deed restriction on the compensatory mitigation site), potential impacts of the Project on wetlands and identified Waters of the State would be off-set and reduced to a less than significant level.

Species Movement, Migration, or Nursery Sites

CASP EIR Conclusions

CASP EIR (Impact Bio-3) found that future development pursuant to the CASP could substantially interfere with the movement of native resident or migratory fish or wildlife species, could interfere with established native resident or migratory wildlife corridors, or could impede the use of native wildlife nursery sites. These include the following potential impacts on wildlife movement in the CASP planning area.

- San Leandro Bay is identified as an important habitat for listed fish and marine mammal species (i.e., Central California Coast Steelhead, Pacific harbor seals and California sea lions). Potential indirect impacts to these migratory aquatic species could be anticipated.
- Suitable habitat for nesting birds is found throughout and adjacent to the CASP planning area at East Creek Slough, Damon Slough, Elmhurst Creek, San Leandro Creek, Edgewater Seasonal Wetland and at the Oakland Estuary/San Leandro Bay. Numerous special status bird species (notably Ridgeway's rail and

burrowing owl) have the potential to occur within or adjacent to the CASP planning area. Common bird species also have the potential to breed at the CASP planning area, including red-tailed hawk, killdeer, Anna's hummingbird, mallard and American crow.

- The CASP planning area was also found to possibly support occurrences of three special-status bat species and two special status salt marsh mammals, salt marsh harvest mouse and salt marsh wandering shrew, and future development could affect movement or access to breeding habitat for these species.

The CASP EIR determined that disturbance to birds from construction activities during the breeding season could result in nest abandonment and direct impacts to eggs or nestlings. Direct construction disturbance could include physically altering a nest or the substrate where a nest is located. Indirect disturbance could include noise, night lighting, altering of surrounding habitat through vegetation removal, and flight path obstruction. Increased noise could prevent birds from receiving acoustic signals for nest exchanges, feeding and predator alarm. Many of the bird species currently using the area are capable of tolerating these existing factors, and although an increase in all of these pressures is anticipated, the CASP EIR found no standard metrics by which to quantify potential impacts. New development pursuant to the CASP was found to result in daily noise from construction equipment and activities, and a minor increase in long-term noise from increased recreational use of trails.

The CASP EIR found that birds living or flying through urban areas are subject to numerous hazards including collisions with buildings, power lines and bridges, and that bird collisions with buildings are a significant threat to bird populations. Clear glass is invisible to birds and poses both a daytime and nighttime hazard. Songbirds are vulnerable to collisions with structures as many songbird species migrate at night, fly at low altitudes, and they tend to become disoriented by night-time illumination. Transparent glass can also reflect the surrounding environment, and birds that attempt to fly through this reflected habitat collide with the glass. Night-time illumination also has a potential to interfere with bird migrations. For seabirds, water birds and marsh birds, lamplight-reflecting surfaces such as wet roads can be mistaken for water at night, causing birds to land in these areas. Since many of these species have difficulty taking off from land, this can put them at risk of predation and exhaustion.

The CASP EIR determined that potential interference with the movement of migratory fish and marine mammals would be substantially reduced through implementation of City of Oakland SCAs. These SCAs provided for erosion and sedimentation control plans, best management practices for soil and groundwater hazards, and compliance with regulatory permits and authorizations. For projects involving creekside properties, the CASP EIR also cited City of Oakland SCA related to creek protection plans, creek monitoring, creek dewatering and aquatic life, and creek dewatering and diversion. disturbance from construction activities during the breeding season that may impact nesting migratory bird and bat species was found to be reduced through implementation of SCAs related to tree removal during breeding season (including consulting biologist's recommendations), tree removal permits, and tree replacement plantings. For impacts of increased noise on migratory birds, implementation of SCAs related to operational noise and pile driving and other extreme noise generators would reduce operational and construction-related noise impacts to a less than significant level. For impacts of potential avian collisions with buildings and night lighting on migratory birds, the CASP EIR determined that implementation of SCAs related to lighting plans and bird collision reduction would include provisions to reduce bird strikes. These measures include night lighting recommendations and restrictions, and building maintenance guidelines. To ensure maximum effectiveness of these SCAs throughout the CASP planning area, the CASP EIR recommended additional lighting features be implemented pursuant to SCA Lighting Plan to minimize the potential negative effects of artificial light from future trails and walkways on migratory birds, specifically the Ridgeway's rail, and salt marsh harvest mouse.

CASP EIR Mitigation Measures

The CASP EIR concluded that there is a direct relationship between special species habitats and movement of fish or wildlife species' migratory wildlife corridors, and wildlife nursery sites. Because of this direct relationship, those mitigation measures that are recommended to reduce and avoid impacts to sensitive species and sensitive habitat types are also equally applicable to reducing or avoiding impacts to migratory movement, migratory corridors and nursery sites (see prior discussion of Special-Status Species, above). In addition, because of increase development along the Bay shoreline, the CASP EIR recommended mitigation measures to further reduce potential impacts, including MM Bio 3-2: Herbicide / Pesticide Control. The CASP EIR concluded that implementation of City of Oakland SCA, together with the recommended mitigation measures would reduce impacts related to migratory movement, migratory corridors and nursery sites to a less than significant level.

Project Analysis

The Project would affect largely ruderal habitat with only limited value to wildlife, but would be located in close proximity to the sensitive marshland habitat of Damon Marsh and could affect opportunities for wildlife movement, disrupt breeding and nesting habitat, and could result in loss of individual birds from inadvertent collisions with the new structure. Of particular concern is the proposed Office Building which would have a height of 85 feet and include considerable glass treatment along the facade facing the marsh and open waters of the Bay, which could obstruct bird movement or cast new light into the nearby marsh.

Applicable Standard Conditions of Approval

The following City of Oakland SCAs and additional mitigation measures were cited in the CASP EIR as an effective means for addressing impacts related to migratory movement, migratory corridors and nursery sites, and would apply to the Project.

- ***CASP EIR MM Bio 1A-1, Pre-construction Nesting Bird Surveys and Buffers*** (see sub-section pertaining to Sensitive Species, above)
- ***CASP EIR MM Bio 1A-3: Salt Marsh Protection*** (see sub-section pertaining to Sensitive Species, above)
- ***CASP EIR's Further Recommendations Pursuant to SCA Aesthetics-1***: In addition to the standard provisions of the City SCA Lighting Plan requirements, lighting plans for properties within the CASP planning area and near the Bay include the following:
  - a) Acorn-style lights that are International Dark Sky Association approved "Dark Sky Friendly" will be installed. This type of lighting ensures 0 percent light above 90 degrees, directs light downward and minimizes the amount of backward and side lighting, thereby reducing light pollution on habitat and animals in the surrounding area.
  - b) Use only the lowest luminaire wattage that still provides safe conditions for vehicular traffic, bicyclists, and pedestrians.
  - c) If possible, correlated color temperature (an indication of how "warm" or "cool" the light source appears) ranges of the light source to be between 3800 and 4000 Kelvins. This range corresponds to "warm" light that would be less disturbing to animals.
  - d) Lights shall be directed away from and/or screened from Damon Marsh and Arrowhead Marsh.
- ***CASP EIR MM Bio 3-2, Herbicide / Pesticide Control:*** Maintenance shall require preparation and implementation of a drift control plan for herbicide/pesticide use.
- ***SCA Bio-1, Tree Removal during Bird Breeding Season*** (see sub-section pertaining to Sensitive Species, above)

- ***SCA Bio-2, Bird Collision Reduction Measures***: The project applicant shall submit a Bird Collision Reduction Plan for City review and approval to reduce potential bird collisions to the maximum feasible extent. The Plan shall include all of the following mandatory measures, as well as applicable Project-specific Best Management Practice (BMP) strategies to reduce bird strike impacts to the maximum feasible extent. The project applicant shall implement the approved Plan. Mandatory measures include all of the following:

  a) For large buildings subject to federal aviation safety regulations, install minimum intensity white strobe lighting with three-second flash instead of solid red or rotating lights.

  b) Minimize the number of and co-locate rooftop-antennas and other rooftop structures.

  c) Monopole structures or antennas shall not include guywires.

  d) Avoid the use of mirrors in landscape design.

  e) Avoid placement of bird-friendly attractants (i.e., landscaped areas, vegetated roofs, water features) near glass unless shielded by architectural features taller than the attractant that incorporate bird friendly treatments no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule).

  f) Apply bird-friendly glazing treatments to no less than 90 percent of all windows and glass between the ground and 60 feet above ground or to the height of existing adjacent landscape or the height of the proposed landscape. Examples of bird-friendly glazing treatments include the following:

     i. Use opaque glass in windowpanes instead of reflective glass.

     ii. Uniformly cover the interior or exterior of clear glass surface with patterns (e.g., dots, stripes, decals, images, abstract patterns). Patterns can be etched, fritted, or on films and shall have a density of no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule).

     iii. Install paned glass with fenestration patterns with vertical and horizontal mullions no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule).

     iv. Install external screens over non-reflective glass (as close to the glass as possible) for birds to perceive windows as solid objects.

     v. Install UV-pattern reflective glass, laminated glass with a patterned UV-reflective coating, or UV-absorbing and UV-reflecting film on the glass since most birds can see ultraviolet light, which is invisible to humans.

     vi. Install decorative grilles, screens, netting, or louvers, with openings no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule).

     vii. Install awnings, overhangs, sunshades, or light shelves directly adjacent to clear glass which is recessed on all sides.

     viii. Install opaque window film or window film with a pattern/design which also adheres to the “two-by-four” rule for coverage.

  g) Reduce light pollution. Examples include the following:

     i. Extinguish nighttime architectural illumination treatments during bird migration season (February 15 to May 15 and August 15 to November 30).

     ii. Install time switch control devices or occupancy sensors on non-emergency interior lights that can be programmed to turn off during non-work hours and between 11:00 p.m. and sunrise.

     iii. Reduce perimeter lighting whenever possible.

     iv. Install full cut-off, shielded, or directional lighting to minimize light spillage, glare, or light trespass.

    v. Do not use beams of lights during the spring (February 15 to May 15) or fall (August 15 to November 30) migration.

h) Develop and implement a building operation and management manual that promotes bird safety. Example measures in the manual include the following:

    i. Donation of discovered dead bird specimens to an authorized bird conservation organization or museums (e.g., UC Berkeley Museum of Vertebrate Zoology) to aid in species identification and to benefit scientific study, as per all federal, state and local laws.
    ii. Distribute educational materials on bird-safe practices for the building occupants. Contact Golden Gate Audubon Society or American Bird Conservancy for materials.
    iii. Asking employees to turn off task lighting at their workstations and draw office blinds, shades, curtains, or other window coverings at end of workday.
    iv. Install interior blinds, shades, or other window coverings in windows above the ground floor visible from the exterior as part of the construction contract, lease agreement, or CC&Rs.
    v. Schedule nightly maintenance during the day, or so that it concludes before 11 p.m., if possible.

Other SCAs with benefit to migratory movement, migratory corridors and nursery sites, and that would apply to the Project include:

- **SCA General-1, Regulatory Permits and Authorizations from Other Agencies** (see Wetlands section of this Checklist, above)
- ***SCA Aesthetics-1, Lighting Plan*** (see Aesthetics section of this Checklist)
- ***SCA Bio-3, Tree Removal Permit*** (see Conflicts with Tree Protection Ordinance section of this Checklist, below)
- ***SCA Geo-4, Erosion and Sedimentation Control Plan*** (see Geology section of this Checklist)
- ***SCA Haz-2, Hazardous Materials Related to Construction*** (including Best Management Practices for soil and groundwater hazards, see Hazards section of this Checklist)
- ***SCA Hydro-2, Creek Protection Plan*** (see details in the Hydrology section of this CEQA Checklist)
- ***SCA Noise-3, Extreme Construction Noise*** (see Noise section of this Checklist), and
- ***SCA Noise-6, Operational Noise*** (see Noise section of this Checklist)

Project Plans pursuant to City SCAs

Consistent with CASP EIR requirements, the Project sponsor has prepared a Lighting Plan (see prior Figure 15) which demonstrates that light cast by proposed new light fixtures of the Project will not exceed 0.5 foot-candles at grade level beyond the westerly property line along the Development Area adjacent to Damon Marsh. Further details pertaining to each luminaire as to "Dark Sky Friendly" design, luminaire wattage and correlated color temperatures will be subject to further review pursuant to subsequent building permit requirements.

The Project applicant has not yet prepared a complete Bird Collision Reduction Plan or a Building Operation and Management Manual that promotes bird safety for City review and approval (which are required prior to approval of construction-related permits). However, the following information relative to bird collision reduction is known for the Project:

- None of the Project's buildings is so tall as to require FAA safety lighting.
- The Project does not indicate any rooftop-antennas and other rooftop structures that might otherwise require guywires.

- The Project's landscape plans do not suggest use of any mirrors in landscape design.
- The Project intends to apply bird-friendly glazing treatments to no less than 90 percent of all windows and glass between the ground and 60 feet above ground by using opaque glass in windowpanes instead of reflective glass.

As concluded in the CASP EIR, implementation of SCAs calling for a Lighting Plan and Bird Collision Reduction would address the potential disruption of night lighting and reduce the risk of bird strikes. The Bird Collision Reduction Plan called for in the City's SCA would further define building treatments, exterior lighting, and management activities that would serve to reduce bird strikes and disturbance to nearby marsh habitat. Together with other SCAs and the additional mitigation measures called for in the CASP EIR that serve to protect nesting habitat and minimize disturbance to sensitive habitat, potential impacts on wildlife movement opportunities associated with the proposed Project would be less than significant.

Conflicts with Tree Protection Ordinance

CASP EIR Conclusions

The CASP EIR (Impact Bio-5) found that future development pursuant to the CASP would not fundamentally conflict with the City of Oakland Tree Protection Ordinance. Prior to removal of any protected tree within the CASP planning area, the City's tree permit criteria for tree removal will be reviewed and a tree removal permit approved with the City of Oakland. Pursuant to SCAs, tree removal permit requirements shall be implemented before and during removal of protected trees, and removal of protected trees will be replaced by new trees that will contribute to the visual framework of the CASP planning area.

Project Analysis

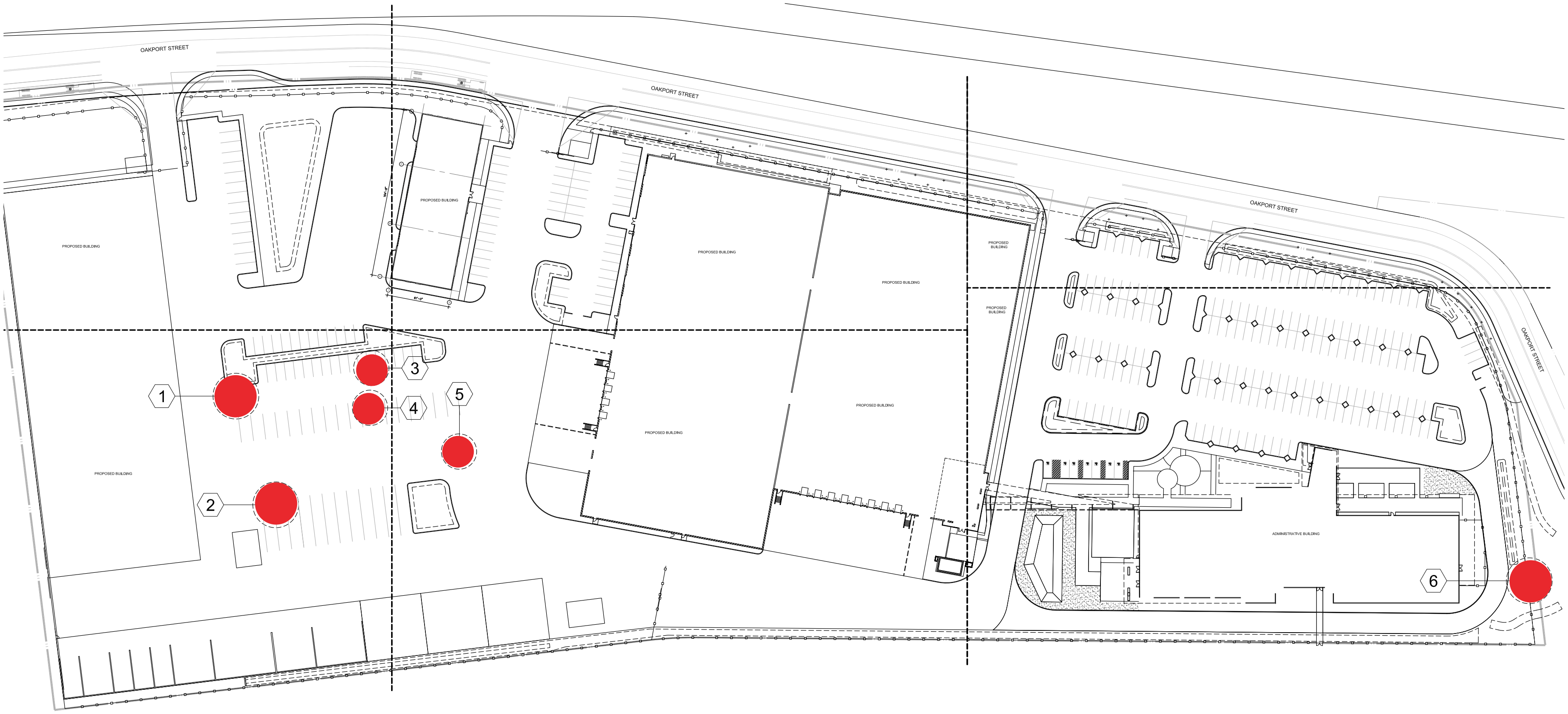
The Development Area of the Project site includes only six existing trees, five located generally within the central portion of the Development Area, and one tree along the southerly property line near Oakport Street (**see Figure 23**). These trees include:

- Tree #1, a 28-inch diameter eucalyptus
- Tree #2, a 48-inch diameter date palm
- Tree #3, a 12-inch diameter olive tree
- Tree #4, a 12-inch diameter olive tree
- Tree #5, a 10-inch diameter olive tree
- Tree #6, a 48-inch diameter date palm

All of these trees are located in the Project's proposed development area and/or where grading and fill are proposed to occur, and each of these trees are proposed to be removed. All of the other vegetation along the Project site's westerly boundary (adjacent to Damon Marsh) would remain.

<u>Applicable Standard Conditions of Approval</u>

The following City of Oakland SCA is cited in the CASP EIR as an effective means for addressing the City's tree permit policies and ordinance, and would apply to the Project. Protected trees under the City's Tree Protection Ordinances are Coast live oak of four inches or larger in diameter, or any other species nine inches in diameter or larger (but not Eucalyptus or Monterey Pine trees). Based on species and trunk diameter, five of the trees on within the Development Area qualify as protected under the City's Tree Protection Ordinance, and a permit would be required for their removal.



WATER EFFICIENT LANDSCAPE WORKSHEET

REFERENCE EVAPOTRANSPIRATION (ETo): 41.8

HYDROZONE / PLANTING DESCRIPTION	PLANT FACTOR (PF)	IRRIGATION METHOD	IRRIGATION EFFICIENCY (IE)	ETAF (PF / IE)	LANDSCAPE AREA (sq. ft.)	ETAF x AREA	ESTIMATED TOTAL WATER USE (ETWU)
REGULAR LANDSCAPE AREAS:							
LOW WATER USE	0.2	DRIP	0.81	0.2469135	72444	17887.40159	463569.9
MEDIUM WATER USE	0.5	BUBBLER	0.81	0.61728395	2007	1238.888888	32107.0
HIGH WATER USE	0.7	DRIP	0.81	0.86419753	10491	9066.296287	234962.1
HIGH WATER USE	0.7	SPRAY	0.75	0.9333333	15782	14729.86614	381739.2
				TOTALS:	100724	42922	
SPECIAL LANDSCAPE AREAS:							
REC. AREA				1	0	0	0
WATER FEATURE 1				1	0	0	0
WATER FEATURE 2				1	0	0	0
				TOTALS:	0	0	
						ETWU TOTAL:	1,112,378
						MAXIMUM ALLOWED WATER ALLOWANCE (MAWA):	1,174,663

ETAF CALCULATIONS:

REGULAR LANDSCAPE AREAS:

TOTAL ETAF x AREA	42,922
TOTAL LANDSCAPE AREA	100,724
AVERAGE ETAF	0.43

NOTE: AVERAGE ETAF FOR REGULAR LANDSCAPE AREAS MUST BE 0.55 OR BELOW FOR RESIDENTIAL AREAS, AND 0.45 OR BELOW FOR NON-RESIDENTIAL AREAS.

ALL LANDSCAPE AREAS:

TOTAL ETAF x AREA	42,922
TOTAL LANDSCAPE AREA	100,724
SITEWIDE ETAF	0.43

NOTES:
1. ALL PLANTING SHALL BE WATERED BY A FULLY AUTOMATIC RECYCLED WATER IRRIGATION SYSTEM WITH WEATHER-BASED CONTROLLER OPERATION.
2. ALL PLANTING (EXCEPT LAWNS) SHALL RECEIVE A 3" DEEP LAYER OF FIR BARK MULCH DRESSING.

EXISTING TREE SURVEY

SYMBOL	TREE COMMON NAME	CALIPER DIAMETER	STATUS
TREES:			
1	EUCALYPTUS	28"Ø	REMOVE
2	DATE PALM	48"Ø	REMOVE
3	OLIVE	12"Ø	REMOVE
4	OLIVE	12"Ø	REMOVE
5	OLIVE	10"Ø	REMOVE
6	DATE PALM	48"Ø	REMOVE

STREET TREE REQUIREMENTS:

PER CITY OF OAKLAND LANDSCAPING AND SCREENING STANDARDS, ONE STREET TREE IS REQUIRED FOR EVERY 25 FEET OF PROJECT STREET FRONTAGE (NOT NECESSARILY EVEN 25 FT. SPACING).

TOTAL PROJECT STREET FRONTAGE ALONG RIGHT OF WAY: 1,442 FT.
TOTAL NUMBER OF (15 GALLON) STREET TREES REQUIRED: 58
TOTAL NUMBER OF (15 GALLON) STREET TREES PROVIDED: 58

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

TREE SURVEY PLAN

Thomas Baak & Associates, LLP
Landscape Architects
1620 North Main Street, Suite 4
Walnut Creek, CA 94596
Ph: 925.933.2583

Figure 23
Tree Survey - Proposed Tree Removal

Source: Thomas Baak & Assoc., Ware Malcomb, Sheet L1.9, April 2019

- ***SCA Bio-3, Tree Permit***: 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.

  a) *Tree Protection during Construction*: 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, filling, 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 resulting from 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 by 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.

  b) *Tree Replacement Plantings*: 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 non-native species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered.

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: a) for Sequoia sempervirens, three hundred fifteen (315) square feet per tree; b) 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.

❖ ***SCA Bio-1, Tree Removal during Breeding Season***: (see sub-section pertaining to Sensitive Species, above)

Project Plans Pursuant to SCAs

Other than the eucalyptus tree (Tree #1), removal of the other 5 olive and date palm trees from the Project site requires approval of a Tree Removal Permit. Although common throughout California and the East Bay, neither the olive nor the date palms are native trees that would require replacement plantings.

Per the City of Oakland landscape and screening standards, the Project is required to provide street trees along the Oakport Street frontage at a spacing of 25 feet on center (average). With approximately 1,450 linear feet of frontage, the Project is required to provide 58 street trees along Oakport Street. The Project's proposed Landscape Plan does include 58 new trees along Oakport Street frontage, as a mix of Trident Maple, Red Alder, Scarlet Oak and Chinese Pistache trees. Internal parking lot planting islands include an additional mix of California Sycamores and Water Gum. Along the Project's westerly boundary near Damon Marsh, additional tree planting include primarily Red Alder and California Sycamores.

Additional Recommendations

Based on City Watershed staff's review of the Project's proposed Landscape Plans, the following additional recommendations are intended to address the appropriateness of proposed tree species for the site, and are intended to apply as conditions to the Project's proposed Tree Permit and/or Creek Permit:

❖ ***Recommendation Pursuant to SCA Bio-3: Landscape Plan Species***: Pursuant to the Project's Tree permit and/or Creek permit, the Project applicant shall reconsider the proposed plant palette to incorporate the following recommendations:

a) The Project's landscape plan should provide for a greater component of native trees, especially along the Project's westerly edge near Damon Marsh.

b) The selection of Chinese Pistache trees within the landscape should be limited to male variety of this species, as the female variety produces berries that are attractive to birds.

Consistent with the conclusions of the CASP EIR, the Project's effects related to consistency with the City's Tree Protection Ordinance will be fully addressed through implementation of City SCAs and existing regulations, including obtaining a Tree Removal permit prior to grading or construction activities, and planting of new street trees and landscape screening. With issuance of a Tree permit and implementation of the Project's proposed landscape plans, including the recommendations pursuant to SCA Bio-3, impact related to inconsistency with the City's Tree Protection Ordinance would be reduced to less than significant.

Conflicts with Creek Protection Ordinance

CASP EIR Conclusions

The CASP EIR (Impact Bio-6) found that new development pursuant to the CASP would not fundamentally conflict with the City of Oakland Creek Protection Ordinance. All future work conducted within areas subject to the Creek Protection Ordinance will require a City of Oakland Creek Protection Permit, to be implemented in accordance with detailed performance requirements. By obtaining the required Creek Protection Permit(s) and conducting the work in accordance with those permits, any impacts were found to be less than significant.

Project Analysis

All creekside properties in Oakland must obtain a Creek Protection Permit to perform construction or other work. "Creekside property" means those properties located in Oakland having a creek or riparian corridor crossing the property and/or are contiguous to a creek or riparian corridor. Pursuant to OMC section 13.16.120, "no person shall commit or cause development or work within the boundaries of a creekside property, or within the public right-of-way fronting a creekside property, unless a Creek Protection Permit has first been obtained."

Although the Project site is split among three separate APNs, each of these APNs comprise one large lot (or property) of 66.4 acres, owned by EBMUD. Although the Project involves different types of activities on each of these APNs, the provisions of the City Creek Protection Ordinance apply to the entire property, based on the property's relationship to the following creeks and waterways (see **Figure 24**).

- *San Leandro Bay*: The City of Oakland's Creek Protection Ordinance (OMC Chapter 13.16) addresses potential water quality impacts from stormwater and other discharges into identified "waterways". According to the City of Oakland's Creek Protection Ordinance, the Oakland Estuary, including San Leandro Bay, is considered a waterway. The Development Area is inclusive of lands that are within 100 feet of the shoreline of San Leandro Bay, and a portion of the larger Project site is either submerged lands within the Bay, or uplands that almost entirely within 100 feet of the shoreline.
- *East Creek Slough*: East Creek Slough is clearly defined as a "creek" based on City criteria. East Creek Slough forms the northerly boundary of the Project site.
- *Damon Slough*: Damon Slough is also a clearly defined "creek" based on City criteria. The nearest portion of the Project site (the southerly extent of the Development Area) is approximately 640 feet to the north of Damon Slough, separated by the Oakport Street/Zhone Way interchange. The Project site's property is well distant from the Damon Slough.

Figure 24
Oakland Creek Permit Locational Criteria

Source: BCDC Bay Shoreline Flood Explorer, acessed at:
https://explorer.adaptingtorisingtides.org/explorer

- *On-Site Drainages*: According to the City's Creek Protection Ordinance, the definition of a "creek" includes a continuous waterway that is hydrologically connected to a waterway above and below the site, or connected to a spring, headwaters, lake, the Estuary or the Bay. As described in detail above (see discussion of Waters of the State), there are a series of swales, culverts, rough ditch segments and a RWQCB-defined drainage channel located along the easterly boundary of the Project site adjacent to Oakport Street. These features generally extend from the Peppermint Gate Road access drive all the way down to Seasonal Wetlands-01 at the southerly end of the Project site and qualify as Waters of the State. However, each of these features are artificial, small and have little to no habitat value. Seasonal Wetland-01 at the southerly end of the Project site is separated from the Bay by a former railroad berm, and these features do not appear to have a hydrological surface connection to the San Francisco Bay, except potentially under extreme rainfall conditions. Accordingly, although these features do qualify as Waters of the State, they are isolated features and do not meet the City definition of a creek.

The Creek Permit category that is the appropriate fit for activities pursuant to the Project (i.e., development associated with the Development Area) is a Category III Creek permit, for exterior work that includes earthwork and is located within 100 feet from the waterway. As shown on Figure 24, the southwesterly portion of the Development Area, including a portion of the proposed new office building, is within 100 feet of the shoreline and would include earthwork. Therefore, the Project is required to comply with the Category III provisions of the Creek Protection Ordinance, and prepare a Creek Protection Plan (see detailed discussion under the Hydrology section of this CEQA Checklist).

The activities proposed as part of the Project outside of the Development Area are limited to demolition of several smaller sheds and other structures within the Northerly Area. These sheds and small structures are located well beyond 100 feet from the centerline of East Creek Slough, and no grading or earthwork is required or proposed for removal of these buildings. Whereas these elements of the Project may, by themselves, qualify for a Category II Creek permit, these activities will likely be subject to the overall Category III Creek permit for the overall property. Similarly, the proposed compensatory mitigation of new wetlands creation within the Westerly Area of the Project site will include a certain amount to earthwork, and will likely be subject to the same Category III Creek permit for the overall property.

<u>Applicable Standard Conditions of Approval</u>

The Creek Permit category that is the best fit for activities at the Project site property is a Category III Creek permit for exterior work that includes earthwork and is located within 100 feet from the waterway. Category III Creek Permits require preparation and implementation of a Creek Protection Plan that includes Best Management Practices ("BMPs") to be implemented during construction and after construction to protect the waterways (East Creek Slough and San Leandro Bay).

❖ ***SCA Hydro-2, Creek Protection Plan*** (see details in the Hydrology section of this CEQA Checklist)

Consistent with the conclusions of the CASP EIR, the Project's effects related to consistency with the City's Creek Protection Ordinance will be fully addressed through implementation of City SCAs and existing regulations, including obtaining a Creek Permit prior to grading or construction activities, and complying with the conditions of that permit throughout the construction period. With issuance of a Creek Permit and implementation of the conditions of that permit during the Project's grading operations, impact related to inconsistency with the City's Creek Protection Permit would be reduced to less than significant.

Applicable Conservation Plans

CASP EIR Conclusions

The CASP EIR (Impact Bio-4) determined that future development pursuant to the CASP would not fundamentally conflict with an applicable habitat conservation plan or natural community conservation plan. The CASP EIR focused its analysis on the BCDC San Francisco Bay Plan (Bay Plan) and the East Bay Regional Park District's MLK Regional Shoreline Master Plan. The CASP EIR analysis was focused primarily on the implications of the proposal included in the original draft CASP to fill and develop the Edgewater Seasonal Wetlands and to create a new Bay cut. The CASP EIR found that these preliminary CASP proposals could conflict with applicable local policies or ordinances protecting biological resources, but that implementation of the City of Oakland SCAs and the mitigation measures as included in the CASP EIR described above would ensure that these proposals would be built in a way that would be supportive of the goals of the BCDC Bay Plan and the East Bay Regional Park District Master Plan.

The CASP EIR (Impact Land-10) found that the CASP would not fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan. The CASP planning area was not found to be located within or in proximity to an area guided by a Habitat Conservation Plan or Natural Community Conservation Plan, other than the Bay Plan and the MLK Regional Shoreline Master Plan, addressed above. The CASP EIR concluded that adoption and development of the CASP would not conflict with any such plans.

Project Analysis

As has been clarified in several of the sections of this Checklist above, there is no current or reasonable foreseeable plan for filling and developing the Edgewater Seasonal Wetlands, for creating a new Bay cut, or for using EBMUD property (i.e., the Project site) to create compensatory wetland mitigation for either of these previously envisioned projects. The Project will be subject to BCDC review for consistency with the Bay Plan, but has no bearing on the EBRPD MLK Regional Shoreline Master Plan. Prior to reaching its own independent conclusions as to whether or how to issue a shoreline development permit, BCDC will consider the environmental effects of the Project as shown in this CEQA document, and may require mitigation for those direct or indirect environmental effects of those parts of the Project for which it has authority to address.

As was concluded in the CASP EIR, the Project site (as part of the CASP planning area) is not within or in proximity to an area guided by any other Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, the Project would not conflict with such plans.

CEQA Conclusion Pertaining to Biological Resources

The analysis presented above examines whether there are any Project-specific significant effects to biological resources that are peculiar to the Project or its site, finding none. The Project would have no impacts to biological resources that were not previously analyzed in the CASP EIR, would have no off-site or cumulative biology impacts not discussed in the prior CASP EIR, and would not result in any impacts to biological resources that are more severe than as discussed in the prior CASP EIR. There are no biology-related impacts that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as pertains to biological resources. The biological resource analysis presented above provides minor technical additions related to the specific biology and wetlands effects of the Project, and these minor technical additions to the CASP EIR that are specific to the Project are appropriately disclosed in this Addendum to the CASP EIR.

Cultural Resources

Would the Project:	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	Relationship to CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Standards and Regulations	Project Conclusions: Resulting Level of Significance
a) Cause a substantial adverse change in the significance of a historic resource pursuant to Section 15064.5?	LTS with SCAs	■	☐	-	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	LTS with SCAs	■	☐	SCA Cultural-1, Archaeological and Paleontological Resources - Discovery during Construction	LTS with SCA
c) Disturb any human remains, including those interred outside of formal cemeteries?	LTS with SCAs	■	☐	SCA Cultural-2, Human Remains - Discovery during Construction	LTS with SCA
d) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	LTS with SCA	■	☐	SCA Cultural-1, Archaeological and Paleontological Resources – Discovery during Construction	LTS with SCA

Information related to the Project and the Project site as included in the following Cultural Resources section of this CEQA Checklist has been derived from the following primary source:

- SWCA Environmental Consultants, *Cultural Resources Inventory Report for the SupplyBank Project*, September 2022 (**Appendix K**)

Historic Resources

CASP EIR Conclusions [58]

The CASP EIR (Impact Cultural-1B) found that, other than the proposed demolition of the Oakland Coliseum and the potential demolition of the Arena, future development pursuant to CASP buildout did not specifically propose to demolish or materially alter any other historic or potentially historic resources. Any subsequent development project that may propose demolition or alteration of a current or future-defined historic resource would be required to undergo subsequent and individual environmental review, and would be subject to all applicable City of Oakland's standard conditions of approval, Planning Code requirements and General Plan policy considerations relevant to historic resource preservation.

The CASP EIR did indicate that the CASP planning area contained many older buildings and other structures with Oakland Cultural Heritage Survey (OCHS) ratings of lower than "A" or "B". During a 2013 reconnaissance survey, many commercial or light industrial buildings, bridges and channelized creeks or sloughs over 45 years old were

[58] City of Oakland, CASP Draft EIR page 4.4-37

noted, and the OCHS rates several mid-twentieth century buildings along Edgewater Drive, Capwell Drive, Swan Way and Roland Way as “*3” (i.e., they were too recent to rate and were assigned the field notation of “F3”). To further assess these structures, a records search, background research and consultation was conducted, which identified three buildings of potential historic interest, each of which is located within Sub-Area D:

- the Oakland Fire Station Engine No. 27 at 8501 Pardee Drive
- the UPS building at 8400 Pardee Drive, and
- the Warehouse Union Local 6 building at 99 Hegenberger Road (which was noted as a PDHP of future interest)

Of these buildings of potential current interest, only the Warehouse Union Local 6 building was of age to be considered a historic resource, had a contingency rating (based on its age) that enabled it to be considered a resource of secondary importance, and was identified as a PDHP. Based on these factors, the Warehouse Union Local 6 building was considered a historical resource. However, no change to the Warehouse Union Local 6 building was proposed pursuant to the CASP, and potential impacts to historic resources was found to be less than significant.

The CASP EIR also noted that new information or new context may be discovered, altered properties may be found to have been restored, and other properties not 50 years old at the time they were last surveyed may become potentially eligible for listing in the California Register or the Local Register. Such properties may be considered historic resources in the future, even though not considered historical resources at the time of preparation of the CASP EIR. Accordingly, the CASP EIR determined that, if it is later determined that demolition or substantial alteration of historically-significant resources would occur pursuant to CASP buildout, the impact of such development would need to be considered under a subsequent CEQA analysis. Any such resources would be subject to all of the City of Oakland’s SCAs, Planning Code requirements and General Plan policy considerations relevant to historic resource preservation.

Project Analysis

According to the U.S. Bureau of Land Management (BLM) General Land Office 1870 survey map, the Project site is located within Lot Number 37 and is depicted as part of the Rancho San Antonio land claim, an extensive claim comprising 43,000 acres of land that encompasses the cities of San Leandro, Oakland, Alameda, Emeryville, Piedmont, Berkeley, and Albany. It extends from the Pacific coastline inland to the Oakland Hills summit. The land grant extends north to Cerrito Creek and southeast to San Leandro Bay.

Based on topographic maps of the area, the entirety of the Project site and surrounding area was marshland until the late 1940s.

- Sometime between 1947 and 1949, most of the marshland comprising the Project site and surrounding area was reclaimed, except for the western extent.
- In 1958, a portion of Highway 17 was rerouted to just east of the Project site, and renamed the Nimitz Freeway. The nearest paved road to the Project site is Oakport Street, which appears to have been constructed sometime between 1956 and 1960, based on topographic maps of those dates.
- By 1958, at least one large warehouse and several other smaller facilities had been constructed along Oakport Street near East Creek Slough at the northeast extent of the Project site.
- Much of the remaining infrastructure surrounding the Project site appears to have been constructed sometime between 1966 and 1969.
- Development at the proposed Development Area does not appear to have begun until at least 1980.

This historical imagery suggests that the Project site and its immediate vicinity have experienced extensive previous disturbance due to reclamation and construction activities, all of which occurred after World War II.

Currently, there are no remaining structures of any type within the Development Area, and this review of historic maps and aerial photographs failed to indicate the presence of any other historic structures or features within the Project site. There are several sheds and outbuildings on the Project Site outside the Development Area (on the Northerly Area) that are owned and used by EBMUD, but these sheds and outbuildings are not listed in, or formally determined eligible for listing in the California Register of Historic Resources (CRHR), they are not included in the local register of historical resources (the Oakland Cultural Resources Survey), and are not identified as significant in any other identified historic resources survey. Although some of these sheds and outbuildings may have been constructed between 1958 and 1969 and are now more than 50 years old, they do not appear to be associated with any events that have made a significant contribution to the broad patterns of California's history and cultural heritage. They are not associated with the lives of persons important in our past; do not embody distinctive characteristics of a type, period, region or method of construction; do not represents the work of an important creative individual, or possesses high artistic values; and are not likely to yield information important in history or prehistory. [59]

Consistent with the conclusions of the CASP EIR, the Project site has been reviewed for the presence of historic resources, no such resources were identified, and no City of Oakland's SCAs, Planning Code requirements or General Plan policy considerations relevant to historic resource preservation apply to the Project. This potential impact is considered less than significant.

<u>Archaeological Resources and Human Remains</u>

CASP EIR Conclusions [60]

The CASP EIR (Impact Cultural-2) found that future development pursuant to the CASP could directly or indirectly destroy unique paleontological resources or sites, cause a substantial adverse change in the significance of currently undiscovered archaeological resources, or disturb human remains. However, with implementation of City of Oakland SCAs, this impact would be reduced to less than significant.

Per the CASP EIR, archaeological resources are not anticipated at or near the surface within the entire CASP planning area due to historic development and the extent of existing artificial fill covering the planning area. The surface of the entire CASP planning area was found to consist of a layer of historic and modern artificial fill that was placed to raise the elevation of the Bay margin for development. The fill consists of a mix of local and imported material, and considered to have very low sensitivity for archaeological resources. At the base of the fill, at the interface or contact with Quaternary Young Bay Mud, the CASP EIR found the sensitivity for prehistoric cultural deposits to be high, especially deposits associated shell mounds at previously recorded sites of Native American settlement along the edge of the historic shoreline (see **Figure 25**). The Bay Mud strata that is in contact with terrestrial deposits has the potential to contain sealed human remains associated with Native American habitation of the area. Thus, archaeological sensitivity is considered moderate to high within marsh deposits when they are situated at the interface of terrestrial deposits, and where the marsh may have been exposed as a land surface long enough to have been available for human use.

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[59] SWCA Environmental Consultants, September 2022

[60] City of Oakland, CASP Draft EIR page 4.4-40

Figure 25
Historic (1855) Shoreline

Source: City of Oakland, Coliseum Area Secific Plan EIR, Figure 44-3, original source Garcia & Associates 2014

The CASP EIR reached the conclusion that, whether an individual development project is within an archaeologically sensitive area will depend on both its location and the depth of proposed disturbance:

- Almost the entire CASP planning area is covered with artificial fill. This artificial fill has a low sensitivity for prehistoric archeological resources, but a very high sensitivity for such resources at its base (or at the interface with Quaternary Young Bay Mud). Encountering this base material would involve excavation deep enough to pass through the depth of the fill. Therefore, if a development project does not excavate to or below the fill, it is not within an archaeologically sensitive area.
- There is also potential for the presence of historic-period resources within the fill. Although such resources are not expected to be comprised of intact, discrete or potentially significant resources, the possibility remains that historic period deposits could be identified that may require additional investigations.
- If development results in excavation deeper than the fill, it then encounters an archaeologically sensitive area.

The CASP EIR determined that the CASP planning area does not contain any known locations of human remains. However, construction-related subsurface disturbance could result in the inadvertent discovery of human remains.

Given the sensitivity of the area, the CASP EIR recommended that any new development project throughout the CASP planning area that involves excavation should be subject to City SCAs. Specifically, the SCAs that require pre-construction surveys to verify the presence or absence of archaeological sensitivity, or preparation and implementation of a construction ALERT sheet and training of construction contractors, construction period monitoring, and avoidance and recovery measures.

In the event of an unanticipated discovery of prehistoric or historic-period archaeological resources during development, other City SCAs are required. These SCAs require that excavations within 50 feet of the find be temporarily halted or diverted until the discovery is examined by a qualified archaeologist or paleontologist, documented and evaluated for significance, and procedures established to consider avoidance of the resource or preparation of an excavation plan if avoidance is unfeasible. With required implementation of City SCAs, impacts on archaeological resources and human remains were concluded to be less than significant.

Project Analysis

A records search from the California Historical Resources Information System (CHRIS) Northwest Information Center (NWIC) at Sonoma State University was conducted to identify known cultural resources and previous cultural resource studies within 0.25 mile of the Project site. The CHRIS search identified 31 previously conducted cultural resource studies, and portions of 22 of these studies intersect the Project site. Of those, only two reports included archaeological field studies. The Project site has not been subject to other recent, location-specific archaeological survey. The CHRIS records search did not identify any previously recorded resources within the Project site or within the 0.25-mile radius.

Similar to most of the entire CASP planning area, archaeological resources are not anticipated at or near the surface of the Project site due to historic development and the amount of artificial fill that covers the site. The surface of the entire Project site (other than submerged lands within the Westerly Area) consists of historic and modern artificial fill that was placed to raise the elevation of Bay margin for development. Based on the geology reports for the Project, there is approximately 5½ to 11 feet of undocumented fill that blankets the site. This artificial fill is considered to have very low sensitivity for prehistoric or historic-period archaeological resources. The artificial fill is underlain by an additional 3 to 7½ feet of young Bay Mud varying from 12½ to 17 feet below the ground surface, which formed the pre-1855 historic Bay shoreline. The interface or contact between the artificial fill and Bay Mud is considered to have a high sensitivity for prehistoric cultural deposits. The Project's grading plan does not propose any deep mass excavation work. Selected excavations of up to 4 feet are anticipated to facilitate the office elevator pit and warehouse loading dock construction, and over-excavation to a depth of 2 feet is planned for areas below anticipated pavement and hardscape areas. These excavations are not extensive across the site and are not expected to be deeper than the artificial fill that covers the site. Accordingly, it is unlikely that any paleontological resources would be discovered during Project construction.

An intensive pedestrian survey of the Project site was conducted on August 25, 2022. The survey was conducted using pedestrian transects spaced 5 to 15 meters apart where vegetation conditions and safety considerations allowed. Periodic boot scrapes were employed to expose soils when vegetation obscured the ground surface. The entirety of the Project site was subject to this intensive pedestrian survey. More than three-quarters of the Project site consists of a considerably disturbed and fenced dirt lot southeast of the EBMUD facility, and ground visibility in this portion of the site was 100 percent. The remainder of the Project site, just southwest of the fence line, is bisected along its length by a graveled path that trends northwest/southeast through the entire Project area. Approximately halfway along the length of the Project area, the graveled path is bounded on the outside by a paved pedestrian trail approximately 15 feet to the southwest. The area between these two paths is heavily vegetated with grasses and coastal scrub. Ground visibility in this portion of the Project area was between five and 10 percent. Boot scrapes were employed in open areas where vegetation was not as dense to expose soils. No archaeological resources, artifacts, or features were observed within the Project area. [61]

Although no cultural resources were noted on the ground surface during this pedestrian survey, the possibility of encountering cultural resources during excavation remains. The discovery of human remains during the course of the Project is also a possibility.

<u>Applicable Standard Conditions of Approval</u>

The following City of Oakland SCAs (as updated) are cited in the CASP EIR as an effective means for addressing potential discovery of undiscovered archaeological resources or human remains, and would apply to the Project.

- ***SCA Cultural-1, Archaeological and Paleontological Resources - Discovery during Construction***: 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.

  a) 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.

  b) 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

[61] SWCA Environmental Consultants, September 2022

and the data class the resource is expected to possess, and how the expected data class would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods.

c) 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.

d) 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.

- ***SCA Cultural-2, Human Remains - Discovery during Construction***: 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.

  a) If the County Coroner determines that an investigation of the cause of death is required, or if the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made.

  b) 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

Consistent with the conclusions of the CASP EIR, the Project's effects related to inadvertent discovery of currently unknown cultural resources or human remains will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.

Paleontological Resources

CASP EIR Conclusions [62]

The CASP EIR (Impact Cutural-2) found that paleontological resources are not anticipated at or near the surface within the CASP planning are due to historic development and the extent of artificial fill that has been placed over the planning area. The surface stratum throughout the CASP planning area consists of a, "variable veneer of historic and modern artificial fill, which is considered to have very low sensitivity for paleontological resources". However, the deposits below the artificial fill may date to the late Pleistocene era and earlier, when the coast was 25 to 50 kilometers to the west. Due to the position on the landscape and the age of certain underlying deposits, they are considered to have high paleontological sensitivity." More specifically, the CASP EIR finds that, beneath the artificial fill, "there is a higher potential for the identification of paleontological resources, where there are Late Pleistocene and Pliocene aged strata, far below the artificial fill and the Bay Mud. These areas of

[62] City of Oakland, CASP Draft EIR page 4.4-40

sensitivity are situated deep beneath the ground surface (e.g., within the Quaternary Old Bay Mud at depths of 75 to 115 feet below sea level, or the Quaternary Alameda Formation at depths of 75 to 130 feet below sea level). These sensitive sub-surface areas are located beneath the surface of the CASP planning area and are not precisely mapped.

The CASP EIR found that development, including construction-related subsurface disturbance such as mass excavation, could destroy fossils by cutting into geological formations where they are located. Since the potential presence and significance of fossils is unknown, such excavations could cause a significant impact to paleontological resources.

The CASP EIR recommended that, given the paleontological sensitivity of the area, any new development project throughout the Project Area that involves excavation be subject to SCAs for archaeological resources at sensitive sites. This SCA requires intensive pre-excavation surveys (such as continuous geotechnical coring) to verify the presence or absence of archaeological sensitivity, or preparation and implementation of a construction ALERT sheet and training of construction contractors, construction period monitoring, and avoidance and recovery measures. In the event of an unanticipated discovery of unique paleontological resources, SCAs require that excavations within 50 feet of the find be temporarily halted or diverted until the discovery is examined by a qualified archaeologist or paleontologist, documented and evaluated for significance, and procedures established to consider avoidance of the resource or preparation of an excavation plan if avoidance is unfeasible.

The CASP EIR concluded that, with implementation of applicable SCAs, impacts on paleontological resources would be less than significant. No additional mitigation is required.

Project Analysis

As indicated in the CASP EIR, if a development project does not excavate to or below the on-site fill, it is not within a paleontological sensitive area. At the Project site there is approximately 5½ to 11 feet of undocumented fill that blankets the site, underlain by 3 to 7½ feet of young Bay Mud to depths varying from 12½ to 17 feet bgs.

The Project's grading plan does not propose any deep mass excavation work. Other than selected excavations of up to 4 feet to facilitate the office elevator pit and warehouse loading dock construction, over-excavation of the undocumented fill below anticipated pavement and hardscape areas to a depth of 2 feet, and excavations for utility trenches, the Project does not propose any mass excavation work. Accordingly, it is unlikely that any paleontological resources would be discovered during Project construction.

<u>Applicable Standard Conditions of Approval</u>

The following City of Oakland SCAs are cited in the CASP EIR to address as effective means addressing an event whereby a paleontological resource may be discovered during an excavation, which would apply to the Project.

- ***SCA Cultural-1, Archaeological and Paleontological Resources – Discovery during Construction*** (see above)

Consistent with the findings of the CASP EIR, with full compliance with SCA Cultural-1 as applies to a potential discovery of paleontological resources during ground disturbing activities, the Project's potential effects would be reduced to a level of less than significant, and no additional mitigation is required.

<u>CEQA Conclusion Pertaining to Cultural Resources</u>

The analysis presented above examines whether there are any Project-specific significant effects related to cultural resources that are peculiar to the Project or its site, finding none. The Project would have no impacts to cultural resources that were not previously analyzed in the CASP EIR, would have no off-site or cumulative cultural resources impacts not discussed in the prior CASP EIR, and would not result in any impacts to cultural resources that are more severe than as discussed in the prior CASP EIR. There are no impacts related to cultural resources that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as pertains to cultural resources. The cultural resource analysis presented above provides technical additions related to specific cultural resource conditions at the site, and these minor technical additions to the CASP EIR that are specific to the Project are appropriately disclosed in this Addendum to the CASP EIR.

Energy

Would the Project:	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	Relationship to CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Standards and Requirements	Project Conclusions: Resulting Level of Significance
a) Result in potentially significant environmental impacts due to wasteful, inefficient or unnecessary consumption of energy resources, during project construction or operation? b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	LTS	■	☐	SCA Energy-1: Green Building Requirements SCA Transportation-2, TDM SCA Transportation-4, Plug-In Electric Vehicle (PEV) Charging Infrastructure	Less than Significant

Note: The thresholds of significance presented above represent the City of Oakland's current energy related thresholds. At the time the CASP EIR was prepared, the City's thresholds were:

Would the project violate applicable federal, state and local statutes and regulations relating to energy standards? and

Would the project 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?

Energy Resources

CASP EIR Conclusions[63]

The CASP EIR (Impact UTIL-5) found that new development pursuant to the CASP would not violate applicable federal, state and local statutes and regulations relating to energy standards, nor would such new development result in a determination by the energy provider that it does not have adequate capacity to serve projected energy demands in addition to the providers' existing commitments, requiring construction of new energy facilities or expansion of existing facilities. New development will result in an incremental increase in the demand for gas and electrical power, and sub-station improvements or new substations, and service line upgrades may be needed to fully service projected new development. However, the CASP EIR found no known capacity limitations within the existing electrical system or gas system. The CASP EIR concluded that, with implementation of City of Oakland SCAs (Compliance with the Green Building Ordinance, and Landscape Projects Using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist, all new development pursuant to the CASP will be required comply with mandatory Title 24 energy efficiency standards for buildings,

63 City of Oakland, CASP Draft EIR page 4.14-26

CALGreen regulations, and City of Oakland Green Building Ordinance requirements and sustainability programs, which would reduce energy consumption. Cumulative impacts related to energy service were found to be less than significant.

Project Analysis

The Project will not cause the need for additional natural gas or electrical energy-producing facilities. Consistent with the City's December 2020 Building Electrification Ordinance, the Project does not include any new natural gas connections, and each of the buildings are designed as all electric.

Applicable Standard Conditions of Approval

The following City of Oakland SCAs, as updated since certification of the CASP EIR, are now a standard conditions of approval that apply to all projects, including new construction of non-residential building over 25,000 sq. ft. of total floor area (i.e., the Project):

- ***SCA Energy-1, Green Building Requirements***: The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code).
  - a) The following information shall be submitted to the City for review and approval with the application for a building permit:
    - i. Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards
    - ii. Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit
    - iii. Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit
    - iv. Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (b) below
    - v. Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance
    - vi. Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit
    - vii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance
  - b) The set of plans in subsection (i) shall demonstrate compliance with the following:
    - i. CALGreen mandatory measures
    - ii. Green building point level/certification requirements per the appropriate checklist approved during the Planning entitlement process
    - iii. All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted.
    - iv. The required green building point minimums in the appropriate credit categories

c) The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project. The following information shall be submitted to the City for review and approval:
   i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit
   ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance
   iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance

d) Compliance with Green Building Requirements after Construction Requirement: Prior to the finalizing the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.

- ***SCA Transportation-2, TDM*** (see Transportation section of this CEQA Checklist)
- ***SCA Transportation-4, Plug-In Electric Vehicle (PEV) Charging Infrastructure*** (see Transportation section of this CEQA Checklist)
- ***SCA Utilities-3, Construction and Demolition Waste Reduction and Recycling*** (see Utilities section of this CEQA Checklist)
- ***SCA Utilities-4, Recycling Collection and Storage Space***: (see Utilities section of this CEQA Checklist)

Consistent with the findings of the CASP EIR, the Project is required to comply with CALGreen Building Energy Efficiency Standards as applicable at the time of building permit application, is required to provide EV infrastructure, and is required to achieve TDM performance that achieves a 20 percent reduction in commuter single-occupant vehicle use. These requirements would achieve compliance with local policies and ordinances pertaining to energy use, comply with state and local plans for energy efficiency, and substantially lower overall energy demands of the Project such that the Project would not result in wasteful, inefficient or unnecessary consumption of energy. The Project's impacts related to energy use would be less than significant and no additional mitigation is required.

CEQA Conclusions Pertaining to Energy

The analysis presented above examines whether there are any Project-specific significant effects related to energy use that are peculiar to the Project or its site, finding none. The Project would have no impacts related to energy use that were not previously analyzed in the CASP EIR, would have no off-site or cumulative energy impacts not discussed in the prior CASP EIR, and would not result in any energy impacts that are more severe than as discussed in the prior CASP EIR. There are no impacts related to energy that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as pertains to energy. The energy analysis presented above provides technical additions related to current requirements of the California Green Building Standards (CALGreen) and the applicable requirements of the City of Oakland Green Building Ordinance (Chapter 18.02 of the OMC) that are now applicable to the Project, and this updated information is appropriately disclosed in this Addendum to the CASP EIR.

Geology and Soils

Would the Project:	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	Relationship to CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Standards and Requirements	Project Conclusions: Resulting Level of Significance
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death, involving: i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map issued by the State Geologist for the area or based on other substantial evidence of a known fault? ii. Strong seismic ground shaking? iii. Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, collapse? iv. Landslides?	LTS with SCAs	■	☐	SCA Geo-1: Construction-Related Permit(s) SCA Geo-2, Soils Report SCA Geo-3, Seismic Hazards Zone (Landslide/Liquefaction) Terracon recommendations to address seismic hazards through design	LTS with SCA
b) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence , liquefaction or collapse? Or - be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	LTS with SCAs	■	☐	SCA Geo-2: Soils Report Terracon recommendations to address earthwork	LTS with SCAs
c) Result in substantial soil erosion or the loss of topsoil?	LTS with SCAs	■	☐	SCA Geo-4, Erosion and Sedimentation Control Plan for Construction	LTS with SCA
d) Have soils that are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	No Impact	■	☐	-	No Impact

Information related to the Project and the Project site as included in the following Geology section of this CEQA Checklist has been derived from the following primary source:

- Terracon Consultants, Inc., *Geotechnical Engineering Report for Oakport Buildings in Oakland, Alameda, California*, June 15, 2018 (**Appendix L**)

The 2018 Terracon Report presents the results of subsurface explorations and geotechnical engineering services performed for the Project's proposed warehouses, office building, workshop/butler building, and associated parking and drive aisles. The purpose of these services was to provide information and geotechnical engineering recommendations relative to the following:

- seismic site classification and design parameters per the 2016 California Building Code (CBC)
- liquefaction potential
- subsurface soil conditions
- foundation design and construction
- groundwater conditions
- floor slab design and construction
- site preparation and earthwork
- lateral earth pressures
- soil corrosivity
- pavement design and construction, and
- site infiltration rates

The geotechnical engineering scope of services included advancement of 28 test borings to depths ranging from approximately 5 to 51½ feet below existing site grades. Additionally, two cone penetrometer test (CPT) soundings were advanced to a depth of 100 feet below ground surface (bgs). The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on boring logs and/or graphs provided in Appendix L.

Seismic Hazards

CASP EIR Conclusions [64]

Fault Rupture

The CASP EIR (Impact Geo-1) found that there are no active faults that cross anywhere within the CASP planning area and the nearest active fault is more than two miles away. Therefore, the potential for fault rupture to affect development pursuant to the CASP was found to be very low.

Strong Seismic Ground Shaking and Seismic-Related Ground Failure

The CASP EIR also found that, if development pursuant to the CASP is not properly designed or constructed, it has the potential to increase the exposure of people to injury or harm during a large regional earthquake. The entire CASP planning area could be subject to very strong ground shaking, capable of causing damage to structures and underground utilities.

The majority of the CASP planning area is located over soils susceptible to liquefaction, which could increase the damages incurred by structures and utility lines in the event of an earthquake. These hazards must be properly evaluated and mitigated as individual projects are implemented.

The CASP EIR concluded that development pursuant to the CASP would be required to comply with the Seismic Hazards Mapping Act (in liquefaction hazard zones) and with the California Building Code. These laws require development projects to demonstrate that soil conditions are known, and that foundations have been designed

[64] City of Oakland, CASP Draft EIR page 4.5-16

according to the proper seismic design category. The risk of liquefaction and other ground failures must be evaluated, and appropriate mitigation measures, if necessary, must be incorporated into project design. Since the entire CASP planning area is located within a Seismic Hazard Zone for liquefaction, development pursuant to the CASP would be required to comply with California Geologic Survey (CGS) guidelines for evaluating and mitigating seismic hazards (Special Publication 117A) (CGS, 2008).

Landslides

The CASP EIR found that the entire CASP planning area does not contain slopes that are susceptible to landslides or slope failure. The gentle sloping topography of the area puts the potential for landslides or slope failure to affect any of proposed development as very low.

To ensure compliance with the Seismic Hazards Mapping Act and the California Building Code, as well as the seismic requirements of the City of Oakland Building Code, the City requires owners/developers to prepare a soils report (**SCA Geo-1**) and geotechnical report (**SCA Geo-2**) for proposed development. Those reports must include generally accepted and appropriate engineering techniques for determining the susceptibility of a site to various geologic and seismic hazards. These requirements are implemented through SCAs. The geotechnical report would include an analysis of ground shaking effects and liquefaction potential, and provide recommendations to address these hazards through design. Owners/developers would be required to submit an engineering analysis accompanied by detailed engineering drawings to the City of Oakland Building Services Division prior to excavation, grading or construction activities. Geotechnical and seismic design criteria must conform to engineering recommendations consistent with the seismic requirements set forth in the California Code of Regulations, Title 24 of the California Building Standards Code in effect at the time of permit application.

The CASP EIR concluded that application of current geotechnical design criteria as required under the CBC and pursuant to applicable SCAs would reduce the potential impacts associated with seismic hazards such as liquefaction and ground shaking to a less than significant level.

Project Analysis

Fault Rupture

Consistent with the conclusions of the CASP EIR, the 2018 Terracon Report finds that the Project site is not located within an Alquist-Priolo Earthquake Fault Zone, based on a review of the State Fault Hazard Maps.[65] The potential for fault rupture to affect the Project is less than significant.

Strong Seismic Ground Shaking and Seismic-Related Ground Failure

The Project site is located in a high seismicity region where the type and magnitude of seismic hazards affecting the site are dependent on the distance to causative faults, the intensity, and the magnitude of the seismic event. Segments of the Hayward-Rogers Creek Fault, which is located approximately 5 kilometers from the Project site, are considered to have the most significant effect at the site from a design standpoint. Based on the ASCE 7-10 Standard, the peak ground acceleration (PGAM) at the Project site is approximately 0.644g, which generally correlates with ‘’severe” groundshaking potentially resulting in moderate to heavy damage to buildings and infrastructure.

The 2018 Terracon Report also finds that the Project site is located in an area identified as a liquefaction hazard zone, having a very high susceptibility to earthquake-induced liquefaction. Terracon conducted a liquefaction

[65] California Department of Conservation Division of Mines and Geology (CDMG), “*Digital Images of Official Maps of Alquist-Priolo Earthquake Fault Zones of California, Southern Region*”, 2012

potential analysis from a depth of 3 to 50 feet bgs. Potentially liquefiable layers were encountered at multiple depths, with the largest liquefiable layer being located between 15 and 30 feet bgs. The anticipated total liquefaction-induced settlements across the Project site vary between 2 to 4½ inches, and the differential liquefaction-induced settlement across proposed building footprints may be up to 2 inches, based on the varying lithology of the site.[66]

Applicable Standard Conditions of Approval

The following City of Oakland SCAs are cited in the CASP EIR as effective means for reducing potential seismic hazards for new development, and are standard conditions of approval that would apply to the Project.

- ***SCA Geo-1: Construction-Related Permit(s)***: 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.
- ***SCA Geo-2, Soils Report***: 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.
- ***SCA Geo-3, Seismic Hazards Zone (Landslide/Liquefaction)***: The project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended). The geotechnical report shall be prepared by a registered geotechnical engineer for City review and approval, and shall contain, 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.

Project Recommendations pursuant to City SCAs

Consistent with CASP EIR requirements, and **SCA Geo-1, SCA Geo-2 and SCA Geo-3**, the project sponsor retained Terracon to prepare a soils report and geotechnical report for the Project. This report provides the following recommendations to address seismic hazards through design:

- *Seismic Considerations*: The seismic design requirements for buildings and other structures of the Project are based on the site's Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure, and the Site Classification is based on the upper 100 feet of the site profile, in accordance with Section 20.4 of ASCE 7-10. Site Classes range from A to F based on the average conditions present within 100 feet of the ground surface, with hard rock considered an 'A', down to potentially collapsible soils which get an 'F'. The Project site qualifies as a Site Class F due to the presence of liquefiable soils.[67] The Site Classification at the Project site could be improved from a Site Class F to a Site Class D by performing ground improvements (see below) that improve the stiffness/density and strength of the very-soft to soft Bay Mud and loose, potentially liquefiable sands.

66 Terracon Consultants, Inc., *Geotechnical Engineering Report for Oakport Buildings*, June 15, 2018

67 Per Terracon 2018, "A site class E was used to develop the listed seismic design parameters due to the presence of the very soft to soft Bay Mud with low shear strength and high moisture contents. Structures may use the listed design parameters provided they have a period of 0.5s or less.

- *Ground Improvement Option*: The 2018 Terracon Report identifies ground improvements (known as Deep Soil Mixing, or DSM) as an appropriate option to mitigate the combined effects associated with the liquefaction, undocumented fill and compressible Bay Mud concerns at this site. DSM is achieved through a process of in-situ mixing of the subsurface soils with cement or a lime-cement combination. This results in physiochemical stabilization of the soils to increase the compressive and shear strength of the material, and to decrease settlement. DSM is accomplished by either a wet mixing method using primarily cement, or a dry mixing method using lime-cement. The wet mixing method should be used for the Project site based on the subgrade soils and groundwater conditions. This method would significantly improve the stiffness/density and strength of the very soft, to soft Bay Mud and loose sands that underlay the site. By improving the stiffness/density and strength of the very soft, to soft Bay Mud and loose sands, DSM would also help improve the Seismic Site Class required for design at the site, and would provide an added assurance against lateral spreading to occur by stabilizing potentially liquefiable soils.
- *Deep Foundations*: As an alternative to the DSM option, steel piles driven into firm native soil below the Bay Mud and liquefiable soil layers can be used to support the Project's proposed Office, Warehouse and Workshop buildings and retaining walls. This would involve steel sections driven through the very soft Bay Mud and liquefiable soils to their design capacity. The preliminary design capacities for individual steel pipe piles to provide an adequate factor of safety for the load carrying capacity requires that steel piles be driven to a depth of 65 to 100 feet (with a preliminary recommendation of 70 to 80 feet below existing grade). Driven piles should be spaced at least three pile widths apart (center-to-center) if side friction is used for compressive loads. If desired, pre-drilling of oversized holes could be conducted prior to pile driving (with filling the resulting annular space with bentonite slurry), casing sleeves could be provided around the piles to separate the piles from direct contact with settling soils, and/or the piles could be coated with bitumen to allow slippage.
- *Rammed Aggregate Piers*: As another alternative to the DSM option, the existing undocumented fill and compressible Bay Mud under these areas could be reinforced with a Rammed Aggregate Pier (RAP) system installed on a grid pattern. This option would allow for the placement of stockpiled materials and retaining wall foundations directly atop the RAP-reinforced subgrade. The RAP system would serve to stiffen the existing undocumented fill and Bay Mud. Piers would be constructed by advancing a drill or mandrel to design depths, then building a bottom bulb of clean, open-graded stone. The pier is built on top of the bottom bulb, using graded aggregate placed in thin lifts (12 to 24 inches compacted thickness). Shafts are anticipated to extend to depths of 20 feet or less for this site. The result of construction is a reinforced zone of soils directly under the stockpiled materials and footings, which allows of the construction of shallow spread footings sized for relatively higher bearing pressures and with lower anticipated settlements.
- *Floor Slabs*: Due to anticipated settlements from liquefaction and consolidation settlement, the building floor slabs should be entirely structurally supported by deep foundations, or alternative floor slab options may be considered if the subgrade in the area of the buildings is improved by DSM.
- *Vapor Barrier*: The use of a vapor retarder should be considered beneath those concrete slabs on grade that are to be covered with moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture.

Pursuant to SCA Geo-2: Soils Report and SCA Geo-3: Seismic Hazards Zone (Landslide/Liquefaction), the Project applicant is required to implement the recommendations contained in the approved report during project design and construction. Consistent with the findings of the CASP EIR, with full compliance with the CBC building standards and recommendations of the 2018 Terracon Report, the effects of strong ground shaking and liquefaction in the event of a likely earthquake scenario would be reduced to levels considered acceptable by professional engineers, and therefore considered under CEQA to be less than significant. No additional mitigation is required.

Soil Settlement and/or Expansive Soil

CASP EIR Conclusions [68]

The CASP EIR (Impact Geo-3) found that new development within the CASP planning area might be located on expansive soil, as defined in the California Building Code, creating substantial risks to life or property. Expansive soils can damage foundations of above-ground structures, paved roads and streets, and concrete slabs. The Bay Mud that underlies much of the CASP planning area, as well as areas underlain by artificial fill, could potentially be subject to shrink-swell behavior, and larger buildings may put loads on underlying geologic layers of mud and silt that could compress. Locations mapped as artificial fills may be underlain by historic bay sloughs, old foundations, and former marsh areas. These areas may experience some degree of differential settlement, and site-specific geotechnical investigations should be conducted prior to construction at a given location.

The City of Oakland imposes SCAs requiring proposed developments to conduct a soil reports (SCA Geo-1) and geotechnical studies (SCA Geo-2). The CASP EIR determined that these SCAs would provide for construction methods and building designs to address problematic soil (such methods typically involve soil removal and replacement, soil improvement, or special foundation design). SCAs would also provide for design methods to protect structures from expansive soil and settlement concerns.

The CASP EIR concluded that application of current geotechnical design criteria required under the CBC and the SCAs would reduce the potential impacts associated with expansive soils, subsidence, seismically-induced settlement and differential settlement to less than significant.

Project Analysis

Undocumented Fill

Approximately 5½ to 11 feet of undocumented fill consisting of sand with variable amounts of clay, silt, and gravel and clay with variable amounts of sand and gravel blanket the Project site. Debris consisting of wood fragments, concrete, and refuse was encountered throughout the fill. The density/consistency of the undocumented fill encountered in borings varied from very loose to medium dense and soft to very stiff. Such undocumented fill can result in differential settlement and damage to proposed structures relying on the fill for structural support. As a result, this fill is not suitable to support the proposed buildings and retaining walls.

Compressible Bay Mud

The undocumented fill blanketing the Project site was underlain by 3 to 7½ feet of Bay Mud, to depths varying from 12½ to 17 feet bgs. The underlying Bay Mud is a largely unconsolidated and compressible geologic unit. The undocumented fill was placed in the early 1960's over tidal marshland. Laboratory testing indicated the Bay Mud is slightly over-consolidated, indicating primary settlement due to the existing fill placement is likely complete. The Project proposes to elevate existing site grades by up to 4 feet in some areas across the site to accommodate development, which may trigger new consolidation and settlement of the Bay Mud.

[68] City of Oakland, CASP Draft EIR page 4.5-17

Moderately Plastic/Expansive Soil

The surface soils across the Project site are generally moderately plastic (expansive). These plastic clays are prone to volume change with changes in moisture, which may lead to excessive shrinking and swelling of pavements and hardscapes.

Applicable Standard Conditions of Approval

The following City of Oakland SCAs are cited in the CASP EIR as effective means for reducing potential seismic hazards for new development, and are standard conditions of approval that would apply to the Project.

❖ ***SCA Geo-2, Soils Report***: (see above)

Project Recommendations pursuant to City SCAs

Consistent with CASP EIR requirements, and **SCA Geo-1 and Geo-2**, the project sponsor retained Terracon to prepare a soils report and geotechnical report for the Project. This report provides the following recommendations to address earthwork (clearing and grubbing, excavations and fill placement) as necessary to render the site ready for foundations, floor slabs and pavement.

- *Site Preparation*: Prior to placing fill, existing vegetation and root mat, debris, stockpiled soil and any otherwise unsuitable material should be removed. Complete stripping of the topsoil should be performed in proposed building and parking/driveway areas. The subgrade should be proof-rolled with an adequately loaded vehicle such as a fully loaded tandem axle dump truck. Any areas excessively deflecting under the proof-roll should be delineated and separately addressed by either further soil removal or stabilization (see below). Excessively wet or dry materials should be removed or moisture conditioned and re-compacted. Exposed surfaces should be free of mounds and depressions which could prevent uniform compaction.
- *Subgrade Preparation*: After clearing, any required cuts should be made. The undocumented fill below pavement and hardscape areas should be over-excavated to a minimum depth of 2 feet. The presence of over-sized debris or a high volume of organic material may warrant additional over-excavation at the time of grading operations. If needed, a geotextile fabric may be utilized as a separator between the undocumented fill and engineered fill. This over-excavation requirement is not required in areas improved by ground improvement methods (see above) or below slabs in buildings supported by deep foundations (also, see above).
- *Scarification and Compaction*: After any required cuts have been made but prior to placement of any engineered fill, the subgrade soil should be scarified and compacted. If construction occurs during the winter or spring when the subgrade soils are typically already in a moist condition, scarification and compaction may only be 12 inches. If construction occurs during the summer or fall when the subgrade soils have been allowed to dry out, deeper depth of scarification and moisture conditioning (as much as 18 inches) may be needed. Due to the shallow groundwater, the sub-grade soil at the over-excavated depth is likely to be in an elevated moisture condition, and will likely require some drying before it can be compacted.
- *Backfill/Fill*: Following scarification and compaction of the subgrade, the over-excavated areas may be backfilled with compacted structural fill and any additional fill may be placed and compacted. The moisture content and compaction of subgrade soils should be maintained until foundation slab or pavement construction. Very soft Bay Mud conditions may be encountered in the bottom of excavations. Dry crushed rock or clean granular fill material placed over a geotextile may be needed to stabilize wet subgrade materials in the bottom of excavations prior to backfill. Fill placed on Bay Mud or in areas where Bay Mud is covered with less than 3 feet of soil can cause failure within the mud if large

amounts of fill are placed too quickly. In order to help reduce the potential for mud waves during fill placement, the first layer of fill should be placed slowly and in as thin a layer as possible without allowing the grading equipment to sink into the mud. In these areas, lightweight equipment should be used to help minimize the required thickness of the first layer. The amount of the fill placed on a daily basis may need to be limited to help minimize pore pressure build up and subsurface failure.

- *Fill Material Types*: Fill required to achieve design grade should be classified as structural fill and general fill. Structural fill is material used below, or within 5 feet of structures or pavements. General fill is material used to achieve grade outside of these areas. Earthen materials used for structural and general fill should meet the material property requirements as specified in the 2018 Terracon Report.
- *Exterior Hardscape*: In order to address the effects of the moderate to high volume change soils, exterior hardscapes should be underlain by a minimum of 24 inches of low volume change (LVC) material. The LVC zone would help to reduce the potential for subgrade volume changes.
- *Utility Design*: In addition, special design details should be considered for underground utility lines, for hardscape, entrances and pavement adjacent to pile or DSM-supported structures, and site drainage. It is recommended that utilities and piping be designed with flexible connections and/or other means to accommodate soil movement and to reduce the potential for damage. Utility and drain lines designed for gravity flow should consider and account for anticipated settlements.

Pursuant to SCA Geo-1: Construction-Related Permit and SCA Geo-2: Soils Report, the Project applicant is required to implement the recommendations contained in the approved report during project design and construction. Consistent with the findings of the CASP EIR, with full compliance with the recommendations of the 2018 Terracon Report, the effects of soil settlement and/or expansive soil would be reduced to levels considered acceptable by professional engineers, and therefore considered under CEQA to be less than significant. No additional mitigation is required.

Soil Erosion

CASP EIR Conclusions [69]

The CASP EIR (Impact Geo-2) found that construction activity within the CASP planning area could result in substantial soil erosion that could create substantial risks to property or creeks/waterways, given the potential for excessive or accelerated erosion to undermine building foundations.

The City of Oakland imposes SCAs to reduce soil erosion during construction for water quality purposes, which would also effectively prevent excessive riling, rutting or erosion of soil on construction sites. These SCAs include SCA Hydro-1: Erosion and Sedimentation Control Plan. The CASP EIR concluded that implementation of erosion control measures pursuant to SCA Hydro-1 would reduce the potential for substantial erosion during construction to less than significant.

Project Analysis

Approximately 5½ to 11 feet of undocumented fill, consisting of sand with variable amounts of clay, silt, and gravel and clay with variable amounts of sand and gravel, blanket the site. Particularly given the extent of earthwork that is proposed/required for the Project, fill soils are susceptible to erosion during construction.

[69] City of Oakland, CASP Draft EIR page 4.5-17

Applicable Standard Conditions of Approval

The following City of Oakland SCAs are cited in the CASP EIR as effective means for reducing potential erosion concerns during construction, and is a standard conditions of approval that would apply to the Project.

❖ ***SCA Geo-4, Erosion and Sedimentation Control Plan for Construction***

a) *Erosion and Sedimentation Control Plan Required*: The project applicant shall submit an Erosion and Sedimentation Control Plan to the City for review and approval. The Erosion and Sedimentation Control Plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading and/or construction operations. The Plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the City. The Plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment.

b) *Erosion and Sedimentation Control during Construction*: The project applicant shall implement the approved Erosion and Sedimentation Control Plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building.

Project Recommendations pursuant to City SCAs

Consistent with CASP EIR requirements and **SCA Geo-4**, the Project sponsor has prepared a preliminary Erosion Control Plan for the Project (see **Figure 26**), which includes the following elements, consistent with City requirements:

- a 3' to 4' retaining wall would be constructed along the westerly property line (between the Development Area and the Bay) as a means of retaining all stormwater runoff on-site
- a fiber roll/silt fence barrier would be placed around the entire perimeter of the Development Area
- stabilized construction entrances would be established at each construction entrance, using either a coarse aggregate base or ‘rumble strips’
- concrete wash out areas would be established near each of the two primary construction exists onto Oakport Street, and
- inlet protections would be placed around all existing storm drain inlets to prevent sediment and erosion form draining into the storm drain

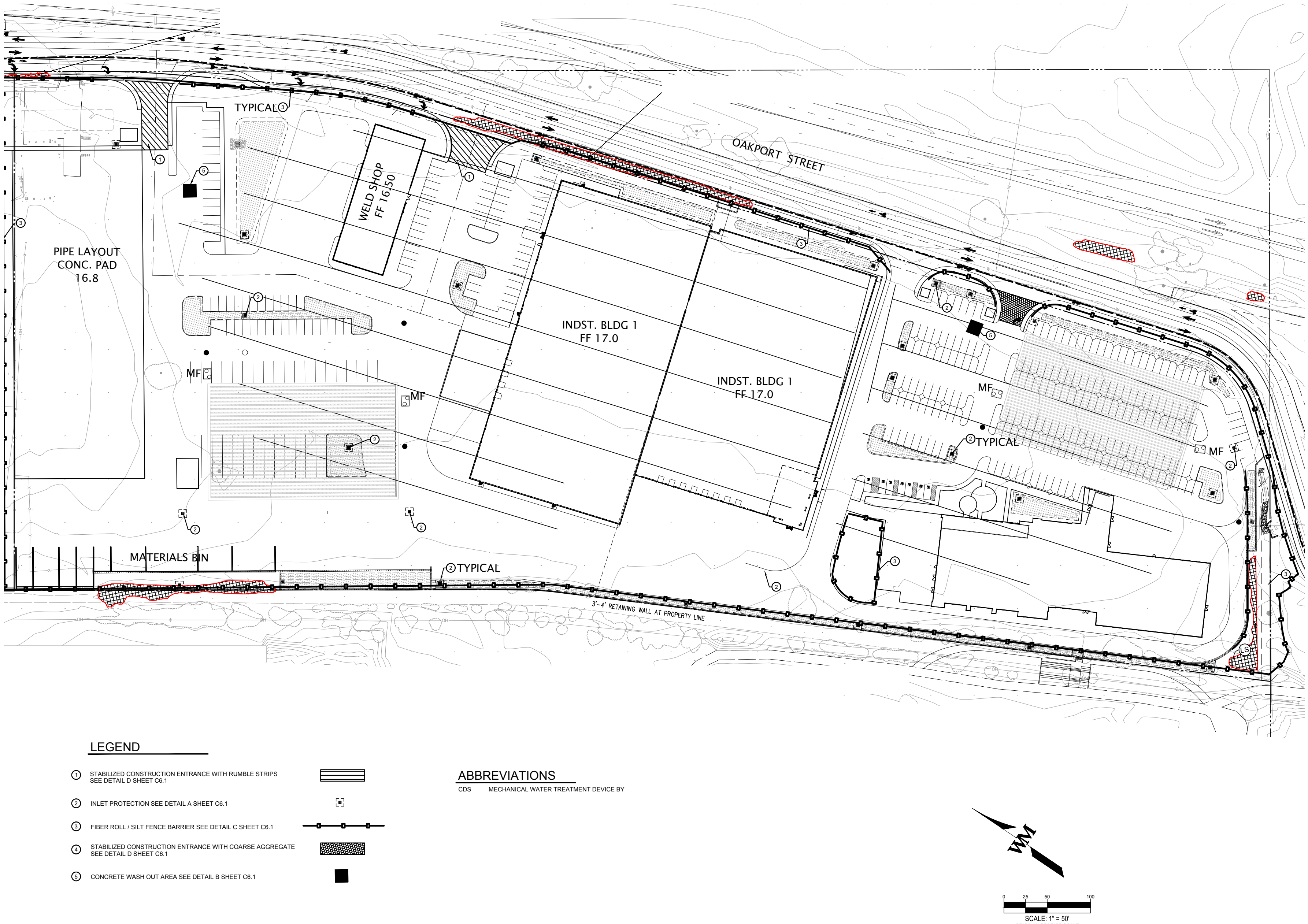

Figure 26
Preliminary Erosion Control Plan, Development Area

Source: Ware Malcomb, Sheet C5.0, December 2022

This preliminary Erosion Control Plan would be subject to subsequent review and approval by the City prior to issuance of any grading permits for the Project, but appears to be consistent with Erosion and Sedimentation Control Plan requirements of SCA Geo-4 (see further discussion of erosion and sedimentation issues in the Hydrology section of this CEQA Checklist). Pursuant to SCA Geo-4, Erosion and Sedimentation Control Plan for Construction, the Project applicant is required to implement the erosion and sediment control plan during construction. Consistent with the findings of the CASP EIR, with full compliance with the required erosion and sediment control plan, the effects of soil erosion during construction would be reduced to levels considered acceptable by professional engineers, and therefore considered under CEQA to be less than significant. No additional mitigation is required.

Septic System Capability

The CASP EIR (Impact Geo-6) concluded that the CASP planning area is fully served by sewers available for the disposal of wastewater, and therefore the capability of soils within the planning area to adequately support the use of septic tanks or alternative wastewater disposal systems is not relevant (No Impact). [70]

Similarly, the Project site is located within an urban area, and proposes to tie into existing wastewater infrastructure. Wastewater would be conveyed to, treated and disposed of at the EBMUD wastewater treatment plant. No septic tanks or alternative wastewater disposal systems are necessary or proposed. The Project would have no impact related to the capacity of local soils to adequately supporting the use of septic tanks or alternative wastewater disposal systems.

CEQA Conclusions Pertaining to Geology and Soils

The analysis presented above examines whether there are any Project-specific significant effects related to geology and soils that are peculiar to the Project or its site, finding none. The Project would have no impacts related to geology and soils that were not previously analyzed in the CASP EIR, would have no off-site or cumulative geology or soils impacts not discussed in the prior CASP EIR, and would not result in any geology or soils impacts that are more severe than as discussed in the prior CASP EIR. There are no impacts related to geology and soils that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as pertains to geology and soils. The geology and soils analysis presented above does provide additional details regarding geologic conditions at the Project site, and the Project provides additional detailed geotechnical recommendations prepared by a registered geotechnical engineer for best addressing these conditions, specific to the site and the proposed Project improvements. These additional details are new information pertinent to the Project that were not available or practical at the time of certification of the CASP EIR. However, as described above, these new details do not introduce any new significant impacts pertaining to geology or soils that were not previously identified in the CASP EIR, and do not substantially increase the severity of any significant impacts as previously disclosed in the CASP EIR. The detailed geotechnical recommendations for the Project are fully consistent with the Standard Conditions of Approval as cited in the CASP EIR. These new details that are specific to the Project and its site are appropriately disclosed in this Addendum to the CASP EIR.

[70] City of Oakland, CASP Draft EIR page 4.5-19

Greenhouse Gas Emissions

Would the Project:	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	Relationship to CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Standards and Requirements	Project Conclusions: Resulting Level of Significance
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	LTS with SCA	■	☐	SCA GHG-1, Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist SCA Transportation-2, Transportation and Parking Demand Management SCA Energy-1, Green Building Requirements Transportation-4, Plug-In Electric Vehicle (PEV) Charging Infrastructure SCA Utilities-3: Construction and Demolition Waste Reduction and Recycling SCA Bio-3, Tree Permit	LTS with SCAs
b) For a project involving a stationary source, produce total emissions of more than 10,000 metric tons of CO2e annually?	LTS	■	☐	-	LTS
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	LTS with SCA	■	☐	SCA GHG-1, Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist	LTS

Note: At the time the CASP EIR was certified, the threshold for determining whether a land use development project would have a significant impact on the environmental was a project that produced total emissions of more than 1,100 metric tons of CO2e annually and more than 4.6 metric tons of CO2e per service population annually. In December of 2020 and following the City's adoption of the Equity and Climate Action Plan, this threshold was changed to demonstration of consistency with the 2030 Equitable Climate Action Plan by committing to all of the GHG emissions reductions strategies described on the ECAP Consistency Checklist, or complying with the GHG Reduction Standard Condition of Approval that requires a project-level GHG Reduction Plan quantifying how alternative reduction measures will achieve the same or greater emissions than would be achieved by meeting the ECAP Consistency Checklist. The current 2020 GHG threshold is relied on for analysis of the Project, below.

Greenhouse Gas Emissions

CASP EIR Conclusions

Operational and Construction Emissions [71]

The CASP EIR (Impact GHG-2B and Impact GHG-3) determined that new development pursuant to CASP buildout would not directly or indirectly generate greenhouse gas emissions that would have a significant impact on the environment.

As a planning document (as opposed to an individual project) the CASP EIR relied on Plan-level thresholds of significance for GHG impacts, which provided that CASP buildout would result in a significant GHG impact if it were to produce emissions of more than 6.6 metric tons of CO2e per service population annually. New development pursuant to CASP buildout was not found to produce emissions of more than the then-effective plan-level threshold of 6.6 metric tons of CO2e per service population annually, or more than the then-effective project-level threshold of 4.6 metric tons of CO2e per service population annually. The methodology used to estimate GHG emissions were calculated using CalEEMod. Operational emissions were calculated for two scenarios, the 2035 Plan Buildout scenario and the 2013 Plan Baseline scenario based on existing land use. The total change in GHG emissions was divided by the total change in service population between the two scenarios and compared to the thresholds. The operational GHG emissions estimated to be generated under CASP buildout were calculated to be 2.8 MT CO2e per service population per year, less than the effective plan-level threshold of 6.6 MT CO2e /service population/year, and less than the effective project-level threshold of 4.6 MT CO2e /service population/year. This impact was found to be less than significant.

The CASP EIR also cited SCA GHG-1, which required each subsequent development project within the Coliseum District and pursuant to Plan Buildout to assess whether that project may result in individually significant levels of GHG emissions. Projects exceeding pertinent screening criteria would be required to undergo project-specific GHG emissions forecasts and, as appropriate, implement project-specific GHG Reduction Plans intended to reduce project emissions levels below relevant thresholds.

Project Analysis

Since 2015 (when the City certified the CASP EIR) the City has adopted new GHG thresholds and several new policy documents and regulatory standards to further address issues related to GHG emissions. These new policy documents and regulations now apply to the Project, as summarized below.

City of Oakland 2030 Equitable Climate Action Plan

In 2018 and 2019, the Oakland City Council adopted several resolutions that formed the mandate and basis for the current 2030 Equitable Climate Action Plan (2030 ECAP), which replaced the city's 2020 Energy and Climate Action Plan and added an Equity lens to the measures and actions. The 2030 ECAP sets forth a detailed, equitable path toward cost-effectively reducing Oakland's local GHG emissions by a minimum of 56% below baseline 2005 GHG emissions levels by year 2030, transitioning away from fossil fuel dependence, removing carbon from the atmosphere through local projects, and ensuring that all of Oakland's communities are resilient to the foreseeable impacts of climate change by 2030. The current statewide goal pursuant to SB 32 is to reduce California's GHG emissions to 40 percent below 1990 levels by 2030, aligning with recommendations from the Intergovernmental Panel on Climate Change to achieve a level of climate stabilization that results in relatively minor consequences. Oakland's adopted 2030 reductions target of 56% below Oakland's 2005 GHG emission reaches beyond that of the State's 40% target. Concurrent with its adoption of the 2030 ECAP, Oakland City

[71] City of Oakland, CASP Draft EIR page 4.6-45

Council also adopted a resolution committing the city to achieve carbon neutrality by 2045. The 2030 ECAP contains not only deeper targets, but also qualitatively different and more focused Actions than those contained in the 2020 ECAP. Whereas the 2020 ECAP included a heavy focus on energy efficiency and solar energy, the 2030 ECAP includes a major focus on building de-carbonization and energy resilience - fully removing natural gas from the built environment and installing energy storage systems where appropriate and feasible. The City's 2030 ECAP does not have a numeric threshold for individual projects, but rather requires that every project applicant must demonstrate consistency with the 2030 ECAP.

Building Electrification Ordinance

In December 2020, the Oakland City Council adopted a new ordinance to the OMC (Chapter 15.37: All-Electric Construction in Newly Constructed Buildings). These regulations require all newly constructed buildings to meet the definition of an All-Electric Building. As a result, newly constructed buildings are required to be designed to use a permanent supply of electricity as the source of energy for all space heating, water heating, cooking appliances, and clothes drying appliances, and will be prohibited from having natural gas or propane plumbing installed in the building.

City of Oakland Standard Conditions of Approval - GHG

As part of its December 2020 actions to implement the 2030 ECAP, the City of Oakland Planning Commission also adopted new SCAs related to GHG emissions from land use development projects. If a development project completes an ECAP Checklist and qualitatively demonstrates compliance with the Checklist items as part of the project's design (or alternatively, demonstrates to the City's satisfaction why the item is not applicable), then the project will be considered in compliance with the City's CEQA GHG Threshold of Significance. If a development project cannot meet all of the Checklist items, the project will alternatively need to demonstrate consistency with the 2030 ECAP by complying with the City of Oakland GHG Reduction Plan Condition of Approval. If the project cannot demonstrate consistency with the 2030 ECAP in either of those two ways, the City will consider the project to have a significant effect on the environment related to GHG emissions.

<u>Consistency with the 2030 Equitable Climate Action Plan</u>

The Project applicant has committed to implementation of all of the GHG emissions reductions strategies described on the ECAP Consistency Checklist that are applicable to the Project, thereby demonstrating consistency with the 2030 Equitable Climate Action Plan and reducing its GHG emissions to a level of less than significant. The Project applicants have completed an ECAP Consistency Checklist (see **Appendix M**), which answers affirmatively to all applicable Checklist questions, fully demonstrating their intent to comply with the City's 2030 ECAP and agreeing to incorporate all 2030 ECAP Consistency Checklist items into the Project's design, construction and operation. The ECAP Consistency Checklist and respective answers (as further explained) is provided in **Table 9**.

Table 9: ECAP Consistency Checklist

Yes	No	
■		1. Is the proposed project substantially consistent with the City's over-all goals for land use and urban form, and/or taking advantage of allowable density and/or floor area ratio (FAR) standards in the City's General Plan?
The Project would develop a currently vacant and underutilized site for non-profit commercial (SupplyBank.org) and institutional (EBMUD) uses, consistent with the Project site's Business Mix General Plan land use designation. Pursuant to applicable zoning, the maximum non-residential FAR for the site is 4.0, whereas the Project seeks approval of a development at an FAR of 0.46. While this development intensity does not maximize the zoning allowance, it is fully consistent with the zoning, and the lower FAR results in less intrusion on the site's adjacent marsh habitat.		

Yes **No**

N/A 2. For developments in “Transit Accessible Areas” as defined in the Planning Code, would the project provide: i) less than half the maximum allowable parking, ii) the minimum allowable parking, or iii) take advantage of available parking reductions?

The Project site is not located within a “Transit Accessible Area” as defined in the Planning Code. The Project site is not within one-half (1/2) mile of a BART Station, a BRT Station, or a designated rapid bus line. The Project is located about one mile from the Coliseum BART Station. The nearest bus stop to the Project site is on 66th Avenue at Coliseum Way, about 0.4 mile east of the Project site. This bus stop is served by AC Transit Line 98, which operates with 20-minute headways during the peak commute periods on weekdays.

Yes **No**

N/A 3. For projects including structured parking, would the structured parking be designed for future adaptation to other uses? (Examples include, but are not limited to the use of speed ramps instead of sloped floors)

The Project does not propose to construct any structured parking at the site.

Yes **No**

■ 4. For projects that are subject to a Transportation Demand Management Program, would the project include transit passes for employees and/or residents?

The Project applicant will require future tenants to provide free or reduced cost transit passes for employees to increase transit mode share. Additionally, the Project will include a privately funded shuttle that will loop between the Project’s Office building and the Coliseum BART station, enabling full integration with local transit agencies (e.g. BART, AC Transit and Amtrak). Passes for the shuttle will be offered to individuals employed by SupplyBank.org, EBMUD, or any tenant of the Project, as well as visitors, free of charge during normal hours of operation.

Yes **No**

N/A 5. For projects that are not subject to a Transportation Demand Management Program, would the project incorporate one or more of the optional Transportation Demand Management measures that reduce dependency on single-occupancy vehicles? (Examples include but are not limited to transit passes or subsidies to employees and/or residents; carpooling; vanpooling; or shuttle programs; on-site car-share program; guaranteed ride home programs)

The Project is subject to a Transportation Demand Management Program (see Required SCA’s below).

Yes **No**

■ 6. Does the project comply with the Plug-In Electric Vehicle (PEV) Charging Infrastructure requirements (Chapter 15.04 of the Oakland Municipal Code), if applicable?

The Project applicant has committed to comply with PEV Charging Infrastructure requirements of the Oakland Municipal Code, and the required EV chargers will be provided as part of the Project (see Required SCA’s below).

Yes **No**

■ 7. Would the project reduce or prevent the direct displacement of residents and essential businesses? (For residential projects, would the project comply with SB 330, if applicable? For projects that demolish an existing commercial space, would the project include comparable square footage of neighborhood serving commercial floor space)

The Project’s proposed Development Area is a vacant site with perimeter fencing, but no internal improvements. Occasionally, EBMUD permits this site to be used for seasonal outdoor use and temporary overflow parking, but generally it remains vacant most of the time. The Project’s proposed development within the Development Area would not directly or indirectly displace residents or essential businesses.

The Northerly Area of the Project site is actively used by EBMUD for a variety of purposes, principally as the site of the Oakport Wet Weather Treatment Facility (Oakport WWF), but also for EBMUD construction materials storage use includes eight small structures (4 sheds, 3 storage structures and a pipe storage structure). Development of the Project includes relocation of certain of these EBMUD construction materials storage uses from the Northerly Area to the Development Area, but would not directly or indirectly displace residents or essential businesses.

Yes	No	
■		8. Would the project prioritize sidewalk and curb space consistent with the City's adopted Bike and Pedestrian Plans? (The project should not prevent the City's Bike and Pedestrian Plans from being implemented. For example, do not install a garage entrance where a planned bike path would be, unless otherwise infeasible due to Planning Code requirements, limited frontage or other constraints)

The Project will prioritize bike and pedestrian conveyance in support of the City of Oakland's Bike and Pedestrian Plans. The Project's shuttle between the Project and the Coliseum BART station will provide a reliable option to access the Bay Trail directly from the shuttle stop at the Project. Bike storage lockers and on-site bicycle maintenance station(s) are planned as part of the development and the interface between the Project and the Bay Trail.

Yes	No	
■		9. Does the project not create any new natural gas connections/hook-ups?

The project is proposed with all electric power, and no new natural gas connections or hook-ups are proposed (see Required SCA's below).

Yes	No	
■		10. Does the project comply with the City of Oakland Green Building Ordinance (Chapter 18.02 of the Oakland Municipal Code), if applicable?

The Project is required to meet the energy performance and other standards of the City's Green Building Ordinance (see Required SCA's below).

Yes	No	
N/A		11. For retrofits of City-owned or City-controlled buildings, would the project be all-electric, eliminate gas infrastructure from the building, and integrate energy storage wherever technically feasible and appropriate?

The Project is not a retrofit of City-owned or City-controlled buildings.

Yes	No	
■		12 Would the project reduce demolition waste from construction and renovation and facilitate material reuse in compliance with the Construction Demolition Ordinance (Chapter 15.34 of the Oakland Municipal Code)?

The Project would comply with the Construction Demolition Ordinance by requiring the Project contractor reduces demolition waste and facilitates material reuse as required (see Required SCA's below).

Yes	No	
NA		13. For City projects: Have opportunities to eliminate/minimize fossil fuel dependency been analyzed in project design and construction?

The Project is not a City project, it is a private commercial development project with additional improvements for a private utility service (EBMUD).

Yes	No	
N/A		14. For new projects in the Designated Very High Wildfire Severity Zone: Would the project incorporate wildfire safety requirements such creation of defensible space around the house, pruning, clearing and removal of vegetation, replacement of fire resistant plants, as required in the Vegetation Management Plan?

The Project site is well outside of any areas classified as a Very High Fire Hazard Severity Zone, which are identified throughout the East Bay Hills and more than 3 miles east of the Project site.[72]

Yes	No	
■		15. Would the project replace a greater number of trees than will be removed in compliance with the Tree Preservation Ordinance (Chapter 12.36 of the Oakland Municipal Code) and Planning Code if applicable and feasible given competing site constraints?

[72] California Department of Forestry and Fire Protection (CalFire), VHSZ Viewer, accessed at: https://egis.fire.ca.gov/FHSZ/

Based on the Tree Survey conducted for the Project, the Development Area includes six existing trees that are proposed to be removed; 1 eucalyptus, 2 date palms and 3 olive trees. All of these trees are located in the Project's proposed development area and/or where grading and fill are proposed. All of the other vegetation along the Project site's westerly boundary (adjacent to Damon Marsh) would remain. [73]

Other than the eucalyptus tree, removal of the other 5 olive and date palm trees from the Project site require approval of a Tree Removal Permit. Although common throughout California and the East Bay, neither the olive not the date palms are native trees that would require replacement plantings. However, per the City of Oakland landscape and screening standards, the Project is required to provide street trees along the Oakport Street frontage at a spacing of 25 feet on center, resulting in a required 58 street trees along Oakport Street. The Project's proposed Landscape Plan includes 58 new trees along Oakport Street frontage, with a mix of Trident Maple, Red Alder, Scarlet Oak and Chinese Pistache trees. Internal parking lot planting islands include an additional mix of California Sycamores and Water Gum. Along the Project's westerly boundary near Damon Marsh, additional tree planting include primarily Red Alder and California Sycamores.

Yes	No	
■		16. Does the project comply with the Creek Protection, Stormwater Management and Discharge Control Ordinance (Chapter 13.16 of the Oakland Municipal Code), as applicable?

A Creek Protection Plan will be prepared for City approval, to be submitted to the City at the time of site improvement applications. The Project will implement the Creek Protection Plan and will 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 Oakland Estuary waterway.

The Project sponsor has prepared a preliminary Stormwater Control Plan (SWCP) that addresses stormwater management measures for Parcel #1. This preliminary SWCP shows 17 Drainage Management Areas (or DMAs). For each DMA, C.3 stormwater quality treatment is primarily addressed through the incorporation of integrated bio-retention facilities with underdrains, distributed throughout the site or along the perimeter. These bio-retention facilities would provide water quality treatment via filtration, removing pollutants and sediment prior to discharge. These bio-retention facilities appear to be sized appropriately, exceeding the minimum treatment area that would be required pursuant to NPDES c.3 criteria for treatment capacity for each DMA area.

An additional goal of the preliminary SWCP design is to maintain pre-developed outflow characteristics by temporarily detaining the increased storm runoff caused by the increased impervious surfaces of the proposed development, and releasing it at the pre-developed rate but for a longer duration. Per this preliminary SWCP, stormwater will flow via underdrains into one of two on-site underground stormwater storage facilities that consist of a series of large (24-inch and 30-inch) inter-connected solid pipes that are buried below the on-site parking lots. The stormwater storage facilities will retain stormwater runoff from the site within these pipes until the stormwater flows in the surrounding storm drain system recede, at which point the stormwater will be released for the storage pies and into the storm drain system, which drains to the Bay.

Consistent with the requirements of the CASP EIR, the Project is required to assess whether it may result in individually significant levels of GHG emissions. The Project applicants have implemented SCA GHG-1, demonstrating full compliance with the ECAP Consistency Checklist, which provides an adequate indication of the Project's GHG emissions, demonstrates that the Project does not exceed currently applicable thresholds for GHG emissions, and therefore is not required to implement a project-specific GHG Reduction Plan.

<u>Applicable Standard Conditions of Approval</u>

The following City of Oakland SCAs are requirements of the Project and help fulfill the requirements of the City's 2030 ECAP, and apply to the Project.

- ***SCA GHG-1, Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist***: The project applicant shall implement all the measures in the Equitable Climate Action Plan (ECAP) Consistency Checklist that was submitted during the Planning entitlement phase.
  a) For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction- related permits.

73 Ware Malcomb, et.al., Project Application Submittal Materials, April 4, 2019

b) For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be implemented during construction.

c) For ECAP Consistency Checklist measures that are operational but not otherwise covered by these SCAs, including but not limited to the requirement for transit passes or additional Transportation Demand Management measures, the applicant shall provide notice of these measures to employees and/or residents and post these requirements in a public place such as a lobby or work area accessible to the employees and/or residents

- ***SCA Transportation-2, Transportation and Parking Demand Management*** (see Transportation section of this CEQA Checklist)
- ***SCA Energy-1, Green Building Requirements***: (see Energy section of this CEQA Checklist)
- ***SCA Transportation-4, Plug-In Electric Vehicle (PEV) Charging Infrastructure*** (see details in the Energy section of this CEQA Checklist)
- ***SCA Utilities-3: Construction and Demolition Waste Reduction and Recycling***: (see details in the Utilities section of this CEQA Checklist)
- ***SCA Bio-3, Tree Removal Permit*** (see Biology section of this CEQA Checklist)

Whereas the Project is a development project and the Project applicants have completed the ECAP Consistency Checklist that qualitatively demonstrates compliance (or required compliance through implementation of applicable City of Oakland SCA) with the Checklist items as part of the Project's design, or alternatively demonstrates to the City's satisfaction why certain items are not applicable, the Project is considered in compliance with the City's CEQA GHG threshold of significance, and its GHG impacts would be less than significant. Accordingly, implementation of the City of Oakland's SCA GHG-2 pertaining to the preparation of a subsequent GHG Reduction Plan is not required.

Stationary Sources of GHG Emissions

CASP EIR Conclusions[74]

The CASP EIR (Impact GHG-1) found that new development pursuant to the CASP would not generate, either directly or indirectly, greenhouse gas emissions from stationary sources that would produce total emissions of more than 10,000 metric tons of CO2e annually. No specific stationary sources of air pollution were proposed pursuant to the CASP, but California building codes require back-up diesel generators for all buildings in excess of 70 feet in height for elevator safety, and other emergency generators were expected for back-up electricity requirements in the event of an emergency. The CASP EIR estimated the GHG emissions from one generator would be approximately 87 MT CO2e per year, and that as many as 114 emergency generators could be installed before exceeding the threshold of 10,000 MT CO2e per year. The CASP EIR did not expect that as many as 114 diesel generators would be installed, that the cumulative GHG emissions from emergency generators would not exceed the stationary source threshold of 10,000 MT CO2e per year, and this impact was found to be less than significant.

[74] City of Oakland, *CASP Draft EIR* page 4.6-32

Project Analysis

The Project's architectural drawings indicate that the proposed office building will include a bank of elevators, and back-up emergency power will be required for these elevators. It is currently unknown but possible that the warehouse may also rely on back-up power for hoists or lifts as may be used for stacking material within the warehouse.[75] These generators would be tested periodically and they would provide back-up power only in the event of a power failure. CARB and BAAQMD requirements limit these engine operations to 50 hours each, per year of non-emergency operation. These engines would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. GHG emissions from this equipment would be well below the BAAQMD threshold of 10,000 MTCO2e/yr, and these GHG emissions would be less than significant.

Conflicts with Plans, Policies or Regulations

CASP EIR Conclusions [76]

The CASP EIR (Impact GHG-3) determined that new development pursuant to the CASP would not fundamentally conflict with an applicable plan, policy or regulation adopted for the purposes of reducing greenhouse gas emissions. The CASP EIR found that the City's then-applicable numeric significance thresholds were formulated based on AB 32 reduction strategies, and that the numeric GHG significance thresholds were intended to serve as interim levels during implementation of AB 32 and SB 375. Until AB 32 has been fully implemented in terms of adopted regulations, incentives and programs, and until the Sustainable Communities Strategy or Alternative Planning Strategy required by SB 375 have been adopted or the California Air Resources Board (ARB) adopts a recommended threshold, the City's significance thresholds represented substantial compliance with applicable plans, policies and regulations adopted for the purpose of reducing GHG emissions. Since new development anticipated under CASP buildout did not exceed the numeric service population thresholds, at the plan or at the project level, the CASP was found not in conflict with applicable plans, policies and regulations adopted to reduce GHG emissions.

In addition to meeting the numeric threshold, the CASP includes several site characteristics, design features and regulatory conformance requirements that were found effective in reducing GHG emissions on an area-wide basis, and as individual development projects are incrementally proposed and developed. These design features and project characteristics help implement reduction strategies identified in AB32 and the City of Oakland's Energy and Climate Action Plan, and included the following:

- compliance with the City Construction and Waste Reduction Ordinance submittal of a Construction and Demolition Waste Reduction Plan
- development facilitated by the CASP would reduce transportation-related GHG emissions compared to emissions from the same level of development elsewhere in the outer Bay Area, due to the Planning Area's proximity and access to transit and its transit-oriented development pattern
- development under the CASP would be required to comply with applicable local, state and federal regulations related to energy conservation, including California Energy Efficiency Standards for Residential and Nonresidential Buildings, Cool Roof Coatings performance, CALGREEN, and the City's Green Building Ordinances

[75] The Project's proposed warehouse is not intended to store or distribute materials that require refrigeration, so no back-up power is needed for refrigeration in the warehouse in the event of a power emergency.

[76] City of Oakland, CASP Draft EIR page 4.6-46

- all new development pursuant to the CASP will be reviewed for consistency with numerous relevant General Plan policies that directly or indirectly result in reduced levels of GHG emissions, including the promotion of compact and transit-oriented development, alternatives to single-occupancy vehicle transportation, energy efficiency in building design and site planning, landscaping, and other measures that would individually and collectively reduce the energy usage of new developments
- all new development facilitated by the CASP is also expected to be required to comply with the applicable requirements of the City's Energy and Climate Action Plan (ECAP)

Relevant City of Oakland SCAs cited in the CASP EIR apply to subsequent individual development projects, including the following:

- SCAs requiring each subsequent development project within the CASP to assess whether that project may result in individually significant levels of GHG emissions. Projects exceeding pertinent screening criteria will be required to undergo project-specific GHG emissions forecasts and, as appropriate, implement project-specific GHG reduction plans intended to reduce project emissions levels below relevant thresholds
- SCAs requiring compliance with the Green Building Ordinance, OMC Chapter 18.02
- SCAs that require projects of a certain type and size submit for review and approval a Transportation Demand Management (TDM) Plan containing strategies to reduce on-site parking demand and single occupancy vehicle travel
- SCAs for waste reduction and recycling
- several SCAs regarding landscape requirements and tree replacement which help to create a cooler climate, reduce excessive solar gain and absorb CO_2e emissions
- several SCAs regarding stormwater management which could affect the ability of new development to address potentially increased storms and flooding associated with climate change

The CASP EIR concluded that development pursuant to the CASP would not be in conflict with then-current plans or policies adopted for the purpose of reducing GHG emissions, finding that all new development pursuant to the CASP would be required to comply with applicable plans, policies and regulations adopted for the purpose of reducing GHG emissions as compared to a baseline business-as-usual approach, and the impact was found to be less than significant.

Project Analysis

The current statewide goal pursuant to SB 32 is to reduce California's GHG emissions to 40 percent below 1990 levels by 2030, aligning with recommendations from the Intergovernmental Panel on Climate Change to achieve a level of climate stabilization that results in relatively minor consequences. Oakland's adopted 2030 reductions target of 56% below Oakland's 2005 GHG emission reaches beyond that of the State's 40% target. Concurrent with its adoption of the 2030 ECAP, Oakland City Council also adopted a resolution committing the city to achieve carbon neutrality by 2045. The 2030 ECAP contains not only deeper targets, but also qualitatively different and more focused actions than those contained in the 2020 ECAP. Whereas the 2020 ECAP included a heavy focus on energy efficiency and solar energy, the 2030 ECAP includes a major focus on building de-carbonization and energy resilience - fully removing natural gas from the built environment and installing energy storage systems where appropriate and feasible.

Whereas the Project's ECAP Checklist demonstrates that the Project will be consistent with the City's 2030 ECAP, and the City's 2030 ECAP has been shown to be consistent with, and even reaches beyond the State's GHG reduction targets of SB 32, the Project is therefore consistent with City and state plans and policies adopted for the purpose of reducing GHG emissions and this impact is less than significant. As indicated above and in addition to complying with the City's Equitable Climate Action Plan (ECAP) Consistency Checklist, the Project will also be subject to the following SCAs, which further reduce GHG emissions:

- ***SCA Transportation-2, Transportation and Parking Demand Management*** (see Transportation section of this CEQA Checklist)
- ***SCA Energy-1, Green Building Requirements***: (see Energy section of this CEQA Checklist)
- ***SCA Transportation-4, Plug-In Electric Vehicle (PEV) Charging Infrastructure*** (see details in the Energy section of this CEQA Checklist)
- ***SCA Utilities-3: Construction and Demolition Waste Reduction and Recycling***: (see details in the Utilities section of this CEQA Checklist)
- ***SCA Bio-3, Tree Removal Permit*** (see details in the Biology section of this CEQA Checklist)

CEQA Conclusions Pertaining to GHG Emissions

The analysis presented above examines whether there are any Project-specific significant effects related to GHG emissions that are peculiar to the Project or its site, finding none. The Project would have no impacts related to GHG emissions that were not previously analyzed in the CASP EIR, would have no off-site or cumulative impacts related to GHG emissions not discussed in the prior CASP EIR, and would not result in GHG emissions that are more severe than as discussed in the prior CASP EIR.

There are no impacts related to GHG emissions that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as pertains to GHG emissions. The analysis presented above does provide new information specific to the City's current GHG reduction strategy at outlined in the 2030 ECAP, and additional information pertaining to the Project's consistency with these GHG reduction strategies. This additional information pertinent to the Project was not available or practical at the time of certification of the CASP EIR. However, as described above, these new details do not introduce any new significant impacts pertaining to GHG emissions that were not previously identified in the CASP EIR, and do not substantially increase the severity of any significant GHG emission impacts as previously disclosed in the CASP EIR. The detailed information regarding the Project's consistency with the City's 2030 ECAP Checklist is fully consistent with the Standard Conditions of Approval as cited in the CASP EIR. These new details that are specific to the Project and its site are appropriately disclosed in this Addendum to the CASP EIR.

Hazards and Hazardous Materials

Would the Project:	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	Relationship to CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Standards and Requirements	Project Conclusions: Resulting Level of Significance
a) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	LTS with SCAs	■	☐	SCA Haz-1, Hazardous Building Materials and Site Contamination	LTS with SCA
b) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? c) 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?	LTS with SCA	■	☐	SCA Haz-2, Hazardous Materials Related to Construction SCA Haz-3, Hazardous Materials Business Plan	LTS with SCAs
d) Create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors? e) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	LTS	■	☐		LTS
f) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	LTs	■	☐	-	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? h) 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?	LTS	■	☐	-	LTS

i) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	See Wildfire section of this CEQA Checklist

Cortese List / Presence of Chemicals of Concern

CASP EIR Conclusions [77]

The CASP EIR (Impact Haz-5B) found that future development pursuant to the CASP could be located on sites 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, could create a significant hazard to the public or the environment. [78] Specifically, the CASP EIR found that the site defined under this document as the Northerly Area of the Project site, identified by the Water Board as "the EBMUD site at 5597 Oakport Drive" was identified as a GeoTracker LUST Cleanup site, with a cleanup status of "Completed - Case Closed". The CASP EIR noted that, "future activities at this site . . . could encounter residual contamination". The CASP EIR also identified several buildings located within Sub-Area E that were constructed in the 1950s and 1960s, where soils should be evaluated for potential asbestos containing materials and lead based paint.

The CASP EIR determined that any future development of any site that has a documented release of hazardous materials and that is listed in a regulatory database is subject to site clean-up regulations, as required by the designated regulatory agency (not including sites with a 'Case Closed' determination). The CASP EIR also found that demolition of existing structures may expose construction workers, the public, or the environment to hazardous materials such as lead-based paint, asbestos and PCBs. Potential exposure to these hazardous building materials would be reduced to less than significant levels with appropriate identification, removal and disposal according to applicable regulations.

The CASP EIR determined that future development pursuant to the CASP will be required to implement all applicable City of Oakland Standard Conditions of Approval, as well as implementation of all other relevant federal, state and city regulations will reduce these impacts to a less than significant level.

Project Analysis

A current review of the DTSC's EnviroStor database does not identify any sites or facilities at the Project site, and a current review of the SWRCB GeoTracker database does not identify any current environmental cases located within the Development Area or the Westerly Area, at Parcels 1 or 3, but that a Case Closure letter has been issued for a prior leaking underground storage tank at the Northerly Area, as more fully described below.[79]

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[77] City of Oakland, CASP Draft EIR page 4.7-44

[78] The Cortese List includes properties listed as Hazardous Waste and Substances sites on DTSC's EnviroStor database, Leaking Underground Storage Tank Sites from the SWRCB GeoTracker database, solid waste disposal sites identified by SWRCB, "active" Cease and Desist Order and Cleanup and Abatement Order (CAO) sites from the SWRCB, and hazardous waste facilities subject to corrective action and listed on the EnviroStor database.

[79] DTSC's EnviroStor database and SWRCB GeoTracker database accessed March 23, 2023 at: https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Oakport+Street%2C+Oakland and https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Oakport+Street%2C+Oakland

Northerly Area at Oakport WWF

According to Water Board records, the Case Closure determination for former leaking underground storage tanks at the Oakport Wet Weather Facility Parcel 2 of the Project (at 5597 Oakport Drive, in the Northerly Area) was issued in March of 1996. In their Case Closure letter, the Alameda County Department of Environmental Health confirmed, "*the completion of site investigation and remedial action for the three underground fuel tanks (1-1000 gallon unknown fuel, 1-2000 gallon diesel and 1-7500 gallon gasoline) at the above described location. Based upon the available information and with provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required*." According to the Case Closure Summary, no additional site management actions were applicable.[80] As a closed case, the Northerly Area of the Project site is no longer considered to be on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Development Area

A Phase 1 Environmental Site Assessment (Phase 1 ESA) was prepared in May of 2018 for the proposed Development Area of the Project site, at address of 5801 Oakport Street (see **Appendix N**).[81] This Phase 1 ESA concluded that this portion of the Project site was not listed on any regulatory databases that identify sites with suspected and/or confirmed releases of hazardous materials to the subsurface soil and/or groundwater. Accordingly, the Development Area is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (i.e., not on the Cortese List). The Phase 1 ESA did identify the following recognized environmental concerns:

- Artificial fill brought on-site in the late 1950s or early 1960s from unknown sources
- Undocumented soil and construction debris stockpiles located throughout the site
- Slurry disposal area
- Trichloroethene (TCE) in groundwater (In 1999, EBMUD conducted a groundwater storage pilot test, which included the installation of 13 groundwater monitoring wells. As part of this study, elevated concentrations of TCE were detected in two wells screened in the middle aquifer zone (260 feet to 350 feet below ground surface). Three of these 13 groundwater monitoring wells remain on-site.

Based on the results of the Phase 1 ESA, a Phase II ESA was also conducted (see **Appendix O**).[82] The Phase II investigation included collection of soil and groundwater samples at the site to understand subsurface conditions. Seven soil borings were advanced and 14 soil samples were collected and submitted for laboratory analysis (see **Figure 27**). Groundwater samples were also collected from four of the seven soil borings.

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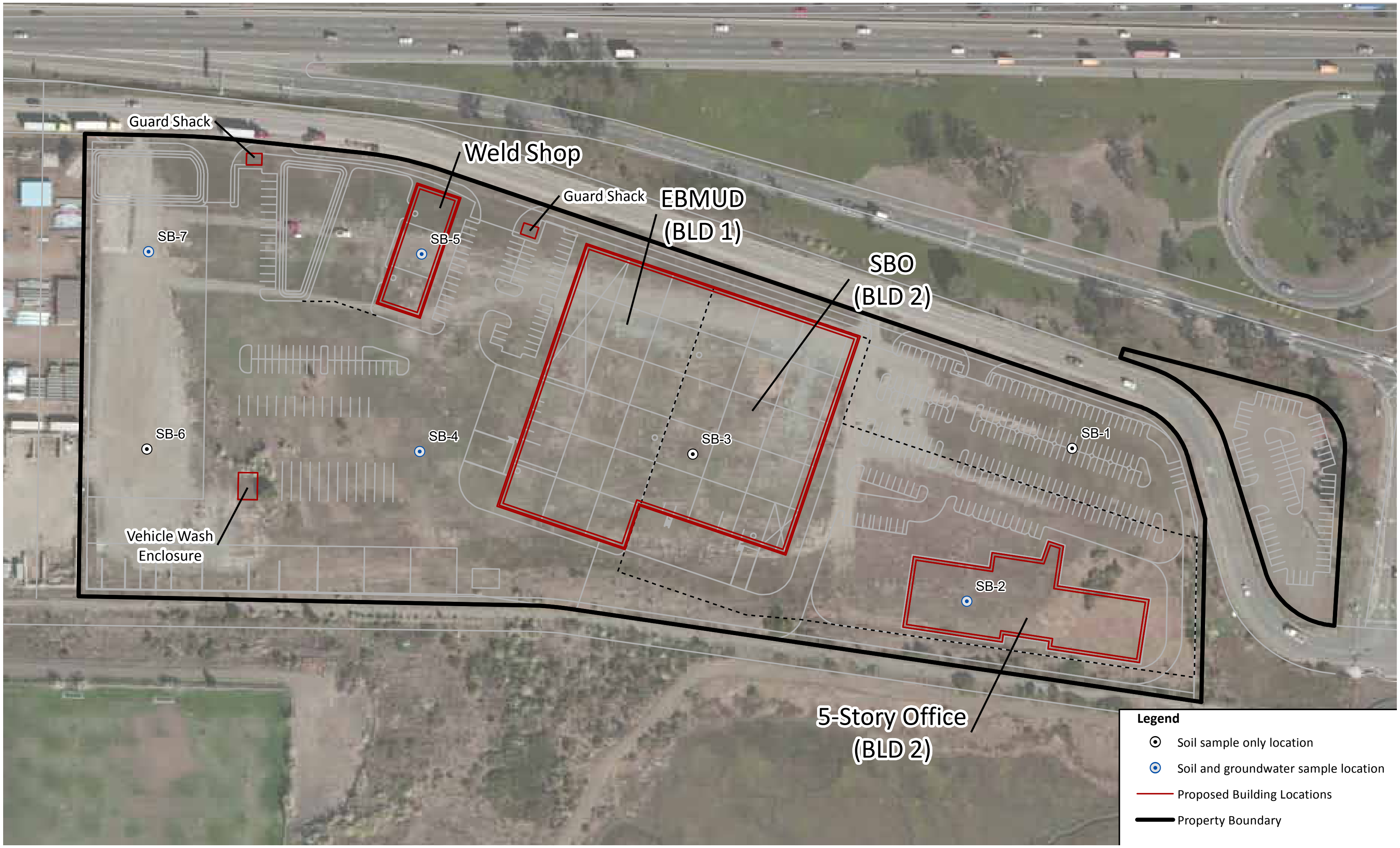
80 Alameda County Department of Environmental Heath, letter to EBMUD re: *EBMUD Oakport Wet Weather Facility*, 5597 Oakport, Oakland, dated March 7, 1996, accessed at SWRCB Geotracker website https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600100493

81 TerraCon Consultants, Inc., Phase I Environmental Site Assessment for the Property Located at 5801 Oakport Street in Oakland, California, May 2018

82 Terraphase Engineering Inc., Phase II Environmental Site Investigation of a 14-acre Portion of the Property Located at 5801 Oakport Street in Oakland, California, February 1, 2019



Note: This basemap relies on an early, preliminary site plan for the Project that is no longer proposed (e.g., no proposed parking area on the northeast side of Oakport Street). The locations of soil and groundwater samples are accurate relative to the site and the Office, Warehouse and Weld Shop structures.

Figure 27
Soil and Groundwater Sampling Locations

Source: Terraphase Engineering, Phase II Investigation, February 2019

Analytical results from the soil samples were compared to the health-based screening levels and waste characterization criteria of the RWQCB's Commercial/Industrial Shallow Soil Exposure Environmental Screening Levels (ESLs); RWQCB Construction Worker Soil ESLs; DTSC Recommended Screening Levels for Commercial/Industrial Soil (DTSC-SLs); and California and Federal hazardous waste toxicity criteria. Analytical results from the groundwater samples were compared to conservative screening levels of the RWQCB Groundwater Odor Nuisance Non-Drinking Water ESLs; RWQCB Groundwater Gross Contamination ESLs; RWQCB Commercial/Industrial Groundwater Vapor Intrusion Human Health Risk Levels for Shallow Groundwater; and the California State Water Resources Control Board, Division of Drinking Water's Maximum Contaminant Levels (MCLs). These conservative risk-based screening levels were used to guide site investigations by segregating characterization data that indicate a higher potential for health significance from those that indicate a low potential. Generally, at sites where chemical concentrations are equal to or below relevant screening levels, no further action or study is warranted. Determinations regarding the need for risk management are based upon the results of risk assessments that account for and quantify potential risks associated with receptor exposure to site-related chemicals.

The analytic results include the following:

- Arsenic was detected above the screening levels in each of the fourteen soil samples collected. Soil in California commonly contains naturally occurring arsenic at concentrations significantly higher than the conservative generic risk-based screening levels. The maximum concentration of arsenic in soil at the site was 8.7 mg/kg, which is below the regional background concentration. As a result, site-related arsenic concentrations in soil would not pose an unacceptable risk to receptors at the site.
- Nickel was detected in soil from one boring above the ESL for construction worker exposure to soil. Construction worker exposure would involve contact with soil across the site over the exposure period. Assuming that all of the nickel is site-related, a conservative estimate of the nickel soil concentration that future construction workers could be exposed to is 62 mg/kg6. This concentration is below the conservative screening level of 86 mg/kg. Therefore, construction worker exposure to soil would not be expected to result in unacceptable risk.
- Lead was also detected in one boring above the DTSC-SL, Commercial/Industrial ESL, and Construction Worker Soil ESL. Given the proximity of the site to Interstate 880, it is suspected that lead has been aerially deposited from motor vehicles with leaded gasoline, and not site-related. Conservatively assuming that all of the lead is site-related, a conservative estimate of the lead soil concentration that future commercial/industrial workers could be exposed to is 305 mg/kg, below the conservative screening level of 320 mg/kg for commercial/industrial workers. Commercial/industrial worker exposure to lead in soil would not be expected to result in unacceptable risk. Similarly, a conservative estimate of the lead soil concentration to which potential future construction workers could be exposed to is 120 mg/kg, below the conservative screening level of 190 mg/kg for construction workers. Therefore, construction worker exposure to lead in soil would not be expected to result in an unacceptable risk.
- Given the municipal drinking water source and the proximity to the Bay, groundwater is not an anticipated source of drinking water. The primary purpose of the groundwater evaluation was to assess the potential for vapor intrusion from shallow groundwater given the presence of chlorinated VOC cleanup sites in the site vicinity. Chlorinated VOCs were not detected above reporting limits. Based on comparison of the groundwater data to vapor-intrusion screening levels, the groundwater would not pose an unacceptable vapor intrusion risk to receptors at the site.
- Arsenic, dichloromethane, TPH-mo and TPH-d were detected in groundwater samples above the MCLs, which are used as a screening level when setting cleanup goals for groundwater designated for use as a

domestic or municipal supply. The shallow aquifer in this area would not be a source of drinking water, and the exceedance of MCLs is not significant.

- Other metals and TPH-g were not detected above laboratory reporting limits in the samples for which these constituents were analyzed.

This investigation was performed to evaluate the environmental condition of the site. Specifically, the evaluation considered the relative risks of fill materials in the upper five feet and that may remain on-site (for commercial/ industrial user exposure), soils that may be excavated (for construction worker exposure), and soils that may be off-hauled during re-development (for waste characterization). The evaluation of potential for vapor intrusion was based on the proximity of the site to active chlorinated VOC cleanup sites. Based on these investigations, the Phase II ESA concluded the following:

- Existing soil at the site does not pose an unacceptable risk to future commercial or industrial receptors (i.e., future employees) at the site, nor does it pose an unacceptable risk to construction workers.
- The preliminary grading plan for the Project indicates substantial import of soil to the site, but no export or off-haul of soil from the site. If final grading plans do identify off-haul of any existing soil, this soil would then be characterized as 'waste' and subject to additional hazardous waste disposal requirements. Because concentrations of chromium, lead and mercury were detected above the hazardous waste screening criteria, any off-haul or soil export would be required to be further analyzed, evaluated and characterized to determine the appropriate waste disposal method (i.e., waste characterization) prior to off-haul and disposal.[83]
- Based on comparison of groundwater data to vapor-intrusion screening levels, groundwater at the site does not pose an unacceptable vapor-intrusion risk to receptors at the site.

Applicable Standard Conditions of Approval

The following City of Oakland SCAs (as has been updated) are cited in the CASP EIR as an effective means for addressing site contamination concerns, and would apply to the Project.

❖ ***SCA Haz-1, Hazardous Building Materials and Site Contamination***

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

[83] Pursuant to California Code of Regulations, Title 27, Division 2, Subdivision 1, Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste, if development will result in soil excavation and off-site disposal as waste, these soils will be classified based on an assessment of the potential risk of water quality degradation associated with each category of waste. Waste classifications include nonhazardous municipal solid wastes (or Class III wastes) that can be disposed at a Class III landfill; Class II wastes that may be disposed of at a Class I or Class II landfill; or Class I wastes, which are further managed and regulated by the DTSC.

b) *Environmental Site Assessment*: 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.

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

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

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

Although there are no buildings on the Development Area, there are buildings proposed to be removed from the Northerly Area, part of the remaining EBMUD site outside of the Development Area. The assessment for presence or lack thereof of ACMs, lead-based paint, PCBs and any other building materials or stored materials classified as hazardous materials (per SCA Haz-1) will be required prior to demolition of these buildings. The Project applicant has conducted Phase I and Phase II investigations (as required by SCA Haz-1), and these investigations have not identified any remedial action as being necessary or appropriate for hazardous materials, nor any health and safety concerns for on-site construction workers. Certain on-site soils contain concentrations of heavy metals (chromium, lead and mercury) are above the hazardous waste screening criteria, and BMPs for further waste characterization of these soils must be conducted (pursuant to SCA Haz-1) prior to any off-site disposal.

Consistent with the conclusions of the CASP EIR, the Project's effects related to site contamination and the presence of chemical of concern have been/will be fully addressed through implementation of City SCAs and existing regulations, and this impact has been/will be reduced to less than significant.

Routine Transport, Use or Disposal of Hazardous Materials / Upset and Accident Condition

CASP EIR Conclusions [84]

The CASP EIR (Impact Haz-1) found that future development pursuant to the CASP would result in an increase in the routine transportation, use and storage of hazardous chemicals. Construction pursuant to the CASP could result in impacts from hazards or hazardous materials if construction-related activities were to result in hazards or the release of hazardous materials. Ongoing commercial, retail and residential activities pursuant to the CASP

[84] City of Oakland, CASP Draft EIR page 4.7-35

may also involve the use of chemical compounds and products that are considered hazardous materials and that could require the transportation, use and storage of additional quantities of hazardous materials for new businesses and entities. If not handled, stored, or transported appropriately, these impacts could be potentially significant.

The CASP EIR found that handling and use of hazardous materials and the disposal of the resulting hazardous wastes would be required to follow all applicable laws and regulations, and projects requiring the use and disposal of hazardous materials would be required to comply with project-specific hazards best management practices as required by SCAs. The CASP EIR concluded that required compliance with applicable regulatory requirements would minimize hazards to workers, visitors, the public and the environment from waste products. With implementation of these requirements, impacts resulting from hazardous materials and hazardous waste transport, use and disposal would be less than significant.

Project Analysis

Construction Effects

Construction activities pursuant to the Project will utilize hazardous chemicals such as fuels, oils and lubricants, paints and thinners, solvents, and other chemicals. Construction activities could generate chemical wastes that, if not properly managed, could flow into the storm drainage system or nearby surface water bodies including the San Francisco Bay.

Operational Effects

Ongoing operations at the SupplyBank.org office building and at the shared warehouse would involve the routine use of certain household chemicals and products that contain hazardous materials. Use of these products according to manufacturer's recommendation would ensure these chemicals do not become a hazard to people or the environment.

The EBMUD workshop and pipe storage area could require the transportation, use and storage of additional quantities of hazardous materials that are of greater consequence than typical household products. If not handled, stored and transported appropriately, these chemicals could result in hazards or the release of hazardous materials and would be considered significant.

<u>Applicable Standard Conditions of Approval</u>

The following City of Oakland SCAs are cited in the CASP EIR as effective means for addressing routine transport, use or disposal of hazardous materials during construction and operations, and would apply to the Project.

Construction-Related:

- ***SCA Haz-2, Hazardous Materials Related to Construction***: 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 of fuel gas tanks on construction equipment
  - 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.

Consistent with the conclusions of the CASP EIR, the Project's effects related to routine transport, use or disposal of hazardous materials during construction will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.

Operational-Related

The following condition applies to all projects involving the handling, storage or transportation of hazardous materials during business operations:

❖ ***SCA Haz-3, Hazardous Materials Business Plan***: The project applicant shall submit a Hazardous Materials Business Plan (HMBP) for review and approval by the City, and shall implement the approved Plan. The approved Plan shall be kept on file with the City and the project applicant shall update the Plan as applicable. The purpose of the Hazardous Materials Business Plan is to ensure that employees are adequately trained to handle hazardous materials and provides information to the Fire Department should emergency response be required. Hazardous materials shall be handled in accordance with all applicable local, state, and federal requirements. The Hazardous Materials Business Plan shall include the following:

a) The types of hazardous materials or chemicals stored and/or used on-site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids

b) The location of such hazardous materials

c) An emergency response plan including employee training information

d) A plan that describes the manner in which these materials are handled, transported, and disposed.

Consistent with the conclusions of the CASP EIR, the Project's effects related to routine transport, use or disposal of hazardous materials will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.

To the extent that EBMUD operations at the Workshop or Pipe Storage facility will store or use hazardous materials, these materials would be stored according to the specifications of a project-specific Hazardous Material Management Plan and/or Hazardous Materials Business Plan (as may be needed or as may be relocated from their current location). As required, the hazardous materials would be stored in locations according to compatibility and in storage enclosures in accordance with applicable regulations. Hazardous materials would be handled and used in accordance with applicable regulations by personnel that have been trained in the handling and use of the material and that have received proper hazard-communication training. Hazardous materials reporting (i.e., California Hazardous Materials Business Planning, California Proposition 65 notification, and Emergency Planning and Community-Right-to-Know Act reporting) would be completed as required. All hazardous materials would be transported to the Project Area in accordance with applicable hazardous materials shipping regulations. Hazardous materials and waste would be delivered, stored and handled in accordance with the HMMP. The HMMP would also provide details on appropriate personal protective equipment, disposal procedures and spill response measures in the case of accidental upset conditions.

Required compliance with applicable regulatory requirements would minimize hazards to workers, visitors, the public and the environment from waste products. With implementation of these requirements, impacts resulting from hazardous materials and hazardous waste transport, use and disposal would be less than significant.

Emit Hazardous Emissions or Handle Hazardous Materials near Schools or Sensitive Receptors

CASP EIR Conclusions [85]

The CASP EIR (Impact Haz-4) found that development pursuant to the CASP could involve use of hazardous materials within 0.25 mile of a school. There are four schools located within the CASP's Sub-Area C, and two grade schools and one daycare center located outside but within ¼-mile of the CASP planning area.

The CASP EIR found that operations that involve handling of hazardous material within 1,000 feet of a school or other sensitive receptor would be required to comply with the City of Oakland's ordinances and General Plan policies that require such operations to prepare a Hazardous Materials Assessment Report and Remediation Plan (HMARRP). The HMARRP would disclose the use of hazardous materials at the site, would require an assessment of potential off-site risks, and would identify precautions to reduce identified risks. The HMARRP is subject to review and approval by the City of Oakland. Additionally, those handling or storing hazardous materials would be required to prepare a Hazardous Materials Management Plan (HMMP) and Hazardous Materials Business Plan (HMBP) as required by Alameda County and the City's SCA Haz-3. The CASP EIR concluded that completion of these requirements would reduce the potential for an unacceptable release of hazardous materials within 0.25 mile of a school to a less than significant level.

Project Analysis

There are no schools, daycare centers or other sensitive receptors located within ¼-mile (or within 1,000 feet) of the Project site (see prior Figure 16). The land uses surrounding the Project site include industrial and warehouse uses to the east, open space and the Bay to the west, the freeway interchange to the south and existing EBMUD operations to the west. The Project would not involve use of hazardous materials within 0.25 mile of a school, and this impact would be less than significant.

Airport-Related Safety or Excessive Noise Hazards

CASP EIR Conclusions [86]

The CASP EIR (Impact Haz-7) found that the entire CASP planning area is located within the Oakland International Airport Land Use Compatibility Plan (ALUCP) planning area, and within two miles of the Oakland Airport, but that the CASP would not result in a safety hazard for people residing or working in the CASP planning area. The ALUCP establishes land use safety compatibility criteria developed to minimize the risks to people and property on the ground, as well as those for people in an aircraft in the event of an accident or emergency landing. The ALUCP states that the risk that potential aircraft accidents pose to land around the airport shall be defined in terms of the geographic distribution of where accidents are most likely to occur. To define those risks the ALUCP identifies safety zones around the airport. The safety zone criteria that are applicable to a particular zone are largely a function of risk acceptability. The CASP EIR concluded that the CASP

[85] City of Oakland, CASP Draft EIR page 4.7-37

[86] City of Oakland, CASP Draft EIR page 4.7-48

complied with the land use safety and compatibility criteria of the ALUCP, and this potential impact was found to be less than significant.

Project Analysis

The Project site is located within the ALUCP Safety Zone 7: Other Airport Environs. Within this safety zone, there are no land use restrictions on residential development, office buildings, medium-sized businesses or eateries. The Project would comply with the land use safety and compatibility criteria of the ALUCP, and no impact related to airport safety hazards would occur (see also the Land Use section of this CEQA Checklist related to ALUCP consistency with building height, noise and lighting restrictions).

Interference with Emergency Response Plan or Emergency Evacuation Plan

CASP EIR Conclusions [87]

The CASP EIR (Impact Haz-9) found that development pursuant to the CASP could potentially impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan. The Safety Element of the City's General Plan identifies Hegenberger Road, San Leandro Street and Edgewater Drive as evacuation routes. Other roadways near the Project Area designated as evacuation routes include International Boulevard, Seminary Avenue, Doolittle Drive and 98th Avenue. The CASP EIR determined that the CASP (especially new planned development within the Coliseum Sub-Area) would result in significant and unavoidable traffic congestion on many of these emergency routes, including during special events at the sports venues. However, the CASP EIR concluded that implementation of the CASP would not impair, re-route, reduce, or otherwise interfere with these evacuation routes. The CASP EIR concluded that any evacuation route would likely be congested in the case of an emergency and that additional peak hour traffic caused by the CASP would not impair an emergency evacuation plan, and this impact was determined to be less than significant.

Project Analysis

The Project site is directly accessible to I-880 from Oakport Street in the event of an emergency evacuation. The Project would not interfere with emergency evacuation routes on Hegenberger Road, San Leandro Street, Edgewater Drive, International Boulevard, or Seminary Avenue, Doolittle Drive or 98th Avenue. This impact is not considered significant.

CEQA Conclusion Pertaining to Hazard and Hazardous Materials

The analysis presented above examines whether there are any Project-specific significant effects related to hazards and hazardous materials that are peculiar to the Project or its site, finding none. The Project would have no impacts related to hazards or hazardous materials that were not previously analyzed in the CASP EIR, would have no off-site or cumulative impacts related to hazards or hazardous materials not discussed in the prior CASP EIR, and would not result in any hazards or hazardous materials impacts that are more severe than as discussed in the prior CASP EIR. There are no impacts related to hazards and hazardous materials that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as pertains to geology and soils. The hazards and hazardous materials analysis presented above does provide additional details regarding hazards and hazardous materials conditions specific to the Project site, and the Project provides additional detailed recommendations for best addressing

[87] City of Oakland, CASP Draft EIR page 4.7-48

these conditions specific to the site. These additional details are new information pertinent to the Project that were not available or practical at the time of certification of the CASP EIR. However, as described above, these new details do not introduce any new significant impacts pertaining to hazards and hazardous materials that were not previously identified in the CASP EIR, and do not substantially increase the severity of any significant impacts as previously disclosed in the CASP EIR. The detailed recommendations for the Project are fully consistent with the Standard Conditions of Approval as cited in the CASP EIR. These new details that are specific to the Project and its site are appropriately disclosed in this Addendum to the CASP EIR.

Hydrology and Water Quality

Would the Project:	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	Relationship to CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Mitigation, Standards and Requirements	Project Conclusions: Resulting Level of Significance
a) Place housing within a 100-year flood hazard area that would impede or redirect flood flows? b) Place structures within a 100-year flood hazard area which would impede or redirect flood flows? c) Expose people or structures to a substantial risk of loss, injury or death involving flooding? d) Expose people or structures to a substantial risk of loss, injury, or death as a result in inundation by tsunami? e) Be located In a flood hazard, tsunami, or seiche risk zones, thereby risking release of pollutants due to project inundation?	LTS	■	☐	-	LTS
f) During construction, substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion siltation or flooding, on- or off-site? g) During construction, violate any water quality standards?	LTS with SCAs	■	☐	SCA Geo-4: Erosion and Sedimentation Control Plan for Construction SCA Hydro-1, State Construction General Permit SCA Hydro-2, Creek Protection Plan	LTS with SCAs
h) During operation, substantially alter the existing drainage pattern of the site or area through the addition of impervious surfaces, in a manner which would: Result in substantial erosion or siltation on- or off-site? substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite/ Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? Impede or redirect flood flows? Violate any water quality standards	LTS with SCA	■	☐	SCA Hydro-3, NPDES C.3 Stormwater Requirements for Regulated Projects SCA Hydro-4, Vegetation Management on Creekside Properties	LTS with SCA

i) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	LTS	■	□	SCA Hydro-1: State Construction General Permit	LTS with SCA
j) Violate any waste discharge requirements or otherwise substantially degrade surface water quality?	NA	Please see the Biology section of this CEQA Checklist under the topic of Wetlands and Waters of the State			
k) Conflict with or obstruct implementation of a sustainable groundwater management plan? l) Conflict with or obstruct implementation of a water quality control plan?	LTS with SCAs	■	□	SCA Hydro-1, -2, -3 and -4, and CASP EIR MM Land Use-8	LTS with SCAs
m) Be susceptible to inundation, storm events and storm events with wind waves in the event of sea level rise?	LTS with SCA	■	□	CASP EIR MM Land Use-8A, BCDC Approval CASP EIR's Rec. Hydro-5	--

Flooding

CASP EIR Conclusions [88]

The CASP EIR (Impact Hydro-2) found that new development pursuant to the CASP would not be susceptible to flooding hazards. The CASP did not identify any proposed development sites located within a 100-year flood zone as mapped by FEMA.

The CASP EIR demonstrated that the majority of the CASP planning area is located outside of the 100-year flood zone, and that the only portions of the planning area that are identified as being within a 100-year flood zone are those areas within the banks of the on-site drainage channels (i.e., within Elmhurst Creek and Damon Slough). All new development pursuant to the CASP will occur outside of these existing creek channels and will not occur within the 100-year flood zone. The CASP EIR (Impact Hydro-3) found that certain new development pursuant to the CASP could be susceptible to flooding hazards in the event of dam or reservoir failure. The southern portion of the CASP planning area (not including the Project site) could experience flooding if the Lake Chabot Dam were to experience dam failure. The CASP EIR determined that compliance with all dam safety regulations would reduce this relatively low risk of impact to a less than significant level. The CASP EIR (Impact Hydro-4) also found that new development pursuant to the CASP could be susceptible to tsunami-related hazards, but the relatively low risk of occurrence of this impact was considered less than significant. The modeled sources of tsunamis that are most likely to affect the Bay Area are very rare, and there is little historical record of past events that would enable an evaluation of the probability of such an event occurring. Therefore, the potential impact from tsunamis was considered less than significant.

[88] City of Oakland CASP Draft EIR, page 4.8-29

Project Analysis

As demonstrated in **Figure 28**, the Project site is not located within the FEMA-designated 100-year flood zone. The Project site, like all of the surrounding land west of San Leandro Street, is within the 0.2 percent Annual Chance of Flood Hazard (i.e., the 500-year flood zone), which is not a regulated flood zone. [89]

Consistent with the findings of the CASP EIR, the impacts of the Project related to flooding hazards would be less than significant and no additional mitigation is required.

Water Quality during Construction

CASP EIR Conclusions [90]

The CASP EIR (Impact Hydro-1B) found that future construction pursuant to the CASP would potentially increase the level of contamination or siltation in stormwater flows.

As would be required for all projects in Oakland, any projects constructed pursuant to the CASP would be required to comply with all City of Oakland Standard Conditions of Approval, and other regulatory requirements for drainage and water quality. These SCAs require preparation of grading plans and erosion and sedimentation control plans that meet all City of Oakland uniformly applied development standards. Compliance with the Municipal Regional Permit (MRP) will require all development to provide stormwater trash capture on-site, and implementation of the State's Construction General Permit and its Stormwater Pollution Prevention Plan (SWPPP) requirements would require any project to incorporate Best Management Practices (BMPs) to control sedimentation, erosion, hazardous materials contamination of runoff during construction.

The CASP EIR concluded that compliance with the City of Oakland Grading Ordinance, the Creek Protection Ordinance and all applicable SCAs would minimize increased stormwater runoff and would reduce sedimentation and contamination to stormwater and surface water during construction to a less than significant level.

Project Analysis

Grading and excavation for the Project would remove protective vegetation and disturb the ground, thereby exposing soil to increased erosion from stormwater runoff, site watering and wind. The import of new fill soils could also introduce the potential for temporary increases in sediment loads and associated construction-related pollutants into waterways in the vicinity (i.e., East Creek and the Bay) during the construction period. Eroded soil contains nitrogen, phosphorus and other nutrients that, when transported to water bodies, can trigger algae blooms that reduce the clarity of water, deplete oxygen and create odors. The overall increase in turbidity and resulting decline in photosynthesis can be a detriment to the entire aquatic ecosystem.

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[89] Federal Emergency Management Agency (FEMA), FEMA's National Flood Hazard Layer (NFHL) Viewer, accessed at: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

[90] City of Oakland, CASP Draft EIR page 4.8-25

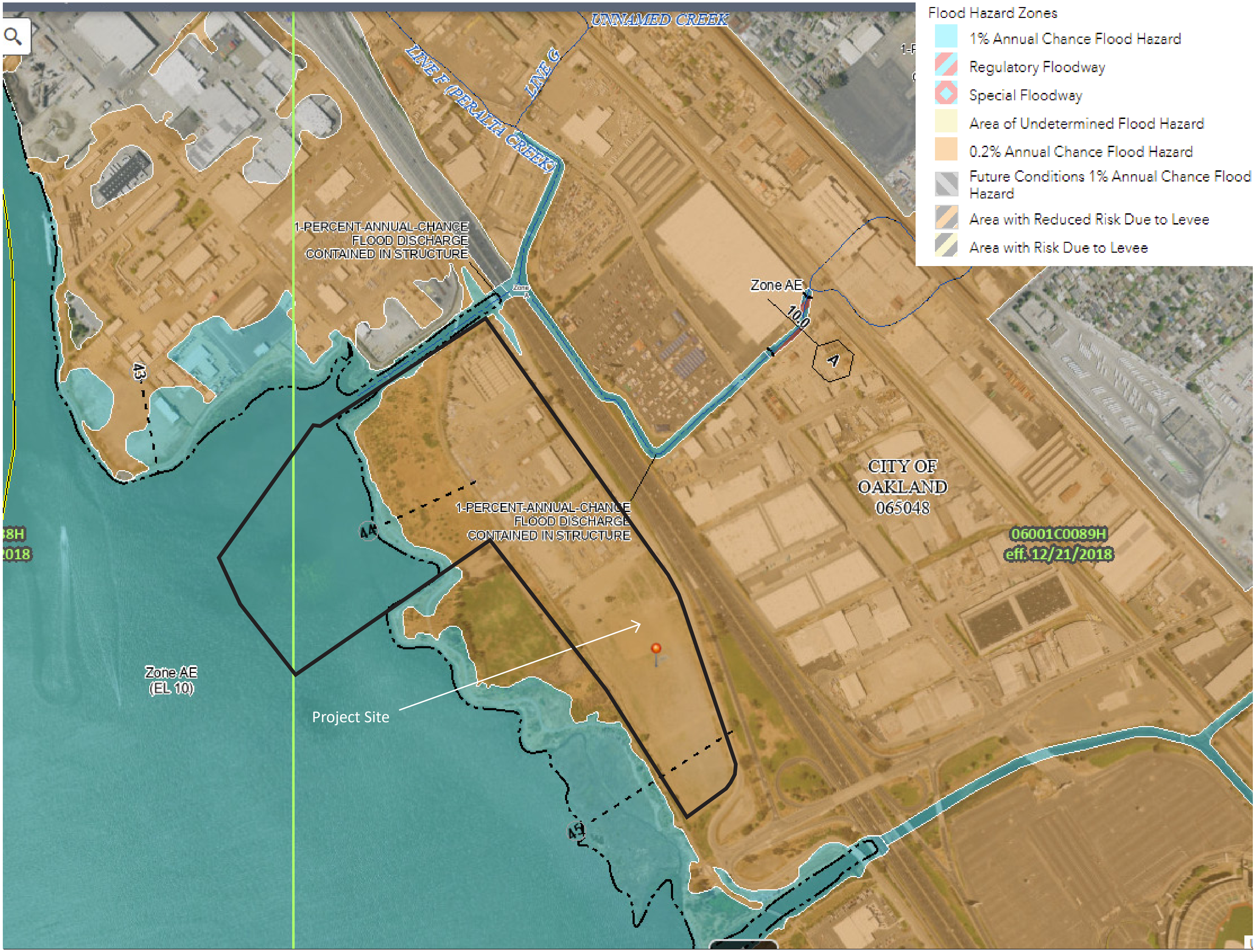

Figure 28
FEMA-designated Flood Hazard Zones at the Project Site

Source: FEMA's National Flood Hazard Layer (NFHL) Viewer,accessed at: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

According to the City of Oakland's Creek Protection Ordinance, the Oakland Estuary, including San Leandro Bay, is considered a waterway. The City of Oakland's Creek Protection Ordinance (OMC Chapter 13.16) is intended to address potential water quality impacts from stormwater and other discharges into identified waterways. The Development Area is inclusive of lands that are within 100 feet of the shoreline of the Estuary (see also Figure 24). Accordingly, the Creek Permit category that is the best fit for activities proposed is a Category III Creek permit, for exterior work that does include earthwork and is located within 100 feet from the waterway. The Project is required to comply with the provisions of the Creek Protection Ordinance, and prepare a Creek Protection Plan (see detailed discussion later in this Hydrology section of the CEQA Checklist).

<u>Applicable Standard Conditions of Approval</u>

The following City of Oakland SCAs as cited in the CASP EIR would apply to the Project:

- ***SCA Geo-4, Erosion and Sedimentation Control Plan for Construction*** (see the Geology section of this CEQA checklist)
- ***SCA Hydro-1, State Construction General Permit***: The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City.
- ***SCA Hydro-2, Creek Protection Plan***: 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 waterway. Required BMPs are identified below.

  a) *Construction BMPs*: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control BMPs to protect the waterway 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 waterway.

     ii. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent biodegradable 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 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/waterway 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/waterway, street gutters, or storm drains.

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

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/waterway 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. Sweep the street pavement adjoining the project site with brooms 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/waterway 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 center line/waterway. This area shall not be disturbed during construction without prior approval of the City.

b) *Post-Construction BMPs*: 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.

c) *Creek Landscaping*: 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/marsh wetlands, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor/marsh wetlands shall be replanted with mature native riparian/marsh wetland vegetation and be maintained to ensure survival.

d) *Creek Protection Plan Implementation*: 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.

Consistent with the conclusions of the CASP EIR, the Project’s effects related to water pollution and sedimentation during construction will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.

Water Quality during Operation

CASP EIR Conclusions [91]

The CASP EIR (Impact Hydro-1B) also found that future development pursuant to the CASP would increase the volume of stormwater flows, and potentially increase the level of contamination or siltation in stormwater flows.

As would be required for all projects in Oakland, any project developed pursuant to the CASP would be required to comply with all City of Oakland Standard Conditions of Approval and other regulatory requirements for drainage and water quality. These requirements include preparation of site design measures for post-construction stormwater management; source control measures to limit stormwater pollution, post-construction stormwater pollution management plans, and maintenance agreements for stormwater treatment measures. Additionally, all new development projects must comply with the City of Oakland’s Storm Drainage Design Guidelines, which requires new development to reduce storm runoff by 25% from existing conditions.

The CASP EIR concluded that compliance with the Municipal Regional Permit (MRP) C.3 requirements for stormwater discharge would require all development projects to provide on-site storm water treatment to meet NPDES standards. These SCAs and other regulatory requirements apply to all subsequent development within the CASP planning area. Implementation of these requirements will mitigate potential drainage and water quality impacts associated with new development to a less than significant level.

Project Analysis

During the life of the Project, new office employees and EBMUD operations may generate non-point source pollutants, potentially including excess fertilizers, herbicides and insecticides from landscaped areas, and oil, grease and toxic chemicals from parking and driveway runoff, and litter. These non-point source pollutants can be washed by rainwater from roofs, landscape areas and streets and parking areas into the downstream drainage network and directly into the Bay. An increase in non-point source pollutants could have adverse effects on wildlife, vegetation and human health. Non-point source pollutants could also infiltrate into groundwater and degrade the quality of groundwater sources.

According to information included in the Project application materials (Ware Malcomb, Sheet C6.0, March 2019), the Development Area currently has only about 16,260 square feet of impervious surface, consisting of existing entry driveways onto Oakport Street. Under post-Project conditions, the Development Area will have as much as 614,260 square feet of impervious surfaces as building rooftops, driveways and parking, and other hardscape (the 16,262 square feet existing, plus 597,758 square feet of new impervious). These impervious surfaces represent non-point sources of water pollution. These impervious surfaces will also result in substantial increased runoff from the site.

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[91] City of Oakland, CASP Draft EIR page 4.8-25

Applicable Standard Conditions of Approval

The following City of Oakland SCA is cited in the CASP EIR as effective means for reducing post-construction water quality and increased runoff concerns from new development. Since the Project will create substantially more than 10,000 square feet of new impervious surface area, the Project is considered a Regulated Project under the NPDES C.3 requirements, and the following SCA would apply.

❖ ***SCA Hydro-3, NPDES C.3 Stormwater Requirements for Regulated Projects***

a) *Post-Construction Stormwater Management Plan*: The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following:

   i. Location and size of new and replaced impervious surface
   ii. Directional surface flow of stormwater runoff
   iii. Location of proposed on-site storm drain lines
   iv. Site design measures to reduce the amount of impervious surface area
   v. Source control measures to limit stormwater pollution
   vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and
   vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff.

b) *Maintenance Agreement*: The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following:

   i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and
   ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for verifying the implementation, operation and maintenance of the on-site stormwater treatment measures, and to take corrective actions if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.

❖ ***SCA Hydro-4, Vegetation Management on Creekside Properties***: The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project:

a) Identify and leave "islands" of vegetation in order to prevent erosion and landslides and protect habitat;
b) Trim tree branches from the ground up (limbing up) and leave tree canopy intact;
c) Leave stumps and roots from cut down trees to prevent erosion;
d) Plant fire-appropriate, drought-tolerant, preferably native vegetation;
e) Provide erosion and sediment control protection if cutting vegetation on a steep slope;

f) Fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management;

g) Obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine);

h) Do not clear-cut vegetation, as this can lead to erosion and severe water quality problems and destroy important habitat;

i) Do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development;

j) Do not trim/prune branches that are larger than 4 inches in diameter;

k) Do not remove tree canopy;

l) Do not dump cut vegetation in the creek;

m) Do not cut tall shrubbery to less than 3 feet high; and

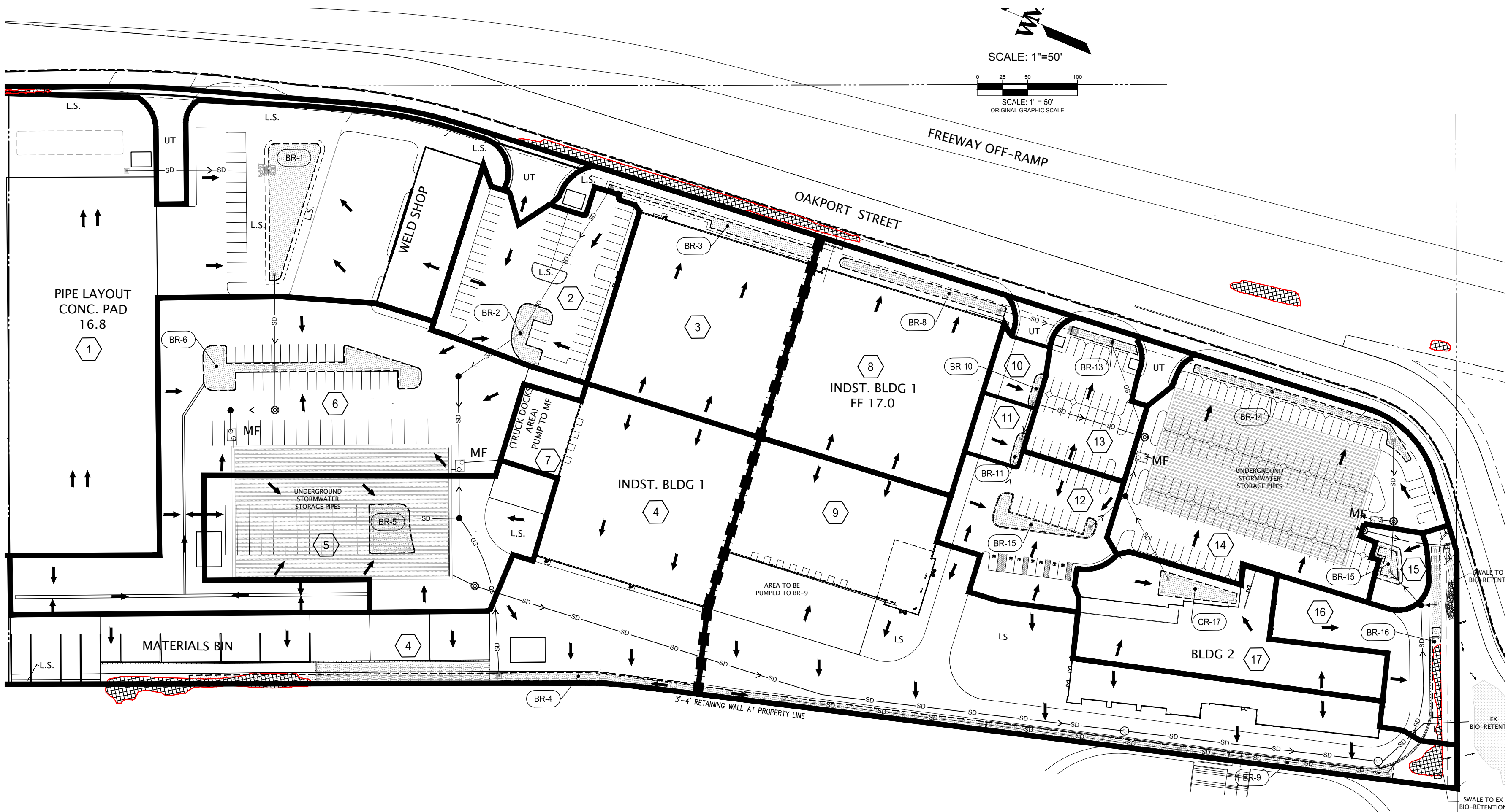
n) Do not cut short vegetation (e.g., grasses, groundcover) to less than 6 inches high.

<u>Project Plans pursuant to City SCAs</u>

Consistent with CASP EIR requirements and SCA Hydro-3, the Project sponsor has prepared a preliminary Stormwater Control Plan (SWCP) that addresses both water quality treatment as well as hydro-modification management measures for the Development Area. This preliminary SWCP is has been prepared to address an assumed division of management and operations between SupplyBank and EBMUD. It is assumed that SupplyBank will manage the southerly portion of the site (the office and the southerly half of the warehouse), and EBMUD will manage the northerly portion of the site (the northerly half of the warehouse, the workshop, the pipe storage and the materials bin).

Bio-Retention and Water Quality Treatment

The Project's preliminary SWCP shows 17 Drainage Management Areas (or DMAs) as shown in **Figure 29**. For each DMA, the C.3 requirements for water quality treatment are primarily addressed through the incorporation of integrated bio-retention facilities with underdrains, distributed throughout the site or along the perimeter. These bio-retention facilities would provide water quality treatment via filtration, removing pollutants and sediment prior to discharge. These bio-retention facilities appear to be sized appropriately, exceeding the minimum treatment area that would be required pursuant to NPDES c.3 criteria for treatment capacity for each DMA area (see **Table 10**, below). One DMA (#7) is associated with the truck docks at the EBMUD-portion of the warehouse, and is served by a mechanical filtration device located below the adjacent parking lot.



STORM WATER TREATMENT MEASURES SUMMARY (EBMUD)

DRAINAGE MANAGEMENT AREAS (DMA)	TOTAL AREA (SF)	PERVIOUS (L.S. AREA) (SF)	TOTAL IMPERVIOUS AREA (SF)	TREATMENT AREA REQUIRED	TREATMENT AREA PROVIDED	TREATMENT CONTROL MEASURES (MF)	PIPE STORAGE VOLUME CU./FT
#1	132,293	34,683	93,255	3,869 SF	4,355 SF	BIO-TREATEMENT	100%
#2	26,968	1,142	24,465	983 SF	1,361 SF	BIO-TREATEMENT	100%
#3	40,668	5,601	33,447	1,360 SF	1,620 SF	BIO-TREATEMENT	100%
#4	91,603	5,523	82,178	3,309 SF	3,902 SF	BIO-TREATEMENT	100%
#5	39,469	2,564	34,905	1,406 SF	2,000 SF	BIO-TREATEMENT	100%
#6	80,421	0	76,362	3,054 SF	3,680 SF	BIO-TREATEMENT	100%
#7	4,850	0	4,850	194 SF	0	MECHANICAL	100%
UT 11,682 SF							
Total	416,272	49,514	349,461	14,176 SF	16,918 SF		100%

AREA OF SUMMARY:

TOTAL SITE AREA:	721,182 SF
AREA A:	427,575 SF
TOTAL IMPERVIOUS AREA:	349,461 SF
UN-TREATED AREA:	11,682 SF
BIO-RETENTION AREA:	16,918 SF
LANDSCAPE AREA :	49,514 SF
AREA B:	293,607 SF
TOTAL IMPERVIOUS AREA:	248,297 SF
UN-TREATED AREA:	4,580 SF
BIO-RETENTION AREA:	13,035 SF
LANDSCAPE AREA :	27,695 SF

STORM WATER TREATMENT MEASURES SUMMARY (OFFICE BUILDING SITE)

DRAINAGE MANAGEMENT AREAS (DMA)	TOTAL AREA (SF)	PERVIOUS (L.S. AREA) (SF)	TOTAL IMPERVIOUS AREA (SF)	TREATMENT AREA REQUIRED	TREATMENT AREA PROVIDED	TREATMENT CONTROL MEASURES (MF)	PIPE STORAGE VOLUME CU./FT
#8	42,255	4,230	36,305	1,469 SF	1,720 SF	BIO-TREATEMENT	100%
#9	102,610	12,200	86,010	3,589 SF	4,400 SF	BIO-TREATEMENT	100%
#10	3,480	0	3,183	127 SF	150 SF	BIO-TREATEMENT	100%
#11	3,455	0	3,158	126 SF	150 SF	BIO-TREATEMENT	100%
#12	20,788	180	19,326	774 SF	1,280 SF	BIO-TREATEMENT	100%
#13	14,106	960	12,601	508 SF	545 SF	BIO-TREATEMENT	100%
#14	54,060	4,700	46,930	1,910 SF	2,128 SF	BIO-TREATEMENT	100%
#15	4,290	0	4,290	155 SF	420 SF	BIO-TREATEMENT	100%
#16	18,186	5,425	12,037	503 SF	725 SF	BIO-TREATEMENT	100%
#17	26,256	0	244,976	995 SF	1,380 SF	BIO-TREATEMENT	100%
UT 4,580 SF							
Total	289,486	27,695	248,297	10,057 SF	13,035 SF		100%

Figure 29
Development Area Preliminary Stormwater Drainage Management Plan

Source: Ware Malcomb, Sheet C6.0, December 2022

Table 10: Storm Water Treatment Measures Summary (sf)

DMAs	Total Area	Pervious (Landscape)	Untreated (existing driveways)	New Impervious	Treatment Area Required	Treatment Area Provided
EBMUD-Portion of Development Area (DMAs 1 through 7)	427,575	49,514	11,682	349,461	14,176	16,918
SupplyBank -Portion of Development Area (DMAs 8 through 17)	293,607	27,695	4,580	248,279	10,057	13,035
Total:	**721,182**	**77,209**	**16,262**	**597,758**	**24,233**	**29,953**
Percent of Site Cover:		**11%**	**2%**	**83%**		**4%**

Source: Ware Malcomb, Sheet C6.0: Conceptual Storm Water Control Plan, March 2019

Pursuant to SCA requirements, the City will review the designs for final hydraulic sizing of the various bio-retention facilities for post-construction water quality treatment prior to approval of grading and/or building permits to determine whether adequate BMPs will be installed, implemented and maintained.

Hydromodification

The proposed Development Area site gradually slopes to the south at an average slope of 0.5 percent. Existing runoff from the Development Area outflows into a seasonal detention pond, located just to the south of the Development area, and based on a preliminary hydrology analysis, runoff from the Development Area is calculated at a 100-year pre-developed peak (Q100) flow of 6.3 cubic feet per second (CFS). Based on a calculation of anticipated increased runoff attributed to the new impervious surfaces of the Project, these impervious surfaces are expected to generate a post-developed peak (Q100) flow of 40 CFS, or a net increase of 33.7 CFS.

The goal of the preliminary SWCP design is to maintain pre-developed outflow characteristics (i.e., 6.3 CFS) by temporarily detaining the increased storm runoff caused by the increased impervious surfaces of the proposed development, and releasing it at the pre-developed rate but for a longer duration. Per the preliminary SWCP, after water quality filtration in the bio-retention facilities and mechanical filtration, stormwater will flow via underdrains into additional media filters, which will then flow into one of two on-site underground stormwater storage facilities. These storage facilities consist of a series of large (24-inch and 30-inch) interconnected solid pipes that are buried below the on-site parking lots in the northerly and southerly portion of Parcel #1. The underground stormwater storage facilities are designed to provide approximately 47,680 CF of storage (19,480 CF and 28,170 CF, respectively), meeting the required hydro-modification standards of the MRP. The stormwater storage facilities will retain stormwater runoff from the site within these pipes until the stormwater flows in the surrounding storm drain system recede, at which point the stormwater will be released from the storage pipes and into the storm drain system, which drains to the Bay.

Pursuant to SCA requirements, the City will review the designs for final storage requirements of the stormwater storage facilities prior to approval of grading and/or building permit, to determine whether these facilities are adequate for the Project.

Consistent with the conclusions of the CASP EIR, the Project's impacts related to post-construction stormwater quality and increased storm water flows will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.

Groundwater

CASP EIR Conclusions [92]

The CASP EIR (Impact Hydro-6) found that future development pursuant to the CASP would not adversely affect the availability of groundwater supplies or interfere substantially with groundwater recharge.

The entire CASP planning area is underlain by the East Bay Plain groundwater basin, and the San Francisco RWQCB has identified groundwater supplies in this basin for municipal, industrial and agricultural water supply. Impacts to this aquifer would occur if development pursuant to the CASP resulted in reduced recharge to the aquifer, or increased extraction from the aquifer.

The CASP EIR determined that the amount of water that is able to infiltrate to the aquifer through pervious areas would not substantially decrease because of new development. The CASP planning area is already largely developed and substantially covered with impervious surfaces. Compliance with the C.3 provisions of the NPDES Municipal Stormwater Permit of the Alameda County Clean Water Program (ACCWP) would require that recharge rates at each individual project site be equivalent to the recharge rate at that site prior to development. Potable water is supplied to the Project Area through imported surface water by EBMUD. Therefore, the existing and potential use of groundwater for adoption and development under the CASP would not increase. Consequently, the CASP EIR concluded that impacts to groundwater would be less than significant.

Project Analysis

During the geotechnical investigations conducted for the Project (Terracon, June 2018), groundwater was observed in soil borings at depths varying from 3 to 21.5 feet below ground surface. Groundwater level fluctuations occur due to seasonal variations in the amount of tidal fluctuations, rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structures may be higher or lower than the levels indicated.

The groundwater table could affect over-excavation efforts, especially for over-excavation and replacement of lower strength soils. A temporary dewatering system consisting of sumps with pumps will likely be necessary to achieve the recommended depth of over-excavation for required excavations. Dewatering should be anticipated and planned for in proposed excavations.

<u>Regulatory Requirements</u>

Depending on the volume and pollutant loads of non-stormwater discharges associated with construction dewatering, different regulatory requirements apply.

Pursuant to **SCA Hydro-1: State Construction General Permit**, the Project applicant will be required to comply with all regulations and requirements of a Construction General Permit issued by the SWRCB. Authorized non-stormwater may be discharged to a storm drain pursuant to a Construction General Permit. A permit from the City (as the local sewer agency) must be obtained prior to such discharge. This approach is generally appropriate for water that contains some sediment and/or pollutants, but sediment may require pre-treatment and acceptable pollutants and pollutant levels as defined by the City. The latest 2022 General Construction Permit requirements include sampling within the first hour of discharge, and daily sampling thereafter for continuous dewatering discharges. The samples are tested for pH and turbidity and the results compared with the numeric

[92] City of Oakland, CASP Draft EIR page 4.8-33

action levels. Depending on water quality, non-stormwater may require off-site hauling for treatment by a licensed commercial contractor who can remove, transport and dispose (or treat and recycle) polluted water. [93]

If dewatering is not permitted (e.g., cannot meet the numeric action levels for pH or turbidity) pursuant to the Construction General Permit, then a statewide low-threat discharge Waste Discharge Requirements (WDR) permit or a site-specific NPDES permit may be required. A statewide low-threat discharge Waste Discharge Requirements (WDR) permit generally provides for accumulated non-stormwater to be retained and managed on the construction site via evaporation, infiltration or used on-site for dust control, irrigation or other construction-related purposes. This approach is generally appropriate for water that is free of pollutants, other than sediment. [94] For those dewatering activities that cannot obtain permission to discharge to the local sanitary sewer and where the discharge cannot be regulated under the Construction General Permit or the statewide low-threat discharge WDRs, site-specific NPDES Dewatering Permits may be sought from the RWQCB.

Consistent with the conclusions of the CASP EIR, the Project's impacts to groundwater will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.

Waste Discharge Requirements

Project Analysis

The Project (as redefined as the Least Environmentally Damaging Practicable Alternative – see discussion of Waters of the State in the Biology section of this Checklist) would result in the fill of 0.371 acres of potential Waters of the State (multiple segments of a roadside ditch between the Project site and Oakport Street), including segments with potential seasonal wetland indicators.

The Regional Water Quality Control Board (RWQCB) has authority to regulate the discharge of dredged or fill material under section 401 of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act (Porter-Cologne). When a discharge (or fill) is proposed to waters outside of federal jurisdiction, the Water Board regulates this discharge under Porter-Cologne through the issuance of Waste Discharge Requirement (WDR) permits. The Project applicant has applied for issuance of Waste Discharge Requirements (WDRs) for the Project as the appropriate fill permitting tool because the on-site features affected by the Project are outside of federal jurisdiction. Restoration elements and requirements for impacts to upland waters of the state require compensatory mitigation. The Project proposes to provide compensate for these Project-related effects by creating 1.01 acres of new Waters of the State in the form of new seasonal wetlands. By applying to the RWQCB for a permit for Waste Discharge Requirements, the Project will not violate any water quality standards or waste discharge requirements. See further discussion of this topic in the Biology section of this CEQA Checklist under the topic of Wetlands and Waters of the State.

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93 The 2022 Construction General Permit requires dischargers to implement BMPs to control the volume and velocity of dewatering discharges (per Section II.G of the Order). Dischargers are required to minimize the discharge of pollutants from dewatering trenches and excavations through the implementation of BMPs. The General Permit does not cover the discharge from some dewatering activities (e.g. contaminated groundwater and/or extraction wells) and the discharger is required to obtain coverage under an applicable Regional Water Board low threat or deminimus permit or other applicable order prior to discharge. Discharges are prohibited unless managed by appropriate controls.

94 The Categories of Low Threat Discharges are found in the State Water Resources Control Board's Water Quality Order No. 2003-003-DWR, Statewide General Waste Discharge Requirements (WDRs) For Discharges to Land With A Low Threat To Water Quality (General WDRS), and include small /temporary dewatering projects (such as excavations during construction) that discharge to land with a low threat to water quality and are low volume discharges with minimal pollutant concentrations

Conflict with Water Quality or Groundwater Management Plan

CASP EIR Conclusions

The CASP EIR did not directly address the current CEQA threshold of whether the CASP would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

As cited in the Groundwater section of this CEQA Checklist (above), the CASP EIR did identify that the entire CASP planning area is underlain by the East Bay Plain groundwater basin, and that the San Francisco RWQCB has identified groundwater supplies in this basin for municipal, industrial and agricultural water supply. Impacts to this aquifer would occur if development pursuant to the CASP resulted in reduced recharge to the aquifer, or increased extraction from the aquifer. The CASP EIR determined that new development would not significantly reduced recharge to the aquifer or significantly increase extraction from the aquifer.

The CASP EIR also cited the San Francisco Bay Basin Water Quality Control Plan (Basin Plan) for San Francisco Bay (RWQCB, 2011) as the basis of water quality regulation in the region and providing a description of beneficial uses of major surface waters and their tributaries. The CASP EIR also cited the Municipal Regional Stormwater Permit (MRP) issued under the National Pollutant Discharge Elimination System (NPDES) as containing the regulatory requirements for stormwater discharges meeting NPDES standards. The CASP EIR determined that, with compliance with NPDES requirements, new development would not significantly increase the level of contamination or siltation in stormwater flows.

The CASP EIR also cited the San Francisco Bay Conservation and Development Commission's (BCDC's) Bay Plan as providing limits and controls on the amount of fill placed in the Bay. BCDC permits are required prior to undertaking most work in the Bay or within 100 feet of the shoreline, including filling, dredging, shoreline development and other work. The CASP EIR concluded that prior to new development within 100 feet of the San Leandro Bay shoreline the project applicants for those projects must apply for and obtain necessary BCDC permits.

Accordingly, the CASP IER did not identify any conflicts with or obstructions of a water quality control plan or sustainable groundwater management plan.

Project Analysis

As indicated in the above sections of this CEQA Checklist, the Project will not significantly reduce recharge to the aquifer or significantly increase extraction from the aquifer. The Project must comply with NPDES requirements of the MRP related to contamination or siltation in stormwater flows. The Project is also required to obtain a BCDC permit for development within 100 feet of the San Leandro Bay shoreline. Consistent with the conclusions of the CASP EIR, the Project's impacts related to conflicts with or obstructions of a water quality control plan or sustainable groundwater management plan will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.

CEQA Conclusion Pertaining to Hydrology and Water Quality

The analysis presented above examines whether there are any Project-specific significant effects related to hydrology or water quality that are peculiar to the Project or its site, finding none. The Project would have no impacts related to hydrology or water quality that were not previously analyzed in the CASP EIR, would have no off-site or cumulative impacts related to hydrology or water quality not discussed in the prior CASP EIR, and would not result in any hydrology or water quality impacts that are more severe than as discussed in the prior CASP EIR. There are no impacts related to hydrology or water quality that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as pertains to hydrology or water quality. The hydrology and water quality analysis presented above does provide additional details regarding hydrology conditions specific to the Project site, and the Project provides additional detailed information as to how it intends to best address these conditions specific to the site. These additional details are new information pertinent to the Project that were not available or practical at the time of certification of the CASP EIR. However, as described above, these new details do not introduce any new significant impacts pertaining to hydrology or water quality that were not previously identified in the CASP EIR, and do not substantially increase the severity of any significant hydrology or water quality impacts as previously disclosed in the CASP EIR. The detailed recommendations for the Project are fully consistent with the Standard Conditions of Approval as cited in the CASP EIR. These new details that are specific to the Project and its site are appropriately disclosed in this Addendum to the CASP EIR.

Non-CEQA Analysis - Sea Level Rise

CASP EIR Conclusions [95]

The CASP EIR (Impact Hydro-5) found that future development pursuant to the CASP could be susceptible to inundation, storm events and storm events with wind waves in the event of sea level rise.

The CASP EIR relied on the 2008 Bay Conservation and Development Commission's (BCDC's) Adapting to Rising Tides (ART) Project, which assessed existing conditions, vulnerability and risk. Based on the 16" and 55" sea level rise with storm events and wind wave scenarios, portions of the CASP planning area (including the Project site) were within the maximum estimated sea level rise area. Adaptation strategies were found to be capable of reducing vulnerability to sea level rise and storm impacts, but implementation of these strategies were found to require the involvement of regional, state and federal partners, as well as residents and businesses in the community. The CASP EIR found that sea level rise is both a local and a regional issue, and must be addressed in that context. [96]

Standard Conditions of Approval

The CASP EIR found that the City's SCAs requires compliance with applicable requirements of regulatory agencies, including BCDC. Future development within those portions of the CASP planning area that are located within 100 feet of the Estuary's high tide requires approval from BCDC. In accordance with BCDC's Bay Plan, BCDC may require a risk assessment and appropriate adaptation measures for those projects at risk from sea level rise. The CASP EIR determined that compliance with SCA Hydro-5 would reduce potential impact of sea level rise for those portions of the CASP planning area that are within BCDC's jurisdiction.

The CASP EIR concluded that safety measures built into the General Plan Safety Element, SCAs related to construction within 100-year flood zones, and adaptive management measures to address sea level rise would reduce potential impacts of sea level rise to less than significant levels. The CASP EIR also included additional

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95 City of Oakland CASP Draft EIR, page 4.8-31. The CASP EIR determined that the impact of flooding related to sea level rise pertains to the impact of an existing/future, environmental condition on the Project Area, whereas CEQA only requires an analysis of impacts pertaining to a project's impact on the environment. The impact of future growth as related to the CASP's GHG emissions (the cause of sea level rise) was analyzed in Section 4.6 of the CASP EIR. Per CEQA, the CASP EIR was not required to analyze or mitigate impacts pertaining to the impact of the environment on the Project. Although not legally required by CEQA, the CASP EIR nevertheless discussed\s the impact of sea level rise on the CASP planning area in the interest of being conservative and providing information to the public and decision-makers.

96 City of Oakland CASP Draft EIR, pages 4.8-31

recommendations to provide an adaptive approach to addressing a 16-inch sea level rise above current Base Flood Elevation (BFE) for mid-term (2050) planning and design.

Project Analysis

Current science-based projections of global sea level rise over the next century vary widely. The State of California provides updated planning guidance for assessing and adapting to the impacts of sea level rise. In 2018, the California Ocean Protection Council (Cal OPC) released updated State guidance on sea level rise projections. This latest guidance adopted a probabilistic approach, and produced estimates of the likely range of global sea level rise under different GHG emission scenarios. To be precautionary in safeguarding the people and resources of California, and inform the development of sufficient adaptation pathways and contingency plans, the 2018 Cal OPC report provides a range of projections based on low, medium-high, and extreme levels of risk aversion. BCDC's most recent sea level rise guidance (BCDC 2021) considers Cal OPC's 2018 projections to be the best estimates of future sea level rise.

Based on the 2018 OPC guidance, the San Francisco Bay is expected to experience 1.1 feet (or 13 inches) of sea level rise by year 2050 under the low risk aversion projection, or up to 1.9 feet (or nearly 23 inches) of rise under the medium-high risk aversion projection. By 2070, this increases to 1.9 feet (or nearly 23 inches) of sea level rise under the low risk aversion projection, and 3.5 feet (or 42 inches) under the medium-high risk aversion projection. The projections for year 2100 sea level rise are 3.4 feet (21 inches) under the low risk aversion projection, and 6.9 feet (nearly 83 inches) under the medium-high risk aversion projection. [97]

BCDC's online mapping tool uses a "One Map, Many Futures" approach to provide multiple map options, showing a single total water level (inundation) resulting from a combination of sea level rise, plus storm surges.[98] For example, **Figure 30** shows the total water level under both a Cal OPC year 2050 low risk scenario of 12-inches of sea level rise, and a 12-inch sea level rise plus 50-year storm surge scenario (or a total 48-inch water level). **Figure 31** shows the total water level under a Cal OPC year 2050 medium-high risk scenario of 24-inch sea level rise plus 100-year storm surge scenario (or a total 66-inch water level), and a more severe condition with a 24-inch sea level rise plus 100-year storm surge scenario (or a total 77-inch water level). These figures demonstrate that the majority of the Development Area remains outside of the inundation area from sea level rise and storm surge flooding for most scenarios, as it is protected by the existing levee along the westerly portion of the site. However, under higher total water level scenarios, sea level rise begins to overtop the shoreline levee, and the site become susceptible to inundation from rising lea level that flows around the outside of the levee from the east.

To protect the site from future sea level rise scenarios, the Project includes two adaptation strategies. First, the project proposes to construct a new 4-foot retaining wall on the landward side of the existing levee to support the levee structure (see prior Figure 19). Second, the Project proposes to raise the elevation of the entire Development Area by 4 to 6 feet over existing grade by importing new fill material. The imported fill would raise the Development Area out of the inundation area from sea level rise as high as the Cal OPC year 2070 medium-high risk aversion scenario (or 42 inches of sea level rise).

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[97] California Ocean Protection Council, *State of California Sea-Level Rise Guidance*, 2018 Update, Table 1

[98] BCDC, Flood Explorer accessed at: https://explorer.adaptingtorisingtides.org/explorer, August 1, 2022

12-Inch Total Water Level (12” SLR, No Storm Surge)

48-Inch Total Water Level (12” SLR, 50-Year Storm Surge)

Figure 30
Year 2050 Low Risk Sea Level Rise Scenarios

Source: BCDC at: https://explorer.adaptingtorisingtides.org/explorer

24-Inch Total Water Level (24” SLR, No Storm Surge)

77-Inch Total Water Level (36” SLR, 100-Year Storm Surge)

Figure 31
Year 2050 Medium and Higher Risk Sea Level Rise Scenarios

Source: BCDC at: https://explorer.adaptingtorisingtides.org/explorer

<u>Applicable Standard Conditions of Approval</u>

The following mitigation measures and recommendations are cited in the CASP EIR as an effective means for addressing sea level rise, and would apply to the Project.

- ***CASP EIR MM Land Use-8A, Bay Conservation and Development Commission (BCDC) Approval***: Prior to implementation of the proposed Damon Slough enhancements, the Elmhurst Creek realignment, new development within 100 feet of the San Leandro Bay shoreline, and the proposed Bay Cut (and potentially other project elements found to be within BCDC jurisdiction), the project applicants for those projects shall apply for and obtain through an application review process (which may include additional public hearings and review boards) issuance of necessary BCDC permits.
- ***CASP EIR Recommendation Hydro-5***: The following additional recommendations are suggested to provide an adaptive approach to addressing a 16-inch sea level rise above current Base Flood Elevation (BFE) for mid-term (2050) planning and design:
  1. Design gravity-based storm drain systems for 16 inches of sea level rise
  2. Design and construct habitable space above at-grade parking structures to allow sea level rise to affect uninhabited parking structures rather than dwelling units
  3. Design buildings to withstand periodic inundation
  4. Prohibit below grade habitable space in inundation zones
  5. Require that all critical infrastructure sensitive to inundation be located above the SLR base flood elevation
  6. Consider means for implementing an adaptive management strategy to protect against long-term sea level rise of as much as 55", potentially including constructing levees or seawalls and providing space for future storm water lift stations near outfall structures into the Bay and Estuary

The Project's design is consistent with the following elements of the CASP EIR's Recommendation Hydro-5:

- The Project's adaptive approach addresses a greater sea level rise scenario than the 16-inch sea level rise scenario for mid-term (2050) planning and design, as identified in the CASP EIR
- The Project's storm drain system is designed to function via gravity, even considering a greater than 16-inch sea level rise scenario
- The Project's buildings are designed to be above anticipated periodic inundation levels with sea level rise
- No below-grade habitable space is proposed
- All critical infrastructure sensitive to inundation would be located above the Cal OPC year 2050 medium-high risk scenario of 24-inches of sea level rise
- The Project includes implementation of adaptive management strategies to protect against long-term sea level rise of as much as 55" by shoring the existing levee with a landward-side retaining wall, and raising the elevation of the entire Development Area portion of the Project site by 4 to 6 feet over existing grade.

Consistent with the findings of the CASP EIR, with implementation of the Project's sea level rise adaptation strategies and confirmation of these strategies through the CDC permit process, the effects of sea level rise on the Project (although not a CEQA threshold concern) would be substantially reduced.

Land Use and Planning

Would the Project:	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	Relationship to CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Standards and Requirements	Project Conclusions: Resulting Level of Significance
a) Physically divide an established community?	LTS	■	☐	-	No Impact
b) Result in a fundamental conflict between adjacent or nearby land uses?	LTS with SCAs	■	☐	SCA Noise-3: Operational Noise SCA Haz-3: Hazardous Materials Business Plan	LTs with SCAs
c) Cause a significant environmental impact due to a conflict with the Port of Oakland LUDC?	LTS	■	☐	-	No Impact
d) Cause a significant environmental impact due to a conflict with the Oakland Airport ALUCP?	LTS with MM	■	☐	CASP EIR Mitigation Measure Land-7B Avigation Easement / Disclosure	LTS with MM
e) Cause a significant environmental impact due to a conflict with the BCDC San Francisco Bay Plan and Seaport Plan?	LTS	■	☐	SCA General-1, Regulatory Permits and Authorizations from Other Agencies CASP EIR MM Land-8A, BCDC Issuance of Major Permit(s)	LTS with SCA
f) Cause a significant environmental impact due to a conflict Tidelands Trust?	LTS	■	☐	-	No Impact
g) Cause a significant environmental impact due to a conflict with a Habitat Conservation Plan or Natural Community Conservation Plan?	No Impact	■	☐	-	No Impact

Physically Divide an Established Community

CASP EIR Conclusions [99]

The CASP EIR (Impact Land-1) found that implementation of the CASP would not physically divide an established community. Other than portions of the Coliseum District, the remaining portions of CASP planning area are not adjacent to residential neighborhoods, and new development in these Sub-Areas would not have the effect of

[99] City of Oakland, CASP Draft EIR, beginning at page 4.9-30

dividing established communities. CASP buildout was not found to interfere with access to or across the Airport Business Park and surrounding areas, but instead would provide an improved circulation network, having a positive effect on access and interconnections to the surrounding area.

Project Analysis

The Project site is located between the I-880 freeway and San Leandro Bay to the east and west, and between East Creek and Damien Slough/ the Zhone Way interchange to the north and south. The Project site is not located within an established community, and the Project would not divide any such community. Consistent with the conclusions of the CASP EIR, the Project would have no impact related to a physical division of an established community.

Fundamental Conflict with Nearby Land Use

CASP EIR Conclusions [100]

The CASP EIR (Impact Land-2) found that implementation of the CASP would introduce new residential and other sensitive land uses at locations that could be exposed to noise, emissions and other potential land use incompatibilities associated with adjacent industrial and special event land uses. However, implementation of performance measures included in the City's General Plan, the City's Noise Ordinance, the Coliseum Area Specific Plan itself, as well as mitigation measures and recommendations in the CASP EIR pertaining to air quality and noise, would minimize such land use incompatibilities such that no fundamental conflict between adjacent or nearby land uses would occur. The CASP EIR found no SCAs that specifically apply to land use conflicts, but because land use conflicts may occur from exposure of sensitive land sues to air quality, noise and hazardous materials from adjacent land uses, SCA's pursuant to those topics would serve to reduce land use incompatibilities to a less than significant level.

Project Analysis

The Project's proposed office, warehouse and light industrial land uses are not considered sensitive land uses or the types of land uses that might fundamentally conflict with the nearby light industrial uses at the EBMUD WWF or at the Airport Business Park. The Project does not represent a fundamental land use conflict with the nearly adjacent Damon Marsh, which is separated from the Project site by a raised rail track berm and the Bay Trail. The following SCAs that pertain to operational noise and hazardous materials would also serve to further reduce any less than significant land use conflict associated with the Project:

- **SCA Haz-3, Hazardous Materials Business Plan** (see the Hazards section of this Checklist)
- **SCA Noise-6, Operational Noise** (see the Noise section of this Checklist)

Consistent with the conclusions of the CASP EIR, the Project would have a less than significant impact related to fundamental land use conflicts with implementation of applicable SCAs.

[100] City of Oakland, CASP Draft EIR, beginning at page 4.9-32

Conflict with Land Use Plan and Policy – Port of Oakland LUDC

CASP EIR Conclusions [101]

The CASP EIR noted that the CASP planning area included the Oakland Airport Business Park, which is under separate land use jurisdiction of the Port of Oakland. Development in this area must be consistent with the land use designations of the City of Oakland General Plan, but then must adhere to the development regulations of the Port as defined in the Port's Airport Business Park Land Use and Development Code (LUDC). New development in this area must receive development permit approval from the Port.

The CASP EIR (Impact Land-7) found that future development of a proposed new Arena and development of a mixed-use residential and retail site along the waterfront pursuant to the CASP would fundamentally conflict with the Port of Oakland's LUDC. Without resolution, this conflict could preclude development of portions of the proposed CASP. Ultimately, the Port did not take any of the actions identified in the CASP EIR to resolve land use inconsistencies between the CASP and the Port's LUDC. The Port retained land use authority over the Airport Business Park, the CASP-proposed new Arena and waterfront residential mixed-use developments were found to directly conflict with the LUDC, and those elements of the CASP could not, and did not move forward.

Project Analysis

The SupplyBank.org Project site is not within the Port's Airport Business Park, is not subject to development regulations of the Port's Airport Business Park LUDC, and does not require approval of a development permit from the Port. The Project poses no inconsistencies with land use plans and policies of the Port of Oakland or its LUDC, and has no impact related to conflicts with land use plans and policies of the Port of Oakland.

Conflict with Land Use Plans and Policy – Oakland Airport ALUCP

CASP EIR Conclusions [102]

The CASP EIR noted that nearly the entire CASP planning area was within the Oakland International Airport Influence Area (AIA), and that the Alameda County Airport Land Use Commission relies on the Oakland International Airport Land Use Compatibility Plan (ALUCP) to promote compatibility between the Oakland International Airport and surrounding land uses.

The CASP EIR (Impact Land-7) found that future development pursuant to the CASP would be consistent with the noise and land use criteria of the ALUCP, but would conflict with the height limit criteria for airspace protection.

Noise Compatibility

The CASP EIR cited the ALUCP's established noise compatibility criteria to safeguard against development of noise-sensitive land uses in locations exposed to significant levels of aircraft noise. The noise contours depicted in the ALUCP are generally confined to the areas adjacent to runways and in the direct path of landing and departing aircraft, and do not extend onto the CASP planning area do not apply to the CASP.

Land Use

The CASP EIR cited the ALUCP's seven safety zones, finding that only Zones 6 and 7 apply to the CASP planning area. Zone 6: Traffic Pattern Zone, occurs only within portions of Sub-Areas C and D primarily along Hegenberger Road; and Zone 7: Other Airport Environs applies to the rest of the CASP planning area (with exceptions of

[101] City of Oakland, CASP Draft EIR page 4.9-52

[102] City of Oakland, CASP Draft EIR page 4.9-55

certain properties outside of the AIA and not subject to the criteria of the ALUCP). Other than the proposed new special event venues, the CASP EIR found that all proposed land uses pursuant to the CASP (including but not limited to office buildings, retail, mixed use, hotels, residential and green space) were compatible land uses within Safety Zones 6 and 7, generally acceptable with no land use limitations.

Aviation Easement

The CASP EIR found that the entire portion of the CASP planning area westerly of San Leandro Street is within the ALUCP's Airport Aviation Easement Zone, which mandates that sellers or leasers of real property disclose that their property is situated within the AIA (also established as Mitigation Measure Land-8B).

Airspace Protection

The CASP EIR cited the ALUCP's airspace protection criteria, which are intended to reduce the risk of harm to people and property resulting from an aircraft accident. Tall structures, trees, other objects, or high terrain on or near airports, may constitute hazards to aircraft. Federal Aviation Regulations Part 77 (FAA Part 77) allows the FAA to identify potential aeronautical hazards, thus preventing or minimizing adverse impacts to safe and efficient use of navigable airspace, and FAA Part 77 provides guidance for the height of objects that may affect normal aviation operations, established as a set of imaginary surfaces around the airport. The CASP EIR found that the majority of the CASP planning area falls within the Horizontal Surface Plane established by the ALUCP at an elevation of 159.3 feet above mean sea level. Sub-Area E (which includes the Project site) is outside of the Horizontal Surface Plane, and building heights are based on a 20:1 slope from the runway, generally exceeding 159 feet above mean sea level at Sub-Area E.

The CASP EIR did find that certain proposed structures pursuant to the CASP, particularly at the Coliseum District, would be so tall as to exceed the FAA Part 77 Horizontal Surface Plane. Implementation of CASP EIR Mitigation Measure Land-8A would restrict the approval of such buildings to a height no taller than as recommended by the FAA to ensure no hazards to air navigation and/or no modifications to flight operations at Oakland International Airport.

Project Analysis

Based on information presented in the CASP EIR, the Project site would be consistent with the noise, land use and height limit criteria of the ALUCP.

- The Project site is well outside of the ALUCP's established Noise Contours and not subject to airport-related noise exceeding 60 dBA CNEL.
- The Project site is located within the ALUCP's Safety Zone 7, where Project land uses are considered acceptable with no land use limitations.
- The Project has a maximum building height of 85 feet (at the proposed Office), which is well within the FAA Part 77 Horizontal Surface Plane at this site.

<u>Applicable Mitigation Measures</u>

The Project site is within the ALUCP's Airport Aviation Easement Zone. The following CASP EIR mitigation measure is therefore applicable to the Project:

- ***CASP EIR MM Land-7B, Avigation Easement / Disclosure***: Sellers or leasers of real property located within the Oakland Airport Influence Area shall disclose within an aviation easement included as part of all real estate transactions within the AIA that their property is situated within the AIA, and may be subject to some of the annoyances or inconveniences associated with proximity to airport operations.

Consistent with the conclusions of the CASP EIR, the Project's effects related to consistency with the ALUCP will be fully addressed through implementation of Mitigation Measure Land-7B and AUCP policy, and this impact would be reduced to less than significant.

Consistency with Land Use Plans and Policies – BCDC San Francisco Bay Plan and Seaport Plan

CASP EIR Conclusions [103]

The CASP EIR (Impact Land-8) found that new development pursuant to the CASP would not fundamentally conflict with BCDC's Bay Plan or Sea Port Plan.

The CASP EIR recognized that portions of the CASP planning are fall under the regulatory jurisdiction of the Bay Conservation and Development Commission (BCDC), which administers its jurisdiction through implementation of the San Francisco Bay Plan (Bay Plan) and Seaport Plan. Proposed development with the 100-foot shoreline band and within 100 feet of waterways that are subject to tidal action (e.g., East Creek, Damon Slough, Elmhurst Creek, and San Leandro Creek) are under the jurisdiction BCDC and the San Francisco Bay Plan. BCDC is authorized to control both Bay fill and dredging, and Bay-related shoreline development. BCDC is empowered to grant or deny permits for development within its jurisdiction.

New development within 100 feet of the San Leandro Bay shoreline require issuance of a BCDC permit. The City of Oakland's CEQA process (as lead agency) must be complete prior to BCDC consideration of, or granting of a BCDC permit. To clarify these obligations and requirements, as well as other Bay Plan policy consistencies, the CASP EIR recommended Mitigation Measure Land-8A: BCDC Issuance of Major Permit(s), which clarified the obligations and requirements of subsequent development project within the CASP planning area to comply with the policy requirements of BCDC's Bay Plan and Sea Port Plan. With required compliance, the CASP EIR concluded that new development pursuant to the CASP would not fundamentally conflict with BCDC's Bay Plan or Sea Port Plan, thereby reducing potential conflicts to a less than significant level.

Project Analysis

As shown on **Figure 32**, a portion of the Project site is located within the 100-foot shoreline band along San Leandro Bay and East Creek, and therefore under the jurisdiction BCDC and the San Francisco Bay Plan.

BCDC's limited shoreline jurisdiction as provided by the McAteer-Petris Act is necessary to reduce pressures for Bay filling that would result from poor use of available shoreline land, and to assure that public access to the Bay is provided wherever feasible. Pursuant to the Bay Plan, the Commission has permit authority for Bay fill and shoreline development, and BCDC uses the Bay Plan to help guide its regulatory decisions on permit applications, consistency determinations, and related matters. Bay fill (including placement of piers, pilings, and floating structures moored in the Bay) and dredging are controlled through BCDC's permit system. The Commission is empowered to grant or deny permits for all Bay fill or dredging, and any person or governmental agency wishing to place fill or to dredge in the Bay is required to obtain a permit before proceeding. Any public agency or private owner holding shoreline lands is required to obtain a permit from the Commission before proceeding with development. Generally, development permits may be granted or denied only after public hearings, and after the process for review and entitlement by the applicable city or county has been completed. The Commission may approve a permit for shoreline development if it specifically determines that the proposed project is in accordance with standards for use of the shoreline, provides for maximum feasible public access consistent with the project, and accounts for advisory review related to appearance (the Design Review Board).

[103] City of Oakland, CASP Draft EIR, page 4.9-63

Figure 32
Approximate BCDC Jurisdiction (100-Foot Shoreine Band)

Source: BCDC Bay Shoreline Flood Explorer, acessed at: https://explorer.adaptingtorisingtides.org/explorer

The Project does not involve any proposed Bay fill or dredging, but does include new development within the shoreline band. Accordingly, the Project is subject to Bay Plan policy and permits pertaining to major development, as stipulated in BCDC regulations and CASP EIR Mitigation Measure Land-8, below.

Applicable SCAs and Mitigation Measures

The following City of Oakland SCA and CASP EIR mitigation measure clarifies the Project's obligation and requirements to comply with applicable policies and regulations of BCDC as applies to the Project:

- ***SCA General-1, Regulatory Permits and Authorizations from Other Agencies***: The project applicant shall obtain all necessary regulatory permits and authorizations from applicable resource/regulatory agencies. These agencies include, but are not limited to the Regional Water Quality Control Board, Bay Area Air Quality Management District, Bay Conservation and Development Commission, California Department of Fish and Wildlife, U. S. Fish and Wildlife Service, and Army Corps of Engineers. Project applicants shall comply with all requirements and conditions of the permits/authorizations. The project applicant shall submit evidence of the approved permits/authorizations to the City, along with evidence demonstrating compliance with any regulatory permit/authorization conditions of approval.
- ***CASP EIR MM Land-8A, BCDC Issuance of Major Permit(s)***. Prior to implementation of new development within 100 feet of the San Leandro Bay shoreline (and potentially other project elements found to be within BCDC jurisdiction), the project applicants for those projects shall apply for and obtain through an application review process (which may include additional public hearings and review boards) issuance of necessary BCDC permits.

Consistent with the conclusions of the CASP EIR, the Project must comply with the policy requirements of BCDC, such that it would not fundamentally conflict with BCDC's Bay Plan, thereby reducing such potential conflicts to a less than significant level.

The City of Oakland, as Lead Agency, is required to conduct its CEQA review and grant its local discretionary approvals before BCDC can act on a permit application. When considering any future development permit for the Project, BCDC will act as a Responsible Agency and will rely on this CEQA document for its subsequent jurisdictional decisions. Prior to reaching its own independent conclusions as to whether or how to issue a shoreline development permit, the Commission will consider the environmental effects of the Project as shown in this CEQA document, and may require mitigation for those direct or indirect environmental effects of those parts of the Project for which it has authority to address.

Plans and Policy Consistency – Tidelands Trust

CASP EIR Conclusions [104]

The CASP EIR (Impact Land-9) found that future development pursuant to the CASP may occur on lands granted to the Port of Oakland and subject to public trust. Development of residential or commercial office uses on lads subject to the public trust would conflict with the Public Trust Doctrine, and such development would not be permitted. However, potential inconsistencies with the public trust doctrine can be removed through appropriate reallocation of the public trust resource.

[104] City of Oakland, CASP Draft EIR, page 4.9-68

Project Analysis

The Project site is owned by EBMUD, not the Port of Oakland, and the site is not subject to the public trust. The Project has no potential inconsistency with public trust requirements and this issue would not be an impact related to the Project.

Conservation Plan Conflict

CASP EIR Conclusions [105]

The CASP EIR (Impact Land-10) found that the CASP would not fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan. The CASP planning area was not found to be located within or in proximity to an area guided by a Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, adoption and development of the CASP would not conflict with such plans.

Project Analysis

As was concluded in the CASP EIR, the Project site (as part of the CASP planning area) is not within or in proximity to an area guided by a Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, the Project would not conflict with such plans.

CEQA Conclusions Pertaining to Land Use

The analysis presented above examines whether there are any Project-specific significant effects related to land use that are peculiar to the Project or its site, finding none. The Project would have no impacts related to land use that were not previously analyzed in the CASP EIR, would have no off-site or cumulative impacts related to land use not discussed in the prior CASP EIR, and would not result in any land use impacts that are more severe than as discussed in the prior CASP EIR. There are no impacts related to land use that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as pertains to land use. The land use analysis presented above does provide additional details regarding land use and land use policy specific to the Project site. These additional details are new information pertinent to the Project that were not available or practical at the time of certification of the CASP EIR. However, as described above, these new details do not introduce any new significant impacts pertaining to land use that were not previously identified in the CASP EIR, and do not substantially increase the severity of any significant land use impacts as previously disclosed in the CASP EIR. These new details that are specific to the Project and its site are appropriately disclosed in this Addendum to the CASP EIR.

[105] City of Oakland, CASP Draft EIR, page 4.9-72

Mineral Resources

Would the Project:	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	Relationship to CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Standards and Requirements	Project Conclusions: Resulting Level of Significance
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	No Impact	■	☐	-	No Impact
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No Impact	■	☐	-	No Impact

Loss of Important Mineral Resources

CASP EIR Conclusions

Impacts on mineral resources were not anticipated, and consequently not analyzed in the CASP EIR.[106]

As there are no known important mineral deposits or active mineral extraction operations identified by the California Department of Conservation at the Project site. Consistent with the findings of CASP EIR, the Project would not have an adverse effect on important mineral resources or result in the loss of availability of a locally important mineral resource recovery site.

CEQA Conclusions Pertaining to Mineral Resources

The analysis presented above examines whether there are any Project-specific significant effects related to mineral resources that are peculiar to the Project or its site, finding none. The Project would have no mineral resource impacts that were not previously analyzed in the CASP EIR, would have no off-site or cumulative mineral resource impacts not discussed in the prior CASP EIR, and would not result in any mineral resource impacts that are more severe than as discussed in the prior CASP EIR. There are no mineral resource-related impacts that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as related to mineral resources. Only minor technical additions related to the Project and its site have been identified, and these minor additions to the CASP EIR are appropriately disclosed in this Addendum to the CASP EIR.

[106] City of Oakland, CASP Draft EIR, page 2-2

Noise and Vibration

Would the Project:	CASP EIR Findings	CASP EIR Findings: Equal or Less Severe	CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Standards and Requirements	Project Conclusions: Resulting Level of Significance
a) Generate a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance?	LTS with SCAs	■	☐	SCA Noise-1, Construction Days/Hours SCA Noise-2, Construction Noise SCA Noise-3, Extreme Construction Noise SCA Noise-4, Public Notification Required SCA Noise-5, Construction Noise Complaints SCA General-2, Construction Management Plan, Including: Recommendation #1 Pursuant to the Construction Management Plan - Temporary Rerouting of the Bay Trail Recommendation #2 Pursuant to the Construction Management Plan – Schedule Coordination with City-Sponsored Use of Soccer Fields	LTS with SCAs
b) Generate a substantial permanent increase in operational ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	LTS with SCA	■	☐	SCA Noise-6, Operational Noise	LTS with SCA
c) Generate a substantial permanent increase in traffic noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	LTS	■	☐	-	No Impact
d) Generate excessive groundborne vibration or groundborne noise levels?	LTS	■	☐	-	LTS

e) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact	■	☐	-	No Impact

Temporary Construction Noise

CASP EIR Conclusions [107]

The CASP EIR (Impact Noise-1) concluded that future development pursuant to the CASP would include pile drilling and other extreme noise generating construction activities that would temporarily increase noise levels in the vicinity. In many instances, noise from construction would exceed the City's noise ordinance due to proximity of new buildings under construction to both existing and new noise-sensitive land uses. The CASP EIR determined that, with implementation of City of Oakland Standard Conditions of Approval, construction noise would not violate the City of Oakland Noise Ordinance or the City of Oakland nuisance standards regarding persistent construction-related noise. The City's SCAs address construction noise by requiring reasonable limits on construction hours, noise reduction program, and measures to track and respond to complaints. Through implementation of the City's SCAs, the CASP EIR found that construction noise would be less than significant.

Project Analysis

Regulatory Requirement

For purposes of analysis of potential construction-period noise impacts, the City of Oakland regulates noise through enforcement of its Noise Ordinance, which is found in Section 17.120 of the Oakland Municipal Code. The Noise Ordinance presents noise level standards that apply to temporary exposure to short-term (less than 10 days) and long-term (more than 10 day) construction noise, as shown in **Table 11**.

Table 11: Construction Noise Level Standards (dBA)

Receiving Land Use	Less Than 10 Days		More Than 10 Days	
	Weekdays 7 AM to 7 PM	Weekends 9 AM to 8 PM	Weekdays 7 AM to 7 PM	Weekends 9 AM to 8 PM
Residential	60	45	65	70
Commercial, Industrial	65	50	70	75

Note:
1. If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.
Source: OMC Section 17.120.050

[107] City of Oakland, CSP Draft EIR, page 4.10-19

Construction noise that would exceed the standards of the Noise Ordinance are considered potentially significant, except if an acoustical analysis is performed that identifies recommended measures to reduce potential impacts. The acoustical analysis must identify, at a minimum, the types of construction equipment expected to be used and the noise levels typically associated with the construction equipment, and surrounding land uses including any sensitive land uses (e.g., schools and childcare facilities, health care and nursing homes, public open space). If sensitive land uses are present, the acoustical analysis must recommend measures to reduce potential impacts.

Construction Equipment and Anticipated Noise Levels

Table 12, below, identifies the types of construction equipment that are likely to be used during construction of the Project. Typical noise levels from this equipment are expected to generate noise levels that range from between 74 to 101 dBA at 50 feet from the source. The loudest construction operations are expected to be pile driving/pile drilling activity, with steel sections driven through the on-site Bay Mud and liquefiable soils to a depth of 65 to 100 feet, as necessary to provide structural support for the Project's proposed Office, Warehouse and Workshop buildings.

Table 12: Reference Noise Levels of Anticipated Construction Equipment

Equipment	Typical Noise Level (dBA) 50 ft from Source
Air Compressor	81
Backhoe	80
Concrete Mixer	85
Crane, Derrick	88
Crane, Mobile	83
Dozer	85
Generator	81
Grader	85
Jack Hammer	88
Loader	85
Paver	89
Pneumatic Tool	85
Pump	76
Roller	74
Saw	76
Scraper	89
Truck	88
Pile Driver - Impact	101
Pile Driver - Sonic	96

Source: *Federal Transit Administration Transit Noise and Vibration Impact Assessment*, May 2006, FTA-VA-90-1003-06, (FTA 2006)

To estimate the sound levels at various receiving locations, the inverse square law can be used to determine sound pressure levels at a various distances. The inverse square law has been found to generally demonstrate that for each doubling of distance from a point source, the sound pressure level decreases by approximately 6 dB.[108] This approach assumes there are no reflective surfaces or barriers located between the noise source and the location at which the sound level is being determined, that would otherwise further attenuate sound. Based on the inverse square law, a conservative estimate of sound levels at various receiver sites can be determined, as indicated below.

- Pile driving/drilling for the proposed Office building would occur as close as approximately 50 feet from the nearest edge of Damon Marsh at the Bay Trail. At this distance, noise levels on this segment of the Bay Trail could be expected at between 96 and 101 dBA, substantially exceeding the sensitive land use standard of 65 dBA.
- Pile driving/drilling for the proposed Warehouse building would occur as close as approximately 350 feet from the nearest edge of the City of Oakland's improved soccer fields. At this distance, noise levels at this public open space could be expected at approximately 84 dBA, exceeding the sensitive land use standard of 65 dBA.
- Pile driving/drilling for the proposed Office building would occur at approximately 1,000 feet from the nearest building within the Oakland Airport Business Park. At this distance, noise levels at the nearest commercial/industrial receiver could be expected approximately 75 dBA, exceeding the commercial/industrial receiver standard of 70 dBA. However (as noted in the Noise Ordinance), if the ambient noise level exceeds the standard, the standard is adjusted to equal the ambient noise level. According to the 2004 Oakland General Plan Noise Element Update, the traffic noise levels on I-880 at the nearest location (at I-880/Hegenberger) was calculated to be 83 dBA Ldn at 150 feet from the freeway centerline (or approximately 80 dBA Ldn at this nearest building within the Oakland Airport Business Park).[109] Noise from pile driving/pile drilling activity would not be expected to exceed this existing ambient condition.
- The residential areas nearest to the Project site are at San Leandro Street/Seminary Avenue, Lion Creek Crossing at San Leandro Street/66th Avenue, and at San Leandro Street/53rd Avenue. Each of these residential areas are about 3,000 feet or more from the Project site (see prior Figure 16). At these distances, noise levels from pile driving/pile drilling activities at the Project site are calculated to be approximately 65 dBA or less, which is at or lower than the sensitive land use standard of 65 dBA. The Project's loudest construction noise would not be expected to exceed the existing ambient condition at these residential locations, particularly given their proximity of these residences to the I-880 freeway, overhead BART tracks and/or other traffic noise sources at these locations.

This analysis demonstrates that the loudest construction noise attributed to the Project would be unlikely to exceed applicable standards at sensitive residential receivers or at commercial/industrial receivers, but would exceed standards at the Damon Marsh open space and Bay Trail, and at the City's soccer field.

<u>Applicable Standard Conditions of Approval</u>

The Oakland Noise Ordinance provides that if an acoustical analysis does identify potentially significant construction noise levels, measures must be recommended to reduce potential impacts. The following City of

108 WKC Group, accessed at: https://www.wkcgroup.com/tools-room/inverse-square-law-sound-calculator/

109 City of Oakland, *Noise Element Update - Environmental Background Report*, prepared by Illingworth and Rodkin, Inc., December 2004, Table B2, page 33

Oakland SCAs are cited in the CASP EIR as effective measures for reducing the effects of construction noise, and are standard conditions of approval that would apply to the Project.

- ***SCA Noise-1, Construction Days/Hours***: 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. Criteria for City's evaluation include 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.

- ***SCA Noise-2, Construction Noise***: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:

  a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) wherever feasible.

  b) Except as provided herein, impact tools (e.g., jackhammers, 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.

- ***SCA Noise-3, Extreme Construction Noise***: 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. The Construction Noise Management Plan shall contain 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:
  - a) Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;
  - b) 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;
  - c) Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;
  - d) 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
  - e) Monitor the effectiveness of noise attenuation measures by taking noise measurements.
- ***SCA Noise-4, Public Notification Required***: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the construction activity that generates extreme noise, and shall describe noise attenuation measures to be implemented.
- ***SCA Noise-5, Construction Noise Complaints***: The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include:
  - a) Designation of an on-site construction complaint and enforcement manager for the project;
  - b) A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit;
  - c) Protocols for receiving, responding to, and tracking received complaints; and
  - d) Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.
- ***SCA General-2, Construction Management Plan***: Prior to the issuance of the first construction-related permit, the project applicant and his/her general contractor shall submit a Construction Management Plan (CMP) for review and approval by the Bureau of Planning and Bureau of Building. Other relevant City departments, such as the Fire Department, Department of Transportation and the Public Works Department shall also review and approve the CMP, as directed.
  - a) The CMP shall contain measures to minimize potential construction impacts, including measures to comply with all construction-related Conditions of Approval (and mitigation measures if applicable) such as dust control, construction emissions, hazardous materials, construction days/hours, construction traffic control, waste reduction and recycling, stormwater pollution prevention, noise control, complaint management, and cultural resource management (see applicable Conditions below).

b) The CMP shall provide project-specific information including descriptive procedures, approval documentation, and drawings (such as a site logistics plan, fire safety plan, construction phasing plan, proposed truck routes, traffic control plan, complaint management plan, construction worker parking plan, and litter/debris clean-up plan). This information shall specify how potential construction impacts will be minimized, and how each construction-related requirement will be satisfied throughout construction of the project.

These SCAs provide effective noise attenuation from excessive noise for surrounding residential, commercial and industrial land uses. SCA Noise-1 limits the days and hours of operation, in particular limited the days that extreme noise generating activities greater than 90 dBA are allowed. SCA Noise-2 includes a list of standard noise reduction measures required of all construction projects that have been found to be practical and feasible for most all situations. SCA Noise-3 addresses the noisiest activities that would occur on-site, and provides a framework for mitigating such noises (e.g., pile driving). SCA Noise-4 and -5 outline the procedures by which contractors shall notify neighboring properties and addressing noise complaints so they can respond quickly to minimize adverse community response. These SCAs are comprehensive in their content, and for practical purposes represent all feasible measures available to mitigate construction noise.

However, noise from pile driving/pile drilling activities at the Bay Trail between the Project site and Damon Marsh (at a maximum of 94 to 100 dBA), and at the City's soccer fields along San Leandro Bay (at a maximum of 84 dBA), would remain significant. According to the Oakland General Plan Noise-Land Use Compatibility Matrix, noise levels in excess of 80 dBA are considered "clearly unacceptable". No on-site measures can effectively reduce pile driving/pile drilling noise levels to acceptable levels at these adjacent locations.

To address the excessive noise levels at these locations during the pile driving/pile drilling activities, and pursuant to **SCA General-2, Construction Management Plan**, the following additional off-site measures are recommended for the lead agency's consideration of Project approvals:

- ***Recommendation #1 Pursuant to the Construction Management Plan - Temporary Rerouting of the Bay Trail***: The Project applicant shall coordinate with BCDC to identify an acceptable temporary detour of the segment of the Bay Trail that is immediately adjacent to the Development Area during pile driving/pile drilling activities. The options for detour routes in this area are limited, and may best be accomplished by providing a temporary public pathway along the Project site's frontage on Oakport Street, at least as far as the Peppermint Gate Access Road. The segment of the Bay Trail adjacent to the site can be re-opened after conclusion of the temporary pile driving/pile drilling activity.
- ***Recommendation #2 Pursuant to the Construction Management Plan – Schedule Coordination with City-Sponsored Use of Soccer Fields***: The Project applicant shall coordinate with the City Parks and Recreation Department to best avoid pile driving/pile drilling activities of the Project concurrent with scheduled sports activities at the City Soccer fields. Pursuant to SCA Noise-3, no pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday, and no construction is allowed on Sunday or federal holidays. Accordingly, schedule coordination is only required during intermittent weekday use of the sport field between the hours of 8:00 a.m. and 4:00 p.m.

Consistent with the conclusions of the CASP EIR and in recognition that construction noise is a temporary condition, the Project's effects related to construction noise will be fully addressed through implementation of City SCAs, existing regulations and Project-specific recommendations pursuant to SCAs, and this impact would be reduced to less than significant.

Permanent Operational Noise

CASP EIR Conclusions [110]

The CASP EIR (Impact Noise-2B) found that development pursuant to the CASP (other than the proposed sports venues described) would not generate operational noise in violation of the City of Oakland Noise Ordinance, based upon required compliance with City of Oakland SCAs. Operational noise within the CASP planning area would result from common noise sources such as rooftop mechanical equipment, and warehouse and distribution uses. The CASP EIR concluded there were no sensitive noise receivers that would be adversely affected by these common noise sources, or by truck and vehicle noise. For most common noise sources such as rooftop mechanical equipment, the City's Municipal Code Noise Standards can be achieved via implementation of reasonable and feasible noise control measures as required pursuant to implementation of City SCAs. For mechanical equipment and other fixed noise sources, these noise control measures may include noise barriers, duct sound attenuators, or selection of equipment that meets a specified noise level limit.

Project Analysis

The Project's Office, Warehouse Workshop buildings would include stationary sources of operational noise such as mechanical heating, ventilating and air conditioning (HVAC) equipment that is standardized for noise reduction. The roof-mounted equipment of the HVAC systems would be screened and subject to approval of the City of Oakland's Design Review procedures and Building Permit requirements, requiring demonstration that this stationary equipment would operate within the restrictions of the OMC requirements for maximum sound levels received at the property line.

The proposed Warehouse would also generate operational noise from large delivery trucks shipping into and out from the warehouse. This warehouse and distribution noise will be similar to that generated by warehouse and distribution uses within the nearby Oakland Airport Business Park, and generated by the logistics, warehouse and storage operations on the opposite (easterly) side of I-880. As indicated above, there are no sensitive residential receptors within a 3,000-foot radius of the Project site, and no sensitive residential receptors would be subject to noise levels.

Noise generated at the Warehouse, the Pipe Storage Structure and the Materials Bin would be the same types of noise generated by these activities as currently exists on the Project site, but would be shifted further south into the Development Area, with no net increase in attributable operational noise.

<u>Applicable Standard Conditions of Approval</u>

The following City of Oakland SCA is cited in the CASP EIR as effective measures for reducing the effects of operational noise, and is a standard condition of approval that would apply to the Project.

- ***SCA Noise-6, Operational Noise***: 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.

Consistent with the conclusions of the CASP EIR, the Project's operational noise impacts will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.

[110] City of Oakland, CASP Draft EIR, page 4.10-24

Traffic Noise

CASP EIR Conclusions [111]

The CASP EIR (Impact Noise-3) found that implementation of the CASP would not generate traffic noise resulting in a 5 dBA permanent increase in ambient noise levels in the vicinity, above levels that would exist without the CASP. Traffic volumes for roadways in the CASP planning area were analyzed to determine the potential for increased traffic noise. The calculated traffic noise levels and associated increases for each roadway link found that, in general, noise levels with the CASP were expected to increase by 1.2 dBA or less, as compared to existing conditions. Consequently, the CASP EIR determined that CASP buildout would not generate traffic noise that would exceed the threshold, and this impact was determined to be less than significant.

Project Analysis

The Project is anticipated to generate 1,750 daily vehicle trips,[112] as compared to the CASP's estimated increase of 63,350 total daily vehicle trips.[113] Accordingly, the Project generates only about 2.7% of the trips as analyzed in the CASP EIR. The full 63,350 daily trips was not found to increase ambient noise levels on roadways within the CASP planning area by a level that would be considered significant (i.e., only 1.2 dBA as compared to a 3 dBA threshold). Accordingly, the Project trips, which represent a small fraction of the trips generated under CASP buildout, would similarly (and to a substantially lesser extent) not increase ambient noise levels on roadways within the CASP planning area by a level that would be considered significant. This would not be an impact of the Project.

Groundborne Vibration

CASP EIR Conclusions [114]

The CASP EIR (Impact Noise-7) found that construction or project operations pursuant to the CASP may expose persons to, or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (FTA). Vibration from construction was found to primarily be associated with use of vibratory rollers and pile drivers. Vibration can also be generated by other equipment, but those are usually at much lower levels. Vibration from construction attenuates rapidly with distance and is usually well below damage criteria for conventionally engineered buildings. The potential for damage from construction vibration was found to be potentially significant for historic structures. The City's standard conditions of approval that address vibration effects on historic buildings was determined to mitigate this potential impact to a level of less than significant.

Project Analysis

The Project is proposed in a location identified as a liquefaction hazard zone, having a very high susceptibility to earthquake-induced liquefaction. To address this condition, the Project proposes that steel piles be driven into firm native soil below the Bay Mud and liquefiable soil layers to support the Project's proposed Office,

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[111] City of Oakland, CASP Draft EIR page 4.10-25

[112] Fehr & Peers, SupplyBank Oakport Project – Preliminary Transportation Assessment, August 1, 2022, Table 1

[113] City of Oakland, CASP Draft EIR, Table 4.13-16, page 4.13-55

[114] City of Oakland, CASP EIR page 4.10-28

Warehouse and Workshop buildings and retaining walls. The Project also proposes using a reinforced Rammed Aggregate Pier (RAP) system installed on a grid pattern to support areas where stockpiled materials and retaining wall foundations are expected. The proposed pile driving and/or drilling for these structural support systems will generate groundborne vibration. To assess the potential for significant effects associated with the construction operations, the methodology for vibration assessments as recommended by the FTA has been conducted for the Project.[115]

According to this FTA methodology, the potential for construction vibration damage depends on the vibration level and the building type or structural category of the building to be assessed. The following **Table 13** provides the FTA recommended criteria for potential vibration damage.

Table 13: FTA Construction Vibration Damage and Annoyance Criteria

Building/ Structural Category	PPV, in/sec
Reinforced-concrete, steel or timber (no plaster)	0.5
Engineered concrete and masonry (no plaster)	0.3
Non-engineered timber and masonry buildings	0.2
Buildings extremely susceptible to vibration damage	0.12

*RMS velocity in decibels, VdB re 1 micro-in/sec

Source: FTA Transit Noise and Vibration Impact Assessment Manual, Table 7-5

The Project site is not in a densely developed area and the nearest structure to pile driving activities (the Oakland Acura building in the Oakland Airport Business Park) is estimated to be approximately 1,000 feet from the nearest pile driving/drilling activity. The EBMUD Oakport WWF is approximately 1,500 feet from the nearest pile driving/drilling activity. The FTA Manual indicates that an impact pile driver can generate an upper range peak period velocity (or PPV) of up to 1.518 PPV (in inches/second) at a reference distance of 25 feet, but generates a typical PPV of 0.644 PPV inches/second at a reference distance of 25 feet. Conservatively using the upper range velocity of 1.518 PPV at a reference distance of 25 feet, the construction vibration felt at the nearest structure 1,000 feet away can be calculated based on the following FTA reference formula: [116]

$PPV_{structure} = PPV_{ref} \times 25/D^{1.5}$, *where*

- $PPV_{structure}$ *= the peak particle velocity of the equipment adjusted for distance to the structure (in/sec)*
- PPV_{ref} *= the source reference vibration level at 25 ft*
- *D = distance from the equipment to the receiver, ft*

Using this formula and the conservative upper-range velocity for pile driving, the PPV at the nearest receiving building (which is also separated by the Damon Slough) would be 0.006 PPV (inches/second), well below the criteria for even the most sensitive building extremely susceptible to vibration damage. Vibration levels at the EBMUD Oakport WWF would be even lower. Furthermore, pursuant to SCA Noise-3, Extreme Construction Noise (see Construction Noise, above) the Project Construction Noise Management Plan shall contain a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise

115 FTA, Transit Noise and Vibration Impact Assessment Manual, Section 7.2: Construction Vibration Assessment, September 2018, beginning at page 182

116 FTA, September 2018, Table 7-4

generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:

a) Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;
b) 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;

Consistent with the conclusions of the CASP EIR and with the requirements of SCA Noise-3 for more quiet pile driving technology such as pre-drilling of piles, the Project’s effects related to damage to nearby buildings from construction vibrations would be a less than significant impact.

Aviation Noise

CASP EIR Conclusions [117]

The CASP EIR (Impact Noise-8) found that new development pursuant to the CASP would not expose people residing or working in the CASP planning area to excessive noise levels from aircraft activity. According to the Airport Noise Contours for Oakland International Airport, the entire CASP planning are is located outside the CNEL 60 dBA noise contour. The Alameda County ALUC considers a CNEL of less than 60 dBA as compatible for residences and all other land uses pursuant to the CASP. Consequently this impact was concluded to be less than significant.

Project Analysis

As is true for the entire CASP planning area, the Project site is not subject to excessive noise from private airstrips, public airports or overhead aircraft. Consistent with the findings of the CASP EIR, the Project would not be adversely affected by aviation noise (see also the Land Use section of this CEQA Checklist pertaining to ALUCP consistency).

CEQA Conclusions Pertaining to Noise and Vibration

The analysis presented above examines whether there are any Project-specific significant effects related to noise or vibration that are peculiar to the Project or its site, finding none. The Project would have no impacts related to noise or vibration that were not previously analyzed in the CASP EIR, would have no off-site or cumulative impacts related to noise or vibration not discussed in the prior CASP EIR, and would not result in any noise or vibration impacts that are more severe than as discussed in the prior CASP EIR. There are no impacts related to noise or vibration that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as pertains to noise or vibration. The noise and vibration analysis presented above does provide additional details regarding noise conditions specific to the Project site, and the Project provides additional detailed information as to how it intends to best address these conditions specific to the site. These additional details are new information pertinent to the Project that were not available or practical at the time of certification of the CASP EIR. However, as described above, these new details do not introduce any new significant impacts pertaining to noise or vibration that were not previously identified in the

[117] City of Oakland, CASP Draft EIR, page 4.10-30

CASP EIR, and do not substantially increase the severity of any significant noise or vibration impacts as previously disclosed in the CASP EIR. The detailed recommendations for the Project are fully consistent with the Standard Conditions of Approval as cited in the CASP EIR. These new details that are specific to the Project and its site are appropriately disclosed in this Addendum to the CASP EIR.

Population, Employment and Housing

Would the Project:	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	Relationship to CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Standards and Requirements	Project Conclusions: Resulting Level of Significance
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	LTS with SCA	■	☐	SCA Population-1, Jobs/Housing Impact Fee	LTS with SCA
b) Induce substantial unplanned employment growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	LTS	■	☐	-	LTS
c) Displace substantial numbers of existing people, housing or businesses, necessitating the construction of replacement housing elsewhere?	LTS	■	☐	-	No Impact

Population Growth

CASP EIR Conclusions [118]

The CASP EIR determined that the CASP buildout would include development of 5,750 housing units, of which 4,000 units were anticipated in the Coliseum District (or Sub-Area A) and 1,750 units along the northwest waterfront in Sub-Area B (no new housing was proposed in Sub-Area E). This new housing was anticipated to accommodate 5,520 households with a population of 10,240 residents. As there was (and still is) no existing housing in the CASP planning area, these new housing units and residents represent new growth pursuant to the CASP. This new household growth was found to represent about nine percent of total citywide household growth over the next 30 years, as targeted for Oakland in ABAG's 2013 *Plan Bay Area*. The CASP's housing development was found to contribute to achieving this targeted citywide residential growth.

Project Analysis

The Project does not include any proposed new housing or residential development. As noted above, the CASP did not propose any new housing within Sub-Area E (which includes the Project site). The CASP EIR did not presume that the Project site would contribute to achieving the City's housing goals, and the site's Business Mix land use designation is intended for a wide variety of business and related commercial and industrial establishments, not residential use. The non-residential Project does not take away any planned housing

[118] City of Oakland, CASP Draft EIR, beginning at page 4.11-22

development site pursuant to the CASP, the General Plan LUTE or the City's General Plan Housing Element. The Project has no direct effect related to population growth.

Applicable Standard Conditions of Approval

The following City of Oakland SCA is cited in the CASP EIR as an effective means for addressing indirect population and housing growth attributed to employment uses, and would apply to the Project.

- ***SCA Population-1, Jobs/Housing Impact Fee***: The project applicant shall comply with the requirements of the City of Oakland Jobs/Housing Impact Fee Ordinance (chapter 15.68 of the Oakland Municipal Code).

Consistent with the conclusions of the CASP EIR, the Project's effects related to indirect population growth and housing demands will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.

Employment Growth

CASP EIR Conclusions [119]

The CASP EIR (Impact Pop and Housing-4) found that new development facilitated by the CASP would not induce substantial population or employment growth in a manner not contemplated in the City's General Plan, either directly by facilitating new businesses, or indirectly through infrastructure improvements. This impact was considered less than significant.

Buildout of the CASP was projected to accommodate three new sports facilities plus 13.6 million square feet of building space for retail/dining/entertainment, hotel, science and technology, office, light industrial, logistics/distribution, and other non-residential business activities. The Coliseum District was projected to accommodate 2.5 million square feet plus the sports facilities, and the rest of the CASP buildout was assumed to include 11.1 million square feet of new building space and associated business activity. Total employment pursuant to the CASP was estimated at 32,000 jobs at build-out. Compared to existing conditions, new development pursuant to the CASP was estimated to generate growth of 7.9 million square feet of new non-residential building space (plus the sports facilities), and approximately 21,000 new jobs. Existing employment of approximately 11,020 would nearly triple, to 32,000 total jobs. Employment growth potentials included an increase of 7,000 jobs in the Coliseum District and 14,000 new jobs within business activities throughout the rest of the CASP planning area. Employment growth was found to represents 25 percent of citywide growth over the next 30 years, as targeted for Oakland in the 2013 *ABAG Plan Bay Area*.

Project Analysis

Employment density factors were presented in the CASP EIR for a variety of land use types most likely to occur within the CASP planning area. The business activity type from the CASP EIR that is most similar to the Project's proposed land uses is a combination of science and tech/office/and light industrial business activities. Growth in this business activity type was estimated at approximately 2.255 million square feet, with 5,255 new employees – for an average of approximately 430 square feet per employee.[120] By applying this employment density factor to the Project's proposed 293,000 square feet of building space (the office, the warehouse and the workshop), the Project may result in projected employment of perhaps 680 employees. This represents only about 3

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119 City of Oakland, CASP Draft EIR, beginning at page 4.11-18

120 City of Oakland, CASP Draft EIR, Table 4.11-10. As noted in that CASP table, employment was estimated by Hausrath Economics Group based on employment density factors by land use as appropriate for the types of space and business activities existing in and proposed for the [CASP] Project Area, drawing from data for Oakland, San Francisco, and other relevant development.

percent of the total employment growth as was anticipated under the CASP EIR. Accordingly, the Project would not induce substantial unplanned employment growth in the area, and this impact would be less than significant.

Displacement of Persons or Housing

CASP EIR Conclusions [121]

The CASP EIR (Impact Pop and Housing-1 through -3) found that new development facilitated by the CASP would not displace any existing housing units and would not displace any people residing in the CASP planning area. It did find that new development facilitated by the CASP would displace certain existing businesses and jobs, but not in substantial numbers necessitating construction of replacement facilities elsewhere, in excess of that contemplated in the City's General Plan. This impact was determined to be less than significant.

Project Analysis

The Development Area is a vacant site owned by a public utility. There are no existing homes on the Project site and development of the Project would not result in the displacement of persons or housing. The Project would provide for replacement of certain EBMUD operations from their current location within the Northerly Area, to new facilities within the Development Area, but these operations and facilities would not be displaced by the Project.

CEQA Conclusions Pertaining to Population and Housing

The analysis presented above examines whether there are any Project-specific significant effects related to population, housing or employment that are peculiar to the Project or its site, finding none. The Project would have no population, housing or employment impacts that were not previously analyzed in the CASP EIR, would have no off-site or cumulative population, housing or employment impacts not discussed in the prior CASP EIR, and would not result in any population, housing or employment impacts that are more severe than as discussed in the prior CASP EIR. There are no population, housing or employment related impacts that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as related to population, housing or employment. Only minor technical additions related to the Project and its site have been identified, and these minor additions to the CASP EIR are appropriately disclosed in this Addendum to the CASP EIR.

[121] City of Oakland, CASP Draft EIR, beginning at page 4.11-27

Public Services and Recreation

Would the Project: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	**CASP EIR Findings**	**Relationship to CASP EIR Findings:** Equal or Less Severe	**Relationship to CASP EIR Findings:** New or Substantial Increase in Severity	**Project Conclusions:** Applicable Standards and Requirements	**Project Conclusions:** Resulting Level of Significance
a) Fire Protection and Police Protection?	LTS	■	☐	SCA Public-1, Capital Improvements Impact Fee	LTS with SCA
b) Schools?	LTS	■	☐	Project Requirement: OUSD School Impact Fees	LTS with OUSD fees
c) For parks; Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	LTS	■	☐	SCA Public-2, Access to Parks and Open Space	LTS with SCA

<u>New Government Facilities</u>

CASP EIR Conclusions [122]

The CASP EIR (Impact Public-1) determined that implementation of the CASP could 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.

Fire Protection

The CASP EIR concluded that the increase in development intensity and overall density would result in an increase in demand for fire protection services. However, adherence to General Plan policies (Policies N.12.1 and N.12.5, which call for the development of public facilities and staffing of safety-related services to be sequenced and timed to provide a balance between land use and public services, and giving priority to reducing deficiencies public services) and Policy FI-1 and FI-2 (calling for maintaining and enhancing the City's capacity for emergency response, fire prevention and firefighting, and implementing programs that seek to reduce the risk

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[122] City of Oakland, CASP Draft EIR, beginning at page 4.12-12

of structural fires) as well as City of Oakland SCAs during review of individual development projects, would reduce the potential for service deficiencies and related impacts. The CASP EIR found that the Oakland Fire Department was able to meet or exceed their response time goal 90 percent of the time. As such, it was anticipated that the CASP would have a less than significant impact on fire protection services.

Police Protection

The CASP EIR concluded that development intensity and overall density could result in an increase in reported crimes. However, adherence to General Plan policies N.12.1, N.12.5 and FI-1 during review of individual development projects would reduce the potential for project-related service deficiencies. Although the population increase attributed to the CSP was considered to potentially result in an increase in reported crime, the new construction and rehabilitation of existing structures would infill currently vacant and underused sites, serve to revitalize the corridors and community, and could result in a reduction in criminal activity within and around the area. As such, it was anticipated that the CASP would have a less than significant impact on fire protection services.

Schools

The CASP EIR found that new development pursuant to the CASP would likely increase student enrollment at local schools. These new students would be added to district-wide enrollment incrementally over time as development occurs. The CASP EIR concluded that Senate Bill 50 (SB 50) requires applicants for individual development projects to pay school impact fees established to offset potential impacts from new development on school facilities. Payment of fees mandated under SB 50 is the mitigation measure prescribed by the statute, and payment of such fees is deemed full and complete mitigation. The CASP EIR determined that, with payment of these fees, the CASP's impact on schools would be less than significant and no additional mitigation would be required.

Other Public Facilities

The CASP EIR found no further impacts on the provision of public services.

Project Analysis

Police, Fire and Other Public Services

Development of the Project will incrementally increase demand for public services (i.e., police, fire protection and other public services) and will contribute to the need for capital improvements necessary to meet this demand. The Project will place additional burdens public services, and these demands will contribute to the cumulative need for construction of facilities and improvements to meet and accommodate new development.

The City of Oakland had conducted a nexus study and established factors that reasonably estimate the level of impacts on public services and related capital improvement. The City has adopted a Capital Improvements Impact Fee (OMC Chapter 15.74), and has found that there is a reasonable relationship between the type of development project paying the fees and the need for capital improvements and infrastructure. Through the payment of these fees, the Project will address its portion of these cumulative effects on public services and capital improvement infrastructure, and fully mitigate it contribution to these impacts as required under CEQA.

Schools

By creating new jobs in Oakland, the Project's employment will indirectly induce additional population and housing growth, indirectly adding to demands for school capacity. As authorized by California Government Code Sections 65995, 65996(a) and 65996(b), the OUSD collects school impact fees from developers of new residential and non-residential building space, including the Project. The permitted method for addressing school enrollment increase impacts is limited to the statutory authority of school districts to impose school impact fees.

Applicable Standard Conditions of Approval

The following condition applies to all projects subject to the Capital Improvements Impact Fee.

- ***SCA Public-1, Capital Improvements Impact Fee***: The Project applicant shall comply with the requirements of the City of Oakland Capital Improvements Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).
- As authorized by ***California Government Code Sections 65995***, 65996(a) and 65996(b), the OUSD will collect school impact fees from the Project, and payment of the required school impact fees will address the impact of the Project on school services to the furthest extent permitted by law. School impact fees are collected when building permits are issued. Payment of these fees will constitute full and complete mitigation, and the impact of the Project related to schools would be less than significant.

Parks and Recreation

CASP EIR Conclusions [123]

Park Standards

The CASP EIR (Impact Public-2) found that the CASP would result in increased use of existing neighborhood and regional parks and other recreational facilities, such that substantial physical deterioration of these facilities may occur. The existing parks and recreation facilities, including the MLK Shoreline Park and the Oakport soccer fields and related land in Sub-Area E, would experience much greater use. However, the CASP EIR concluded that adherence to the General Plan's OSCAR Policies 3.1, 3.3, and 3.10 would reduce potential impacts to recreational facilities, the City would continue to exceed its overall park standard but would continue to fall short of its stated local-serving park standard, but that the CASP would have a positive contribution to both standards. As a result, the impact was found to be less than significant.

New Recreational Facilities

The CASP EIR (Impact Public-3) found that the CASP would include new recreational facilities that could potentially have an adverse physical effect on the environment. However, the construction of new park spaces and habitat restoration efforts would be subject to the City's standard conditions of approval, and therefore any impacts would be less than significant.

Project Analysis

The Project's Development Area is located adjacent to a segment of the Bay Trail. New employees at the Project will have direct access to this public recreational amenity, and may result in increased walkers and bicycle users on the Bay Trail. The Project does not include any on-site parks or recreational space improvements that might result in environmental effects.

Applicable Standard Conditions of Approval

The following SCA applies to all projects involving new construction adjacent to an existing open space such as parks, lakes, or the shoreline.

- ***SCA Public-2, Access to Parks and Open Space***: The project applicant shall submit a plan for City review and approval to enhance bicycle and pedestrian access from the Project site and adjacent areas to the Bay Trail.

[123] City of Oakland, CASP Draft EIR, beginning at page 4.12-13

> Examples of enhancements may include, but are not limited to new or improved bikeways, bike parking, traffic control devices, sidewalks, pathways, bulb-outs and signage. The project sponsor shall install the approved enhancements during construction and prior to completion of the project.

The Project's current plans do not indicate any off-site improvements, and only suggest a single pathway connection from the proposed Office building to a gate at the fence line adjacent to the Bay Trail.

As more fully addressed in the Land Use section of this CEQA Checklist, the Project will be required to obtain a permit from BCDC before proceeding with development. Generally, BCDC development permits may be granted or denied only after public hearings, and after the process for review and entitlement by the City has been completed. The Commission may approve a permit for shoreline development if it determines that the Project is in accordance with standards for use of the shoreline, provides for maximum feasible public access consistent with the Project, and accounts for advisory review related to appearance by the BCDC Design Review Board.

Pursuant to City of Oakland ***SCA General-1: Regulatory Permits and Authorizations from Other Agencies***, the Project applicant must obtain all necessary regulatory permits and authorizations from BCDC, and comply with all requirements and conditions of that those permits/authorizations. Prior to reaching its own independent conclusions as to whether or how to issue a shoreline development permit, the Commission will consider the environmental effects of the Project as shown in this CEQA document, and may require mitigation for those direct or indirect environmental effects of those parts of the Project for which it has authority to address, particularly in regard to any proposed enhancements to bicycle and pedestrian access from the Project site to the Bay Trail.

CEQA Conclusions Pertaining to Public Services

The analysis presented above examines whether there are any Project-specific significant effects related to public services that are peculiar to the Project or its site, finding none. The Project would have no public service impacts that were not previously analyzed in the CASP EIR, would have no off-site or cumulative public service impacts not discussed in the prior CASP EIR, and would not result in any public service impacts that are more severe than as discussed in the prior CASP EIR. There are no public services related impacts that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as related to public services. Only minor technical additions related to the Project and its site have been identified, and these minor additions to the CASP EIR are appropriately disclosed in this Addendum to the CASP EIR.

Transportation

<table>
<tr><th rowspan="2">Would the Project:</th><th rowspan="2">CASP EIR Findings</th><th colspan="2">Relationship CASP EIR Findings:</th><th colspan="2">Project Conclusions:</th></tr>
<tr><th>Equal or Less Severe</th><th>New or Substantial Increase in Severity</th><th>Applicable Standards and Requirements</th><th>Resulting Level of Significance</th></tr>
<tr><td>Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, based on a variety of level of service (LOS) metrics?</td><td colspan="5">In April 2017, the City of Oakland published revised Transportation Impact Review Guidelines to guide the evaluation of transportation impacts associated with land-use development projects. Based on these new guidelines, level of service (LOS) or similar measures of vehicular capacity or traffic congestion are no longer used as thresholds for defining a significant impact on the environment</td></tr>
<tr><td>a) Cause substantial additional vehicle miles traveled (VMT) per capita, per service population, or other appropriate efficiency measure? For office projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per worker minus 15-percent.</td><td>N/A</td><td>N/A</td><td>☐</td><td>-</td><td>LTS</td></tr>
<tr><td>b) Fundamentally conflict with adopted City policies, plans or programs regarding public transit, bicycle or pedestrian facilities?</td><td>N/A</td><td>■</td><td>☐</td><td>SCA Transp-1, Bicycle Parking
SCA Transp-2, Transportation and Parking Demand Management
SCA Trans-3, Transportation Impact Fee
SCA Trans-4, Plug-In Electric Vehicle (PEV) Charging Infrastructure</td><td>LTS with SCAs</td></tr>
<tr><td>c) Result in a substantial, though temporary, adverse effect on the circulation system during construction of the project?
d) Directly or indirectly cause or expose roadway users to a permanent and substantial transportation hazard due to a new or existing physical design feature or incompatible use?</td><td>LTS</td><td>■</td><td>☐</td><td>SCA Transp-5: Construction Activity in the Public Right-of-Way
SCA Transp-6: Transportation Improvements</td><td>LTS with SCAs</td></tr>
<tr><td>d) Substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes) or by adding new roadways to the network?</td><td>NA</td><td>■</td><td>☐</td><td>-</td><td>LTS</td></tr>
</table>

Information related to the Project as included in the following Transportation section of this CEQA Checklist has been derived from the following primary source:

- Fehr & Peers, SupplyBank.org at Oakport Project - Transportation Impact Review, March 31, 2023 (**Appendix P**)
- Fehr & Peers, SupplyBank.org at Oakport Project – Transportation Demand Management Plan, March 31, 2023 (**Appendix Q**)

Vehicle Miles Traveled

CASP EIR Conclusions

In 2015 (when the CASP EIR was certified), the applicable CEQA thresholds relative to traffic were based on level of service (LOS) metrics, taking into account intersection delay and queuing. The LOS metrics measured traffic congestion based on the relationship between the numbers of vehicles travelling on a given segment of a roadway or through an intersection during a given time period and the estimated capacity of the facility based on the number of lanes and other roadway design factors. The CASP EIR analysis evaluated the traffic-related impacts of the Coliseum District and CASP Buildout during the weekday morning and evening peak hours. The analysis was conducted in compliance with then-applicable City of Oakland and Alameda County Transportation Commission (Alameda CTC) guidelines. Traffic conditions were assessed for multiple scenarios, including Existing, Existing Plus Coliseum District, 2035 No Project, 2035 Plus Coliseum District 2035 Plus CASP Buildout conditions.

The CASP EIR did not use vehicle miles traveled (VMT) as a threshold for measuring transportation impacts.

Project Analysis

VMT Threshold

On September 21, 2016, the City of Oakland's Planning Commission directed staff to update the City of Oakland's California Environmental Quality Act (CEQA) Thresholds of Significance Guidelines related to transportation impacts. The purpose of this update was to implement the directive from Senate Bill 743 (SB 743) to modify local environmental review processes by removing automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, as a significant impact on the environment pursuant to CEQA. The Planning Commission direction aligned with draft proposed guidance from the Governor's Office of Planning and Research and the City's approach to transportation impact analysis, with adopted plans and polices related to transportation, which promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. Consistent with the Planning Commission direction and the SB 743 requirements, the City of Oakland published a revised Transportation Impact Review Guidelines (TIRG) on April 14, 2017 to guide the evaluation of transportation impacts associated with land-use development projects.

According to the City of Oakland TIRG, the following threshold of significance related to substantial additional VMT is applicable to the Project:

- For office projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per worker minus 15-percent.

Screening Criteria

VMT impacts are also considered less than significant for a project, if any of the identified screening criteria outlined below are met:

1. Small Projects: if the project generates fewer than 100 vehicle trips per day

2. Near Transit Stations: if the project is located in a Transit Priority Area or within a one-half mile of a Major Transit Corridor or Stop and satisfies the following:
    a. has a Floor Area Ratio (FAR) of more than 0.75
    b. includes less parking for use by residents, customers, or employees of the project than other typical nearby uses, or less than or less than required by the City (if parking minimums pertain to the site) or allowed without a conditional use permit (if minimums and/or maximums pertain to the site), and
    c. is consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the MTC)
3. Low-VMT Areas: if the project meets map-based screening criteria by being located in an area that exhibits below-threshold VMT, or 15 percent or more below the regional average, or

<u>Potential Impact</u>

Small Projects

Trip generation is the process of estimating the number of vehicles that would likely access the Project on any given weekday. **Table 14** summarizes the trip generation for the Project. Trip generation data published by the Institute of Transportation Engineers (ITE) in the Trip Generation Manual (11th Edition) was used as a starting point to estimate the vehicle trip generation, prior to implementation of any Project-specific Transportation Demand Management (TDM) measures.

Table 14: SupplyBank at Oakport Project, Automobile Trip Generation									
				Weekday AM Peak Hour			Weekday PM Peak Hour		
Land Use	ITE Code	Size1 (KSF)	Daily Trips	In	Out	Total	In	Out	Total
Office [2]	710	160	1,750	221	30	251	42	203	245
Warehousing [3]	150	123	230	29	9	38	11	30	41
Workshop [4]	110	10	90	10	1	11	1	7	8
ITE Trip Generation Subtotal			2,070	260	40	300	54	240	294
Non-Auto Adjustments[5]			*-320*	*-40*	*-7*	*-47*	-8	-38	-46
Adjusted Total Project Trips			**1,750**	**220**	**33**	**253**	**46**	**202**	**248**

Notes:

1. KSF = 1,000 square feet.
2. ITE Trip Generation (11th Edition) land use category 710 (General Office Building, General Urban/Suburban):
   Daily: Ln(T) = 0.87 * Ln(X) + 3.05
   AM Peak Hour: Ln(T) = 0.86 * Ln(X) + 1.16 (88% in, 12% out)
   PM Peak Hour: Ln(T) = 0.83 * Ln(X) + 1.29 (17% in, 83% out)
3. ITE Trip Generation (11th Edition) land use category 150 (Warehousing, General Urban/Suburban):
   Daily: T = 1.58 * X + 38.29
   AM Peak Hour: T = 0.12 * X + 23.62 (77% in, 23% out)
   PM Peak Hour: T = 0.12 * X + 26.48 (28% in, 72% out)
4. ITE Trip Generation (11th Edition) land use category 110 (General Light Industrial, General Urban/Suburban):
   Daily: T= 3.76 * X + 50.47
   AM Peak Hour: Ln(T) = 0.68 * Ln(X) + 3.81 (88% in, 12% out)
   PM Peak Hour: Ln(T) = 0.72 * Ln(X) + 0.38 (14% in, 86% out)
5. Reduction of 15.6% assumed, based on City of Oakland TIRG, using Census data for suburban environments with less than 6,000 people per square mile and more than one mile from a BART station.

Source: Fehr & Peers, 2022

As shown above, the Project would generate more than 100 vehicle trips per day, and does not meet the criterion for small projects.

Near Transit Stations

The Project site is approximately a 0.93-mile walking distance from the Coliseum BART Station. The nearest bus stop to the Project site is on 66th Avenue at Coliseum Way, about 0.4 mile east of the Project site. This bus stop is served by AC Transit Line 98, which operates with 20-minute headways during the peak commute periods on weekdays. Thus, the Project is not located in a Transit Priority Area and is not within a one-half mile of a Major Transit Corridor or Stop.

The Project does not meet the criterion for projects near transit stations.

Low-VMT Area

Table 15 shows the estimated VMT per worker for TAZ #1403, which is the Traffic Analysis Zone (TAZ) where the Project is located, as identified in the Alameda County Transportation Commission's Travel Demand Model. The Alameda CTC Travel Demand Model includes 369 TAZs within Oakland that vary in size from a few city blocks in the downtown core, to multiple blocks in outer neighborhoods, to even larger geographic areas in lower-density neighborhoods. Based on the transportation network and land use inputs such as population and employment characteristics by TAZ, the Model predicts trip generation by TAZ and assigns all predicted trips within, across or to/from the county onto the roadway network and the transit system by mode (single-driver and carpool vehicle, biking, walking, or transit) and transit carrier (bus, rail) for a particular scenario. The Alameda CTC Model outputs the home-based-work (i.e., commute) VMT per worker, which measures all of the worker commute VMT by a motor vehicle on a typical weekday between homes and workplaces.

Based on the Alameda CTC Travel Demand Model, the regional average daily VMT per worker is 18.1 under 2020 conditions and 18.2 under 2040 conditions. The VMT data for the Project site's TAZ is also presented for years 2020 and 2040. This table also shows the applicable VMT thresholds of 15 percent below the regional average for the years 2020 and 2040. According to the City's TIRG, the VMT screening methodology for warehouse and industrial components of the Project should be compared to the regional average VMT per worker in the TAZ, minus 15 percent.

Table 15: SupplyBank at Oakport Project - Daily Vehicle Miles Traveled Summary

	Home-Work VMT per Worker	
Geographic Area	2020	2040
Proposed Project (Alameda CTC Model TAZ 1403)	14.0	14.6
Bay Area Region Average	18.1	18.2
Bay Area Region Average minus 15% (i.e., threshold of significance)	15.4	15.5
Significant Impact?	**No**	**No**

Notes:

1. Alameda CTC Travel Demand Model results at https://www.alamedactc.org/planning/sb743-vmt/ and accessed in July 2022.

Source: Fehr & Peers, 2022

As shown in this Table, the estimated average daily VMT per worker in the Project TAZ is less than the regional averages minus 15 percent for both year 2020 and year 2040 conditions. The Project satisfies the City of Oakland's VMT screening criterion for projects located in a low VMT area, and is therefore determined to have a less than significant impact on VMT.

Conflict with Transit, Bicycle or Pedestrian Facility Policies

CASP EIR Conclusions [124]

The CASP EIR (Impact Trans-86) found that development pursuant to the CASP would not fundamentally conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities adopted for the purpose of avoiding or mitigating an environmental effect. The CASP EIR found the CASP to be consistent with policies, plans and programs supporting public transit, bicycle and pedestrian transportation. The following general findings were cited in the CASP EIR in support of the City of Oakland General Plan LUTE, as well as the City's Public Transit and Alternative Mode Policy:

- The CASP provides for high-density development in a compact area with excellent pedestrian and bicycle infrastructure and transit service. By providing a mix of uses in a dense walkable urban

[124] City of Oakland, *CASP Draft EIR*, page 4.13-160

environment with quality pedestrian, bicycle and transit infrastructure and a limited parking supply, the CASP encourages the use of non-automobile transportation modes.

- The CASP includes a number of street modifications that encourage pedestrian activity by creating a safer and more attractive pedestrian environment such as minimizing driveways on pedestrian thoroughfares, widening sidewalks, and providing pedestrian scale lighting that further encourage pedestrian activity consistent with the City's Pedestrian Master Plan.
- The CASP encourage completion of the bicycle network on 66th Avenue and Edgewater Drive, as well as completion of the bicycle connection between BART and the Bay Trail as envisioned in the Bicycle Master Plan.

The CASP EIR concluded that the CASP would not conflict with adopted City policies, plans or programs regarding public transit, bicycle or pedestrian facilities, this impact was determined to be less than significant and no mitigation measures were required.

City's Oakland Bike Plan

The City's Oakland Bike Plan (Let's Bike Oakland, 2019) proposes the following facilities in the vicinity of the Project:

- Class 2 separated bicycle path along Zhone Way/66th Avenue, between Oakport Street and San Leandro Street.
- Class 2 bicycle path along Tidewater Avenue between High Street and the San Francisco Bay Trail, 0.3 miles north of the Project
- Class 2 bicycle path connecting the segment of the San Francisco Bay Trail south of Lions Creek to an existing Class 2 bicycle lane on Edgewater Drive, 0.2 miles south of the Project

Neither the City of Oakland's Bike Plan nor the Pedestrian Master identify any planned improvements adjacent to the Project site. The CASP (Policy TR.5-23) does state that, "a Class I path on the south side of 66th Avenue will be necessary to provide pedestrian and bicycle connections between the CASP Plan Area and the Bay Trail, as well as to Sub-Area E."

One Bay Area Grant

The City of Oakland's concept plan for the 66th Avenue BART-to-Bay Trail pursuant to its One Bay Area Grant (OBAG) Project includes the following improvements at the Oakport Street/Zhone Way intersection, including the Class 1 path identified in the CASP:

- A new multi-use path crossing treatment across the south approach of the intersection, including a curb ramp on the east side
- A new Class 1 multi-use path along the south side of Zhone Way/66th Avenue (changing the Oakland Bike Plan's anticipated Class 2 separate bicycle path)
- Upgrades to the existing signal at the intersection, including a dedicated phase for the multi-use path users
- A raised eight-foot wide median on Zhone Way/66th Avenue between Oakport Street and the I-880 Southbound off-ramp, and
- Changes to roadway geometry and striping to maintain the current number of vehicle travel lanes and provide stop bars on the intersection approaches

Project Analysis

The Project is consistent with the applicable programs, plans, ordinances and policies, and would not cause a significant impact by conflicting with adopted programs, plans, ordinances or policies addressing the safety and performance of the circulation system, including transit, roadways, bicycle lanes and pedestrian paths.

The Project's proposed land uses (which primarily consist of office and warehouse use), and the types of trips generated by these uses are consistent with the land uses envisioned in the CASP for the planning area. The Project is consistent with the CASP in that it does not propose any modification to the transportation network not envisioned in the CASP and it would not adversely affect installation of new facilities or modifications to existing facilities as proposed by the CASP.

As shown in Table 13, the Project would generate as many as 253 AM peak hour trips (more than 50 peak hour trips), and preparation and implementation of a Transportation Demand Management Plan (TDM Plan) is required per City's SCA Trans-2 (see **Appendix Q**). The TDM Plan for the Project includes on-going operational strategies such as shuttle service between the site and the Coliseum BART Station, as well as on-site facilities such as bicycle parking and amenities, and off-site infrastructure improvements such as new bus stops and enhanced pedestrian crossings, that encourage the use of non-automobile travel modes.

Consistent with the Oakland General Plan's Land Use and Transportation Element (LUTE), City's Public Transit and Alternative Mode Policy and the Complete Streets Policy, the CASP EIR states a strong preference for encouraging the use of non-automobile transportation modes, such as transit, bicycling and walking. The Project's required TDM Plan, and other Project characteristics such as limited automobile parking supply and direct access to the Bay Trail, are consistent with the CASP and other City policies to improve and encourage the use of non-automobile transportation modes. The Project would not make any major modifications to the public right-of-way, including existing pedestrian or bicycle facilities in the surrounding areas and would not adversely affect installation of future facilities, including the 66th Avenue BART to Bay Trail Project.

Overall, the Project would not conflict with adopted plans, ordinances, or policies addressing the safety and performance of the circulation system, and would have a less than significant impact on this topic.

<u>Applicable Standard Conditions of Approval</u>

The Project would be subject to the following City of Oakland SCAs intended to ensure consistency with City transportation-related plans, ordinances, and policies.

- ***SCA Transp-1, Bicycle Parking***: The project applicant shall comply with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements.

Although not delineated on Project plans, the TIA (Recommendation 6) recommends the Project shall provide long-term bicycle parking for at least 16 bicycles at the Office building and at least three bicycles at the Warehouse building to meet the minimum amount of long-term bicycle parking required (19 spaces).

- ***SCA Transp-2, Transportation and Parking Demand Management***: The project applicant shall submit a Transportation and Parking Demand Management (TDM) Plan for review and approval by the City (see further detail on the Project's TDM Plan, below).
- ***SCA Trans-3, Transportation Impact Fee***: The project applicant shall comply with the requirements of the City of Oakland Transportation Impact Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).
- ***SCA Trans-4, Plug-In Electric Vehicle (PEV) Charging Infrastructure***:
  a) *PEV-Ready Parking Spaces*: The applicant shall submit, for review and approval of the Building Official and the Zoning Manager, plans that show the location of parking spaces equipped with full electrical

circuits designated for future PEV charging (i.e. “PEV-Ready) per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-Ready parking spaces.

b) *PEV-Capable Parking Spaces*: The applicant shall submit, for review and approval of the Building Official, plans that show the location of inaccessible conduit to supply PEV-capable parking spaces per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-capable parking spaces.

c) *ADA-Accessible Spaces*: The applicant shall submit, for review and approval of the Building Official, plans that show the location of future ADA-accessible EV parking spaces as required under Title 24 Chapter 11B Table 11B-228.3.2.1, and specify plans to construct all future accessible EV parking spaces with appropriate grade, vertical clearance, and accessible path of travel to allow installation of ADA-accessible EV charging station(s).

Although not delineated on Project plans, the TIA (Recommendation 3) recommends the Project provide a minimum of 33 PEV-ready and an additional 33 PEV-capable parking spaces.

Project-Required TDM Plan

Pursuant to SCA Transportation-2, a TDM Plan for the Project has been prepared (see **Appendix Q**). The TDM Plan includes all mandatory strategies that are part of the City’s Transportation Impact Review Guidelines (TIRG), and shall be implemented by the Project applicant and subsequent building management. The TDM Plan’s mandatory measures have been designed to achieve the goal of a 20 percent reduction in vehicle trips from the Project. If the mandatory TDM strategies ultimately do not meet the required goal, the Project applicant should consider implementation of some or all of the additional strategies identified in the TDM Plan to further limit automobile use and encourage non-automotive travel. A list of the Project’s mandatory TDM measures is provided below (see details in Appendix Q).

- Various street and pedestrian infrastructure improvements
- pre-tax commuter benefits worth up to $300 per month
- subsidized or discounted transit passes for employees
- provide a free shuttle between the Project site and the Coliseum BART Station that would operate during weekday peak commute periods
- provide fewer parking spaces than the estimated demand for the site
- establish eligibility requirements for parking permits and/or charge for parking
- require tenants to provide cash value equivalent to the cost of a parking pass for employees that forgo a subsidized/free parking space
- provide preferential parking for carpoolers
- provide carpooling and ride-matching assistance
- provide bicycle parking above the minimum requirement, including showers, long-term bicycle storage and personal lockers
- where feasible, encourage tenants to provide employees the opportunity to work flexible schedules and telecommute
- encourage employees to register for the Guaranteed Ride Home (GRH) program
- designate a TDM coordinator responsible for implementing and managing the TDM Plan

- provide active marketing of carpooling, BART, AC Transit and other non-auto modes

Based on research compiled in "*Quantifying Greenhouse Gas Mitigation Measures*" (California Air Pollution Control Officers Association, December 2021) these TDM measures are estimated to result in total trip reductions of between 20 to 38 percent for the Project, meeting the SCA Transportation-2 requirement.

Project Recommendations for the 66th Avenue BART-to-Bay Trail

The City of Oakland's planned 66th Avenue BART to Bay Trail One Bay Area Grant (OBAG) project proposes a Class 1 separated multi-use bike and pedestrian path on the south side of 66th Avenue between the Bay Trail and San Leandro Street, just south of the Project site. The TDM Plan for the Project includes implementation of elements of this planned improvement, such as enhancing the crossing across Oakport Street at 66th Avenue and providing new AC Transit bus stops at the Oakport Street/66th Avenue intersection. The Project also proposes to provide a pedestrian connection from the west side of the Project's Office building to the existing Bay Trail along the west side of the site. The pedestrian path would be accessible via a gate in the fence surrounding the Project.

❖ ***TIA Recommendation Transportation-5, 66th Avenue BART to Bay Trail Improvements***: While not required to address a CEQA impact, and at the discretion of City of Oakland, the following recommendations shall be considered as part of the final design for the Project:

  1) Do not include Class 2 bicycle lanes on Oakport Street. Although the Project's plans suggest that the Project would provide for bike lanes on Oakport along the Project frontage, bike lanes on Oakport are not recommended given the high volumes of trucks on the street; the possibility that bike lanes/shoulders would be used for RV parking; that Oakport Street is not shown on the City's Bike Plan and there are no connecting bike facilities north of the Project frontage; and that a Class I bike and pedestrian facility (the Bay Trail) already exists and parallels to the Oakport Street alignment.
  2) At the Oakport Street/Zhone Way intersection, install a multi-use crossing design across the south approach of the intersection. Use a curb ramp design with truncated domes on the east side of the intersection, consistent with the OBAG Project's concept plan. Coordinate with City of Oakland staff to ensure this design is compatible with plans for the future Oakport Street/Zhone Way intersection.
  3) Pave the segment of the existing gravel path that connects the Bay Trail to the Project's proposed gate, providing access to the Project site. Sign and stripe this facility as a multi-use path. Install appropriate lighting along the Bay Tail between the Project site and the Oakport Street/Zhone Way intersection.
  4) Install a non-curb design or ramp with truncated domes or similar treatment at both ends of the marked path where it crosses the fire access lane, so bike users and pedestrian have warning they are crossing a space shared by vehicles.

Consistent with the CASP EIR and with implementation of applicable SCAs listed above, the Project would not conflict with adopted plans, ordinances or policies addressing the safety and performance of the circulation system, and this impact would be less than significant.

Emergency Access and Transportation Design

CASP EIR Conclusions [125]

The CASP EIR (Impact Trans-81) found that development pursuant to the CASP would not directly or indirectly cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent and

[125] City of Oakland, *CASP Draft EIR*, page 4.13-151

substantial transportation hazard due to a physical design feature or incompatible use. The CASP does include anticipated new development and changes in the public right-of-way that could affect transportation safety, but the location and design of individual developments were not known at the time. The CASP EIR concluded that the CASP generally includes intersecting streets that slow vehicle speeds and maximize sight lines between drivers, pedestrians and bicyclists. The CASP EIR also cited requirements for each new development project and any changes to the public right-of-way to be consistent with regulations and design standards in effect at the time. Specifically, City SCAs related to improvements in the public right-of-way require that public improvement plans and building plans for individual development projects incorporate design requirements such as curbs, gutters, disabled access, adequate emergency access and other measures to improve vehicle, bicycle and pedestrian safety. This impact was found to be less than significant and no mitigation measures were required.

Project Analysis

The Project would provide four new driveways on Oakport Street, complete the sidewalk along the Project frontage on Oakport Street, and connect the site to the Bay Trail on the west side of the Project. The Project does not propose major modifications to the street network serving the Project site. The Project Transportation Impact Review (**Appendix P**) includes a detailed review of multi-modal access and circulation for the Project site and includes recommendations to improve access and circulation for the various travel modes in the area surrounding the Project site. With incorporation of these recommendations, the Project would not include design features that would substantially increase design hazards.

Similar to current uses in the Project vicinity, the Project would primarily consist of office and warehouse uses that would be generally consistent with the existing uses in the surrounding areas. Thus, the Project is expected to generate a mix of passenger vehicle and truck trips, with some pedestrian, bike and transit trips, which would be compatible with existing uses and the transportation system in the surrounding areas. The Project would not substantially increase hazards due to a geometric design feature or incompatible uses, and the impact is less than significant.

As analyzed in the Hazards section of this CEQA Checklist, the Project site is directly accessible to I-880 from Oakport Street, providing adequate access in the event of an emergency. The Project would not interfere with emergency evacuation routes on Hegenberger Road, San Leandro Street, Edgewater Drive, International Boulevard, or Seminary Avenue, Doolittle Drive or 98th Avenue. This impact is not considered significant.

<u>Applicable Standard Conditions of Approval</u>

The Project would be subject to the following City of Oakland SCAs intended to reduce transportation hazards.

❖ ***SCA Transp-5: Construction Activity in the Public Right-of-Way***

a) *Obstruction Permit Required*: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets, sidewalks, bicycle facilities, and bus stops.

b) *Traffic Control Plan Required*: In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. 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 accommodations (or detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The Traffic Control Plan shall be in conformance with the City's Supplemental Design Guidance for Accommodating Pedestrians, Bicyclists, and Bus Facilities in Construction Zones. The project applicant shall implement the approved Plan during construction.

c) *Repair of City Streets*: 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.

❖ ***SCA Transp-6: Transportation Improvements***: The project applicant shall implement the recommended on- and off-site transportation-related improvements contained within the Transportation Impact Review for the project (e.g., signal timing adjustments, restriping, signalization, traffic control devices, roadway reconfigurations, transportation demand management measures, and transit, pedestrian, and bicyclist amenities). The project applicant is responsible for funding and installing the improvements, and shall obtain all necessary permits and approvals from the City and/or other applicable regulatory agencies such as, but not limited to, Caltrans (for improvements related to Caltrans facilities) and the California Public Utilities Commission (for improvements related to railroad crossings), prior to installing the improvements. To implement this measure for intersection modifications, the project applicant shall submit Plans, Specifications, and Estimates (PS&E) to the City for review and approval. All elements shall be designed to applicable City standards in effect at the time of construction and all new or upgraded signals shall include these enhancements as required by the City. All other facilities supporting vehicle travel and alternative modes through the intersection shall be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction.

TIA-Recommended On- and Off-Site Transportation Improvements

Transportation Impact Review prepared for the Project (see details in **Appendix P**) lists the following non-CEQA transportation improvements that should be implemented by the Project at both on-site and off-site locations:

TIA Recommendation 1: Implement one of the following at Driveway B (the second driveway from the north) to be consistent with the City of Oakland Municipal Code Section 12.04.270; a) reduce the width of the driveway opening to 35 feet; or b) if a high volume of large trucks, such as WB-67 is expected, then coordinate with the City of Oakland Driveway Appeals Board to provide a wider driveway. Implement one of the following at Driveways C and/or D (the two south driveways) to reduce the potential for queues at Project access gates spilling back onto Oakport Street: a) redesign the Project to provide at least 75 feet of queuing space for at least one of the driveways or b) keep the access gates at the two driveways open during normal business hours.

- **TIA Recommendation 2**: Eliminate the proposed right-turn lane on southbound Oakport Street at the approach to Driveway B; limit the outbound movement at Driveway D to right-turns only; and provide a left-turn lane on northbound Oakport Street at the approach to Driveway D. If a left-turn lane cannot be accommodated, prohibit left-turns into the driveway and physically limit the driveway to right-turns in and out only.
- **TIA Recommendation 4**: either provide a pull-out space on the west side of Oakport Street along the Project frontage to accommodate passenger loading and unloading, or allow non-employee vehicles (such as rideshare vehicles) to enter the Project site to drop off and/or pick-up passengers.
- **TIA Recommendation 7**: Ensure that the sidewalk on the west side of Oakport Street has a minimum width of 5.5 feet (seven feet preferred),and provide high visibility crosswalk markings with directional curb ramps and truncated domes on both ends across each of the four Project driveways.
- **TIA Recommendation 8**: Install a new southbound AC Transit Stop on the west side of Oakport Street just south of the Oakport Street/Zhone Way intersection, and install a temporary northbound/eastbound AC Transit stop on northbound Oakport Street approximately 350 feet south of

the Oakport Street/Zhone Way intersection. The stop should be located adjacent to the existing pedestrian path between 66th Avenue and Oakport Street. The temporary stop can be removed when the Southbound I-880 On-ramp has been reconfigured by the 66th Avenue BART to Bay Trail OBAG Project, and the permanent bus stop has been installed on eastbound Zhone Way east of Oakport Street. Install bus shelters with benches and real-time arrival information at both bus stops.

- **TIA Recommendation 9**: Conduct a speed study on Oakport Street to determine if the posted speed limit on Oakport Street along the Project frontage can be reduced. If justified, reduce the posted speed limit per the speed study.
- **TIA Recommendation 10**: Install signage on southbound and northbound Oakport Street warning of the S-curve, consistent with the California Manual on Uniform Traffic Control Devices (CA MUTCD, 2014 Edition); install double-sided reflective chevron signs or similar devices through the S-curve; and install speed feedback signs in both directions of Oakport Street ahead of the S-curve.

Consistent with the CASP EIR and with implementation of applicable SCAs listed above, the Project would not directly or indirectly cause or expose roadway users to a permanent and substantial transportation hazard, and this impact would be less than significant.

Induced Automobile Traffic

CASP EIR Conclusions

The CASP EIR did not use induced automobile traffic as a threshold for measuring transportation impacts.

Project Analysis

Beyond providing access to the Project site, the Project would not modify the roadway network serving the Project site. Therefore, the Project would not substantially induce additional automobile travel by increasing the physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes). The Project would not add new roadways to the network and would have a less than significant impact on inducing additional automobile traffic.

CEQA Conclusions Pertaining to Transportation

The analysis presented above examines whether there are any Project-specific significant effects related to transportation that are peculiar to the Project or its site, finding none. The Project would have no impacts related to transportation that were not previously analyzed in the CASP EIR, would have no off-site or cumulative impacts related to transportation not discussed in the prior CASP EIR, and would not result in any transportation impacts that are more severe than as discussed in the prior CASP EIR. There are no impacts related to transportation that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as pertains to transportation. Only minor technical additions related to the Project and its site have been identified, and these minor additions to the CASP EIR are appropriately disclosed in this Addendum to the CASP EIR.

While not required under the City’s CEQA thresholds of significance, a detailed site plan review and a collision analysis were completed for the Project and provided in the Transportation Impact Review (**Appendix P**). Based on the analysis completed, the Transportation Impact Review includes recommendations to improve multimodal access, circulation, and safety for the Project site and surrounding areas. These recommendations are incorporated in the TDM Plan for the Project (**Appendix Q**).

Tribal Cultural Resources

Would the Project: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	**CASP EIR Findings**	**Relationship to CASP EIR Findings:** Equal or Less Severe	**Relationship to CASP EIR Findings:** New or Substantial Increase in Severity	**Project Conclusions:** Applicable Standards and Regulations	**Project Conclusions:** Resulting Level of Significance
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? or	LTS	■	☐	-	No Impact
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	LTS	■	☐	SCA Cultural-1, Archaeological and Paleontological Resources - Discovery during Construction Project Requirement Tribal Cultural Resources-1: Discovery of Tribal Cultural Resources	Less than Significant

Tribal Cultural Resources

CASP EIR Conclusions [126]

The CASP EIR did not include a separate discussion of Tribal cultural resources, separate from its analysis of archaeological resources and human remains. The CASP EIR did identify that the CASP planning area is, "located within the area that is ethnographically attributed to the Ohlone (also known as Costanoan). The term Costanoan derives from the Spanish word Costaños or "coast people", and refers to an ethno-linguistic group of people that lived along the San Francisco peninsula before contact with European Americans. The territory of the Ohlone is purported to have extended from the Central Coast Ranges between San Pablo Bay in the north and Monterey in the south. The Ohlone tribal territory boundary in the east is not precisely known but is understood to extend to the Mount Diablo Range".

The CASP EIR concluded that development within the CASP planning are, including construction-related subsurface disturbance, "could damage or destroy previously unidentified prehistoric archaeological resources. There is a low potential for the identification of archaeological resources within the artificial fill from elevation 15 to 0 feet (sea level). However, beneath this stratum, there is a higher potential for the identification of prehistoric archaeological resources where there are Holocene aged soils below the artificial fill and above, or

126 City of Oakland, CASP Draft EIR, page 4.4-45

far below, the Bay Mud. These archaeologically sensitive areas are far below the ground surface. While deep excavation for the construction of new buildings has the potential to impact such resources, identification is not recommended. Geo-archaeological testing to a depth of 36 to 40 feet beneath the ground surface that was conducted for a different project on the northeast side of Hegenberger Road did not discover prehistoric archaeological resources or well developed prehistoric land surfaces that indicate a high potential for the discovery of Native American archaeological resources".

Project Analysis

In 2014 (after the CASP EIR's Notice of Preparation), Assembly Bill 52 (Chapter 532, Statutes 2014) required an update to the CEQA Checklist as presented in CEQA Guidelines, to include questions related to impacts to tribal cultural resources. Pursuant to these updated CEQA Guidelines, the SWCA Cultural Resources Inventory Report for the SupplyBank Project (**Appendix K**) provided the following research, outreach and conclusions.

SWCA contacted the Native American Heritage Commission (NAHC) on July 15, 2022, with the intent of identifying culturally sensitive areas and obtaining a list of Native American contacts who may have specific knowledge of the vicinity. The NAHC response was received on August 25, 2022, indicating that "*a record search of the Native American Heritage Commission Sacred Lands File was completed for the information submitted for the above referenced Project. The results were negative. However, the absence of specific site information in the Sacred Lands File does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites*."

The NAHC reply also included a list of seven Native American tribes and individuals who may have knowledge of cultural resources in the Project area. SWCA sent outreach letters via email to all Native American contacts on August 30, 2022, with hard copies following by regular mail on September 1, 2022. Examples of tribal outreach letters and details regarding tribal correspondence are presented in Appendix K. Follow-up telephone calls were made on September 2, 2022. Chairperson Irene Zwierlein of the Amah Mutsun Band of Mission San Juan Bautista requested on-site worker sensitivity training for both tribal and archaeological resources, detailing whom to contact in the event of an inadvertent discovery. Chairperson Corrina Gould of the Confederated Villages of Lisjan requested the CHRIS results and final report. The remainder of the telephone calls went unanswered, and two telephone numbers were disconnected.

Native American outreach performed as part of this review does not constitute formal consultation, which is not required for this type of CEQA documentation. [127]

<u>Applicable Standard Conditions of Approval</u>

The following City of Oakland SCAs (as have been updated) is cited in the CASP EIR as an effective means for addressing an event whereby a tribal cultural resource may be discovered during excavation, and would apply to the Project.

- ***SCA Cultural-1, Archaeological and Paleontological Resources - Discovery during Construction***: Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources, including tribal 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.

[127] PRC Section 21080.3.1 provides that prior to the release of a Negative Declaration, Mitigated Negative Declaration or EIR, for a project, the lead agency shall begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. This CEQA Checklist is not a MND, ND or EIR, so formal consultation was not requested. Nevertheless, this CEQA document's preparers did conduct outreach to those Native American tribes that have requested notification of CEQA documents, requesting any knowledge of tribal cultural resources in the Project area.

a) 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.

b) 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.

c) 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 unlikely event that human remains or funerary objects are discovered during Project excavation, the following additional regulatory requirements would also apply, addressing the potential discovery of tribal cultural resources and/or human remains of Native American origin:

- ***Project Requirement Tribal Cultural Resources-1, Discovery of Tribal Cultural Resources***: In the event that Native American human remains or funerary objects are discovered, the provisions of Section 7050.5(b) of the California Health and Safety Code apply. These provisions provide that, the County Coroner, upon recognizing the remains as being of Native American origin, is responsible to contact the Native American Heritage Commission within 24 hours. The Commission has various powers and duties to provide for the ultimate disposition of any Native American remains, as does the assigned Most Likely Descendant. Sections 5097.98 and 5097.99 of the Public Resources Code also call for "protection of Native American human burials and skeletal remains from vandalism and inadvertent destruction.

In the unlikely event of discovery tribal cultural resources or human remains of Native American origin during construction, the Project would be required to comply with City SCAs and State law that addresses such an unanticipated circumstance. These SCAs and State regulations will ensure that the Project's construction does not cause a substantial adverse change in the significance of a tribal cultural resource, defined as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe.

CEQA Conclusions Pertaining to Tribal Cultural Resources

The analysis presented above examines whether there are any Project-specific significant effects related to tribal cultural resources that are peculiar to the Project or its site, finding none. The Project would have no impacts to tribal cultural resources that were not previously analyzed in the CASP EIR, would have no off-site or cumulative tribal cultural resources impacts not discussed in the prior CASP EIR, and would not result in any impacts to tribal cultural resources that are more severe than as discussed in the prior CASP EIR. There are no impacts related to tribal cultural resources that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as pertains to tribal cultural resources. The tribal cultural resource analysis presented above provides technical additions related to specific cultural resource conditions at the site, and these minor technical additions to the CASP EIR that are specific to the Project are appropriately disclosed in this Addendum to the CASP EIR.

Utilities and Service Systems

Would the Project:	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	Relationship to CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Standards and Requirements	Project Conclusions: Resulting Level of Significance
a) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	LTS with SCAs	■	□	SCA Energy-1, Green Building Requirements SCA Utility-1, Water Efficient Landscape Ordinance	LTS with SCAs
b) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	LTS with SCAs	■	□	SCA Energy-1, Green Building Requirements SCA Utility-2, Sanitary Sewer System SCA General -1, Regulatory Permits and Authorizations from Other Agencies	LTS with SCAs
c) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? d) Comply with federal, state, and local statutes and regulations related to solid waste?	LTS with SCAs	■	□	SCA Utilities-3, Construction and Demolition Waste Reduction and Recycling SCA Utilities-4, Recycling Collection and Storage Space	LTS with SCAs
e) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?	LTS with SCAs	■	□	SCA Utilities-5, Underground Utilities SCA Utilities-6, Storm Drain System SCAs pertaining to construction noise, air quality and dust suppression, erosion control and temporary construction traffic controls	LTS with SCAs

Water Supplies

CASP EIR Conclusions [128]

The CASP EIR (Impact Util-1B) found that the water demand generated by new development pursuant to CASP buildout will increase the average daily water demand over existing levels, but will not exceed water supplies projected to be available from existing entitlements and resources. Average annual water use within the CASP planning area was about 700,000 gallons per day (gpd) in 2014. The projected average annual water demand for CASP buildout was approximately 3.62 million gpd, or 4,065 acre-feet year (AFY). This projected increase in water demand of nearly 3 million gallons per day (or 3,363 AFY) of water was found to be within EBMUD's long-range water supply planning for future growth in Oakland, according to the WSA prepared by EBMUD. Based on this WSA, the CASP EIR determined that CASP buildout would not require expansion of existing water entitlements or resources.

The CASP EIR also concluded that water demand pursuant to the CASP would be reduced to the extent feasible through implementation of City of Oakland SCA Energy-1: Compliance with the Green Building Ordinance, and SCA Util-1: Water Efficient Landscape Ordinance. With implementation of these SCA, the CASP EIR this impact was concluded to be less than significant.

Project Analysis

Applying the same water demand factors as used in the CASP EIR to the Project, the Project's projected water demand is estimated to be approximately 35,600 gpd, as shown in **Table 16**.

Table 16: Project Water Demand vs. CASP Demand

Land Use	Quantity	Demand Factor [1]	Water Demand (gpd	Total CASP Demand [1]
Office	160,000 sf	0.17 gal/sf/day	27,200	
Warehouse/Logistics	123,000 sf	0.03 gal/sf/day	3,690	
Light Industrial (Workshop)	10,000 sf	0.09 gal/sf/day	900	
Outdoor Irrigation	77,100 sf	0.05 gal/sf/day [2]	3,855	
			35,645 gpd / 40 AFY	3 MGD / 3,362 AFY
		Project as a % of CASP total	1.2%	

Sources and Notes:

1. CSP Draft EIR, August 2014, Table 4.14-1: Projected Water Demand– Plan Buildout, page 4.14-15
2. Outdoor irrigation assumes 21 gal/sf/year as industry standard for Oakland area, per CASP EIR

The water demands of the Project represent only about 1 percent of the total water demands generated by buildout of the CASP. Whereas the full water demands of the CASP were previously found to be within EBMUD's long-range water supply for future growth in Oakland, the Project's small increment of this CASP water demands would be well within EBMUD's long-range water supply.

[128] City of Oakland, CASP EIR, page 4.14-14

Applicable Standard Conditions of Approval

The following City of Oakland SCAs (as has been updated) is cited in the CASP EIR as an effective means for addressing cumulative water demands and offsetting water restrictions during periods of multiple dry years, and would apply to the Project.

- ***SCA Energy-1, Green Building Requirements***: (see details in the Energy section of this CEQA Checklist)
- ***SCA Utility-1, Water Efficient Landscape Ordinance***: The project applicant shall comply with California's Water Efficient Landscape Ordinance (WELO) in order to reduce landscape water usage. For any landscape project with an aggregate (total non-contiguous) landscape area over 2,500 sq. ft., the project applicant shall implement the Performance Measures in accordance with the WELO.
  a) Prior to construction, the project applicant shall submit the Project Information and documentation showing compliance with Appendix D of California's Model Water Efficient Landscape Ordinance
  b) Prior to construction, the project applicant shall prepare and submit a Landscape Documentation Package for review and approval, which includes specific Project Information and a Water Efficient Landscape Worksheet.
  c) Upon installation of the landscaping and irrigation systems, and prior to the final of a construction-related permit, the Project applicant shall submit a Certificate of Completion (see page 38.6 in the link above) and landscape and irrigation maintenance schedule for review and approval by the City. The Certificate of Completion shall also be submitted to the local water purveyor and property owner or his or her designee.

Consistent with the conclusions of the CASP EIR, the Project's effects related to water demand will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.

Wastewater Treatment

CASP EIR Conclusions [129]

The CASP EIR (Impact UTIL-2B) found that new development pursuant to CASP buildout would not exceed the wastewater treatment requirements of the San Francisco Regional Water Quality Control Board or result in a determination that new or expanded wastewater treatment facilities would be required. The CASP EIR concluded that full buildout of the CASP would increase the amount of wastewater generated within the CASP planning area, but that EBMUD's Main Wastewater Treatment Plant (MWWTP) had adequate capacity to accommodate the projected 2.7 mgd wastewater flows resulting from CASP buildout during dry-weather operation.

However, the CASP EIR also identified that wet weather flows at the MWWTP are a concern. EBMUD has historically operated three Wet Weather Facilities to provide treatment for high wet weather flows that exceed the treatment capacity of the MWWTP. In 2009, the Regional Water Quality Control Board (RWQCB) issued an order eventually prohibiting further discharges from three of EBMUD's Wet Weather Facilities and requiring EBMUD to identify problem infiltration/inflow areas, begin to reduce infiltration/inflow through private sewer lateral improvements, and lay the groundwork for future efforts to eliminate discharges from the Wet Weather Facilities.

129 City of Oakland, CASP EIR, page 4.14-19

Project Analysis

Conservatively assuming that all water use within the Project other than outdoor irrigation ultimately becomes wastewater, the Project is projected to generate approximately 31,800 gpd of wastewater or slightly over 1% the total wastewater generated by buildout of the CASP. Whereas the full wastewater demands of the CASP were previously found to be within EBMUD's MWWTP capacity, the Project's small increment of the CASP's wastewater demands would be well within the EBMUD MWWTP capacity during average, dry-weather operations. Based on more recent data, the MWWTP currently treats, on average, about 63 million gallons of wastewater every day as compared to the facility's Design Flow of 120 MGD (average dry weather design flow capacity).[130] The Project's estimated 31,800 gpd of wastewater represents a very small fraction of the remaining average dry weather capacity at the MWWTP.

Wet Weather Flows

Peak wet weather flows to the MWWTP remain a concern. During peak wet weather conditions, the MWWTP can receive as much as 425 MGD of influent, primarily from inflow and infiltration (I&I) of stormwater into the surrounding sewer collection system. When wet weather flows exceed the primary treatment capacity of the MWWTP, a portion of these excess flows are stored in separate basin and returned to the plant influent when flows subside. Effluent may also be diverted around (or bypass) biological treatment, be disinfected and then "blended" with disinfected biologically treated effluent. The "blended" wastewater is then dechlorinated prior to being discharged to the Bay through the deepwater outfall. This "blending" is now subject to discharge prohibitions that identify storage basin procedures, future enhancements to these procedures, and measures required to reduce such bypass events. [131]

EBMUD also operates three separate Wet Weather Facilities (WWFs) that operate under a separate discharge permit. These facilities are located at Point Isabel, San Antonio Creek, and Oakport (i.e., at the Northerly Area of the Project site). Each provides primary treatment through physical removal of solids and chemical disinfection prior to discharge. The WWFs were built to capture and treat excess untreated wastewater during peak wet-weather flows. A Consent Decree entered in 2014 requires the reduction and eventual cessation of all WWF discharges, beginning with the San Antonio WWF in 2027 and ending with the Oakport WWF in 2035, with mid-course check-ins in 2022 and 2030.[132]

To cease discharge from all three WWFs and substantially reduce bypass events at the MWWT, EBMUD is working with its "Satellite" agencies (e.g., the City of Oakland to rehabilitate sewer main pipes and manholes, remove sources of inflow, implement a private sewer lateral ordinance, and to identify sources of rapid inflow into the collection systems. These actions will reduce wet weather I&I into the collection systems, which will reduce blending at the MWWTP and cease discharges from the WWFs.

Applicable Standard Conditions of Approval

The following City of Oakland SCAs are cited in the CASP EIR as an effective means for addressing cumulative wastewater demands and reducing wet weather flows to the MWWTP, and would apply to the Project.

- ***SCA Energy-1, Green Building Requirements*** (see above – these requirements will lower demand and result in commensurately lower wastewater generation)

[130] EBMUD, accessed at: https://www.ebmud.com/wastewater/collection-treatment/wastewater-treatment#:~:text=EBMUD%20provides%20secondary%20treatment%20for,wastewater%20is%20treated%20every%20day.

[131] California Regional Water Quality Control Board San Francisco Bay Region, *Order R2-2020-0024, NPDES Permit CA 0037702*, September 2020

[132] California Regional Water Quality Control Board San Francisco Bay Region, *Reissuance of NPDES Permit for East Bay Municipal Utility District; Point Isabel, San Antonio Creek, and Oakport Wet Weather Facilities*, February 12, 2020

❖ ***SCA Utility-2, Sanitary Sewer System***: The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system.

❖ ***SCA General -1, Regulatory Permits and Authorizations from Other Agencies***: The project applicant shall obtain all necessary regulatory permits and authorizations from applicable resource/regulatory agencies, and shall comply with all requirements and conditions of the permits/authorizations. The project applicant shall submit evidence of the approved permits/authorizations to the City, along with evidence demonstrating compliance with any regulatory permit/authorization conditions of approval. In accordance with this SCA:

a) To ensure that the Project contributes to legally required reductions in I&I, the Project applicant shall comply with EBMUD's Regional Private Sewer Lateral (PSL) Ordinance. Affected property owners must obtain a certificate from EBMUD certifying that all of their PSLs are leak-free.

b) The Project shall replace or rehabilitate any existing sanitary sewer collection systems, including sewer lateral lines, to ensure that such systems and lines are free from defects or, alternatively, disconnected from the sanitary sewer system, and

c) The Project shall ensure that any new wastewater collection systems, including sewer lateral lines, are constructed to prevent I&I to the maximum extent feasible while meeting all requirements contained in the Regional Private Sewer Lateral Ordinance and applicable municipal codes.

Consistent with the conclusions of the CASP EIR, the Project's effects related to increased wastewater demands will be fully addressed through implementation of City SCAs and existing regulations, and impacts related to sanitary sewer service and treatment would be reduced to less than significant.

Stormwater/Drainage

CASP EIR Conclusions [133]

The CASP EIR (Impact UTIL-3B) found that new development pursuant to CASP would require construction of new stormwater drainage facilities and the potential expansion of existing facilities. Given the developed condition of the CASP planning area, the CASP EIR did not expect that future development would increase the amount of impervious surface area or the volume of stormwater runoff. New development would be required by regulation and City SCAs to either add pervious area or use underground detention in-lieu of or in combination with increased landscaping and pervious surfaces. Although the City of Oakland's Storm Drainage Design Guidelines require new development to reduce storm runoff by 25% from existing conditions, the CASP EIR recognizes that the feasibility of reducing peak runoff on a site-by-site basis may be constrained by factors such as aesthetic design, space constraints, construction budget implications, environmental and geotechnical constraints, and on-going maintenance commitments. The CASP EIR concluded that the environmental effects resulting from construction of new stormwater drainage facilities would be less than significant with implementation of SCAs.

[133] City of Oakland, CASP EIR, page 4.14-22

Project Analysis

Currently, stormwater from the Development Area drains either south or north via a vegetated ditch along the Oakport Street frontage. Runoff to the south enters a large off-site depression at the 66th Avenue/Zhone way interchange, which is separated from the Bay by a former railroad berm that supports a hiking trail. Stormwater also runs as sheet flow into low depressed areas on the westerly side of the site near the railroad berm before dissipating into existing vegetation. Based on a preliminary hydrology analysis, runoff from the Development Area is calculated at a 100-year pre-developed peak (Q100) flow of 6.3 cubic feet per second (CFS).

Based on a calculation of anticipated increased runoff attributed to the new impervious surfaces of the Project, these impervious surfaces are expected to generate a post-developed peak (Q100) flow of 40 CFS, or a net increase of 33.7 CFS.

<u>Applicable Standard Conditions of Approval</u>

- ***SCA Hydro-3, NPDES C.3 Stormwater Requirements for Regulated Projects*** (see Hydrology section of this CEQA Checklist), which includes hydromodification management measures, if required by Provision C.3 of the Municipal Regional Stormwater NPDES Permit (MRP), so that post-project stormwater runoff flow and duration match pre-project runoff

Pursuant to SCA Hydro-3, the Project will need to implement storm water treatment and hydromodification management to control the flow and duration of post-project stormwater runoff to match pre-project runoff conditions.

<u>Project Plans pursuant to City SCAs</u>

The Project includes a preliminary Storm Water Control Plan (SWCP) designed to maintain pre-developed stormwater outflow characteristics. This SWCP relies on temporarily detaining increased storm runoff and releasing it at the pre-developed rate, but for a longer duration. Per the preliminary SWCP, after water quality filtration in the bio-retention facilities and mechanical filtration, stormwater will flow into one of two on-site underground stormwater storage facilities. These storage facilities consist of a series of interconnected solid pipes buried below the Project's parking lots. The underground stormwater storage facilities are designed to provide storage capacity that meets the hydro-modification standards of the Master Regional permit (MRP). The stormwater storage facilities will retain stormwater runoff until stormwater flows in the surrounding storm drain system recede, at which point the stormwater will be released into the storm drain system, which drains to the Bay.

Consistent with the conclusions of the CASP EIR, and with implementation of the Project's required SWCP, the Project's impacts related to storm water drainage will be fully addressed, and this impact would be reduced to less than significant.

<u>Landfill Capacity and Waste Generation</u>

CASP EIR Conclusions [134]

The CASP EIR (Impact Util-4) found that future development pursuant to the CASP would not violate applicable federal, state and local statutes or regulations related to solid waste, and that it would not generate solid waste that would exceed the permitted capacity of the landfills serving the area. Based on waste generation rates established by the California Integrated Waste Management Board (CIWMB) new development pursuant to the CASP was expected to increase the existing total waste stream by approximately 26.8 million pounds per year.

[134] City of Oakland, CASP EIR, page 4.14-23

Compliance with existing policies and regulations, including the City of Oakland's SCAs was found to minimize solid waste disposal requirements of the CASP to the extent feasible. The CASP EIR concluded that implementation of the CASP would not impede the ability of the City to meet waste diversion requirements, and would not cause the City to violate other applicable federal, state and local statutes and regulations related to solid waste. No additional mitigation measures were required.

The CASP EIR also found that demolition and construction activities associated with removal of existing buildings, paved asphalt areas and utilities would be subject to City of Oakland waste reduction and recycling requirements of the City's SCAs and the City's Waste Reduction and Recycling Standards of Oakland Municipal Code Chapter 15.34. The requirements provide for implementation of a recycling and waste reduction plan for construction and demolition activities. With implementation of these requirements, the CASP EIR determined that demolition and new construction pursuant to the CASP would comply with existing solid waste reduction requirements, including applicable federal, State and local solid waste statutes and regulations. No additional mitigation measures were required.

Project Analysis

During the Project's construction process, the Project will generate construction waste consisting of lumber and other construction materials. The Project will also result in demolition of several small sheds and structures from within the Northerly Area of the Project site, with relocation of activities to new facilities within the Development Area. During operations, the Project's employees will also generate waste material as garbage, recyclable products and green waste. Based on waste generation rates established by the CIWMB, the Project can be expected to increase the existing total waste stream by approximately 0.58 million pounds per year, or about 2 percent of the total increase in the waste stream attributable to the CASP. These waste materials are common and regular components of office and warehouse land uses and are not unique or specific to the Project. In proportion to overall waste generated pursuant to CASP buildout, the Project's operational waste will be relatively small in volume. These waste streams resulting from the Project will incrementally add to the total amount of waste destined for landfill, but the Project's solid waste disposal needs cause an exceedance of permitted landfill capacity, and will comply with federal, state and local statutes and regulations related to solid waste.

<u>Applicable Standard Conditions of Approval</u>

The following City of Oakland SCAs are cited in the CASP EIR as an effective means for addressing solid waste and landfill capacity, and would apply to the Project.

- ***SCA Utilities-3, Construction and Demolition Waste Reduction and Recycling***: 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.
- ***SCA Utilities-4, Recycling Collection and Storage Space***: The project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall contain recycling collection and storage areas in

compliance with the Ordinance. For residential projects, at least two (2) cubic feet of storage and collection space per residential unit is required, with a minimum of ten (10) cubic feet. For non-residential projects, at least two (2) cubic feet of storage and collection space per 1,000 square feet of building floor area is required, with a minimum of ten (10) cubic feet.

Consistent with the conclusions of the CASP EIR, the Project's effects related to waste generation and landfill capacity will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.

Construction of New Utility Service Infrastructure

CASP EIR Conclusions [135]

The CASP EIR found that all construction activity on-site, including construction of new water distribution lines, new sewer laterals and new storm drain infrastructure would be required to comply with City of Oakland standard conditions of approval regarding construction noise, air quality and dust suppression, erosion control and temporary construction traffic controls. These City SCAs were found to reduce standard construction impacts to levels considered less than significant, and no mitigation measures were required.

Project Analysis

There is an existing 12-inch to 16-inch water main within the Oakport Street right-of-way. The Project will connect to this existing water main at two locations, and a looped water service line would be installed between these connections to serve all new development within the Development Area (see **Figure 33**). Relocation and installation of new fire hydrants would be provided, per City of Oakland standards. The Project will also install new water meters and separate domestic/irrigation water lines to serve the office building, the warehouse and the workshop, per EBMUD standards.

The Project will also install a new sanitary sewer system within the Development Area. This system includes a sewer cleanout at the southerly portion of the site, a new 8" sewer pipe that runs within the drive aisle in front of the office building and around the rear of the warehouse, to a new sewer lift station located at the northwest corner of the warehouse. From this lift station, a new force main will convey sewer flows up to Oakport Street, where an approximately 300 linear-foot sewer line extension will run within Oakport Street to the terminus of the existing sewer main, which is located about mid-way between the northerly portion of the proposed Development Area and the Peppermint Gate access road.

Based on recent site observations, flooding associated with heavy rains currently occurs on the most southerly portion of the Development Area and in the adjacent area to the south of the Project site. To address this issue, as well as the Project's increase stormwater runoff, the Project proposes to construct a storm drain system that includes and underground stormwater storage/retention system, and low-impact development (LID) measures such as bio-retention facilities with underdrains distributed throughout the site and along the site perimeter. The purpose of the stormwater storage/retention system is to collect and retain stormwater flow from the site within the pipes until surface stormwater flows subside. The additional stormwater generated by the Project will then be released into the surrounding storm drain system once peak flows have dissipated, thus not contributing to existing stormwater flooding conditions.

[135] City of Oakland, CASP EIR, page 4.14-16 and -21

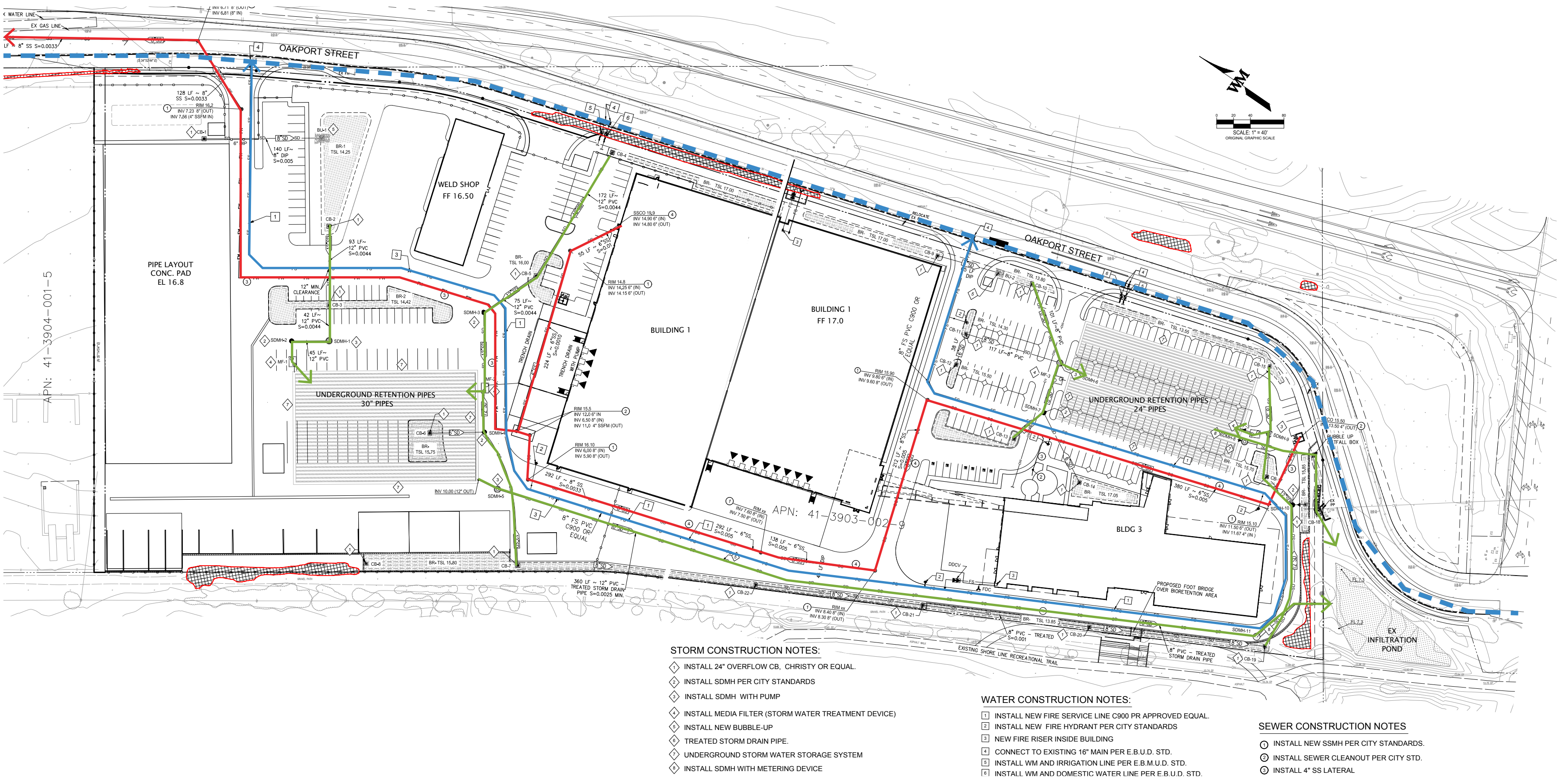

Figure 33
Development Area Preliminary Utility Plan

Source: Ware Malcomb, Sheet C4.0, December 2022

Nearly all of the construction necessary to install new utility infrastructure will occur on-site and is accounted for as part of the Project's grading and construction plans. On-site utilities will connect to the existing main lines under Oakport Street, and nearly all of the new connections will be made within the Oakport Street right-of-way. The off-site construction necessary will be trenching for a new 300 linear-foot sewer line extension within Oakport Street to the terminus of the existing sewer main, and trenching for new utility connections within the Oakport Street right-of-way. Construction of these limited off-site trenches will be required to comply with all SCAs regarding construction noise, air quality and dust suppression, erosion control and temporary construction traffic controls, and are not expected to result in significant environmental effects.

Applicable Standard Conditions of Approval

The following City of Oakland SCAs are cited in the CASP EIR related to construction of new utility connections, and would apply to the Project.

- **SCA Utilities-5, Underground Utilities**: 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.
- **SCA Utilities-6, Storm Drain System**: The project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.

Consistent with the conclusions of the CASP EIR, the Project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects.

CEQA Conclusions Pertaining to Utilities and Service Systems

The analysis presented above examines whether there are any Project-specific significant effects related to utilities that are peculiar to the Project or its site, finding none. The Project would have no impacts to utilities that were not previously analyzed in the CASP EIR, would have no off-site or cumulative utilities service impacts not discussed in the prior CASP EIR, and would not result in any impacts to utilities that are more severe than as discussed in the prior CASP EIR. There are no utilities-related impacts that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as related to utilities. The utilities analysis presented above does provide additional details regarding utilities at the Project site, and the Project provides additional detailed recommendations for best addressing these utility conditions, specific to the site and the proposed Project. These additional details are new information pertinent to the Project that were not available or practical at the time of certification of the CASP EIR. However, as described above, these new details do not introduce any new significant impacts pertaining to utilities that were not previously identified in the CASP EIR, and do not substantially increase the severity of any significant utilities impacts as previously disclosed in the CASP EIR. The detailed utilities recommendations for the Project are fully consistent with the Standard Conditions of Approval as cited in the CASP EIR. These new details that are specific to the Project and its site are appropriately disclosed in this Addendum to the CASP EIR.

Wildfire

		Relationship to CASP EIR Findings:		Project Conclusions:	
Would the Project: If located in or near state responsibility areas or lands classified as Very High Fire Hazard Severity Zones:	**CASP EIR Findings**	**Equal or Less Severe**	**New or Substantial Increase in Severity**	**Applicable Standards and Requirements**	**Resulting Level of Significance**
a) Due to slope, prevailing winds and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrollable spread of a wildfire?	No Impact	■	☐	-	No Impact
b) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No Impact	■	☐	-	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risks or that may result in temporary or ongoing impacts to the environment? d) Expose people or structures to significant risk, including downslope or downstream flooding or landslides from runoff post-fire slope instability, or drainage changes?	No Impact	■	☐	-	No Impact

Exacerbate Wildfire Risks

CASP EIR Conclusions [136]

When the CASP EIR was certified in 2015, the CEQA Checklist did not include a Wildfire Risk section. Wildfires pose an increasingly serious threat to the public and environment, and to help public agencies identify and evaluate such risks, CEQA Guidelines were amended in December 2018 to address this topic. Wildfire risks were addressed in the 2015 CASP EIR under the wildfire subcategory in the Hazards chapter of that EIR. The CASP EIR (Impact Hax-10) found that the CASP would not expose people or structures to risks involving wildland fires. The CASP planning area was not in or adjacent to a fire hazard severity zone for either a State Responsibility Area or a Local Responsibility Area as shown on CalFire's Fire Hazard Severity Zone maps for Alameda County, and no impact was identified.

[136] City of Oakland, CASP EIR, page 4.7-51

Project Analysis

Based on current review of the CalFire Fire Hazard Severity Zone Viewer, the Project site is not located within any designated fire hazard severity zone, and is approximately 2.8 miles from the nearest Very High Fire Hazard Severity Zones, which are identified throughout the East Bay Hills.[137] The Project poses no potential impacts related to exacerbation of wildfire risks, post-fire slope instability, or conflicts with emergency response plans or emergency evacuation plans.

Consistent with the conclusions of the CASP EIR, the Project has no potential effects related to wildfire risks, and this impact remains less than significant.

CEQA Conclusion Pertaining to Wildfire

The analysis presented above examines whether there are any Project-specific significant effects related to wildfire risks that are peculiar to the Project or its site, finding none. The Project would have no impacts to wildfire risks that were not previously analyzed in the CASP EIR, would have no off-site or cumulative wildfire risks not discussed in the prior CASP EIR, and would not result in any impacts related to wildfire risks that are more severe than as discussed in the prior CASP EIR. There are no impacts related to wildfire risks that would otherwise invalidate the applicability of CEQA Guidelines Section 15183 for the Project.

None of the conditions described in CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR are met as pertains to wildfire risks. The wildfire risk analysis presented above provides technical additions related to specific wildfire risks at the site, and these minor technical additions to the CASP EIR that are specific to the Project are appropriately disclosed in this Addendum to the CASP EIR.

137 CalFire FHSZ Viewer, accessed August 2022 at https://egis.fire.ca.gov/FHSZ/

Mandatory Findings of Significance

	CASP EIR Findings	Relationship to CASP EIR Findings: Equal or Less Severe	Relationship to CASP EIR Findings: New or Substantial Increase in Severity	Project Conclusions: Applicable Standards and Requirements	Project Conclusions: Resulting Level of Significance
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal? Does the project have the potential to eliminate important examples of the major periods of California history or prehistory?	LTS	■	☐		LTS
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	LTS	■	☐	-	LTS
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly	LTS	■	☐	-	LTS

<u>Degrade the Quality of the Environment</u>

As addressed in the Air Quality, Biology, Cultural Resources, GHG, Hazards and Hydrology sections of this CEQA Checklist, with implementation of all applicable City of Oakland SCAs and other regulatory requirements the Project would not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. Similarly, with implementation of all applicable City of Oakland SCAs and other regulatory requirements the Project would not eliminate important examples of the major periods of California history or prehistory.

- The Project's effects related to emission of fugitive dust during construction will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.
- The Project's construction-period emissions of criteria pollutants would not exceed threshold levels, and this impact would be less than significant. The Project's effects related to criteria pollutant emissions

during construction will be further reduced with implementation of City SCAs pertaining to construction-related air pollutant controls.

- The Project's operational air quality impacts related to increases of non-attainment criteria air pollutants would be less than significant. The Project will be subject to City SCAs pertaining to required TDM, energy efficiency, water conservation and waste generation, and implementation of these SCAs will further reduce the Project's operational criteria pollutant emissions.
- The Project's effects related to special status species and their habitat will be fully addressed through implementation of City SCAs and existing regulations, as well as CASP EIR mitigation measures. CASP EIR mitigation measures provide for avoidance and protection of core habitat areas for salt marsh harvest mouse habitat within Damon Marsh, and avoidance and protection of special status birds and nesting birds within Damon Marsh. With these CASP EIR mitigation measures, impacts to special status species and their habitat would be reduced to less than significant.
- Through coordination with the RWQCB, the Project will result in the loss of approximately 0.371 acres of wetlands and other Waters of the State. The Project applicant has coordinated with the RWQCB to pursue necessary regulatory permits and authorizations for the Project. With RWQCB acceptance of the avoidance strategies incorporated as part of the Project and the off-site compensatory mitigation of new wetlands creation, impacts of the Project on wetlands and identified Waters of the State will be reduced to a less than significant level.
- The Project will implement SCAs calling for a Lighting Plan and a Bird Collision Reduction Plan, which would address the potential disruption of night lighting and reduce the risk of bird strikes. The Bird Collision Reduction Plan called for in the City's SCA would further define building treatments, exterior lighting, and management activities that would serve to reduce bird strikes and disturbance to nearby marsh habitat. Together with other SCAs and the additional mitigation measures called for in the CASP EIR that serve to protect nesting habitat and minimize disturbance to sensitive habitat, potential impacts on wildlife movement opportunities associated with the proposed Project would be less than significant.
- The Project's effects related to consistency with the City's Tree Protection Ordinance will be fully addressed through implementation of City SCAs and existing regulations, including obtaining a Tree Removal permit prior to grading or construction activities, and planting new street trees and landscape screening. With issuance of a Tree permit and implementation of the Project's proposed landscape plans, impact related to inconsistency with the City's Tree Protection Ordinance would be reduced to less than significant.
- The Project's effects related to consistency with the City's Creek Protection Ordinance will be fully addressed through implementation of City SCAs and existing regulations, including obtaining a Creek Permit prior to grading or construction activities, and complying with the conditions of that permit throughout the construction period. With issuance of a Creek Permit and implementation of the conditions of that permit during the Project's grading operations, impact related to inconsistency with the City's Creek Protection Permit would be reduced to less than significant.
- The Project site has been reviewed for the presence of historic resources, no such resources were identified, and no City of Oakland's SCAs, Planning Code requirements or General Plan policy considerations relevant to historic resource preservation apply to the Project. This potential impact is considered less than significant.
- A records search from the California Historical Resources Information System (CHRIS) Northwest Information Center (NWIC) at Sonoma State University was conducted to identify known cultural resources and previous cultural resource studies within 0.25 mile of the Project site. The CHRIS records

search did identify any previously recorded resources within the Project site or within the 0.25-mile radius. An intensive pedestrian survey of the Project site was conducted on August 25, 2022. No archaeological resources, artifacts or features were observed within the Project area. Although no cultural resources were noted on the ground surface during this pedestrian survey, the possibility of encountering cultural resources during excavation remains. City of Oakland SCAs are cited as an effective means for addressing potential discovery of undiscovered archaeological resources or human remains and would apply to the Project, reducing this potential impact to less than significant.

- The Project applicants have completed the City of Oakland ECAP Consistency Checklist, which qualitatively demonstrates compliance with the Checklist items as part of the Project's design. The Project is considered in compliance with the City's CEQA GHG threshold of significance, and its impact related to GHG emissions would be less than significant.
- Construction activities pursuant to the Project will utilize hazardous chemicals that, if not properly managed, could flow into the storm drainage system or nearby surface water bodies including the San Francisco Bay. Ongoing operations would also involve routine use of certain household chemicals and products that contain hazardous materials, as well as use and storage of hazardous materials that are of greater consequence than typical household products. These chemicals could result in hazards or the release of hazardous materials. The Project's effects related to routine transport, use or disposal of such hazardous materials during construction and operation will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.
- Grading and excavation for the Project would remove protective vegetation and disturb the ground, thereby exposing soil to increased erosion from stormwater runoff, site watering and wind. The import of new fill soils could also introduce the potential of temporary increases in sediment loads and associated construction-related pollutants into waterways in the vicinity (i.e., Elm Creek and the Bay) during the construction period. The Project's effects related to water pollution and sedimentation during construction will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.
- During the life of the Project, new office employees and EBMUD operations may generate non-point source pollutants from landscaped areas, parking and driveway runoff, and litter. An increase in non-point source pollutants could have adverse effects on wildlife, vegetation and human health. Non-point source pollutants could also infiltrate into groundwater and degrade the quality of groundwater sources. The Project's impacts related to post-construction stormwater quality and increased storm water flows will be fully addressed through implementation of City SCAs and existing regulations, and this impact would be reduced to less than significant.
- In the unlikely event of discovery tribal cultural resources or human remains of Native American origin during construction, the Project would be required to comply with City SCAs and State law that addresses such an unanticipated circumstance. These SCAs and State regulations will ensure that the Project's construction does not cause a substantial adverse change in the significance of a tribal cultural resource.

Based on these conclusions, the Project would not degrade the quality of the environment. The Project would not substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten or eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. The Project would not eliminate important examples of major periods of California history or prehistory.

Cumulative Impacts

The City of Oakland's certified 2015 CASP EIR is both a project-level and a Program EIR as defined under CEQA Guidelines Section 15168 and Section 15183. That prior EIR examined the potential cumulative effects of new development pursuant to Coliseum Area Specific Plan. The 2015 CASP EIR determined that, for the majority of environmental topics analyzed in that EIR, cumulative development consistent with the CASP would result in environmental impacts that would be reduced to levels of less than significant with implementation of City of Oakland SCAs, existing regulatory requirements and implementation of policies contained within the 2015 CASP.

The 2015 CASP EIR determined that the following list of environmental impacts would be cumulatively significant and unavoidable.

- Construction activities pursuant to CASP buildout will generate regional ozone precursor emissions and regional particulate matter emissions from construction equipment exhaust. For most individual projects, construction emissions will be effectively reduced to a level of less than significant with implementation of required City of Oakland Standard Conditions of Approval. However, larger individual construction projects may generate emissions of criteria air pollutants that would exceed the City's thresholds of significance. Even with implementation of mitigation measures (MM Air 6A-1: Reduced Construction Emissions), it was not certain that emissions of ROG and NOx could be reduced to below threshold levels and this impact was conservatively deemed to be significant and unavoidable.
- New development pursuant to the Project CASP would result in operational average daily emissions of criteria pollutants that would exceed applicable threshold criteria. Even with implementation of SCA Trans-1: Transportation Demand Management (TDM) Program, this impact was deemed significant and unavoidable.
- Future development pursuant to the CASP could have a substantial adverse effect, either directly or through habitat modifications, on candidate, sensitive or special status species. Not until such time as the details of these Project elements are known, permits from responsible agencies are sought, and the requirements and conditions of the responsible regulatory agencies specific to these Project elements are fully known, could any determination be made as to the efficacy of recommended mitigation measures (including MM Bio 1A-1: Pre-construction Nesting Bird Surveys and Buffers, MM Bio 1A-2: In-water Work Restrictions, MM Bio 1A-3: Salt Marsh Protection, MM Bio 1B-1: In-Bay Dredge Requirements, and MM Bio 1B-2: Freshwater Marsh Restoration Plan). Therefore, this impact was conservatively deemed significant and unavoidable.
- Future development pursuant to the CASP would result in ultimate demolition of the Oakland Coliseum and potentially the Arena, causing a substantial adverse change in the significance of the Oakland Coliseum and Arena Complex, a historical resource as defined in CEQA Guidelines Section 15064.5. Even with implementation of MM Cultural 1A-1: Site Recordation, MM Cultural 1A-2: Public Interpretation Program and MM Cultural 1A-3: Financial Contribution, this impact was deemed significant and unavoidable.
- Future development of new sports and special events venues would generate operational noise that would exceed the City of Oakland Noise Ordinance at new, on-site sensitive receivers. There was no feasible mitigation to reduce game-day and special event noise from a new stadium and ballpark (assuming a non-roof design) at proposed new on-site sensitive receivers, and this impact was considered significant and unavoidable.
- The CASP EIR also identified several traffic-related impacts involving level of service thresholds that were applicable at the time. However, as fully addressed in this CEQA Checklist, level of service effects on traffic are no longer considered an impact under CEQA.

CEQA Guidelines Section 15183 provides that future projects analyzed in relationship to a prior Program EIR may be excluded from further analysis of off-site or cumulative impacts, if those off-site or cumulative impacts were adequately discussed in the prior Program EIR.

This CEQA Checklist analyzes whether the Project may contribute to cumulative environmental effects as identified in the 2015 CASP EIR. This CEQA Checklist also considers whether uniformly applied development standards, policies and/or regulations identified in the CASP EIR would apply to the Project, and whether the Project would have significant effects on the environment that may be unique to the Project or its site, and not analyzed in that prior Program EIR. The analysis in this CEQA Checklist finds that the Project would not have environmental impacts that are unique to the Project, that the Project's contribution to cumulative effects were fully evaluated and disclosed in the 2015 CASP EIR, and that certain uniformly applied development policies or standards identified in the CASP EIR would continue to apply to the Project.

Accordingly, this CEQA Checklist relies on the streamlining provisions of CEQA Guidelines Section 15183 to address cumulative effects, and finds that the Project would not contribute to any cumulative effects not previously disclosed and adequately analyzed in the prior 2015 CASP EIR.

Effects on Human Beings

As addressed in the Air Quality, Geology, Hazards, Hydrology, Noise and Wildfire sections of this CEQA Checklist:

- The Project would involve grading and earth movement using loaders, tractors, bulldozers, backhoes and other diesel-powered equipment that would release emissions of diesel particulate matter (DPM), a toxic air contaminant. The Project is required to conduct a health risk analysis (HRA) prior to construction and implement diesel emission reductions as identified in that HRA, or to implement Verified Diesel Emission Control Strategies for control of construction-related toxic air contaminant (TAC) emissions. Either of these approaches would control construction-related TAC emissions to levels of less than significant.
- The Project's contribution of traffic to the surrounding major roadways represents a small component of the assumed buildout of the CASP. Whereas the CASP EIR found that traffic attributed to buildout of the CASP would not result in significant human health impacts on the maximum exposed on-site and off-site sensitive residential receptors, the Project's small increment of traffic and associated TAC emissions would be less than as assumed in the CASP EIR, and therefore less than significant. The project will also likely rely on diesel-powered back-up generators for emergency power. With implementation of City of Oakland SCA, the health risks associated with on-site stationary sources of TAC emissions (assumed limited to emergency generators) would be reduced to a level of less than significant.
- The Project site is not located within an Alquist-Priolo Earthquake Fault Zone, and the potential for fault rupture to affect employees at the Project is less than significant. The Project site is located in the San Francisco Bay Area of California, which is a relatively high seismicity region. The type and magnitude of seismic hazards affecting the site generally correlate with ''severe" groundshaking, potentially resulting in moderate to heavy damage to buildings and infrastructure. The Project site is also located in an area identified as a liquefaction hazard zone, having a very high susceptibility to earthquake-induced liquefaction. With full compliance with the CBC building standards and recommendations of the 2018 Terracon Report, the effects of strong ground shaking and liquefaction in the event of a likely earthquake scenario would be reduced to levels considered acceptable by professional engineers, and therefore considered under CEQA to be less than significant.
- According to Water Board records, a Case Closure determination for former leaking underground storage tanks within the Northerly Area at the Oakport Wet Weather Facility (at 5597 Oakport Drive)

was issued in March of 1996. As a closed case, this portion of the Project site is no longer considered to be on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

- Based on the Phase II ESA conducted for the Project site, existing soil at the site does not pose an unacceptable risk to future commercial or industrial receptors (i.e., future employees), nor does it pose an unacceptable risk to construction workers. Based on comparison of groundwater data to vapor-intrusion screening levels, groundwater at the site does not pose an unacceptable vapor-intrusion risk to receptors at the site. Certain on-site soils contain concentrations of heavy metals (chromium, lead and mercury) are above the hazardous waste screening criteria, and BMPs for further waste characterization of these soils must be conducted (pursuant to SCA Haz-1) prior to any off-site disposal. The Project's effects related to site contamination and the presence of chemicals of concern have been/will be fully addressed through implementation of City SCAs and existing regulations, and this impact has been/will be reduced to less than significant.
- There are no schools, daycare centers or other sensitive receptors located within ¼-mile of the Project site. The land uses surrounding the Project site include industrial and warehouse uses to the east, open space and the Bay to the west, the freeway interchange to the south and existing EBMUD operations to the west. The Project would not involve use of hazardous materials within 0.25 mile of a school, and this impact would be less than significant.
- Ongoing operations at the SupplyBank.org office building at the shared warehouse would involve the routine use of certain household chemicals and products that contain hazardous materials. Use of these products according to manufacturer's recommendation would ensure these chemicals do not become a hazard to people or the environment.
- The Project site is located within the ALUCP Safety Zone 7: Other Airport Environs. Within this safety zone, there are no land use restrictions office buildings or medium-sized businesses. The Project would comply with the land use safety and compatibility criteria of the ALUCP, and no impacts to people related to airport safety hazards would occur.
- The Project site is directly accessible to I-880 from Oakport Street in the event of an emergency evacuation, and the Project would not interfere with emergency evacuation routes.
- The Project site is not located within the FEMA-designated 100-year flood zone. The Project site, like all of the surrounding land west of San Leandro Street, is within the 0.2 percent Annual Chance of Flood Hazard (i.e., the 50-year flood zone), which is not a regulated flood zone. Impacts of the Project related to flooding hazards would be less than significant.
- The loudest construction noise attributed to the Project would be unlikely to exceed applicable standards at sensitive residential receivers or at commercial/industrial receivers, but would exceed standards at the Damon Marsh open space and Bay Trail, and at the City's soccer field. The Project's effects related to construction noise will be fully addressed through implementation of City SCAs, existing regulations and Project-specific recommendations pursuant to SCAs, and this impact would be reduced to less than significant.
- The Project site is not subject to excessive noise from private airstrips, public airports or overhead aircraft. Consistent with the findings of the CASP EIR, the Project would not be adversely affected by aviation noise.
- There are no existing homes on the Project site and development of the Project would not result in the displacement of persons or housing.

- the Project site remains well outside of any areas classified as a Very High Fire Hazard Severity Zone, which are identified throughout the East Bay Hills, more than 3 miles east of the Project site. The Project poses no potential impacts related to exacerbation of wildfire risks, post-fire slope instability, or conflicts with emergency response plans or emergency evacuation plans.

Based on these conclusions, the Project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

VII - CEQA Determination / Findings

Based on the information and analysis contained in this CEQA Checklist, the Project is consistent with the development density and land use characteristics established by existing zoning and General Plan policies for which an EIR was certified (i.e., the 2015 Coliseum Area Specific Plan and its EIR).

The Project would be required to comply with all applicable SCAs, regulatory requirements and/or mitigation measures as cited in the CASP EIR. With implementation of those SCAs, regulatory requirements and/or mitigation measures, the preceding CEQA Checklist concludes that the Project would not result in a substantial increase in the severity of any significant impacts and would not result in any new significant impacts that were not previously identified in that prior EIR.

In accordance with CEQA Guidelines Sections 15183 and as set forth in this CEQA Analysis, the Project qualifies for CEQA streamlining provisions, because the following findings can be made:

<u>Consistency with Community Plan or Zoning (CEQA Guidelines Section 15183)</u>

CEQA Guidelines Section 15183 provides that, "projects that are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site". These provisions of CEQA are intended to streamline the environmental review of certain types of projects, and to reduce the need to prepare repetitive environmental studies. These provisions of CEQA apply only to those projects that are consistent with a community plan adopted as part of a General Plan, a zoning action which zoned or designated the parcel on which the Project would be located to accommodate a particular density of development, or the General Plan of a local agency. Per CEQA Guidelines section 15183 (i)(2), "consistent means that the density of the proposed project is the same or less than the standard expressed for the involved parcel in the general plan, community plan or zoning action for which an EIR has been certified, and that the project complies with the density-related standards contained in that plan or zoning. Where the zoning ordinance refers to the general plan or community plan for its density standard, the project shall be consistent with the applicable plan". An EIR must have been certified by the Lead Agency for the community plan, the zoning action or the General Plan, for these provisions to apply.

Section 15183(a) of the CEQA Guidelines provides that, in approving a project meeting these requirements, a public agency shall, "limit its examination of environmental effects to those impacts that the agency determines, in an Initial Study or other analysis:

- are peculiar to the project or the parcel on which the project would be located
- are not analyzed as significant effects in a prior EIR on the zoning action, General Plan or community plan
- are potentially significant off-site impacts and cumulative impacts that were not discussed in the prior EIR prepared for the general plan, community plan or zoning action, or
- are previously identified significant effects which, as a result of substantial new information which was not known at the time the prior EIR was certified, are determined to have a more severe adverse impact than discussed in the prior EIR"

When reviewing the environmental effects of the Project pursuant to these provisions, an effect of the Project on the environment shall not be considered peculiar to the Project if uniformly applied development policies or standards (i.e., SCAs) have been previously adopted by the City. A finding must have been made that the applicable development policies or standards will substantially mitigate environmental effects when applied to future projects, unless substantial new information shows that the policies or standards will not substantially mitigate the environmental effect. The finding shall be based on substantial evidence, which need not include an EIR.

This CEQA Checklist includes information that demonstrates the Project is consistent with the development density established by existing zoning, the CASP and the Oakland General Plan's Land Use and Transportation Element (LUTE). The General Plan and Zoning Consistency Analysis demonstrates that the Project is consistent with the bulk, density and land use standards as established by policies of the Coliseum Area Specific Plan, and as subsequently incorporated into the Land Use and Transportation Element (LUTE) of the City of Oakland General Plan and implementing regulations of the applicable zoning district for the site.

- A Program EIR was prepared and certified by the City of Oakland for the Coliseum Area Specific Plan (the 2015 CASP EIR). The Project is consistent with the development assumptions of that prior CASP EIR.

The CEQA Checklist also examines whether the potential impacts of the Project have already been addressed in the CASP EIR, and concludes that the Project's effects have been thoroughly addressed in the prior 2015 CASP EIR, and no Project-specific significant effects that are peculiar to the Project or its site will occur.

- The CEQA Checklist prepared for the Project demonstrates that the Project will not result in significant impacts that were not previously identified in the CASP EIR as significant project-level, cumulative or off-site effects.
- The CEQA Checklist also presents substantial evidence that the Project would not result in new or more severe environmental effects than those previously disclosed in the CASP EIR, or which may be peculiar to the Project or its site.
- The Project's potentially significant effects have already been addressed as such in the CASP EIR and any such potentially significant effects will be substantially mitigated by the implementation of City of Oakland Standard Conditions of Approval (SCAs) and/or the imposition of regulatory requirements, and Project's plans prepared pursuant to those SCAs and regulations.

Therefore, the Project would meet the criteria of CEQA Guidelines Section 15183 and no further environmental review is required. Overall, based on an examination of the analysis, findings and conclusions of the 2015 CASP EIR, all of which are summarized in the CEQA Checklist of this document, the potential environmental impacts associated with the Project have been adequately analyzed and covered in that prior EIR. No further review or analysis under CEQA is required.

<u>Reliance on a Prior Program EIR</u>

Pursuant to CEQA Guidelines Section 15168, "a Program EIR is an EIR that has been prepared on a series of actions that can be characterized as one large project and that are related either geographically, as logical parts in a chain of contemplated actions, in connection with general criteria to govern the conduct of a continuing program, or as individual activities carried out under the same authorizing statute or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways". CEQA Guidelines Section 15168(c) provides that, "later activities in the program must be examined in the light of the Program EIR to determine whether an additional environmental document must be prepared (unless that project is determined to be eligible for a categorical exemption):

- If a later activity would have effects that were not examined in the program EIR, a new Initial Study would need to be prepared leading to either an EIR or a negative declaration. That later analysis may tier from the Program EIR as provided in Section 15152.
- If the lead agency finds, pursuant to Section 15162, that no subsequent EIR would be required, the lead agency can approve the activity as being within the scope of the project covered by the Program EIR,

and no new environmental document would be required. Whether a later activity is within the scope of a Program EIR is a factual question that the lead agency determines based on substantial evidence in the record. Factors that an agency may consider in making that determination include, but are not limited to consistency of the later activity with the type of allowable land use, overall planned density and building intensity, geographic area analyzed for environmental impacts, and covered infrastructure, as described in the program EIR.

- The Lead Agency shall incorporate feasible mitigation measures and alternatives developed in the Program EIR into later activities in the program.
- Where the later activities involve site-specific operations, the Lead Agency should use a written checklist or similar device to document the evaluation of the site and the activity, to determine whether the environmental effects of the operation are within the scope of the program EIR.

Based on information presented in this CEQA checklist, the Project would not have effects that were not examined in the CASP EIR, no subsequent EIR would be required, the City may approve the Project as being within the scope of the project covered by the CASP EIR, and no additional environmental document is required. This CEQA Checklist identifies City of Oakland SCAs and feasible mitigation measures as included in the CASP EIR into the Project Descriptions and as required conditions of approval. This CEQA Checklist documents the evaluation of the Project and its site, and determines that the environmental effects of the Project are within the scope of the prior CASP EIR.

A finding of reliance on a prior program EIR may be made concurrently, and in addition to a finding for CEQA streamlining pursuant to CEQA Guidelines Section 15183.

<u>Addendum to a Prior EIR</u>

Section 15164 of the CEQA Guidelines provides that, "an addendum to an adopted negative declaration or certified EIR may be prepared if only minor technical changes or additions are necessary, and none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred". CEQA Guidelines section 15162 provides that, for a project covered by a previously certified EIR, preparation of a subsequent EIR or negative declaration (rather than an Addendum) is required only if one or more of the following conditions occur:

- 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
- 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 the previously identified significant effects, or
- New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time of the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
    - The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
    - Significant effects previously examined will be substantially more severe than shown in the previous EIR or negative declaration;

- 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 or negative declaration would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measures or alternative.

An additional purpose of this CEQA document is to update the CASP EIR with the additional technical details and minor changes to the CASP EIR as represented by the Project, and as fully described in the Project Description. Based on the analysis presented in this CEQA Checklist, the City has determined that an Addendum to the CASP EIR, in accordance with CEQA Guidelines section 15164, is the appropriate CEQA document to address the more detailed information specific to the Project. This CEQA Checklist demonstrates that none of the conditions described in CEQA Guidelines section 15162 calling for the preparation of a subsequent EIR or Negative Declaration have occurred. The CEQA Checklist references and relies on the analyses completed in the CASP EIR and incorporates the conclusions of the CASP EIR by reference, as appropriate.

Each of the above findings provides a separate and independent basis for CEQA compliance.

____ ______________

Date:

Environmental Review Officer
City of Oakland Planning and Building

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Attachment A

Applicable City of Oakland Standard Conditions of Approval (SCAs)

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
General			
SCA General-1, Regulatory Permits and Authorizations from Other Agencies: The project applicant shall obtain all necessary regulatory permits and authorizations from applicable resource/regulatory agencies including, but not limited to, the Regional Water Quality Control Board, Bay Area Air Quality Management District, Bay Conservation and Development Commission, California Department of Fish and Wildlife, U. S. Fish and Wildlife Service, and Army Corps of Engineers and shall comply with all requirements and conditions of the permits/authorizations. The project applicant shall submit evidence of the approved permits/authorizations to the City, along with evidence demonstrating compliance with any regulatory permit/authorization conditions of approval.	Prior to activity requiring permit/authorization from regulatory agency	Approval by applicable regulatory agency with jurisdiction; evidence of approval submitted to Bureau of Planning	Applicable regulatory agency with jurisdiction
SCA General-2, Construction Management Plan: Prior to the issuance of the first construction-related permit, the project applicant and his/her general contractor shall submit a Construction Management Plan (CMP) for review and approval by the Bureau of Planning, Bureau of Building, and other relevant City departments such as the Fire Department, Department of Transportation, and the Public Works Department as directed. The CMP shall contain measures to minimize potential construction impacts including measures to comply with all construction-related Conditions of Approval (and mitigation measures if applicable) such as dust control, construction emissions, hazardous materials, construction days/hours, construction traffic control, waste reduction and recycling, stormwater pollution prevention, noise control, complaint management, and cultural resource management (see applicable Conditions below). The CMP shall provide project-specific information including descriptive procedures, approval documentation, and drawings (such as a site logistics plan, fire safety plan, construction phasing plan, proposed truck routes, traffic control plan, complaint management plan, construction worker parking plan, and litter/debris clean-up plan) that specify how potential construction impacts will be minimized and how each construction-related requirement will be satisfied throughout construction of the project.	Prior to the issuance of the first construction-related permit	Bureau of Planning, Bureau of Building, and other relevant City departments	Bureau of Planning, Bureau of Building, and other relevant City departments
Aesthetics			
SCA Aesthetics-1, Lighting: 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.	Prior to building permit final	N/A	Bureau of Building
SCA Aesthetics-2: Trash and Blight Removal: The project applicant and his/her successors shall maintain the property free of blight, as defined in chapter 8.24 of the Oakland Municipal Code. For nonresidential and multifamily residential projects, the project applicant shall install and maintain trash receptacles near public entryways as needed to provide sufficient capacity for building users.	Ongoing	N/A	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
SCA Aesthetics-3: Graffiti Control a) During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation: i. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces ii. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces iii. Use of paint with anti-graffiti coating iv. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED). v. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement b) The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following: i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system ii. Covering with new paint to match the color of the surrounding surface iii. Replacing with new surfacing (with City permits if required)	Ongoing	N/A	Bureau of Building
SCA Aesthetics-4: Landscape Plan a) Landscape Plan Required: The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of chapter 17.124 of the Planning Code. Proposed plants shall be predominantly drought-tolerant. Specification of any street trees shall comply with the Master Street Tree List and Tree Planting Guidelines (which can be viewed at http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf and http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf, respectively), and with any applicable streetscape plan.	Prior to approval of construction-related permit	Bureau of Planning	N/A
b) Landscape Installation: The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit, or other equivalent instrument acceptable to the Director of City Planning, is provided. The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor’s bid.	Prior to building permit final	Bureau of Planning	Bureau of Building
c) Landscape Maintenance: All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation	Ongoing	N/A	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.			
Air Quality			
SCA Air-1, Dust Controls – Construction Related: The project applicant shall implement all of the following applicable dust control measures during construction of the project: a) Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible. b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). c). All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. d) Limit vehicle speeds on unpaved roads to 15 miles per hour. e) All demolition activities (if any) shall be suspended when average wind speeds exceed 20 miles per house (mph). f) All trucks and equipment, including tires, shall be washed off prior to leaving the site. g) 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. Because the Project involves extensive site preparation (the construction site more than four acres in size) and involves extensive soil transport (more than 10,000 CY of soil import), the following additional Enhanced dust control measures during construction of the project: h) Apply and maintain vegetative ground cover (e.g., hydro-seed) or non-toxic soil stabilizers to disturbed areas of soil that will be inactive for more than one month. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). i) 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. j) When working at a site, install appropriate windbreaks (e.g., trees, fences) on the windward side(s) of the site, to minimize wind-blown dust. Windbreaks must have a maximum 50 percent air porosity. k) 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.	During construction	Bureau of Building	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
When contacted, the project complaint manager shall respond and take corrective action within 48 hours. l) 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.			
SCA Air-2, Criteria Air Pollutant Controls - Construction Related: The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable: a) Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized by shutting equipment off when not in use, or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points. b) Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized by shutting equipment off when not in use, or reducing the maximum idling time to two minutes. 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"). c) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed. d) Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand. e) Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings. f) All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met.	During construction	Bureau of Building	Bureau of Building
SCA Air-3, Diesel Particulate Matter Controls-Construction Related: a) The project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to diesel particulate matter (DPM) from construction emissions. The project applicant shall choose one of the following methods: i) The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with current guidance from the California Air Resources Board	During construction	Bureau of Building	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
(CARB) and Office of Environmental Health and Hazard Assessment to determine the health risk to sensitive receptors exposed to DPM from project construction emissions. The HRA shall be submitted to the City (and the Air District if specifically requested) for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then DPM reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, DPM reduction measures shall be identified to reduce the health risk to acceptable levels as set forth under subsection b below. Identified DPM reduction measures shall be submitted to the City for review and approval prior to the issuance of building permits and the approved DPM reduction measures shall be implemented during construction. -or- ii) All off-road diesel equipment shall be equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by CARB. The equipment shall be properly maintained and tuned in accordance with manufacturer specifications. This shall be verified through an equipment inventory submittal and Certification Statement that the Contractor agrees to compliance and acknowledges that a significant violation of this requirement shall constitute a material breach of contract.			
b) *Construction Emissions Minimization Plan* (if required by a) above): The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified DPM reduction measures (if any). The Emissions Plan shall be submitted to the City (and the Bay Area Air Quality District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following: i) An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all VDECS, the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date. ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract	Prior to issuance of a construction related permit	Bureau of Planning	Bureau of Building
SCA Air-4, Stationary Sources of Air Pollution (Toxic Air Contaminants): The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to on-site stationary sources of toxic air contaminants. The project applicant shall choose one of the following methods: a) The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk associated	During construction	Bureau of Building	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
with proposed stationary sources of pollution in the project. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable. - or - b) The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: i. Installation of non-diesel fueled generators, if feasible, or; ii. Installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible			
SCA Air-5, Truck-Related Risk Reduction Measures (Toxic Air Contaminants) a) *Truck Loading Dock*: The project applicant shall locate proposed truck loading docks as far from nearby sensitive receptors as feasible. b) *Truck Fleet Emission Standards*: The project applicant shall comply with all applicable California Air Resources Board (CARB) requirements to control emissions from diesel engines and demonstrate compliance to the satisfaction of the City. Methods to comply include, but are not limited to new clean diesel trucks, higher-tier diesel engine trucks with added Particulate Matter (PM) filters, hybrid trucks, alternative energy trucks, or other methods that achieve the applicable CARB emission standard. Compliance with this requirement shall be verified through CARB's Verification Procedures for In-Use Strategies to Control Emissions from Diesel Engines.	Prior to building permit final; ongoing	Bureau of Planning	Bureau of Building
SCA Air-6, Asbestos in Structures: The project applicant shall comply with all applicable laws and regulations regarding demolition and renovation of Asbestos Containing Materials (ACM), including but not limited to California Code of Regulations, Title 8; California Business and Professions Code, Division 3; California Health and Safety Code sections 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended. Evidence of compliance shall be submitted to the City upon request.	Prior to approval of construction-related permit	Applicable regulatory agency with jurisdiction	Applicable regulatory agency with jurisdiction

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
Biological Resources			
CASP EIR MM Bio 1A-1, Pre-construction Nesting Bird Surveys and Buffers: The following mitigation measures are recommended to address potential impacts to special status birds and nesting birds: a) A qualified biologist shall conduct pre-construction surveys for construction activities between February 15 and September 30 to identify and subsequently avoid nesting areas for special status and migratory bird species. Surveys shall be designed and be of sufficient intensity to document rail and raptor nesting within 500 feet of planned work activities and within 50 feet for passerine nesting activity. b) Construction activities within 500 feet of Damon Marsh and Arrowhead Marsh shall be conducted during the period from August 1 to January 31 to protect potentially nesting Ridgeway rail, California black rail, Alameda song sparrow and San Francisco saltmarsh common yellowthroat. c) If Ridgeway rails, California black rails or raptors are found to be nesting within or adjacent to the planned work area, a minimum 100-foot wide buffer shall be maintained between construction activities and the nest location. d) For Alameda song sparrow, San Francisco saltmarsh common yellowthroat and all other protected birds, a 50-foot buffer shall be maintained. e) Buffer zones may be reduced in consultation with a qualified biologist. f) Buffers shall be maintained until the young have fledged and are capable of flight, or by September 30.	Pre-construction surveys conducted between February 15 and September 30 During construction (b)	Bureau of Planning	Bureau of Building
Project Recommendation related to CASP EIR MM Bio-1A-1: The USFWS typically considers any disturbance within 700 feet direct line of sight of occupied nesting habitat to be a potential take of the federally endangered Ridgeway's rail. The 500-foot distance specified in CASP EIR MM Bio 1A-1 could be determined insufficient, and an increased construction-period buffer is recommended, as indicated below: a) Construction activities within ~~500~~ <u>700</u> feet of Damon Marsh and Arrowhead Marsh shall be conducted during the period from August 1 to January 31 to protect potentially nesting Ridgeway's rail, California black rail, Alameda song sparrow and San Francisco saltmarsh common yellowthroat	During construction	Bureau of Planning	Bureau of Building
CASP EIR MM Bio 1A-3, Salt Marsh Protection: All core habitat areas for salt marsh harvest mouse (i.e., pickleweed-dominated salt marsh habitat within Damon Marsh and Arrowhead Marsh) shall be avoided and protected. If construction activities are within 100 feet of these areas, site-specific buffers shall be established in coordination with a qualified biologist, approved by USFWS or CDFW as appropriate. a) Buffers shall be designed to preclude changes to water and soil salinity and flooding/inundation regime. The buffers shall be at least 100 feet wide or extend to the current boundary of existing roads or development (includes vacant but graded lots and filled building pads). The qualified biologist may modify these buffers depending on site conditions. b) The construction work area shall be fenced on the side closest to salt marsh habitat to delineate the extent of construction, preclude construction personnel and equipment from entering non-work	During construction	Bureau of Planning	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
areas, and prevent debris from entering avoided habitats. The construction boundary fencing may also inhibit movement of species such as the salt marsh harvest mouse and salt marsh wandering shrew into the construction area. c) The qualified biologist shall be present during work on-site until the construction barrier fencing is installed, instruction of workers has been conducted, and any direct habitat disturbance has been completed. After that time, the contractor or permittee shall designate a person to monitor on-site compliance with all minimization measures. d) The monitor and qualified biologist shall have the authority to halt construction that might result in impacts that exceed anticipated levels			
CASP EIR MM Bio 1A-4, Public Access Design: All new or additional public access to San Francisco Bay, the Bay shoreline, Damon Marsh and San Leandro Creek shall be implemented in a manner consistent with the San Francisco Bay Conservation and Development Commission's Public Access Design Guidelines for the San Francisco Bay, in particular its recommendations for avoiding adverse effects on wildlife. These Design Guidelines include the following: a) Preparation of individual site analyses to generate information on wildlife species and habitats existing at the site, and the likely human use of the site b) Employing appropriate siting, design and management strategies (such as buffers or use restrictions) to reduce or prevent adverse human and wildlife interactions c) Planning public access in a way that balances the needs of wildlife and people on an areawide scale, where possible d) Providing visitors with diverse and satisfying public access opportunities to focus activities in designated areas and avoid habitat fragmentation, vegetation trampling and erosion e) Evaluating wildlife predator access and control in site design f) Retaining existing marsh and tidal flats and restoring or enhancing wildlife habitat, wherever possible	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
CASP EIR's Further Recommendations Pursuant to SCA Aesthetics-1: In addition to the standard provisions of the City SCA Lighting Plan requirements, lighting plans for properties within the CASP planning area and near the Bay include the following: a) Acorn-style lights that are International Dark Sky Association approved "Dark Sky Friendly" will be installed. This type of lighting ensures 0 percent light above 90 degrees, directs light downward and minimizes the amount of backward and side lighting, thereby reducing light pollution on habitat and animals in the surrounding area. b) Use only the lowest luminaire wattage that still provides safe conditions for vehicular traffic, bicyclists, and pedestrians. c) If possible, correlated color temperature (an indication of how "warm" or "cool" the light source appears) ranges of the light source to be between 3800 and 4000 Kelvins. This range corresponds to "warm" light that would be less disturbing to animals.	Prior to building permit final	N/A	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
d) Lights shall be directed away from and/or screened from Damon Marsh and Arrowhead Marsh.			
CASP EIR MM Bio 3-2, Herbicide / Pesticide Control: Maintenance shall require preparation and implementation of a drift control plan for herbicide/pesticide use.	On going	N/A	Bureau of Building
SCA Biology-1, Tree Removal during Bird Breeding Season: 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 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.	Prior to removal of trees	Bureau of Planning	Bureau of Building
SCA Bio-2, Bird Collision Reduction Measures: The project applicant shall submit a Bird Collision Reduction Plan for City review and approval to reduce potential bird collisions to the maximum feasible extent. The Plan shall include all of the following mandatory measures, as well as applicable Project-specific Best Management Practice (BMP) strategies to reduce bird strike impacts to the maximum feasible extent. The project applicant shall implement the approved Plan. Mandatory measures include all of the following: a) For large buildings subject to federal aviation safety regulations, install minimum intensity white strobe lighting with three-second flash instead of solid red or rotating lights. b) Minimize the number of and co-locate rooftop-antennas and other rooftop structures. c) Monopole structures or antennas shall not include guywires. d) Avoid the use of mirrors in landscape design. e) Avoid placement of bird-friendly attractants (i.e., landscaped areas, vegetated roofs, water features) near glass unless shielded by architectural features taller than the attractant that incorporate bird friendly treatments no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule). f) Apply bird-friendly glazing treatments to no less than 90 percent of all windows and glass between the ground and 60 feet above ground or to the height of existing adjacent landscape or the height of the proposed landscape. Examples of bird-friendly glazing treatments include the following: i. Use opaque glass in windowpanes instead of reflective glass.	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
ii. Uniformly cover the interior or exterior of clear glass surface with patterns (e.g., dots, stripes, decals, images, abstract patterns). Patterns can be etched, fritted, or on films and shall have a density of no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule). iii. Install paned glass with fenestration patterns with vertical and horizontal mullions no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule). iv. Install external screens over non-reflective glass (as close to the glass as possible) for birds to perceive windows as solid objects. v. Install UV-pattern reflective glass, laminated glass with a patterned UV-reflective coating, or UV-absorbing and UV-reflecting film on the glass since most birds can see ultraviolet light, which is invisible to humans. vi. Install decorative grilles, screens, netting, or louvers, with openings no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule). vii. Install awnings, overhangs, sunshades, or light shelves directly adjacent to clear glass which is recessed on all sides. viii. Install opaque window film or window film with a pattern/design which also adheres to the "two-by-four" rule for coverage. g) Reduce light pollution. Examples include the following: i. Extinguish nighttime architectural illumination treatments during bird migration season (February 15 to May 15 and August 15 to November 30). ii. Install time switch control devices or occupancy sensors on non-emergency interior lights that can be programmed to turn off during non-work hours and between 11:00 p.m. and sunrise. iii. Reduce perimeter lighting whenever possible. iv. Install full cut-off, shielded, or directional lighting to minimize light spillage, glare, or light trespass. v. Do not use beams of lights during the spring (February 15 to May 15) or fall (August 15 to November 30) migration. h) Develop and implement a building operation and management manual that promotes bird safety. Example measures in the manual include the following: i. Donation of discovered dead bird specimens to an authorized bird conservation organization or museums (e.g., UC Berkeley Museum of Vertebrate Zoology) to aid in species identification and to benefit scientific study, as per all federal, state and local laws. ii. Distribute educational materials on bird-safe practices for the building occupants. Contact Golden Gate Audubon Society or American Bird Conservancy for materials. iii. Asking employees to turn off task lighting at their workstations and draw office blinds, shades, curtains, or other window coverings at end of workday.			

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
iv. Install interior blinds, shades, or other window coverings in windows above the ground floor visible from the exterior as part of the construction contract, lease agreement, or CC&Rs. v. Schedule nightly maintenance during the day, or so that it concludes before 11 p.m., if possible.			
SCA Biology-3, Tree Permit: 1. *Tree Permit Required*: 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.	Prior to approval of construction-related permit	Permit approval by Public Works Department, Tree Division; evidence of approval submitted to Bureau of Building	Bureau of Building
2. *Tree Protection during Construction*: Adequate protection shall be provided during the construction period for any trees that are to remain standing, including the following, plus any recommendations of an arborist: a. Before the start of any clearing, excavation, construction or other work on the site, every protected tree deemed 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 that will avoid injury to any protected tree. b. 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, filling, 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. c. 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.	During construction	Public Works Department, Tree Division	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring When Required	 Initial Approval	 Monitoring/ Inspection
d. 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. e. If any damage to a protected tree should occur during or from 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. f. All debris created from 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.			
3. *Tree Replacement Plantings*: 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: a. 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. b. 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. c. 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. d. 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 e. 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. f. 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 that fail to become established within one year of planting shall be replanted at the project applicant's expense.	Prior to building permit final	Public Works Department, Tree Division	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
Recommendation Pursuant to SCA Bio-3: Landscape Plan Species: Pursuant to the Project's Tree permit and/or Creek permit, the Project applicant shall reconsider the proposed plant palette to incorporate the following recommendations: a) The Project's landscape plan should provide for a greater component of native trees, especially along the Project's westerly edge near Damon Marsh. b) The selection of Chinese Pistache trees within the landscape should be limited to male variety of this species, as the female variety produces berries that are attractive to birds.	Prior to building permit final	Public Works Department, Tree Division	Bureau of Building
Cultural Resources			
SCA Cultural-1: Archaeological and Paleontological Resources – Discovery during Construction: 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. a) 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. b) 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. c) 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	During construction	N/A	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense. d) 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.			
SCA Cultural-2: Human Remains – Discovery during Construction: 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. a) 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. b) 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.	During construction	N/A	Bureau of Building
Energy			
SCA Energy-1, Green Building Requirements: The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code). a) The following information shall be submitted to the City for review and approval with the application for a building permit: i. Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards ii. Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit iii. Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit iv. Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (b) below	Prior to approval of construction-related permit	Bureau of Building	N/A

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
v. Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance vi. Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit vii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance b) The set of plans in subsection (i) shall demonstrate compliance with the following: i. CALGreen mandatory measures ii. Green building point level/certification requirements per the appropriate checklist approved during the Planning entitlement process iii. All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted. iv. The required green building point minimums in the appropriate credit categories			
c) The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project. The following information shall be submitted to the City for review and approval: i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance	During construction	N/A	Bureau of Building
d) Compliance with Green Building Requirements after Construction Requirement: Prior to the finalizing the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.	Prior to Final Approval	Bureau of Planning	Bureau of Building
Geology and Soils			
SCA Geo-1: Construction-Related Permit(s): 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.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building

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SCA Geo-2: Soils Report: 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.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
SCA Geo-3, Seismic Hazards Zone (Landslide/Liquefaction): The project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended). The geotechnical report shall be prepared by a registered geotechnical engineer for City review and approval, and shall contain, 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.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
Detailed Recommendations in Furtherance of SCAs – Seismic Hazards: The project sponsor retained Terracon to prepare a soils report and geotechnical report for the Project. This report provides the following recommendations to address seismic hazards through design: • *Seismic Considerations*: The seismic design requirements for buildings and other structures of the Project are based on the site's Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure, and the Site Classification is based on the upper 100 feet of the site profile, in accordance with Section 20.4 of ASCE 7-10. Site Classes range from A to F based on the average conditions present within 100 feet of the ground surface, with hard rock considered an 'A', down to potentially collapsible soils which get an 'F'. The Project site qualifies as a Site Class F due to the presence of liquefiable soils. The Site Classification at the Project site could be improved from a Site Class F to a Site Class D by performing ground improvements (see below) that improve the stiffness/density and strength of the very-soft to soft Bay Mud and loose, potentially liquefiable sands. • *Ground Improvement Option*: The 2018 Terracon Report identifies ground improvements (known as Deep Soil Mixing, or DSM) as an appropriate option to mitigate the combined effects associated with the liquefaction, undocumented fill and compressible Bay Mud concerns at this site. DSM is achieved through a process of in-situ mixing of the subsurface soils with cement or a lime-cement combination. This results in physiochemical stabilization of the soils to increase the compressive and shear strength of the material, and to decrease settlement. DSM is accomplished by either a wet mixing method using primarily cement, or a dry mixing method using lime-cement. The wet mixing method should be used for the Project site based on the subgrade soils and groundwater conditions. This method would significantly improve the stiffness/density and strength of the very soft, to soft Bay Mud and loose sands that underlay the site. By improving the stiffness/density and strength of the very soft, to soft Bay Mud and loose sands, DSM would also help improve the	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
Seismic Site Class required for design at the site, and would provide an added assurance against lateral spreading to occur by stabilizing potentially liquefiable soils. • *Deep Foundations*: As an alternative to the DSM option, steel piles driven to into firm native soil below the Bay Mud and liquefiable soil layers can be used to support the Project's proposed Office, Warehouse and Workshop buildings and retaining walls. This would involve steel sections driven through the very soft Bay Mud and liquefiable soils to their design capacity. The preliminary design capacities for individual steel pipe piles to provide an adequate factor of safety for the load carrying capacity requires that steel piles be driven to a depth of 65 to 100 feet (with a preliminary recommendation of 70 to 80 feet below existing grade). Driven piles should be spaced at least three pile widths apart (center-to-center) if side friction is used for compressive loads. If desired, pre-drilling of oversized holes could be conducted prior to pile driving (with filling the resulting annular space with bentonite slurry), casing sleeves could be provided around the piles to separate the piles from direct contact with settling soils, and/or the piles could be coated with bitumen to allow slippage. • *Rammed Aggregate Piers*: As an alternative to the DSM option, the existing undocumented fill and compressible Bay Mud under these areas could be reinforced with a Rammed Aggregate Pier (RAP) system installed on a grid pattern. This option would allow for the placement of stockpiled materials and retaining wall foundations directly atop the RAP-reinforced subgrade. The RAP system would serve to stiffen the existing undocumented fill and Bay Mud. Piers would be constructed by advancing a drill or mandrel to design depths, then building a bottom bulb of clean, open-graded stone. The pier is built on top of the bottom bulb, using graded aggregate placed in thin lifts (12 to 24 inches compacted thickness). We anticipate shafts would extend to depths of 20 feet or less for this site. The result of construction is a reinforced zone of soils directly under the stockpiled materials and footings, which allows of the construction of shallow spread footings sized for relatively higher bearing pressures and with lower anticipated settlements. • *Floor Slabs*: Due to anticipated settlements from liquefaction and consolidation settlement, the building floor slabs should be entirely structurally supported by deep foundations, or alternative floor slab options may be considered if the subgrade in the area of the buildings is improved by DSM. • *Vapor Barrier*: The use of a vapor retarder should be considered beneath those concrete slabs on grade that are to be covered with moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture.			
Detailed Recommendations in Furtherance of SCAs - Earthwork: The project sponsor retained Terracon to prepare a soils report and geotechnical report for the Project. This report provides the following recommendations to address earthwork (clearing and grubbing, excavations and fill placement) as necessary to render the site ready for foundations, floor slabs and pavement.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
• *Site Preparation*: Prior to placing fill, existing vegetation and root mat, debris, stockpiled soil and any otherwise unsuitable material should be removed. Complete stripping of the topsoil should be performed in proposed building and parking/driveway areas. The subgrade should be proof-rolled with an adequately loaded vehicle such as a fully loaded tandem axle dump truck. Any areas excessively deflecting under the proof-roll should be delineated and separately addressed by either further soil removal or stabilization (see below). Excessively wet or dry materials should be removed or moisture conditioned and re-compacted. Exposed surfaces should be free of mounds and depressions which could prevent uniform compaction. • *Subgrade Preparation*: After clearing, any required cuts should be made. The undocumented fill below pavement and hardscape areas should be over-excavated to a minimum depth of 2 feet. The presence of over-sized debris or a high volume of organic material may warrant additional over-excavation at the time of grading operations. If needed, a geotextile fabric may be utilized as a separator between the undocumented fill and engineered fill. This over-excavation requirement is not required in areas improved by ground improvement methods (see above) or below slabs in buildings supported by deep foundations (also, see above). • *Scarification and Compaction*: After any required cuts have been made but prior to placement of any engineered fill, the subgrade soil should be scarified and compacted. If construction occurs during the winter or spring when the subgrade soils are typically already in a moist condition, scarification and compaction may only be 12 inches. If construction occurs during the summer or fall when the subgrade soils have been allowed to dry out, deeper depth of scarification and moisture conditioning (as much as 18 inches) may be needed. Due to the shallow groundwater, the sub-grade soil at the over-excavated depth is likely to be in an elevated moisture condition, and will likely require some drying before it can be compacted. • *Backfill/Fill*: Following scarification and compaction of the subgrade, the over-excavated areas may be backfilled with compacted structural fill and any additional fill may be placed and compacted. The moisture content and compaction of subgrade soils should be maintained until foundation slab or pavement construction. Very soft Bay Mud conditions may be encountered in the bottom of excavations. Dry crushed rock or clean granular fill material placed over a geotextile may be needed to stabilize wet subgrade materials in the bottom of excavations prior to backfill. Fill placed on Bay Mud or in areas where Bay Mud is covered with less than 3 feet of soil can cause failure within the mud if large amounts of fill are placed too quickly. In order to help reduce the potential for mud waves during fill placement, the first layer of fill should be placed slowly and in as thin a layer as possible without allowing the grading equipment to sink into the mud. In these areas, lightweight equipment should be used to help minimize the required thickness of the first layer. The amount of the fill placed on a daily basis may need to be limited to help minimize pore pressure build up and subsurface failure.			

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
• *Fill Material Types*: Fill required to achieve design grade should be classified as structural fill and general fill. Structural fill is material used below, or within 5 feet of structures or pavements. General fill is material used to achieve grade outside of these areas. Earthen materials used for structural and general fill should meet the material property requirements as specified in the 2018 Terracon Report. • *Exterior Hardscape*: In order to address the effects of the moderate to high volume change soils, exterior hardscapes should be underlain by a minimum of 24 inches of low volume change (LVC) material. The LVC zone would help to reduce the potential for subgrade volume changes. • *Utility Design*: In addition, special design details should be considered for underground utility lines, for hardscape, entrances and pavement adjacent to pile or DSM-supported structures, and site drainage. It is recommended that utilities and piping be designed with flexible connections and/or other means to accommodate soil movement and to reduce the potential for damage. Utility and drain lines designed for gravity flow should consider and account for anticipated settlements.			
SCA Geo-4, Erosion and Sedimentation Control Plan for Construction a) *Erosion and Sedimentation Control Plan Required*: The project applicant shall submit an Erosion and Sedimentation Control Plan to the City for review and approval. The Erosion and Sedimentation Control Plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading and/or construction operations. The Plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the City. The Plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment. b) *Erosion and Sedimentation Control during Construction*: The project applicant shall implement the approved Erosion and Sedimentation Control Plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building.	During construction	N/A	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
Greenhouse Gas Emissions/Climate Change			
SCA GHG-1, Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist: The project applicant shall implement all the measures in the Equitable Climate Action Plan (ECAP) Consistency Checklist that was submitted during the Planning entitlement phase. a) For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction- related permits. b) For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be implemented during construction. c) For ECAP Consistency Checklist measures that are operational but not otherwise covered by these SCAs, including but not limited to the requirement for transit passes or additional Transportation Demand Management measures, the applicant shall provide notice of these measures to employees and/or residents and post these requirements in a public place such as a lobby or work area accessible to the employees and/or residents	Prior to approval of construction-related permit	Bureau of Planning	N/A
Hazards and Hazardous Materials			
SCA Hazards-1, Hazardous Building Materials and Site Contamination a) *Hazardous Building Materials Assessment*: The project applicant shall submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials (ACMs), lead-based paint, polychlorinated biphenyls (PCBs), and any other building materials or stored materials classified as hazardous materials by State or federal law. If lead-based paint, ACMs, PCBs, or any other building materials or stored materials classified as hazardous materials are present, the project applicant shall submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.	Prior to approval of demolition, grading, or building permits	Bureau of Building	Bureau of Building
b) *Environmental Site Assessment Required*: The project applicant shall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase 1 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	Prior to approval of construction-related permit	Applicable regulatory agency with jurisdiction	Applicable regulatory agency with jurisdiction

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c) *Health and Safety Plan Required*: The project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The project applicant shall implement the approved Plan.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
d) Best Management Practices (BMPs) Required for Contaminated Sites (Item 4 text omitted because it is not applicable to the project, which is not on a contaminated site)	During construction	N/A	Bureau of Building
SCA Hazards-2: Hazardous Materials Related to Construction: 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 Fire Prevention Bureau, Alameda County Environmental Health, and other applicable regulatory agencies, and implementation of the actions described in these agencies' 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.	During construction	N/A	Bureau of Building
SCA Haz-3, Hazardous Materials Business Plan: The project applicant shall submit a Hazardous Materials Business Plan (HMBP) for review and approval by the City, and shall implement the approved Plan. The approved Plan shall be kept on file with the City and the project applicant shall update the Plan as applicable. The purpose of the Hazardous Materials Business Plan is to ensure that employees are adequately trained to handle hazardous materials and provides information to the Fire Department should emergency response be required. Hazardous materials shall be handled in accordance with all applicable local, state, and federal requirements. The Hazardous Materials Business Plan shall include the following:	Prior to building permit final	Oakland Fire Department	Oakland Fire Department

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a) The types of hazardous materials or chemicals stored and/or used on-site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids b) The location of such hazardous materials c) An emergency response plan including employee training information d) A plan that describes the manner in which these materials are handled, transported, and disposed.			
Hydrology and Water Quality			
SCA Hydro-1, State Construction General Permit: The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City.	Prior to approval of construction-related permit	State Water Resources Control Board; evidence of compliance submitted to Bureau of Building	State Water Resources Control Board
SCA Hydro-2, Creek Protection Plan: a) *Creek Protection Plan Required*: 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.	Prior to approval of construction-related permit	Bureau of Planning	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 biodegradable 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 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.	Prior to approval of construction-related permit	Bureau of Planning	N/A

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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 re-packed 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). xii. 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.			
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	Prior to approval of construction-related permit	Bureau of Planning	N/A

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring When Required	 Initial Approval	 Monitoring/ Inspection
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.			
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.	Prior to approval of construction-related permit	Bureau of Planning	N/A
d) *Creek Protection Plan Implementation Requirement*: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, the project applicant shall regularly monitor all erosion, sedimentation, debris, and pollution control. 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.	During construction; ongoing	N/A	Bureau of Building
SCA Hydro-3, NPDES C.3 Stormwater Requirements for Regulated Projects a) *Post-Construction Stormwater Management Plan Required*: The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. location and size of new and replaced impervious surface ii. directional surface flow of stormwater runoff iii. location of proposed on-site storm drain lines iv. site design measures to reduce the amount of impervious surface area v. source control measures to limit stormwater pollution vi. stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and hydro-modification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
b) *Maintenance Agreement Required*: The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity, and ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region. Access is for purposes of verifying implementation, operation and maintenance of the on-site stormwater treatment measures, taking corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.	Prior to building permit final	Bureau of Building	Bureau of Building
SCA Hydro-4, Vegetation Management on Creekside Properties: The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project: a) Identify and leave "islands" of vegetation in order to prevent erosion and landslides and protect habitat; b) Trim tree branches from the ground up (limbing up) and leave tree canopy intact; c) Leave stumps and roots from cut down trees to prevent erosion; d) Plant fire-appropriate, drought-tolerant, preferably native vegetation; e) Provide erosion and sediment control protection if cutting vegetation on a steep slope; f) Fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management; g) Obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine); h) Do not clear-cut vegetation, as this can lead to erosion and severe water quality problems and destroy important habitat; i) Do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development; j) Do not trim/prune branches that are larger than 4 inches in diameter; k) Do not remove tree canopy; l) Do not dump cut vegetation in the creek; m) Do not cut tall shrubbery to less than 3 feet high; and n) Do not cut short vegetation (e.g., grasses, groundcover) to less than 6 inches high.	Ongoing	N/A	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
CASP EIR Recommendation Hydro-5: The following additional recommendations are suggested to provide an adaptive approach to addressing a 16-inch sea level rise above current Base Flood Elevation (BFE) for mid-term (2050) planning and design: 1. Design gravity-based storm drain systems for 16 inches of sea level rise 2. Design and construct habitable space above at-grade parking structures to allow sea level rise to affect uninhabited parking structures rather than dwelling units 3. Design buildings to withstand periodic inundation 4. Prohibit below grade habitable space in inundation zones 5. Require that all critical infrastructure sensitive to inundation be located above the SLR base flood elevation 6. Consider means for implementing an adaptive management strategy to protect against long-term sea level rise of as much as 55”, potentially including constructing levees or seawalls and providing space for future storm water lift stations near outfall structures into the Bay and Estuary	Prior to approval of grading and other construction-related permits	Bureau of Building	Bureau of Building
Land Use			
CASP EIR MM Land-7B, Avigation Easement / Disclosure: Sellers or leasers of real property located within the Oakland Airport Influence Area shall disclose within an aviation easement included as part of all real estate transactions within the AIA that their property is situated within the AIA, and may be subject to some of the annoyances or inconveniences associated with proximity to airport operations.	Prior to issuance of building permit	Bureau of Building	N/A
CASP EIR MM Land-8A, BCDC Issuance of Major Permit(s): Prior to implementation of the proposed Damon Slough enhancements, the Elmhurst Creek realignment, new development within 100 feet of the San Leandro Bay shoreline, and the proposed Bay Cut (and potentially other project elements found to be within BCDC jurisdiction), the project applicants for those projects shall apply for and obtain through an application review process (which may include additional public hearings and review boards) issuance of necessary BCDC permits.	Prior to activity requiring permit/authorization from BCDC	Approval by BCDC; evidence of approval submitted to Bureau of Planning	BCDC, per agency jurisdiction
Noise and Vibration			
SCA Noise-1, Construction Days/Hours: 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.	During construction	N/A	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
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.			
SCA Noise-2, Construction Noise: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following: a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) wherever feasible. b) Except as provided herein, impact tools (e.g., jackhammers, 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.	During construction	N/A	Bureau of Building
SCA Noise-3, Extreme Construction Noise 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. This Plan shall be prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
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: a) Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings; b) 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; c). Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site; d) 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 e) Monitor the effectiveness of noise attenuation measures by taking noise measurements.			
SCA Noise-4, Public Notification Required: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise-generating activities, and describe noise attenuation measures to be implemented.	During construction	Bureau of Building	Bureau of Building
SCA Noise-5, Construction Noise Complaints: The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include: a) Designation of an on-site construction complaint and enforcement manager for the project; b) A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit; c) Protocols for receiving, responding to, and tracking received complaints; and d) Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
Recommendation #1 Pursuant to the Construction Management Plan - Temporary Rerouting of the Bay Trail: The Project applicant shall coordinate with BCDC to identify an acceptable temporary detour of the segment of the Bay Tail that is immediately adjacent to the Project site during pile driving/pile drilling activities. The options for detour routes in this area are limited, and may best be accomplished by providing a temporary public pathway along the Project site's frontage on Oakport Street, at least as far as the	Prior to the issuance of the first construction-related permit	Bureau of Planning, Bureau of Building, and other relevant	Bureau of Planning, Bureau of Building, and other relevant City departments

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
Peppermint Gate Access Road through the EBMUD Parcel #2. The segment of the Bay Trail adjacent to the site can be re-opened after conclusion of the temporary pile driving/pile drilling activity.		City departments	
Recommendation #2 Pursuant to the Construction Management Plan – Schedule Coordination with City-Sponsored Use of Soccer Fields: The Project applicant shall coordinate with the City Parks and Recreation Department to best avoid pile driving/pile drilling activities of the Project concurrent with scheduled sports activities at the City Soccer fields. Pursuant to SCA Noise-3, no pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday, and no construction is allowed on Sunday or federal holidays. Accordingly, schedule coordination is only required during intermittent weekday use of the sport field between the hours of 8:00 a.m. and 4:00 p.m	Prior to the issuance of the first construction-related permit	Bureau of Planning, Bureau of Building, and other relevant City departments	Bureau of Planning, Bureau of Building, and other relevant City departments
SCA Noise-6, Operational Noise: 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.	Ongoing	N/A	Bureau of Building
Population and Housing			
SCA Population-1, Jobs/Housing Impact Fee: The project applicant shall comply with the requirements of the City of Oakland Jobs/Housing Impact Fee Ordinance (chapter 15.68 of the Oakland Municipal Code).	Prior to issuance of building permit	Bureau of Building	N/A
Public Services			
SCA Pubic-1, Capital Improvements Impact Fee: The Project applicant shall comply with the requirements of the City of Oakland Capital Improvements Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).	Prior to issuance of building permit	Bureau of Building	N/A
As authorized by **California Government Code Sections 65995, 65996(a) and 65996(b**), the OUSD will collect school impact fees from the Project, and payment of the required school impact fees will address the impact of the Project on school services to the furthest extent permitted by law. School impact fees are collected when building permits are issued. Payment of these fees will constitute full and complete mitigation, and the impact of the Project related to schools would be less than significant.	Prior to issuance of building permit	Bureau of Building	N/A
SCA Public-2, Access to Parks and Open Space: The project applicant shall submit a plan for City review and approval to enhance bicycle and pedestrian access from the Project site and adjacent areas to the Bay Trail. Examples of enhancements may include, but are not limited to new or improved bikeways, bike parking, traffic control devices, sidewalks, pathways, bulb-outs and signage. The project sponsor shall install the approved enhancements during construction and prior to completion of the project.	Prior to approval of construction-related permit	Bureau of Planning, Department of Transportation	Department of Transportation

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
Transportation and Circulation			
SCA Transportation-1, Bicycle Parking: The project applicant shall comply with the City of Oakland Bicycle Parking: Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements.	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
SCA Transportation-2: Transportation and Parking Demand Management: a) *Transportation and Parking Demand Management (TDM) Plan Required*: The project applicant shall submit a Transportation and Parking Demand Management (TDM) Plan for review and approval by the City. 1. The goals of the TDM Plan shall be the following: i. Reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable. ii. For Projects generating 50-99 net new a.m. or p.m. peak hour vehicle trips, achieve a project vehicle trip reduction (VTR of 10%. For Projects generating 100 or more net new a.m. or p.m. peak hour vehicle trips, achieve a project vehicle trip reduction (VTR of 20% iii. Increase pedestrian, bicycle, transit, and carpool/vanpool modes of travel. All four modes of travel shall be considered, as appropriate. iv. Enhance the City's transportation system, consistent with City policies and programs. 2. The TDM Plan should include the following: i. Baseline existing conditions of parking and curbside regulations within the surrounding neighborhood that could affect the effectiveness of TDM strategies, including inventory of parking spaces and occupancy if applicable. ii. Proposed TDM strategies to achieve VTR goals (see below). iii. For employers with 100 or more employees at the subject site, the TDM Plan shall also comply with the requirements of Oakland Municipal Code Chapter 10.68 Employer-Based Trip Reduction Program. 3. The following TDM strategies must be incorporated into a TDM Plan based on a project location or other characteristics. When required by Code or when described below, these mandatory strategies should be identified as a credit toward a project's VTR. i. Bus boarding bulbs or islands, when a bus boarding bulb or island does not already exist and a bus stop is located along the project frontage; and/or a bus stop along the project frontage serves a route with 15 minutes or better peak hour service and has a shared bus-bike lane curb ii. Bus shelter, when a stop with no shelter is located within the project frontage, or the project is located within 0.10 miles of a flag stop with 25 or more boardings per day iii. Concrete bus pad, where a bus stop is located along the project frontage and a concrete bus pad does not already exist	Prior to approval of planning application	Bureau of Planning	N/A

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iv. Curb extensions or bulb-outs, where identified as an improvement within site analysis v. Implementation of a corridor-level bikeway improvement, where a buffered Class II or Class IV bikeway facility is in a local or county adopted plan within 0.10 miles of the project location, and The project would generate 500 or more daily bicycle trips vi. Implementation of a corridor-level transit capital improvement, where a high-quality transit facility is in a local or county adopted plan within 0.25 miles of the project location; and the project would generate 400 or more peak period transit trips vii. Installation of amenities such as lighting; pedestrian-oriented green infrastructure, trees, or other greening landscape; and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan - always required viii. Installation of safety improvements identified in the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.), when improvements are identified in the Pedestrian Master Plan along project frontage or at an adjacent intersection ix. In-street bicycle corral, when a project includes more than 10,000 square feet of ground floor retail, is located along a Tier 1 bikeway, and onstreet where vehicle parking is provided along the project frontages. x. Intersection improvements, when identified as an improvement within site analysis xi. New sidewalk, curb ramps, curb and gutter meeting current City and ADA standards, always required xii. No monthly permits and establish minimum price floor for public parking, if proposed parking ratio exceeds 1:1000 sf. (commercial) xiii Parking garage is designed with retrofit capability, optional if proposed parking ratio exceeds 1:1.25 (residential), or 1:1000 sf. (commercial) xiv Parking space reserved for car share, if a project is providing parking and a project is located within downtown. One car share space reserved for buildings between 50 – 200 units, then one car share space per 200 units. xv. Paving, lane striping or restriping (vehicle and bicycle), and signs to midpoint of street section, typically required xvi. Pedestrian crossing improvements, when identified as an improvement within site analysis xvii Pedestrian-supportive signal changes, when identified as an improvement within operations analysis xviii Real-time transit information system, when a project frontage block includes a bus stop or BART station and is along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better xix Relocating bus stops to far side, when a project is located within 0.10 mile of any active bus stop that is currently near-side			

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
xx. Signal upgrades, when project size exceeds 100 residential units, 80,000 sf. of retail, or 100,000 sf. Of commercial; and Project frontage abuts an intersection with signal infrastructure older than 15 years xxi. Transit queue jumps , when identified as a needed improvement within operations analysis of a project with frontage along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better xxii Trenching and placement of conduit for providing traffic signal interconnect, when a Project size exceeds 100 units, 80,000 sf. Of retail, or 100,000 sf. of commercial; and Project frontage block is identified for signal interconnect improvements as part of a planned ITS improvement; and a major transit improvement is identified within operations analysis requiring traffic signal interconnect xxiii Unbundled parking, if proposed parking ratio exceeds 1:1.25 (residential) 4. Other TDM strategies to consider include, but are not limited to, the following: i. Inclusion of additional long-term and short-term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan and the Bicycle Parking Ordinance (chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement. ii. Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, on-site signage and bike lane striping iii. Installation of safety elements per the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials, in addition to safety elements required to address safety impacts of the project. iv. Installation of amenities such as lighting, street trees, and trash receptacles per the Pedestrian Master Plan, the Master Street Tree List and Tree Planting Guidelines and any applicable streetscape plan. v. Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements. vi. Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency). vii. Provision of a transit subsidy to employees or residents, determined by the project applicant and subject to review by the City, if employees or residents use transit or commute by other alternative modes. viii Provision of an ongoing contribution to transit service to the area between the project and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle service; and 3) Establishment of new shuttle			

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring When Required	Initial Approval	Monitoring/ Inspection
service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario 3). ix. Guaranteed ride home program for employees, either through 511.org or through separate program. x. Pre-tax commuter benefits (commuter checks) for employees xi. Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.), and/or car-share membership for employees or tenants. xii. On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools xiii. Distribution of information concerning alternative transportation options xiv. Parking spaces sold/leased separately for residential units. Charge employees for parking, or provide a cash incentive or transit pass alternative to a free parking space in commercial properties. xv. Parking management strategies, including attendant/valet parking and shared parking spaces xvi. Requiring tenants to provide opportunities and the ability to work off-site xvii Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite (e.g., working four, ten-hour days; allowing employees to work from home two days per week). xviii Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours. 5. The TDM Plan shall indicate the estimated VTR for each strategy, based on published research or guidelines where feasible. For TDM Plans containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. If an annual compliance report is required, as explained below, the TDM Plan shall also specify the topics to be addressed in the annual report.			
b) *TDM Implementation – Physical Improvements Requirement*: For VTR strategies involving physical improvements, the project applicant shall obtain the necessary permits/approvals from the City and install the improvements prior to the completion of the project.	Prior to building permit final	Bureau of Building	Bureau of Building
c) TDM Implementation – Operational Strategies: For projects that generate 100 or more net new a.m. or p.m. peak hour vehicle trips and contain ongoing operational VTR strategies, the project applicant shall submit an annual compliance report for the first five years following completion of the project (or completion of each phase for phased projects) for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR achieved by the project during operation. If deemed necessary, the City may elect to have a peer	Ongoing	Department of Transportation	Department of Transportation

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
review consultant, paid for by the project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the project applicant has failed to implement the TDM Plan, the project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in these Conditions of Approval. The project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved.			
SCA Transportation-3, Transportation Impact Fee: The project applicant shall comply with the requirements of the City of Oakland Transportation Impact Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).	Prior to issuance of building permit	Bureau of Building	N/A
SCA Transportation-4, Plug-In Electric Vehicle (PEV) Charging Infrastructure a) *PEV-Ready Parking Spaces*: The applicant shall submit, for review and approval of the Building Official and the Zoning Manager, plans that show the location of parking spaces equipped with full electrical circuits designated for future PEV charging (i.e. "PEV-Ready) per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-Ready parking spaces. b) *PEV-Capable Parking Spaces*: The applicant shall submit, for review and approval of the Building Official, plans that show the location of inaccessible conduit to supply PEV-capable parking spaces per the requirements of Chapter 15.04 of the Oakland Municipal Code. Building electrical plans shall indicate sufficient electrical capacity to supply the required PEV-capable parking spaces. c) *ADA-Accessible Spaces*: The applicant shall submit, for review and approval of the Building Official, plans that show the location of future accessible EV parking spaces as required under Title 24 Chapter 11B Table 11B-228.3.2.1, and specify plans to construct all future accessible EV parking spaces with appropriate grade, vertical clearance, and accessible path of travel to allow installation of accessible EV charging station(s).	Prior to Issuance of Building Permit	Bureau of Building	Bureau of Building
SCA Transportation-5, Construction Activity in the Public Right-of-Way a) *Obstruction Permit Required*: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets, sidewalks, bicycle facilities, and bus stops.	Prior to approval of construction-related permit	Department of Transportation	Department of Transportation
b) *Traffic Control Plan Required*: In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. 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 accommodations (or detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction	The project applicant shall implement the approved Plan during construction	Department of Transportation	Department of Transportation

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
access routes. The Traffic Control Plan shall be in conformance with the City's Supplemental Design Guidance for Accommodating Pedestrians, Bicyclists, and Bus Facilities in Construction Zones. c) *Repair of City Streets*: 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.	Prior to building permit final	N/A	Department of Transportation
SCA Transportation-6, Transportation Improvements: The project applicant shall implement the recommended on- and off-site transportation-related improvements contained within the Transportation Impact Review for the project (e.g., signal timing adjustments, restriping, signalization, traffic control devices, roadway reconfigurations, transportation demand management measures, and transit, pedestrian, and bicyclist amenities). The project applicant is responsible for funding and installing the improvements, and shall obtain all necessary permits and approvals from the City and/or other applicable regulatory agencies such as, but not limited to, Caltrans (for improvements related to Caltrans facilities) and the California Public Utilities Commission (for improvements related to railroad crossings), prior to installing the improvements. To implement this measure for intersection modifications, the project applicant shall submit Plans, Specifications, and Estimates (PS&E) to the City for review and approval. All elements shall be designed to applicable City standards in effect at the time of construction and all new or upgraded signals shall include these enhancements as required by the City. All other facilities supporting vehicle travel and alternative modes through the intersection shall be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for, among other items, the elements listed below: a) 2070L Type Controller with cabinet accessory b) GPS communication (clock) c) Accessible pedestrian crosswalks according to Federal and State Access Board guidelines with signals (audible and tactile) d) Countdown pedestrian head module switch out e) City Standard ADA wheelchair ramps f) Video detection on existing (or new, if required) g) Mast arm poles, full activation (where applicable) h) Polara Push buttons (full activation) i) Bicycle detection (full activation)) Pull boxes k) Signal interconnect and communication with trenching (where applicable), or through existing conduit (where applicable), 600 feet maximum l) Conduit replacement contingency	Prior to building permit final or as otherwise specified	Bureau of Building; Department of Transportation	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	When Required	Initial Approval	Monitoring/ Inspection
	Mitigation Implementation/Monitoring		
m) Fiber switch n) PTZ camera (where applicable) o) Transit Signal Priority (TSP) equipment consistent with other signals along corridor p) Signal timing plans for the signals in the coordination group q) Bi-directional curb ramps (where feasible, and if project is on a street corner) r) Upgrade ramps on receiving curb (where feasible, and if project is on a street corner)			
Tribal Cultural Resources			
SCA Cultural-1, Archaeological and Paleontological Resources - Discovery during Construction: Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources, including tribal 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. a) 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. b) 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. c) 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.	During construction	N/A	Bureau of Building
Project Requirement Tribal Cultural Resources-1, Discovery of Tribal Cultural Resources: In the event that Native American human remains or funerary objects are discovered, the provisions of Section 7050.5(b) of	During construction	N/A	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
the California Health and Safety Code apply. These provisions provide that, the County Coroner, upon recognizing the remains as being of Native American origin, is responsible to contact the Native American Heritage Commission within 24 hours. The Commission has various powers and duties to provide for the ultimate disposition of any Native American remains, as does the assigned Most Likely Descendant. Sections 5097.98 and 5097.99 of the Public Resources Code also call for "protection of Native American human burials and skeletal remains from vandalism and inadvertent destruction.			
Utilities and Service Systems			
SCA Utilities-1, Water Efficient Landscape Ordinance: The project applicant shall comply with California's Water Efficient Landscape Ordinance (WELO) in order to reduce landscape water usage. For any landscape project with an aggregate (total noncontiguous) landscape area over 2,500 sq. ft., the project applicant shall implement the Performance Measures in accordance with the WELO. Prior to construction, the project applicant shall submit the Project Information (detailed below) and documentation showing compliance with Appendix D of California's Model Water Efficient Landscape Ordinance. *a) Performance Measures*: Prior to construction, the project applicant shall prepare and submit a Landscape Documentation Package for review and approval, including the following: i. Project information (date, applicant and property owner name, project address, total landscape area, project type (new, rehabilitated, cemetery, or home owner installed), water supply type and water purveyor, checklist of documents in the package, project contact information, and applicant signature and date with the statement: "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package." ii. Water Efficient Landscape Worksheet, including Hydro-zone Information Table and Water Budget Calculations with Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use iii. Soil Management Report iv. Landscape Design Plan v. Irrigation Design Plan, and vi. Grading Plan b) Upon installation of the landscaping and irrigation systems, and prior to the final of a construction-related permit, the Project applicant shall submit a Certificate of Completion, and landscape and irrigation maintenance schedule, for review and approval by the City. The Certificate of Completion shall also be submitted to the local water purveyor and property owner or his or her designee.	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
SCA Utilities-2, Sanitary Sewer System: The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer	Prior to approval of construction-related permit	Public Works Department, Department of Engineering and Construction	N/A

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring: When Required	Initial Approval	Monitoring/ Inspection
system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system.			
SCA General -1, Regulatory Permits and Authorizations from Other Agencies: The project applicant shall obtain all necessary regulatory permits and authorizations from applicable resource/regulatory agencies, and shall comply with all requirements and conditions of the permits/authorizations. The project applicant shall submit evidence of the approved permits/authorizations to the City, along with evidence demonstrating compliance with any regulatory permit/authorization conditions of approval. In accordance with this SCA: a) To ensure that the Project contributes to legally required reductions in I&I, the Project applicant shall comply with EBMUD's Regional Private Sewer Lateral (PSL) Ordinance. Affected property owners must obtain a certificate from EBMUD certifying that all of their PSLs are leak-free. b) The Project shall replace or rehabilitate any existing sanitary sewer collection systems, including sewer lateral lines, to ensure that such systems and lines are free from defects or, alternatively, disconnected from the sanitary sewer system, and c) The Project shall ensure that any new wastewater collection systems, including sewer lateral lines, are constructed to prevent I/I to the maximum extent feasible while meeting all requirements contained in the Regional Private Sewer Lateral Ordinance and applicable municipal codes.	Prior to activity requiring permit/authorization from EBMUD	Approval by EBMUD; evidence of approval submitted to Bureau of Planning	Applicable regulatory agency with jurisdiction
SCA Utilities-3, Construction and Demolition Waste Reduction and Recycling: 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.	Prior to approval of construction-related permit	Public Works Department, Environmental Services Division	Public Works Department, Environmental Services Division
SCA Utilities-4, Recycling Collection and Storage Space: The project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with the Ordinance. For residential projects, at least two (2) cubic feet of storage and collection space per residential unit is required, with a minimum of ten (10) cubic feet. For non-residential projects, at least two (2) cubic feet of storage and collection space per 1,000 square feet of building floor area is required, with a minimum of ten (10) cubic feet.	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
SCA Utilities-5, Underground Utilities: 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.	During construction	N/A	Bureau of Building
SCA Utilities-6, Storm Drain System: The project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building

Appendix B

CalEEMod Emissions Calculator Results, Project Construction Emissions, December 2022

Lamphier-Gregory

1. Basic Project Information

1.1 Basic Project Information

Data Field	Value
Project Name	SBnk
Lead Agency	City of Oakland
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.90
Precipitation (days)	39.0
Location	37.754506887246976, -122.21137687971326
County	Alameda
City	Oakland
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1481
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric

1.2 Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (	Landscape Area (sq ft)
General Office Building	160	1000sqft	4.13	160,000	19,300
Unrefrigerated Warehouse-No Rail	134	1000sqft	4.13	134,000	19,300
General Light Industry	10.0	1000sqft	4.13	10,000	19,300
User Defined Industrial	0.00	User Defin	4.13	0.00	19,300

5. Activity Data

5.1 Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase
Demolition	Demolition	8/1/2023	8/29/2023	5.00	20.0
Site Preparation	Site Preparation	8/1/2023	8/7/2023	6.00	6.00
Grading	Grading	8/8/2023	9/11/2023	6.00	30.0
Building Construction	Building Construction	9/12/2023	1/31/2024	6.00	122
Building Const Ph2	Building Construction	8/1/2024	1/31/2025	6.00	158
Building Const Ph 3	Building Construction	8/1/2025	8/23/2025	6.00	20.0
Paving	Paving	8/25/2025	9/16/2025	6.00	20.0
Architectural Coating	Architectural Coating	9/17/2025	10/9/2025	6.00	20.0

5.3. Construction Vehicles

5.3.1 Unmitigated

Phase Name	Trip Type	One-Way T	Miles per Trip	Vehicle Mix
Demolition				
Demolition	Worker	15.0	11.7	LDA,LDT1,LDT2
Demolition	Vendor		8.40	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck			HHDT
Site Preparation				
Site Preparation	Worker	17.5	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor		8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck			HHDT
Grading				
Grading	Worker	20.0	11.7	LDA,LDT1,LDT2
Grading	Vendor		8.40	HHDT,MHDT
Grading	Hauling	95.6	20.0	HHDT
Grading	Onsite truck			HHDT
Building Construction				
Building Construction	Worker	112	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	49.8	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck			HHDT
Paving				
Paving	Worker	15.0	11.7	LDA,LDT1,LDT2
Paving	Vendor		8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck			HHDT
Architectural Coating				
Architectural Coating	Worker	67.0	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor		8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck			HHDT
Building Const Ph2				
Building Const Ph2	Worker	112	11.7	LDA,LDT1,LDT2
Building Const Ph2	Vendor	49.8	8.40	HHDT,MHDT
Building Const Ph2	Hauling	0.00	20.0	HHDT
Building Const Ph2	Onsite truck			HHDT
Building Const Ph 3				
Building Const Ph 3	Worker	112	11.7	LDA,LDT1,LDT2
Building Const Ph 3	Vendor	49.8	8.40	HHDT,MHDT
Building Const Ph 3	Hauling	0.00	20.0	HHDT
Building Const Ph 3	Onsite truck			HHDT

5.6. Dust Mitigation

5.6.1 Construction Earthmoving Activities

Phase Name	Material Imported (Cubic	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Demolition	0.00	0.00	0.00		
Site Preparation			9.00	0.00	
Grading	22,941	0.00	90.0	0.00	
Paving	0.00	0.00	0.00	0.00	10.3

5.2. Off-Road Equipment

5.2.1 Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Da	Hours Per Day	Horsepowe	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhc	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhc	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhc	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Building Const Ph2	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Const Ph2	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Const Ph2	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Const Ph2	Tractors/Loaders/Backhc	Diesel	Average	3.00	7.00	84.0	0.37
Building Const Ph2	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Const Ph 3	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Const Ph 3	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Const Ph 3	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Const Ph 3	Tractors/Loaders/Backhc	Diesel	Average	3.00	7.00	84.0	0.37
Building Const Ph 3	Welders	Diesel	Average	1.00	8.00	46.0	0.45

8 User Changes to Default Data

Screen	Justification
	Total landscape divided equally between office, warehouse, shop and pipe laydown uses
Land Use	Total lot area divided equally between office, warehouse, shop and pipe laydown uses
Construction: Paving	Total paved area (10.3 acres or 449,000 sf) divided equally among each land use type
Construction Phases	Construction schedule based on limited construction period of August through January each year

2. Emissions Summary

2.1 Construction Emissions Compared Against Thresholds

Un/Mit.	TOG	ROG	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Daily, Summer (Max)											
Unmit.	8.52	159	73.4	60.4	3.01	19.9	22.9	2.76	10.2	12.9	17,652
Daily, Winter (Max)											
Unmit.	2.05	159	14.1	18.4	0.57	1.27	1.85	0.53	0.31	0.84	4,778
Average Daily (Max)											
Unmit.	1.22	9.02	9.61	9.59	0.39	1.57	1.96	0.36	0.59	0.95	2,688
Annual (Max)											
Unmit.	0.22	1.65	1.75	1.75	0.07	0.29	0.36	0.06	0.11	0.17	445

2. Emissions Summary

2.2 Construction Emissions by Year, Unmitigated

Year	TOG	ROG	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Daily - Summer (Max)											
2023	8.52	6.91	73.4	60.4	3.01	19.9	22.9	2.76	10.2	12.9	17,652
2024	1.98	1.64	13.2	18.5	0.52	1.27	1.79	0.48	0.31	0.79	4,821
2025	1.84	159	12.3	18.0	0.45	1.27	1.72	0.42	0.31	0.73	4,778
Daily - Winter (Max)											
2023	2.05	1.71	14.1	18.4	0.57	1.27	1.85	0.53	0.31	0.84	4,778
2024	1.94	1.62	13.4	18.0	0.52	1.27	1.79	0.48	0.31	0.79	4,744
2025	1.82	159	12.5	17.6	0.45	1.27	1.72	0.42	0.31	0.73	4,702
Average Daily											
2023	1.22	0.99	9.61	9.59	0.39	1.57	1.96	0.36	0.59	0.95	2,688
2024	0.83	0.70	5.75	7.70	0.22	0.54	0.76	0.21	0.13	0.34	2,054
2025	0.31	9.02	2.06	2.98	0.08	0.19	0.27	0.07	0.05	0.12	728
Annual											
2023	0.22	0.18	1.75	1.75	0.07	0.29	0.36	0.06	0.11	0.17	445
2024	0.15	0.13	1.05	1.40	0.04	0.10	0.14	0.04	0.02	0.06	340
2025	0.06	1.65	0.38	0.54	0.01	0.04	0.05	0.01	0.01	0.02	121

3. Construction Emissions Details

3.1 Demolition (2023) - Unmitigated

Location	TOG	ROG	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Onsite											
Daily, Summer (Max)											
Off-Road Equipment	3.39	2.84	27.3	23.5	1.20		1.20	1.10		1.10	3,437
Demolition						0.00	0.00		0.00	0.00	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Average Daily											
Off-Road Equipment	0.19	0.16	1.50	1.29	0.07		0.07	0.06		0.06	188
Demolition						0.00	0.00		0.00	0.00	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Off-Road Equipment	0.03	0.03	0.27	0.23	0.01		0.01	0.01		0.01	31.2
Demolition						0.00	0.00		0.00	0.00	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite											
Daily, Summer (Max)											
Worker	0.06	0.06	0.04	0.67	0.00	0.12	0.12	0.00	0.03	0.03	137
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Average Daily											
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3. Construction Emissions Details

3.3 Site Preparation (2023) - Unmitigated

Location	TOG	ROG	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Onsite											
Daily, Summer (Max)											
Off-Road Equipment	4.70	3.95	39.7	35.5	1.81		1.81	1.66		1.66	5,314
Dust From Material Mc						19.7	19.7		10.1	10.1	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Average Daily											
Off-Road Equipment	0.08	0.06	0.65	0.58	0.03		0.03	0.03		0.03	87.3
Dust From Material Mc						0.32	0.32		0.17	0.17	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Off-Road Equipment	0.01	0.01	0.12	0.11	0.01		0.01	< 0.005		< 0.005	14.5
Dust From Material Mc						0.06	0.06		0.03	0.03	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite											
Daily, Summer (Max)											
Worker	0.07	0.07	0.05	0.78	0.00	0.14	0.14	0.00	0.03	0.03	160
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Average Daily											
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.45
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.41
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3. Construction Emissions Details

3.5 Grading (2023) - Unmitigated

Location	TOG	ROG	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Onsite											
Daily, Summer (Max)											
Off-Road Equipment	4.43	3.72	37.3	31.4	1.59		1.59	1.47		1.47	6,621
Dust From Material M						9.28	9.28		3.66	3.66	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Average Daily											
Off-Road Equipment	0.36	0.31	3.07	2.58	0.13		0.13	0.12		0.12	544
Dust From Material M						0.76	0.76		0.30	0.30	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Off-Road Equipment	0.07	0.06	0.56	0.47	0.02		0.02	0.02		0.02	90.1
Dust From Material M						0.14	0.14		0.05	0.05	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite											
Daily, Summer (Max)											
Worker	0.08	0.08	0.06	0.89	0.00	0.17	0.17	0.00	0.04	0.04	183
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.56	0.15	8.66	3.41	0.13	1.77	1.90	0.13	0.49	0.61	7,274
Daily, Winter (Max)											
Average Daily											
Worker	0.01	0.01	0.01	0.06	0.00	0.01	0.01	0.00	< 0.005	< 0.005	14.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.01	0.74	0.28	0.01	0.14	0.15	0.01	0.04	0.05	597
Annual											
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.13	0.05	< 0.005	0.03	0.03	< 0.005	0.01	0.01	98.9

3. Construction Emissions Details

3.7 Building Construction (2023) - Unmitigated

Location	TOG	ROG	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Onsite											
Daily, Summer (Max)											
Off-Road Equipment	1.50	1.26	11.8	13.2	0.55		0.55	0.51		0.51	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Off-Road Equipment	1.50	1.26	11.8	13.2	0.55		0.55	0.51		0.51	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily											
Off-Road Equipment	0.39	0.33	3.08	3.43	0.14		0.14	0.13		0.13	627
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Off-Road Equipment	0.07	0.06	0.56	0.63	0.03		0.03	0.02		0.02	104
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite											
Daily, Summer (Max)											
Worker	0.46	0.42	0.31	4.98	0.00	0.92	0.92	0.00	0.22	0.22	1,022
Vendor	0.11	0.05	1.76	0.78	0.02	0.35	0.37	0.02	0.10	0.12	1,430
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Worker	0.44	0.40	0.42	4.40	0.00	0.92	0.92	0.00	0.22	0.22	945
Vendor	0.11	0.05	1.86	0.80	0.02	0.35	0.37	0.02	0.10	0.12	1,428
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily											
Worker	0.11	0.10	0.10	1.11	0.00	0.23	0.23	0.00	0.05	0.05	248
Vendor	0.03	0.01	0.47	0.21	< 0.005	0.09	0.09	< 0.005	0.02	0.03	372
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Worker	0.02	0.02	0.02	0.20	0.00	0.04	0.04	0.00	0.01	0.01	41.1
Vendor	0.01	< 0.005	0.09	0.04	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	61.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3. Construction Emissions Details

3.9 Building Construction (2024) - Unmitigated

Location	TOG	ROG	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Onsite											
Daily, Summer (Max)											
Daily, Winter (Max)											
Off-Road Equipment	1.44	1.20	11.2	13.1	0.50		0.50	0.46		0.46	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily											
Off-Road Equipment	0.10	0.09	0.82	0.95	0.04		0.04	0.03		0.03	175
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Off-Road Equipment	0.02	0.02	0.15	0.17	0.01		0.01	0.01		0.01	29.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite											
Daily, Summer (Max)											
Daily, Winter (Max)											
Worker	0.39	0.38	0.35	4.08	0.00	0.92	0.92	0.00	0.22	0.22	927
Vendor	0.10	0.04	1.78	0.76	0.02	0.35	0.37	0.02	0.10	0.12	1,411
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily											
Worker	0.03	0.03	0.03	0.29	0.00	0.07	0.07	0.00	0.02	0.02	68.1
Vendor	0.01	< 0.005	0.13	0.05	< 0.005	0.03	0.03	< 0.005	0.01	0.01	103
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Worker	0.01	0.01	< 0.005	0.05	0.00	0.01	0.01	0.00	< 0.005	< 0.005	11.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	17.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3. Construction Emissions Details

3.11 Building Construction (2024) - Unmitigated

Location	TOG	ROG	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Onsite											
Daily, Summer (Max)											
Off-Road Equipment	1.44	1.20	11.2	13.1	0.50		0.50	0.46		0.46	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Off-Road Equipment	1.44	1.20	11.2	13.1	0.50		0.50	0.46		0.46	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily											
Off-Road Equipment	0.52	0.43	4.03	4.71	0.18		0.18	0.16		0.16	864
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Off-Road Equipment	0.09	0.08	0.74	0.86	0.03		0.03	0.03		0.03	143
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite											
Daily, Summer (Max)											
Worker	0.44	0.40	0.28	4.63	0.00	0.92	0.92	0.00	0.22	0.22	1,002
Vendor	0.11	0.04	1.69	0.74	0.02	0.35	0.37	0.02	0.10	0.12	1,414
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Worker	0.39	0.38	0.35	4.08	0.00	0.92	0.92	0.00	0.22	0.22	927
Vendor	0.10	0.04	1.78	0.76	0.02	0.35	0.37	0.02	0.10	0.12	1,411
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily											
Worker	0.14	0.14	0.12	1.42	0.00	0.32	0.32	0.00	0.08	0.08	336
Vendor	0.04	0.01	0.63	0.27	0.01	0.12	0.13	0.01	0.03	0.04	507
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Worker	0.03	0.02	0.02	0.26	0.00	0.06	0.06	0.00	0.01	0.01	55.6
Vendor	0.01	< 0.005	0.11	0.05	< 0.005	0.02	0.02	< 0.005	0.01	0.01	84.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3. Construction Emissions Details

3.13 Building Construction (2025) - Unmitigated

Location	TOG	ROG	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Onsite											
Daily, Summer (Max)											
Daily, Winter (Max)											
Off-Road Equipment	1.35	1.13	10.4	13.0	0.43		0.43	0.40		0.40	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily											
Off-Road Equipment	0.10	0.08	0.76	0.95	0.03		0.03	0.03		0.03	175
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Off-Road Equipment	0.02	0.01	0.14	0.17	0.01		0.01	0.01		0.01	29.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite											
Daily, Summer (Max)											
Daily, Winter (Max)											
Worker	0.38	0.37	0.35	3.80	0.00	0.92	0.92	0.00	0.22	0.22	909
Vendor	0.09	0.04	1.71	0.73	0.02	0.35	0.37	0.02	0.10	0.12	1,387
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily											
Worker	0.03	0.03	0.02	0.27	0.00	0.07	0.07	0.00	0.02	0.02	66.7
Vendor	0.01	< 0.005	0.12	0.05	< 0.005	0.03	0.03	< 0.005	0.01	0.01	101
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.01	0.01	0.00	< 0.005	< 0.005	11.1
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	16.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3. Construction Emissions Details

3.15 Building Construction (2025) - Unmitigated

Location	TOG	ROG	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Onsite											
Daily, Summer (Max)											
Off-Road Equipment	1.35	1.13	10.4	13.0	0.43		0.43	0.40		0.40	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Average Daily											
Off-Road Equipment	0.07	0.06	0.57	0.71	0.02		0.02	0.02		0.02	132
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Off-Road Equipment	0.01	0.01	0.10	0.13	< 0.005		< 0.005	< 0.005		< 0.005	21.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite											
Daily, Summer (Max)											
Worker	0.39	0.38	0.24	4.29	0.00	0.92	0.92	0.00	0.22	0.22	982
Vendor	0.11	0.04	1.63	0.71	0.02	0.35	0.37	0.02	0.10	0.12	1,390
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Average Daily											
Worker	0.02	0.02	0.02	0.20	0.00	0.05	0.05	0.00	0.01	0.01	50.2
Vendor	0.01	< 0.005	0.09	0.04	< 0.005	0.02	0.02	< 0.005	0.01	0.01	76.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.01	0.01	0.00	< 0.005	< 0.005	8.32
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	12.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3. Construction Emissions Details

3.17 Paving (2025) - Unmitigated

Location	TOG	ROG	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Onsite											
Daily, Summer (Max)											
Off-Road Equipment	0.95	0.80	7.45	9.98	0.35		0.35	0.32		0.32	1,517
Paving		1.35									
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Average Daily											
Off-Road Equipment	0.05	0.04	0.41	0.55	0.02		0.02	0.02		0.02	83.1
Paving		0.07									
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005		< 0.005	< 0.005		< 0.005	13.8
Paving		0.01									
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite											
Daily, Summer (Max)											
Worker	0.05	0.05	0.03	0.58	0.00	0.12	0.12	0.00	0.03	0.03	132
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Average Daily											
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.01	0.01	0.00	< 0.005	< 0.005	6.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.12
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3. Construction Emissions Details

3.19 Architectural Coating (2025) - Unmitigated

Location	TOG	ROG	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Onsite											
Daily, Summer (Max)											
Off-Road Equipment	0.15	0.13	0.88	1.14	0.03		0.03	0.03		0.03	134
Architectural Coatings		159									
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Off-Road Equipment	0.15	0.13	0.88	1.14	0.03		0.03	0.03		0.03	134
Architectural Coatings		159									
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily											
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005		< 0.005	< 0.005		< 0.005	7.34
Architectural Coatings		8.69									
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005		< 0.005	< 0.005		< 0.005	1.22
Architectural Coatings		1.59									
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite											
Daily, Summer (Max)											
Worker	0.23	0.23	0.15	2.58	0.00	0.55	0.55	0.00	0.13	0.13	589
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)											
Worker	0.23	0.22	0.21	2.28	0.00	0.55	0.55	0.00	0.13	0.13	546
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily											
Worker	0.01	0.01	0.01	0.12	0.00	0.03	0.03	0.00	0.01	0.01	30.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual											
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	4.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Appendix C

<u>CalEEMod Emissions Calculator Results, Project Operational Emissions, December 2022</u>

Lamphier-Gregory

1. Basic Project Information

1.1 Basic Project Information

Data Field	Value
Project Name	SBnk
Lead Agency	City of Oakland
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.90
Precipitation (days)	39.0
Location	37.754506887246976, -122.21137687971326
County	Alameda
City	Oakland
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1481
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric

1.2 Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)
General Office Building	160	1000sqft	4.13	160,000	19,300
Unrefrigerated Warehouse-No Rail	134	1000sqft	4.13	134,000	19,300
General Light Industry	10.0	1000sqft	4.13	10,000	19,300
User Defined Industrial	0.00	Jser Defined Un	4.13	0.00	19,300

4.2. Energy

4.2.1 Electricity Emissions By Land Use - Unmitigated

Land Use	ROG	NOx	PM10E	PM2.5E	CO_2e
Daily, Summer (Max)					
General Office Building					2,540
Unrefrigerated Warehouse-No Rail					874
General Light Industry					134
User Defined Industrial					0.00
Total					3,548
Daily, Winter (Max)					
General Office Building					2,540
Unrefrigerated Warehouse-No Rail					874
General Light Industry					134
User Defined Industrial					0.00
Total					3,548
Annual					
General Office Building					421
Unrefrigerated Warehouse-No Rail					145
General Light Industry					22.2
User Defined Industrial					0.00
Total					587

5.9. Operational Mobile Sources

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year
Total all Land Uses	1,750	1,750	1,750	638,750
	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
	25,550	25,550	25,550	9,325,700

5.10. Operational Area Sources

5.10.2 Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)
0.00	0.00	456,000	152,000

5.10.3 Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	4,500,450	204	0.0,330	0.0,040	0.00
Unrefrigerated Warehouse-No Rail	1,548,691	204	0.0,330	0.0,040	0.00
General Light Industry	237,410	204	0.0,330	0.0,040	0.00
User Defined Industrial	0.00	204	0.0,330	0.0,040	0.00

5.12. Operational Water and Wastewater Consumption

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	28,437,400	219,273
Unrefrigerated Warehouse-No Rail	30,987,500	219,273
General Light Industry	2,312,500	219,273
User Defined Industrial	0.00	219,273

5.13. Operational Waste Generation

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	149	0.00
Unrefrigerated Warehouse-No Rail	126	0.00
General Light Industry	12.4	0.00
User Defined Industrial	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak	Service Leak Ra	Times Serviced
General Office Building	Household refrig	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commerci	R-410A	2,088	< 0.005	4.00	4.00	18.0
Unrefrigerated Warehouse-No Rail	Cold storage	R-404A	3,922	7.50	7.50	7.50	25.0
General Light Industry	Other commerci	R-410A	2,088	0.30	4.00	4.00	18.0

2. Emissions Summary

2.4 Operations Emissions Compared Against Thresholds

Un/Mit.	TOG	ROG	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Daily, Summer (Max)											
Unmit.	10.0	16.5	7.50	88.8	0.15	7.03	7.18	0.14	1.24	1.38	29,251
Daily, Winter (Max)											
Unmit.	7.47	14.1	8.66	68.8	0.13	7.03	7.16	0.12	1.24	1.36	27,964
Average Daily (Max)											
Unmit.	8.53	15.0	8.23	73.5	0.14	7.03	7.17	0.13	1.24	1.37	28,116
Annual (Max)											
Unmit.	1.56	2.75	1.50	13.4	0.03	1.28	1.31	0.02	0.23	0.25	4,655

2. Emissions Summary

2.5 Operations Emissions by Sector, Unmitigated

Sector	TOG	ROG	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2e
Daily, Summer (Max)											
Mobile	7.69	6.94	7.39	75.6	0.13	7.03	7.16	0.12	1.24	1.36	20,796
Area	2.35	9.54	0.11	13.2	0.02		0.02	0.02		0.02	56.0
Energy	0.00	0.00	0.00	0.00	0.00		0.00	0.00		0.00	3,548
Water											736
Waste											541
Refrig.											3,574
Total	10.0	16.5	7.50	88.8	0.15	7.03	7.18	0.14	1.24	1.38	29,251
Daily, Winter (Max)											
Mobile	7.47	6.69	8.66	68.8	0.13	7.03	7.16	0.12	1.24	1.36	19,564
Area		7.37									
Energy	0.00	0.00	0.00	0.00	0.00		0.00	0.00		0.00	3,548
Water											736
Waste											541
Refrig.											3,574
Total	7.47	14.1	8.66	68.8	0.13	7.03	7.16	0.12	1.24	1.36	27,964
Average Daily											
Mobile	7.37	6.60	8.17	67.0	0.13	7.03	7.16	0.12	1.24	1.36	19,690
Area	1.16	8.44	0.05	6.52	0.01		0.01	0.01		0.01	27.6
Energy	0.00	0.00	0.00	0.00	0.00		0.00	0.00		0.00	3,548
Water											736
Waste											541
Refrig.											3,574
Total	8.53	15.0	8.23	73.5	0.14	7.03	7.17	0.13	1.24	1.37	28,116
Annual											
Mobile	1.34	1.20	1.49	12.2	0.02	1.28	1.31	0.02	0.23	0.25	3,260
Area	0.21	1.54	0.01	1.19	< 0.005		< 0.005	< 0.005		< 0.005	4.57
Energy	0.00	0.00	0.00	0.00	0.00		0.00	0.00		0.00	587
Water											122
Waste											89.6
Refrig.											592
Total	1.56	2.75	1.50	13.4	0.03	1.28	1.31	0.02	0.23	0.25	4,655

Appendix D

Biological Resource Assessment

Environmental Collaborative, May 25, 2023

ENVIRONMENTAL COLLABORATIVE

Consultation • Documentation • Restoration
41 Jeanette Court • Walnut Creek, CA 94596
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MEMORANDUM

TO: Scott Gregory, President
Lamphier-Gregory
4100 Redwood Road, Suite 20A #601
Oakland, CA 94619

DATE: 25 May 2023

FROM: James Martin, Principal
Environmental Collaborative

SUBJECT: Biological Resource Assessment
SupplyBank Project on Oakport Street
Oakland, California

Environmental Collaborative was retained by Lamphier-Gregory to conduct a Biological Resource Assessment (BRA) for the SupplyBank.org Project (Project) on Oakport Street in Oakland, California. The Project site consists of one large property owned by the East Bay Municipal Utilities District (EBMUD) that is split among three Assessor's Parcels (APN #s 41-3904-1-5, 41-3903-2-7 and 41-3903-2-8) that collectively occupy approximately 66.5 acres within in the Coliseum industrial neighborhood of East Oakland. The Project site is within the planning area of the City of Oakland's Coliseum Area Specific Plan (CASP). Assessor's Parcel Number 41-3903-2-8 is the primary location of the Project (i.e., the Development Area), and APNs 41-3904-1-5 and 41-3903-2-7 are the remaining portions of the property The Development Area was originally tidal marshlands that were filled in the 1950s and 1960s to create the existing relatively level property. The EBMUD Oakport Wet Weather Treatment Facility (Oakport WWF) is located on the northerly APN (41-3904-1-5) and would remain and continue to provide primary wastewater treatment. The remainder of this APN is used for warehousing, materials storage, temporary parking and other activities, and is largely vacant. The proposed Project involves relocating EBMUD's main warehouse operations, pipe storage, worker training, and materials storage bins, and constructing a new 85-foot high, 5-story office building and associated improvements to be used as the SupplyBank.org headquarters, with the remaining capacity of the new building to be rented to other non-profit organizations for similar office use.

This BRA provides a summary of existing conditions on the Project site and an assessment of potential impacts of the proposed Project. The primary purpose of this BRA is to determine whether the biological resource analysis contained in the CASP EIR[1] adequately addresses the biological resources that are specific to the Project site, or whether there are unique or specific

[1] City of Oakland, 2014. *Coliseum Area Specific Plan, Draft Environmental Impact Report.* SCH # 2013042066. City Case #ER 13-004.

biological resources associated with the Project site that may not have been adequately addressed in the CASP EIR. Accordingly, this BRA is focused on the topics of special-status species, regulated waters, wildlife movement opportunities, and conformance with local ordinances. This BRA also includes a peer-review of several biological studies prepared by consultants retained by the applicant that are specific to the topic of wetlands and jurisdictional waters and their applicability to regulatory agency authorizations for proposed development of the Project site. Significance Criteria from Appendix G of the California Environmental Quality Act (CEQA) Guidelines related to consistency with adopted habitat conservation plans are not relevant and not further reviewed in this BRA because there are no adopted habitat conservation plans encompassing the Project site vicinity.

This BRA was prepared based on a review of available background information, as well as field reconnaissance surveys of the Project site. The review provided information on biological and wetland resources known from the Project site and vicinity. This included review of records maintained by the California Natural Diversity Data Base (CNDDB) of the California Department of Fish and Wildlife (CDFW) on special-status species and sensitive natural communities in the Oakland vicinity, mapping prepared by the U.S. Fish and Wildlife Service (USFWS) as part of the National Wetland Inventory, and other available background information. Biological and wetland resource documentation prepared for the applicant by First Carbon solutions and LSA were reviewed. Environmental Collaborative conducted field reconnaissance surveys of the Project site on April 27, May 2, and June 18, 2019, and February 14, 2023, to inspect existing conditions and review the adequacy of documentation prepared by the applicant's consultants. No protocol surveys for special-status species were performed as part of the field reconnaissance surveys, although habitat conditions were evaluated to determine the likelihood of occurrence on the Project site and assess the potential impacts of the Project. A separate wetland delineation or coordination with regulatory agency staff was not performed as part of this BRA, as these tasks were accomplished by consultants retained by the applicant.

The following provides an assessment of the Project on biological issues in accordance with Appendix G of the CEQA Guidelines, and ordinance conformance, pertinent findings contained in the CASP EIR, and a review of the applicability of mitigation measures from the CASP EIR and the City's Standard Conditions of Approval (SCA) in addressing potentially significant impacts on sensitive resources.

SPECIAL-STATUS SPECIES

1. CASP EIR identification of Special-Status Species

Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Acts or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts and other essential habitat. As defined in the CASP EIR, special status species included: those species listed, proposed for listing, or candidates for listing as threatened or endangered under the Federal Endangered Species Act; species listed or candidates for listing as rare, threatened or endangered under the California Endangered Species Act; species designated as "Special Concern" or "Fully Protected" by CDFW; species protected by the Federal Marine Mammal Protection Act; raptors (birds of prey), which are specifically protected by California Fish & Game Code Section 3503.5; those species that may be considered rare or endangered pursuant to Section 15380(b) of the CEQA Guidelines, such as those listed as “Special Animals” by CDFW, which include species on CDFW’s watchlist, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, and colonial nesting birds; species listed in the Special Plants, Bryophytes, and Lichens List as defined by the CDFW CNDDB; and species listed as California Rare Plant Rank (RPR) 1-3 as defined by the California Native Plant Society’s *Inventory of Rare and Endangered Plants of California*.

The CASP EIR found that 46 special-status wildlife species (see **Table 4.3A-1** in **Appendix 4.3A** of the CASP EIR) and 33 plant species (see **Table 4.3B-1** in **Appendix 4.3B** of the CASP EIR) were considered to have some potential for occurrence in the CASP planning area. Tables included in the CASP EIR listed the status, habitat requirements and potential for each species to occur within the CASP planning area or adjacent habitats. **Figures 1** and **2** show the known distribution of special-status plants and animals, respectively, within several miles of the Project site according to records maintained as part of the CNDDB. Those special-status species known or suspected to occur along the Bay front in the vicinity of the Project site, include the following:

- Coastal salt marsh provides habitat for the State and federally-endangered salt marsh harvest mouse and the Species of Special Concern (SSC) salt marsh wandering shrew
- Creeks, sloughs and open water provide suitable foraging habitat for special-status and more common bats. Existing structures and mature trees may provide maternity roosts for bat species. Three special-status bat species (the Townsend’s big-eared bat, pallid bat and silver-haired bat) are recognized as SSC by CDFW.
- California clapper (Ridgway’s) rail, California black rail, California brown pelican, California least tern, peregrine falcon and western snowy plover all occur within the CASP panning area and vicinity. Of these currently or now delisted birds, the Ridgway’s rail and California black rail nest in coastal salt marshes, including Damon Marsh just west of the Project site. California brown pelican, California least tern, and western snowy plover may forage in the open waters of the Bay but are not expected to nest in the CASP planning area. Peregrine falcon is expected to forage in portions of the CASP planning area.
- Several bird species recognized as SSC or for which roosting colonies are of concern to CDFW, are known from the CASP planning area. Alameda song sparrow and San Francisco saltmarsh common yellowthroat nest in tidal coastal salt marshes along the edges of San Francisco Bay. East Creek Slough, Damon Slough, Elmhurst Creek and San Leandro Creek provide foraging for the great blue heron, great egret, snowy egret, California gull, double-crested cormorant, and other species. Adjacent marshes, creeks, sloughs and Bay waters also provide foraging habitat for most of these species.
- Raptors (birds of prey) are known or suspected from the CASP planning area, including American kestrel, burrowing owl, Cooper’s hawk, northern harrier, osprey, red-tailed hawk, and white-tailed kite.
- Special-status fish and marine mammals known from the open waters of the Bay and creeks include steelhead trout, green sturgeon, longfin smelt, Pacific herring, Pacific harbor seals and California sea lions.

2. Potential Project Impacts to Special-Status Species

The proposed Project would directly affect a highly disturbed area that has very little potential for presence of any special-status species. However, its proximity to Damon Marsh could result in indirect impacts on known occurrences of Ridgway's rail, California black rail, and other special-status birds and mammals. **Figures 1** and **2** show the location of the Project site in relation to the natural habitat of Damon Marsh and open waters of the Bay, known to support numerous special-status species.

Construction activities, including noise, vibrations from pile driving, and increased human activity, could directly affect individuals, and could indirectly affect special-status species by reducing the quality of habitats, disruption of nesting and other essential behaviors, or attracting predators. The proposed Project would introduce new nighttime lighting, an increase in human activity and noise generated from the Project site, and the new structure could pose a risk of bird collision due to the height and proximity to Damon Marsh and the Bay. Sediment from grading could be released by construction-related erosion and wash contaminants into Bay waters, adversely affecting aquatic-dependent species unless careful controls are implemented. Other indirect impacts on special-status birds and bats could occur from construction-related disturbance from noise, vibrations from pile driving, new sources of light and traffic, as well as direct impacts through removal of nesting and roosting habitat.

The demolition or renovation of structures and removal of mature trees could affect bat species if roosting individuals are present, or if maternity roosts have been established.

3. Applicable Mitigation Measures and Standard Conditions of Approval

As concluded in the CASP EIR, implementation of City of Oakland SCAs that require Erosion and Sedimentation Control Plans, Best Management Practices for Soil and Groundwater Hazards and Creek Protection Plans would serve to address potential indirect effects of the Project's construction on water quality and aquatic-dependent special-status species associated with the nearby habitat of the Bay and creeks.

Potential impacts on nesting birds and roosting bats would generally be addressed through SCAs that call for preconstruction surveys as part of tree removal requirements during breeding season, and construction controls required as part of operational noise controls, limitations on pile driving and other extreme noise generators, and controls of nighttime lighting through preparation of a lighting plan.

A number of the biological-related SCAs identified in the CASP EIR that apply to future development in proximity to highly sensitive habitat areas such as Damon Marsh, would also apply to the proposed Project. These SCAs include controls on pile driving and other construction related disturbance, and nighttime lighting. Controls would also be required as part of building design to limit the risk of bird collision, which is of particular concern given the proposed height and proximity of the Office Building to Damon Marsh and open waters of the Bay. The risk of bird collision with new structures applies to both special-status species and more common bird species. Exterior treatment and nighttime lighting issues would be addressed as part of the Bird Collision Reduction Plan called for in the City's updated SCAs. Additional analysis of the risk of bird collision associated with the proposed Project is provided below under Species Movement, Migration, or Nursery Sites.

The CASP EIR also recommended additional mitigation measures to address the special sensitivity and extended nesting and migratory period associated with Ridgway's rails, California black rails and raptors.

Given the proximity of the Project site to Damon Marsh, many of these CASP EIR mitigation measures would apply to the Project and would serve to further address potential adverse impacts on special-status species, as reviewed further below. These additional mitigation measures include conducting pre-construction nesting surveys and establishing appropriate construction buffers, protection of essential habitat for species associated with salt marsh habitat, and controls on public access to limit disturbance to sensitive habitat. All of these mitigation measures would be useful in further minimizing or avoiding potential adverse impacts on special-status species associated with Damon Marsh and the remaining natural habitat in the vicinity of the Project site.

Applicable Standard Conditions of Approval

The following City of Oakland SCAs (as updated) are cited in the CASP EIR as an effective means for addressing direct and indirect impacts to SSS and their habitats, and would apply to the Project:

- SCA Bio-1: Operational Noise-General
- SCA Bio-2: Pile Driving and Other Extreme Noise Generators
- SCA Bio-3: Lighting Plan
- SCA Bio-4: Tree Removal Permit on Creekside Properties
- SCA Bio-5: Tree Removal during Breeding Season
- SCA Bio-6: Tree Removal Permit
- SCA Bio-7: Tree Replacement Plantings
- SCA Bio-8: Tree Protection during Construction
- SCA Bio-9: Erosion and Sedimentation Control Plan
- SCA Bio-10: Best Management Practices for Soil and Groundwater Hazards
- SCA Bio-12: Regulatory Permits and Authorizations
- SCA Bio 17: Bird Collision Reduction

In addition, to reduce potential impacts to special status bat species, the consulting biologists involved in preparation of the CASP EIR recommend the following additional measures be implemented:

Recommendations in Furtherance of SCA Bio-5: Tree Removal during Breeding Season:

a) Potential direct and indirect disturbances to bats shall be identified by locating colonies and instituting protective measures prior to tree removal and building dismantling and demolition activities. No more than two weeks in advance of tree removal, demolition of buildings onsite, or initiation of construction within 100 feet of trees or structures providing potential bat roosting sites, a qualified bat biologist (e.g., a biologist holding a CDFW collection permit and a Memorandum of Understanding with CDFW allowing the biologist to handle and collect bats) shall conduct pre-construction surveys for bat roosts. No activities that could disturb active roosts shall proceed prior to the completed surveys.

b) If a bat maternity colony is located within the Project site during pre-construction surveys, the Project shall be redesigned to avoid impacts if feasible, and a no-disturbance buffer acceptable in size to the CDFW shall be created around the roost.

Bat roosts (maternity or otherwise) initiated during construction are generally presumed to be unaffected by increased noise, vibration, or human activity, and no buffer is necessary as long as roost sites are not directly altered or destroyed. However, the "take" of individuals is still prohibited at any time.

c) If there is a maternity colony present and the Project cannot be redesigned to avoid removal of the tree or structure inhabited by the bats, demolition of that tree or structure shall not commence until after young are flying (i.e., after July 31, confirmed by a qualified bat biologist) or before maternity colonies form the following year (i.e., prior to March 1).

d) If a non-maternity roost must be removed as part of the Project, the non-maternity roost shall be evicted prior to building/tree removal by a qualified biologist using methods such as making holes in the roost to alter the air-flow or creating one-way funnel exits for the bats.

e) If significant (e.g., maternity roosts or large non-maternity roost sites) bat roosting habitat is destroyed during building/tree removal, artificial bat roosts shall be constructed in an undisturbed area in the Project site vicinity away from human activity and at least 200 feet from Project demolition/construction activities. The design and location of the artificial bat roost(s) shall be determined by a qualified bat biologist.

CASP EIR Mitigation Measures

Because of the special sensitivity and extended nesting and migratory period associated with Ridgway's rails, California black rails and raptors, the following mitigation measures for further addressing direct and indirect impacts to these special status species and their habitat would apply to the Project to address potential impacts to special status birds and nesting birds:

CASP EIR MM Bio 1A-1, Pre-construction Nesting Bird Surveys and Buffers: A qualified biologist shall conduct pre-construction surveys for construction activities between February 15 and September 30 to identify and subsequently avoid nesting areas for special status and migratory bird species. Surveys shall be designed and be of sufficient intensity to document rail and raptor nesting within 500 feet of planned work activities and within 50 feet for passerine nesting activity.

a) Construction activities within 500 feet of Damon Marsh and Arrowhead Marsh shall be conducted during the period from August 1 to January 31 to protect potentially nesting Ridgeway's rail, California black rail, Alameda song sparrow and San Francisco saltmarsh common yellowthroat.

b) If Ridgeway's rails, California black rails or raptors are found to be nesting within or adjacent to the planned work area, a minimum 100-foot wide buffer shall be maintained between construction activities and the nest location.

c) For Alameda song sparrow, San Francisco saltmarsh common yellowthroat and all other protected birds, a 50-foot buffer shall be maintained.

d) Buffer zones may be reduced in consultation with a qualified biologist.

e) Buffers shall be maintained until the young have fledged and are capable of flight, or by September 30.

To address potential impacts on special-status terrestrial mammals, the CASP EIR recommended the following additional mitigation measures:

CASP EIR MM Bio 1A-3, Salt Marsh Protection: All core habitat areas for salt marsh harvest mouse (i.e., pickleweed-dominated salt marsh habitat within Damon Marsh and Arrowhead Marsh) shall be avoided and protected. If construction activities are within 100 feet of these areas, site-specific buffers shall be established in coordination with a qualified biologist, approved by USFWS or CDFW as appropriate.

a) Buffers shall be designed to preclude changes to water and soil salinity and flooding/inundation regime. The buffers shall be at least 100 feet wide or extend to the current boundary of existing roads or development (includes vacant but graded lots and filled building pads). The qualified biologist may modify these buffers depending on site conditions.
b) The construction work area shall be fenced on the side closest to salt marsh habitat to delineate the extent of construction, preclude construction personnel and equipment from entering non-work areas, and prevent debris from entering avoided habitats. The construction boundary fencing may also inhibit movement of species such as the salt marsh harvest mouse and salt marsh wandering shrew into the construction area.
c) The qualified biologist shall be present during work on-site until the construction barrier fencing is installed, instruction of workers has been conducted, and any direct habitat disturbance has been completed. After that time, the contractor or permittee shall designate a person to monitor on-site compliance with all minimization measures.
d) The monitor and qualified biologist shall have the authority to halt construction that might result in impacts that exceed anticipated levels

CASP EIR MM Bio 1A-4, Public Access Design: All new or additional public access to San Francisco Bay, the Bay shoreline, Damon Marsh and San Leandro Creek shall be implemented in a manner consistent with the San Francisco Bay Conservation and Development Commission's Public Access Design Guidelines for the San Francisco Bay, in particular its recommendations for avoiding adverse effects on wildlife. These Design Guidelines include the following:

a) Preparation of individual site analyses to generate information on wildlife species and habitats existing at the site, and the likely human use of the site
b) Employing appropriate siting, design and management strategies (such as buffers or use restrictions) to reduce or prevent adverse human and wildlife interactions
c) Planning public access in a way that balances the needs of wildlife and people on an areawide scale, where possible
d) Providing visitors with diverse and satisfying public access opportunities to focus activities in designated areas and avoid habitat fragmentation, vegetation trampling and erosion
e) Evaluating wildlife predator access and control in site design
f) Retaining existing marsh and tidal flats and restoring or enhancing wildlife habitat, wherever possible

Further Recommendations of this Assessment

Mitigation Measure Bio 1A-1 from CASP EIR calls for a restriction on construction activities within 500 feet of Damon Marsh to the period from August 1 to January 31 to protect nesting Ridgway's rail and other salt marsh bird species. However, the USFWS typically considers any disturbance within 700 feet direct line of sight of occupied nesting habitat to be a potential take of the federally endangered Ridgeway's rail. Some low growing trees and shrubs occur along the western edge of the Project site, and could serve as partial screening between construction activities and suitable nesting habitat in Damon Marsh. But unless further consultation is provided with the USFWS to confirm any adjustments to standard setback requirements, the 500-foot distance specified in the CASP EIR could be insufficient, and should be increased to 700 feet to adhere to typical USFWS standards, as indicated below:

a) Construction activities within <u>700</u> ~~500~~ feet of Damon Marsh and Arrowhead Marsh shall be conducted during the period from August 1 to January 31 to protect potentially nesting Ridgeway's rail, California black rail, Alameda song sparrow and San Francisco saltmarsh common yellowthroat.

The SCA in the CASP EIR calling for regulatory permits and authorizations (SCA Bio-12: Regulatory Permits and Authorizations) would not automatically trigger consultation with the USFWS as part of a Section 7 consultation with the U.S. Army Corps of Engineers (Corps) for the proposed Project, because no federally regulated wetlands or waters would be affected as currently proposed. Without a federal nexus that would trigger a Section 7 consultation (such as a Section 404 Permit from the Corps), the only way to address potential take of federally-listed species would be under Section 10 of the Endangered Species Act, which requires preparation of a Habitat Conservation Plan. Adhering to take avoidance standards such as the 700-foot disturbance setback during the rail's nesting season, should serve to avoid the need for further consultation with the USFWS and CDFW on potential take of listed species.

4. Conclusions

Consistent with the conclusions of the CASP EIR, the Project's effects on special-status species and their habitats would be fully addressed through implementation of City SCAs, the additional mitigation measures called for in the CASP EIR (as revised to ensure adequate construction disturbance setbacks from Damon Marsh), and existing regulations. No further analysis or mitigation measures are considered necessary in addressing potential impacts to a level of less-than-significant.

WETLANDS, RIPARIAN HABITAT AND OTHER SENSITIVE NATURAL COMMUNITIES

1. CASP EIR review of Regulated Waters and other Sensitive Natural Communities

The CASP EIR provides a review of regulated waters in the CASP planning area, which include several creeks and the wetlands of Damon Marsh. The CASP EIR found that future development pursuant to the CASP could have a substantial adverse effect on wetlands, riparian habitat, Waters of the State and other sensitive natural communities as identified in local or regional plans, policies and regulations. The CASP EIR determined that such potential impacts caused by construction activities near sensitive communities along the edges of waterways would be fully addressed through implementation of City SCAs, which acknowledge the regulatory permits and authorizations needed from other regulatory agencies in addition to the City of Oakland and requiring compliance with all conditions as may be issued by these applicable agencies, including the RWQCB. Other SCAs required of construction at or near the edges of waterways or Waters of the State require implementation of Best Management Practices (BMPs) for soil and groundwater hazards, and preparation and implementation of Creek Protection Plans. The CASP EIR determined that potential direct impacts to wetlands, riparian habitats, isolated wetlands and headwaters would be reduced through implementation of SCAs.

The CASP Final EIR cited the Porter-Cologne Water Quality Control Act as implementing the federal Clean Water Act (CWA), and providing a mechanism for protecting the quality of the State's waters, providing independent authority to the Reginal Water Quality Control Board (RWQCB) to regulate the discharge of fill material to wetlands outside the jurisdiction of the U.S. Army Corps of Engineers (Corps). The RWQCB protects all waters in its regulatory scope, but has special responsibility for isolated wetlands and headwaters. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. If a proposed project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to Waters of the State, the RWQCB has the option to regulate such activities under its State authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements.

The CASP EIR also acknowledged that the Bay Conservation and Development Commission (BCDC) regulates dredging, filling and public access within 100 feet of the mean high tide line within San Francisco Bay, and has jurisdiction over open water, marshes, mudflats, and the first 100-feet inland from the shoreline, and portions of most creeks, rivers, sloughs and tributaries that flow into San Francisco Bay. BCDC permits would be required for all work within their jurisdictional boundaries. The BCDC policies to maximize public access opportunities also seek to minimize potentially significant adverse impacts upon wildlife. All proposed new or additional public access to San Francisco Bay and the Bay shoreline must be implemented in a manner consistent with the BCDC's Public Access Design Guidelines, in particular its recommendations for avoiding adverse effects on wildlife.

2. Potential Impacts on Regulated Waters

Several wetland delineations have been conducted at the Project site for the applicant and within a larger study area, including an initial delineation conducted by WRA Environmental Consultants in 2019,[2] and a subsequent delineation conducted by First Carbon Solutions in February 2021.[3] The First Carbon Solutions 2021 delineation was verified by the Corps in March of 2021. Although the 2021 delineation by First Carbon Solutions indicates that a small seasonal wetland (Seasonal Wetland SW-01) of an estimated 0.02 acre was a "potentially jurisdictional feature", the Corps determined that the Project site contained no federally regulated waters. The 2019 delineation concluded there was an estimated 0.24 acre of construction-related depressions and 0.03 acre of wetland drainage ditches on the Project site, but no determination was made on whether these features were regulated waters of the State. The 2021 delineation focused on mapping features off of the Project site along the Oakport Street corridor, and concluded that there was an estimated 0.157 acre of State-regulated waters present within the expanded study area.

[2] WRA Environmental Consultants, 2019. *Aquatic Resources Delineation Report, SupplyBank.Org Office & Distribution Center, Oakland*. Prepared for SupplyBank.Org. September, revised October 20.

[3] First Carbon Solutions, 2021. *Delineation of Aquatic Resources of Additional Areas at the Oakport Street Project and Regulatory Considerations*. Letter to Benito Delgado-Olson, Executive Director, SupplyBank.org, from Bernhard Warzecha, Senior Biologist/Project Manager, First Carbon Solutions. February 1.

In addition to the 2019 WRA delineation study and the 2021 First Carbon Solutions delineation, an additional delineation was conducted by LSA at the request of the RWQCB in 2022. This LSA 2022 delineation[4] was conducted at the end of the wet season to more accurately represent conditions for potential seasonal wetlands. It also captured potential jurisdictional waters along the northern portion of the Oakport Street right-of-way and the off-site mitigation area that were outside the study area limits of the previous two wetland delineations. Potential jurisdictional wetland boundaries were mapped based on a combination of the limits of hydrophytic vegetation, evidence of wetland hydrology, and hydric soil indicators. However, the Project site had been scraped and vegetation was cut shortly in advance of the field survey effort, obscuring and eliminating some of the seasonal wetland features observed during the 2019 delineation. Based on the more recent conditions observed, the 2022 delineation determined that SW-01 occupies an estimated 0.03 acre and is a "potential waters of the United States". It concluded that an estimated 0.221 acre of waters of the State were present on the Project site.

Based on the LSA 2022 Section 404(B)(1) Alternatives Analysis (Alternatives Analysis),[5] which was submitted as part of the permit application to the RWQCB, the Project site currently supports 0.244 acre of seasonal wetlands and 0.027 acre of other waters of the State, with a total potential jurisdictional area of 0.271 acre. In addition, approximately 0.240 acre of potential seasonal wetlands were located in the central portion of the site that were likely removed during maintenance activities in spring of 2022. As specified by the RWQCB during permitting negotiations with the applicant, these features are to be included in the assessment of the Project's impact on waters of the State. Therefore, the overall total potential jurisdictional area of Waters of the State is 0.511 acre.

The proposed Project would result in approximately 0.455 acre of permanent impacts to wetlands and other waters of the State. Permanent impacts would result from placement of fills and grading on the Project site, installation of retaining walls, and from construction of City-required improvements to Oakport Street (including street widening, street frontage planter, curb and gutter, and concrete sidewalk). Impacts to the estimated 0.240 acre of former potential seasonal wetlands in the central portion of the Project site were graded away during prior maintenance activities are also included in the permanent impact total, as directed by the RWQCB. The potential waters of the United States associated with Seasonal Wetland SW-01 would be avoided in the southwestern corner of the Project site.

The 2022 Alternatives Analysis was prepared to analyze the Project's compliance with the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures) administered by the RWQCB, which went into effect on May 28, 2020. The purpose of the analysis is to identify the "Least Environmentally Damaging Practicably Alternative" (LEDPA) in accordance with the *U.S. Environmental Protection Agency Section 404(B)1) Guidelines for Specification of Disposal Sites for Dredge or Fill Material* (40 CFR Part 230). As part of the 2022 Alternatives Analysis, it was determined that on-site Alternative 3 would result in an 18 percent reduction of impacts on State Waters in comparison to the proposed Project. This could be accomplished by avoiding seasonal wetlands in the western

[4] LSA 2022. *Request for Verification of Jurisdictional Delineation, SupplyBank.Org/Oakport Street Study Site, Oakland, California*. Letter to Brian Wines, Regional Water Quality Control Board from Chip Bouril, Senior Soil Scientist. August 4.

[5] LSA, 2022. *Section 404(B)(1) Alternatives Analysis, SupplyBank.Org Office & Distribution Center Project, City of Oakland, California*. Submitted to Regional Water Quality Control Board. October.

and southern areas of the Project site. Under Alternative 3 a total of 0.371 acre rather than 0.511 acre of State Waters would be permanently impacted by the Project. Alternative 3 was determined in the Alternatives Analysis to be practicable in terms of cost, technology, and logistics, was identified as the LEDPA, and would presumably be implemented as a refined Project design as a requirement of the permitting by the RWQCB.

The applicant is proposing to provide compensation for the temporary and permanent impacts on regulated waters, including the previous loss of the estimated 0.24 acre of seasonal wetland features on the Project site. The proposed wetland mitigation would consist of a compensatory mitigation area where a seasonal wetland of higher quality habitat would be established, located northwest of the Project site on other lands owned by EBMUD. Detailed engineering plans for the proposed compensatory wetland mitigation site would be prepared once this conceptual mitigation approach is approved by the RWQCB, but it appears to adequately address the concerns of the regulatory agencies.

3. Applicable Mitigation Measures and Standard Conditions of Approval

As concluded in the CASP EIR, implementation of City of Oakland SCAs that require Erosion and Sedimentation Control Plans, Best Management Practices for Soil and Groundwater Hazards and Creek Protection Plans would serve to address potential indirect effects of the Project's construction on water quality and aquatic-dependent special-status species associated with the nearby habitat of the Bay and creeks. Consistent with the CASP EIR and SCA General-12: Regulatory Permits and Authorizations from Other Agencies, the applicant has coordinated with the RWQCB and other agencies to obtain necessary regulatory permits and authorizations for the Project.

4. Conclusions

With RWQCB acceptance of the avoidance strategies and the proposed off-site compensatory mitigation of new wetlands creation, potential impacts of the Project on wetlands and identified Waters of the State would be reduced to a less than significant level. No further analysis or mitigation measures are considered necessary in addressing potential impacts to a level of less-than-significant.

SPECIES MOVEMENT, MIGRATION OR NURSERY SITES

1. CASP EIR identification of Wildlife Movement Opportunities

The CASP EIR found that movement of native resident or migratory fish or wildlife species, established native resident or migratory wildlife corridors, and native wildlife nursery sites within the CASP planning area include the following:

- San Leandro Bay is identified as an important habitat for listed fish and marine mammal species (i.e., Central California Coast Steelhead, Pacific harbor seals and California sea lions).
- Suitable habitat for nesting birds is found throughout and adjacent to the CASP planning area at East Creek Slough, Damon Slough, Elmhurst Creek, San Leandro Creek, Edgewater Seasonal Wetland and at the Oakland Estuary/San Leandro Bay. Numerous special status bird species (notably Ridgeway's rail and burrowing owl) have the potential to occur within or adjacent to the CASP planning area. Common bird species

also have the potential to breed at the CASP planning area, including red-tailed hawk, killdeer, Anna's hummingbird, mallard and American crow.

- The CASP planning area was also found to possibly support species movement for three special-status bat species and two special-status salt marsh mammals (salt marsh harvest mouse and salt marsh wandering shrew).

2. Potential Impacts to Wildlife Movement, Migration and Nursery Sites

The proposed Project would affect largely ruderal habitat with only limited value to wildlife movement, migration or nursery sites.

However, the proposed Project would be located in close proximity to the sensitive marshland habitat of Damon Marsh and could affect opportunities for wildlife movement, disrupt breeding and nesting habitat, and could result in loss of individual birds from inadvertent collisions with the Project's new structures. Of particular concern is the proposed Office Building, which would have a height of 85 feet and include considerable glass treatment along the facade facing the marsh and open waters of the Bay, and could obstruct bird movement or cast new light into the nearby marsh. As identified in the CASP EIR, birds living or flying through urban areas are subject to numerous hazards including collisions with buildings, power lines and bridges, and bird collisions with buildings are a significant threat to bird populations. Clear glass is invisible to birds and poses both a daytime and nighttime hazard. Songbirds are vulnerable to collisions with structures as many songbird species migrate at night, fly at low altitudes, and they tend to become disoriented by night-time illumination. Transparent glass can also reflect the surrounding environment, and birds that attempt to fly through this reflected habitat collide with the glass. Night-time illumination also has a potential to interfere with bird migrations. For seabirds, water birds and marsh birds, lamplight-reflecting surfaces such as wet roads can be mistaken for water at night, causing birds to land in these areas. Since many of these species have difficulty taking off from land, this can put them at risk of predation and exhaustion.

Disturbance to birds from construction activities during the breeding season could result in nest abandonment and direct impacts to eggs or nestlings. Direct construction disturbance could include physically altering a nest or the substrate where a nest is located. Indirect disturbance could include noise, night lighting, altering of surrounding habitat through vegetation removal, and flight path obstruction. Increased noise could prevent birds from receiving acoustic signals for nest exchanges, feeding and predator alarm.

Additionally, potential indirect impacts to migratory aquatic species could be anticipated if construction activities were to adversely affect water quality.

3. Applicable Mitigation Measures and Standard Conditions of Approval

The following City of Oakland SCAs (as updated) were cited in the CASP EIR as an effective means for addressing impacts related to migratory movement, migratory corridors and nursery sites, and would apply to the Project.

Potential interference with the movement of migratory fish and marine mammals would be substantially reduced through implementation of City of Oakland SCAs including, but not limited to the following:

- SCA Bio-9: Erosion and Sedimentation Control Plan

- SCA Bio-10: Best Management Practices for Soil and Groundwater Hazards
- SCA Bio-11: Creek Protection Plan
- SCA Bio-12: Regulatory Permits and Authorizations
- SCA Bio-13: Creek Monitoring
- SCA Bio-15: Creek Dewatering and Aquatic Life

Disturbance from construction activities during the breeding season that may impact nesting migratory bird and bat species would be reduced through implementation of the following:

- SCA Bio-4: Tree Removal Permit on Creekside Properties
- SCA Bio-5, Tree Removal during Bird Breeding Season
- SCA Bio-6: Tree Removal Permit
- SCA Bio-7: Tree Replacement Plantings
- SCA Bio-8: Tree Protection during Construction

Impacts of increased recreation and residential facilities on migratory birds would be reduced through implementation of the following:

- SCA Bio-1: Operational Noise
- SCA Bio-2: Pile Driving and Other Extreme Noise Generators

For impacts of potential avian collisions with buildings and night lighting on migratory birds, the City of Oakland has adopted strategies to make the city safer for birds. These include SCA Bio-3: Lighting Plan and SCA Bio 17: Bird Collision Reduction Plan. Implementation of these SCAs would result in measures to reduce bird strikes, including night lighting recommendations and restrictions, and building maintenance guidelines. Since the CASP EIR was published in 2015, the City has updated its SCAs, and specifically the SCA pertaining to bird collision reduction plans, the current text of this SCA is as follows:

SCA Bio-17 (as updated), Bird Collision Reduction Plan: The project applicant shall submit a Bird Collision Reduction Plan for City review and approval to reduce potential bird collisions to the maximum feasible extent. The Plan shall include all of the following mandatory measures, as well as applicable Project-specific Best Management Practice (BMP) strategies to reduce bird strike impacts to the maximum feasible extent. The project applicant shall implement the approved Plan. Mandatory measures include all of the following:

a. For large buildings subject to federal aviation safety regulations, install minimum intensity white strobe lighting with three-second flash instead of solid red or rotating lights.
b. Minimize the number of and co-locate rooftop-antennas and other rooftop structures.
c. Monopole structures or antennas shall not include guywires.
d. Avoid the use of mirrors in landscape design.
e. Avoid placement of bird-friendly attractants (i.e., landscaped areas, vegetated roofs, water features) near glass unless shielded by architectural features taller than the

attractant that incorporate bird friendly treatments no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule).

f. Apply bird-friendly glazing treatments to no less than 90 percent of all windows and glass between the ground and 60 feet above ground or to the height of existing adjacent landscape or the height of the proposed landscape. Examples of bird-friendly glazing treatments include the following:

i. Use opaque glass in windowpanes instead of reflective glass.

ii. Uniformly cover the interior or exterior of clear glass surface with patterns (e.g., dots, stripes, decals, images, abstract patterns). Patterns can be etched, fritted, or on films and shall have a density of no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule).

iii. Install paned glass with fenestration patterns with vertical and horizontal mullions no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule).

iv. Install external screens over non-reflective glass (as close to the glass as possible) for birds to perceive windows as solid objects.

v. Install UV-pattern reflective glass, laminated glass with a patterned UV-reflective coating, or UV-absorbing and UV-reflecting film on the glass since most birds can see ultraviolet light, which is invisible to humans.

vi. Install decorative grilles, screens, netting, or louvers, with openings no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule).

vii. Install awnings, overhangs, sunshades, or light shelves directly adjacent to clear glass which is recessed on all sides.

viii. Install opaque window film or window film with a pattern/design which also adheres to the “two-by-four” rule for coverage.

g. Reduce light pollution. Examples include the following:

i. Extinguish nighttime architectural illumination treatments during bird migration season (February 15 to May 15 and August 15 to November 30).

ii. Install time switch control devices or occupancy sensors on non-emergency interior lights that can be programmed to turn off during non-work hours and between 11:00 p.m. and sunrise.

iii. Reduce perimeter lighting whenever possible.

iv. Install full cut-off, shielded, or directional lighting to minimize light spillage, glare, or light trespass.

v. Do not use beams of lights during the spring (February 15 to May 15) or fall (August 15 to November 30) migration.

h. Develop and implement a building operation and management manual that promotes bird safety. Example measures in the manual include the following:

i. Donation of discovered dead bird specimens to an authorized bird conservation organization or museums (e.g., UC Berkeley Museum of Vertebrate Zoology) to aid in species identification and to benefit scientific study, as per all federal, state and local laws.

ii. Distribute educational materials on bird-safe practices for the building occupants. Contact Golden Gate Audubon Society or American Bird Conservancy for materials.

iii. Asking employees to turn off task lighting at their workstations and draw office blinds, shades, curtains, or other window coverings at end of workday.

iv. Install interior blinds, shades, or other window coverings in windows above the ground floor visible from the exterior as part of the construction contract, lease agreement, or CC&Rs.

v. Schedule nightly maintenance during the day, or so that it concludes before 11 p.m., if possible.

To further address potential impacts on species movement, migration and nursery sites, the CASP EIR recommended the following additional recommendations and mitigation measures:

CASP EIR's Further Recommendations Pursuant to SCA Bio-3: In addition to the standard provisions of the City SCA Lighting Plan requirements, lighting plans for properties within the CASP planning area and near the Bay include the following:

a. Acorn-style lights that are International Dark Sky Association approved "Dark Sky Friendly" will be installed. This type of lighting ensures 0 percent light above 90 degrees, directs light downward and minimizes the amount of backward and side lighting, thereby reducing light pollution on habitat and animals in the surrounding area.
b. Use only the lowest luminaire wattage that still provides safe conditions for vehicular traffic, bicyclists, and pedestrians.
c. If possible, correlated color temperature (an indication of how "warm" or "cool" the light source appears) ranges of the light source to be between 3800 and 4000 Kelvins. This range corresponds to "warm" light that would be less disturbing to animals.
d. Lights shall be directed away and/or screened from Damon Marsh and Arrowhead Marsh.

CASP EIR MM Bio 3-2, Herbicide / Pesticide Control: Maintenance shall require preparation and implementation of a drift control plan for herbicide/pesticide use.

4. Conclusions

As concluded in the CASP EIR, implementation of SCAs calling for a Lighting Plan and a Bird Collision Reduction Plan would address the potential disruption of nighttime lighting and reduce the risk of bird strikes. The Bird Collision Reduction Plan called for in the City's updated SCA would further define building treatments, exterior lighting, and management activities that would serve to reduce bird strikes and disturbance to nearby marsh habitat. Together with other SCAs and the additional mitigation measures called for in the CASP EIR, the required lighting plan and a bird collision reduction plan would serve to protect nesting habitat and minimize disturbance to species movement and migration.

Consistent with the conclusions of the CASP EIR, the Project's effects related to interference with the movement of fish or wildlife, migratory wildlife corridors and wildlife nursery sites would be fully addressed through implementation of City SCAs and additional recommendations and mitigation measures as recommended in the CASP EIR. The City's SCAs require that the Bird Collision Reduction Plan be prepared prior to approval of a construction-related permit, with initial approval by the Bureau of Planning and monitoring/inspection to be conducted by the Bureau of Building. The Project is not currently seeking approval of a construction-related permit and so has not prepared the Bird Collision Reduction Plan. Accordingly, this Biological Assessment does not include a peer review of the efficacy or effectiveness of a Bird Collision Reduction plan for the Project.

CONFLICTS WITH TREE PROTECTION ORDINANCE

1. CASP EIR identification of Ordinance Compliance

The CASP EIR found that future development pursuant to the CASP would not fundamentally conflict with the City of Oakland Tree Protection Ordinance. Prior to removal of any protected tree within the CASP planning area, the City's tree permit criteria for tree removal will be reviewed and a tree removal permit approved with the City of Oakland. Pursuant to SCAs, tree removal permit requirements shall be implemented before and during removal of protected trees, and removal of protected trees would be replaced by new trees that would contribute to the visual framework of the CASP planning area.

2. Potential Impacts to Trees

The Project site (Parcel 1) includes only six existing trees, five located generally within the central portion of Parcel 1, and one tree along the southerly property line near Oakport Street. These trees include:

- Tree #1, a 28-inch diameter eucalyptus
- Tree #2, a 48-inch diameter date palm
- Tree #3, a 12-inch diameter olive tree
- Tree #4, a 12-inch diameter olive tree
- Tree #5, a 10-inch diameter olive tree
- Tree #6, a 48-inch diameter date palm

All of these trees are located in the proposed development area and/or where grading and fill are proposed to occur, and each of these trees are proposed to be removed as part of the Project. All of the other vegetation along the Project site's westerly boundary (adjacent to Damon Marsh) would remain.

3. Applicable Mitigation Measures and Standard Conditions of Approval

The City of Oakland SCA Bio-6, Tree Removal Permit is cited in the CASP EIR as an effective means for addressing the City's tree permit policies and ordinance, and would apply to the Project. Protected trees under the City's Tree Protection Ordinance are Coast live oaks of four inches or larger in diameter, or any other species nine inches in diameter or larger (but not Eucalyptus or Monterey Pine trees). Based on species and trunk diameter, five of the trees on the Project site qualify as protected under the City's Tree Protection Ordinance, and a permit would be required for their removal.

Per the City of Oakland landscape and screening standards, the Project is required to provide street trees along the Oakport Street frontage at a spacing of 25 feet on center (average). With 1,425 linear feet of frontage, the Project is required to provide 58 street trees along Oakport Street. The Project's proposed Landscape Plan does include 58 new trees along Oakport Street frontage, as a mix of Trident Maple, Red Alder, Scarlet Oak and Chinese Pistache trees. Internal parking lot planting islands include an additional mix of California Sycamores and Water Gum. Along the Project's westerly boundary near Damon Marsh, additional tree plantings include primarily Red Alder and California Sycamore.

4. Conclusions

Consistent with the conclusions of the CASP EIR, the Project's effects related to consistency with the City's Tree Protection Ordinance would be fully addressed through implementation of the City SCA and existing regulations, including obtaining a Tree Removal permit prior to grading or construction activities, and planting of new street trees and landscape plantings. With issuance of a Tree permit and implementation of the Project's proposed landscape plans, impact related to inconsistency with the City's Tree Protection Ordinance would be reduced to less than significant.

CONFLICTS WITH CREEK PROTECTION ORDINANCE

1. CASP EIR identification of Ordinance Compliance

The CASP EIR found that new development pursuant to the CASP would not fundamentally conflict with the City of Oakland Creek Protection Ordinance. All future work conducted within areas subject to the Creek Protection Ordinance would require a City of Oakland Creek Protection Permit, to be implemented in accordance with detailed performance requirements. By obtaining the required Creek Protection Permit and conducting the work in accordance with those permits, any impacts were found to be less than significant.

2. Potential Impacts on Creeks

The Project site consists of two parcels, both of which are owned by EBMUD. Because the Project involves both properties, the provisions of the City Creek Protection Ordinance apply to both parcels. Each of these properties have different criteria as to the type of Creek Permits that apply, as discussed below.

Parcel 2 / East Creek Slough

Parcel 2 is the northerly approximately 29-acre parcel that fronts Oakport Street along its eastern perimeter. East Creek Slough is clearly defined as a "creek" based on City criteria, and this creek bisects the northernmost portion of Parcel 2. A small portion of Parcel 2 is located on the northerly side of East Creek Slough, and the larger portion of Parcel 2 is located on the south side of East Creek Slough. According to the City of Oakland's Guide to Oakland's Creek Protection Ordinance, the Creek Permit category that is the best fit for activities proposed at Parcel 2 is a Category II Creek permit, for exterior work that does not include earthwork and is located more than 100 feet from the centerline of the creek. The activities proposed as part of the Project at Parcel 2 are limited to demolition of several smaller sheds and other structures. These sheds and small structures are located well beyond 100 feet from the centerline of East Creek Slough, and no grading or earthwork is required or proposed for removal of these buildings.

Parcel 1 / San Leandro Bay

According to the City of Oakland's Creek Protection Ordinance, the Oakland Estuary, including San Leandro Bay, is considered a waterway. The City of Oakland's Creek Protection Ordinance (OMC Chapter 13.16) is intended to address potential water quality impacts from stormwater and other discharges into identified waterways. The Parcel 1 development area is inclusive of lands that are within 100 feet of the shoreline of the Estuary. Accordingly, the Creek Permit category that is the best fit for activities proposed at Parcel 1 is a Category III Creek permit, for exterior work that does include earthwork and is located within 100 feet from the waterway. The Project (at Parcel 1) is required to comply with the provisions of the Creek Protection Ordinance, and must prepare a Creek Protection Plan.

Parcel 1 / East Creek Slough and Damon Slough

Parcel 1 is the nearly 16-acre southerly parcel that also fronts Oakport Street along its eastern perimeter, with Oakport Street/Zhone Way forming the southerly perimeter. The nearest portion of Parcel 1 is well beyond 1,900 feet to the south of East Creek Slough. South of Parcel 1 and south of the Oakport Street/Zhone Way interchange is Damon Slough. The nearest portion of Parcel 1 is approximately 640 feet to the north of Damon Slough. The development proposed pursuant to the Project is well distant from these traditionally defined creeks.

Parcel 1 / On-Site Drainage

According to the City's Creek Protection Ordinance, the definition of a "creek" includes a continuous waterway that is hydrologically connected to a waterway above and below a site, or connected to a spring, headwaters, lake, the Estuary or the Bay. There are a series of swales, culverts, rough ditch segments and a RWQCB-defined drainage channel located along the easterly boundary of the Project site adjacent to Oakport Street. These features generally extend from the Peppermint Gate Road access drive in Parcel[2], all the way down to Seasonal Wetlands-01 at the southerly end of the Project site and qualify as Waters of the State. However, each of these features are artificial, small in size, and have little to no habitat value. Seasonal Wetland-01 at the southerly end of the Project site is separated from the Bay by a former railroad berm, and these features do not appear to have a hydrological surface connection to the San Francisco Bay, except potentially under extreme rainfall conditions.[6] Accordingly, although these features do qualify as Waters of the State, they are isolated features and do not meet the City definition of a creek.

3. Applicable Mitigation Measures and Standard Conditions of Approval

The Creek Permit category that is the best fit for activities proposed at Parcel 2 is a Category II Creek permit, for exterior work that does not include earthwork and is located more than 100 feet from the centerline of the creek. The Creek Permit category that is the best fit for activities proposed at Parcel 1 is a Category III Creek permit, for exterior work that does include earthwork and is located within 100 feet from the waterway. These Creek Permits require preparation and implementation of a Creek Protection Plan that includes Best Management Practices ("BMPs") to be implemented during construction and after construction to protect the waterways (East Creek Slough and San Leandro Bay). The City's SCA Hydro-4, Creek Protection Plan calls for preparation of a Creek Protection Plan, which would be applicable to the Project.

4. Conclusions

Consistent with the conclusions of the CASP EIR, the Project's effects related to consistency with the City's Creek Protection Ordinance would be fully addressed through implementation of the City SCA and existing regulations, including obtaining a Creek Permit prior to grading or

[6] First Carbon Solutions, *Delineation of Aquatic Resources of Additional Areas at the Oakport Street Project and Regulatory Considerations*, February 1, 2021

construction activities, and complying with the conditions of that permit throughout the construction period. With issuance of a Creek Permit and implementation of the conditions of that permit during the Project's grading operations, impacts related to inconsistency with the City's Creek Protection Permit would be reduced to less than significant.

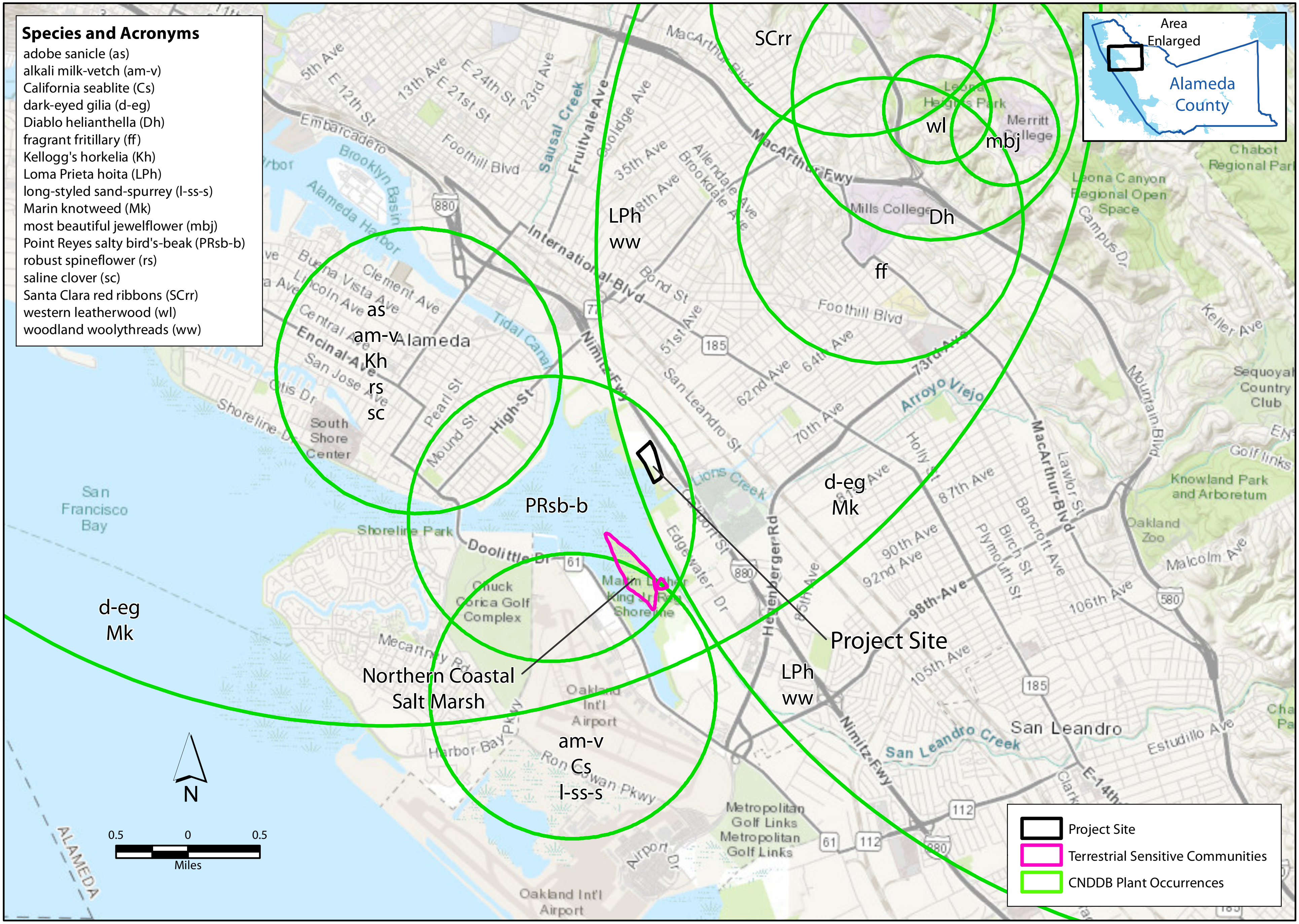
Although not a direct effect on biological resources, the following additional recommendations are intended to address the appropriateness of proposed tree species for the site, and pertain to the Project's proposed Tree Permit and/or Creek Permit:

Recommendation Pursuant to SCA Bio-3: Landscape Plan Species: Pursuant to the Project's Tree permit and/or Creek permit, the Project applicant shall reconsider the proposed plant palette to incorporate the following recommendations:

a) The Project's landscape plan should provide for a greater component of native trees, especially along the Project's westerly edge near Damon Marsh.
b) The selection of Chinese Pistache trees within the landscape should be limited to male variety of this species, as the female variety produces berries that are attractive to birds.

Figure 1. Special-Status Plant Species and Sensitive Natural Communities

Oakland Supplybank Project



SOURCES: California Natural Diversity Database accessed on April 16, 2019; USGS base map by ESRI and NGS. Map produced by www.digitalmappingsolutions.com on 4/16/2019.

Figure 2. Special-Status Animal Species and Critical Habitat

Oakland Supplybank Project

SOURCES: California Natural Diversity Database accessed on April 16, 2019; USGS base map by ESRI and NGS. Map produced by www.digitalmappingsolutions.com on 4/16/2019.

Appendix E

Aquatic Resources Delineation Report

WRA Environmental Consultants, August 2019

Aquatic Resources Delineation Report

SUPPLYBANK.ORG OFFICE & DISTRIBUTION CENTER

OAKLAND, ALAMEDA, CALIFORNIA

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Revised: October 29, 2019

WRA Project: 29251

ENVIRONMENTAL CONSULTANTS

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LIST OF ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
Corps	U.S. Army Corps of Engineers
CSRL	California Soil Resource Lab
CWA	Clean Water Act
DEM	Digital Elevation Model
DWR	Department of Water Resources
EBMUD	East Bay Municipal Utility District
EPA	Federal Environmental Protection Agency
FAC	Facultative Plant
FACU	Facultative Upland Plant
FACW	Facultative Wetland Plant
HTL	High Tide Line
MHW	Mean High Water
NAVD88	North American Vertical Datum of 1988
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
NWPL	National Wetland Plant List
OBL	Obligate Wetland Plant
OHWM	Ordinary High Water Mark
RHA	Rivers and Harbors Act
UPL	Upland Plant
USGS	U.S. Geological Survey
WRA	WRA, Inc.

EXECUTIVE SUMMARY

The purpose of this report is to provide a summary of the aquatic resources present within the a Study Area comprised of approximately 17.84-acres of land located in Alameda County, California. A proposed SupplyBank.Org Office & Distribution Center project is planned within the Study Area.

On August 27, 2019 WRA, Inc. (WRA) conducted a routine wetland delineation throughout the Study Area. Within the Study Area WRA observed approximately 0.02 acres of potentially jurisdictional seasonal wetlands in the southwest portion of the Study Area, 0.03 acres (373 linear feet) of potentially non-jurisdictional wetland drainage ditch in the northeast portion of the Study Area, and 0.24 acres of potentially non-jurisdictional construction-related depressions within the western portion of the Study Area. The wetland drainage ditch feature is considered non-jurisdictional per current Corps of Engineers regulations (e.g. not a waters of the United States as defined in 33 CFR 328.3), because it is a ditch created in uplands for the purpose of conveying drainage with ephemeral flow that is not a relocated tributary or excavated in a tributary. The construction-related depressions are considered non-jurisdictional per 33 CFR 328.3, because they are manmade aquatic features in otherwise dry land such as small depressions that were created incidental to construction activity.

1.0 INTRODUCTION

This report describes the methods and results of a delineation of aquatic resources conducted within the boundaries of the proposed SupplyBank.Org Office & Distribution Center (Assessor Parcel Numbers [APN]s 41-3903-02-8 and 41-3904-10-5) located in Oakland, Alameda County, California (Study Area; Figure 1). The Study Area consists of approximately 17.84 acres of land within south Oakland and consists of a developed lot previously utilized as a pipe storage, parking lot, and event venue (Figure 2). Property owned by City of Oakland, along the road frontage on the eastern edge of the site, and along the southernmost edge or the site, is excluded from the Study Area. The Project proposes to redevelop a portion of the property within the Study Area into a warehouse and office building development.

On August 27, 2019, WRA conducted a routine delineation within the Study Area to identify wetlands and non-wetland waters (also referred to as "other waters") potentially subject to jurisdiction by the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act (CWA). The following sections describe the regulatory background and methods used to guide the delineation and provide a description of potentially jurisdictional wetlands and non-wetland waters within the Study Area.

2.0 REGULATORY BACKGROUND

Section 404 of the Clean Water Act gives the Environmental Protection Agency (EPA) and the Corps regulatory and permitting authority regarding discharge of dredged or fill material into "navigable waters of the United States." Section 502(7) of the CWA defines "navigable waters" as "waters of the United States, including territorial seas." Section 328 of Chapter 33 in the Code of Federal Regulations (CFR) defines the term "waters of the United States" as it applies to the jurisdictional limits of the authority of the Corps under the CWA. A summary of the definition of "waters of the United States" in 33 CFR 328.3 (a) includes (1) waters used for commerce; (2) interstate waters and wetlands; (3) territorial seas; (4) impoundments of waters listed here; (5) tributaries to the above waters; (6) waters and wetlands adjacent to the above waters; and (7) prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools, and Texas coastal prairie wetlands, provided these features have a significant nexus to the above listed waters[1]; (8) all waters located within the 100-year floodplain of waters listed above in items 1-3 or within 4,000 feet of the high tide line (HTL) or ordinary high water mark (OHWM) of a water listed above in items 1-5, provided those waters are determined to have a significant nexus to waters identified in items 1-3 above. For purposes of the determining Corps jurisdiction under the CWA, "navigable waters" as defined in the CWA are the same as "waters of the U.S." defined in 33 CFR 328.3.

Areas not considered to be "waters of the United States" as defined in 33 CFR 328.3 (b), are summarized as follows: (1) waste treatment systems; (2) prior converted cropland; (3) specific classes of ditches, including (i) ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary, (ii) ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands, and (iii) ditches that do not flow, either directly or through another water, into a water identified in 33 CFR 328.3 paragraphs (a) (1) through (3); (4) artificially irrigated areas that would otherwise revert to dry land and manmade aquatic features in otherwise dry land such as stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, cooling ponds, reflecting pools, swimming pools, small

[1] Wetlands and non-wetland waters in this category are similarly situated and are combined, for purposes of a significant nexus analysis, in the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of 33 CFR 328.3.

ornamental waters, depressions incidental to mining and construction activity, erosional features, and puddles; (5) groundwater; (6) stormwater control features; (7) wastewater recycling structures, groundwater recharge basins, percolation ponds for wastewater recycling, and distribution networks for wastewater recycling.

At the time of this study, changes are being made to the federal definition of waters of the U.S. These changes include repeal of a 2015-era rule (2015 Clean Water Rule) and re-codification of the federal definition. Despite possible changes to the federal definition, the exemptions given in 33 CFR 328.3 for purpose-built ditches created in dry land and for depressions created incidental to mining and construction activities will likely still apply.

2.1 Wetlands

Wetlands are defined in 33 CFR 328.3 (c) as:

> *…those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.*

The basis for determining whether a given area is a wetland for the purposes of Section 404 of the CWA is outlined in the Corps *Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers* Delineation Manual for the respective region. As defined in 33 CFR 328.4 (c), the extent of federal jurisdiction within wetlands is defined as extending to the limit of the wetland as determined using the methods outlined in the manuals.

2.2 Non-Wetland Waters

The limit of federal jurisdiction in tidal non-wetland waters extends to the HTL which is defined in 33 CFR 328.4 (a) as:

> *...the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.*

The limit of federal jurisdiction in non-tidal non-wetland waters extends to the OHWM which is defined in 33 CFR 328.3 (e) as:

> *...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the characteristics of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*

3.0 STUDY AREA DESCRIPTION

The approximately 17.8-acre Study Area is located in Oakland, Alameda County, California (Figure 1). The Study Area can be reached from Exit 37 off Highway 880 towards 66th Avenue before making a left on Zhone Way then a right on S Street and the Study Area is on the left. The Study Area is bounded by the East Bay Municipal Utility District Corporation Yards to the north, Highway 880 and commercial development to the east, more commercial development to the south, and San Francisco Bay to the west. Land uses within the Study Area include previously being utilized as a pipe storage yard by the East Bay Municipal Utility District (EBMUD) and a parking lot for events attended by the public such as those at the nearby RingCentral Coliseum. Habitat conditions within the Study Area are disturbed due to the historical development and utilization for commercial and industrial uses.

3.1 Vegetation

The Study Area primarily consists of developed areas, ruderal vegetation, and hydrophytes. Developed areas are a result of historical usage as a parking lot, circus venue, and pipe storage yard. These areas have some mixed patches of annual ruderal species such as Bermuda grass (*Cynodon dactylon,* FACU) and cut leaf plantain (*Plantago coronopus,* FAC) within the gravel and paved portions of these uplands. Other upland areas within the Study Area are actively maintained (mowed) by the EBMUD and contain more vegetation density and diversity with species such as bermudagrass, bristly ox-tongue (*Helminthotheca echioides*, FAC), and annual grasses. Wetlands within the Study Area contain a mixture of native and non-native species depending on the location. Dominant species include rabbitsfoot grass (*Polypogon monspeliensis*, FACW), swamp grass (*Crypsis schoenoides*, FACW), curly dock (*Rumex crispus,* FAC), pennyroyal (*Mentha pulegium*, OBL), Italian rye grass (*Festuca perennis,* FAC), and cosmopolitan bulrush (*Bolboschoenus maritimus,* OBL).

3.2 Soils

The Soil Survey of Alameda County (USDA 1961) and the California Soil Resource Lab's (CSRL) online soil viewer (CSRL 2019) list one soil mapping unit within the Study Area: *Urban land*. Descriptions of each soil series are provided below. The distribution of these soil mapping units within the Study Area is depicted in Figure 3.

> **Urban land:** Urban land soils consist of ground surfaces covered by pavement, concrete, buildings, and other structures underlain by disturbed and natural soils material. Runoff is extremely high and drainage is nonexistent in urban land soils due to the presence of impervious surfaces. Soil present may contain high amounts of fill or other debris from development presence. This soil isn't considered hydric by the Soil Survey of Alameda County (USDA 1961).

3.3 Hydrology

The Study Area's natural hydrology has been permanently altered by the historical commercial usages and the associated placing of fill and paving throughout the site. The Study Area has been disconnected from tidal influence and natural wetlands hydrology by development for the entirety of available aerial imagery going back to 1993 (Google Earth 2019). In addition, the Study Area has been subjected to routine and frequent maintenance, grading and levelling to support various uses, including but not limited to vehicle parking, entertainment events, and materials storage, stockpiling and laydown activities. Hydrological sources for the Study Area include precipitation and runoff from the surrounding impermeable urban surfaces. Water from the Study Area drains either south via a vegetated ditch on the southeastern border of the site into the large depression separated from the tidal influence by a berm that supports a hiking trail or north via a vegetated ditch off-site through a series of culverts. Water from the Study Area also runs off the uplands with impermeable paved surfaces or well-draining gravel into low depressional areas on the western side of the site before dissipating into existing vegetation. The site is entirely within the San Francisco Bay HUC-8 watershed (NRCS 2019).

4.0 METHODS

WRA biologists performed a delineation of aquatic resources within the Study Area on August 27, 2019. Prior to conducting the evaluation, WRA reviewed a range of background materials including the *Soil Survey of Alameda County* (USDA 1961, the CSRL online soil viewer (CSRL 2019), the National Wetland Inventory (NWI; USFWS 2019), the California Aquatic Resource Inventory (CARI; SFEI 2017) and the U.S. Geological Survey (USGS) Oakland East 7.5-minute quadrangle map (USGS 1916, 2015). WRA also reviewed historic aerial imagery from Google Earth (1993-2019).

During the on-site evaluation, WRA followed the methods outlined in *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Corps Manual; Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Supplement; Corps 2008) and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* ("OHWM Guide"; Lichvar and McColley 2008). Potentially jurisdictional wetlands were identified and their boundaries mapped using the Routine Method described in the Corps Manual.

4.1 Wetlands

4.1.1 Routine Method

WRA followed the Routine Method to evaluate the Study Area for the presence or absence of indicators of the three wetland parameters described in the Corps Manual (Environmental Laboratory 1987) and Arid West Supplement (Corps 2008). Data on vegetation, hydrology, and soils were collected at sample points within potential wetland communities and adjacent upland areas. Sample points that contained positive indicators for hydrophytic vegetation, hydric soils, and wetland hydrology were considered to be wetland. Except in cases of atypical or problematic wetland situations (i.e., difficult wetland situations, as described below), sample points that lacked one or more indicators were considered to be upland. Sample point data were reported on Arid West Supplement data forms. Sample point locations were recorded using a handheld GPS unit with sub-meter accuracy.

Wetland boundaries were identified using a combination of indicators observed on the ground, most often minor shifts in topography and changes in dominant vegetation, in addition to other indicators. Where wetland boundaries were broad and difficult to determine in the field, wetland signatures visible in recent and historical aerial imagery from Google Earth 1993 to 2019 were used to determine wetland boundaries. Based on a WETS hydrological analysis (see summary below and full analysis in Appendix A), WRA determined that the photos represent periods with normal to slightly below normal precipitation levels. Using imagery from normal periods allowed WRA to identify the normal extent of wetland conditions across the site. Using imagery from drier than normal periods allowed WRA to more easily visualize trends in vegetation and soil conditions due to the stronger juxtaposition of wet and dry areas.

4.1.2 Wetland Indicators

The three parameters used to delineate wetlands are the presence of: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. According to the Corps Manual, for areas not considered “problem areas” or “atypical situations”:

> *"....[E]vidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland determination."*

Data on vegetation, hydrology, and soils collected at sample points during the delineation site visit were reported on Arid West Supplement data forms. Once an area was determined to be a potential jurisdictional wetland, its boundaries were delineated using GPS equipment and mapped on a topographic map. The areas of potential jurisdictional wetlands were measured digitally using ArcGIS software. Indicators described in the Arid West Supplement were used to make wetland determinations at each sample point in the Study Area and are summarized below.

<u>Vegetation</u>
Plant species observed in the Study Area were identified using the Jepson Manual, Second Edition (Baldwin et al. 2012) and subsequent revisions by the Jepson Flora Project (2019). Plant species identified in the Study Area were assigned a wetland status according to the National Wetland Plant List (Lichvar et al. 2016). This wetland classification system is based on the expected frequency of plant species occurrence in wetlands as follows:

Classification (Abbreviation)	**Definition***	**Hydrophytic Species? (Y/N)**
Obligate (OBL)	Almost always is a hydrophyte, rarely in uplands	Y
Facultative Wetland (FACW)	Usually is a hydrophyte, but occasionally found in uplands	Y
Facultative (FAC)	Commonly occurs as either a hydrophyte or non-hydrophyte	Y
Facultative Upland (FACU)	Occasionally is a hydrophyte, but usually occurs in uplands	N
Upland/Not Listed (UPL/NL)	Rarely is a hydrophyte, almost always in uplands	N

*See Lichvar et al. (2016).

The presence of hydrophytic vegetation was then determined based on indicator tests described in the Arid West Supplement. The Arid West Supplement requires that a three-step process be conducted to determine if hydrophytic vegetation is present. The procedure first requires the delineator to apply the "50/20 rule" (Indicator 1; Dominance Test) described in the manual. To apply the "50/20 rule", dominant species are chosen independently from each stratum of the community. Dominant species are determined for each vegetation stratum from a sampling plot of an appropriate size surrounding the sample point. Dominants are the most abundant species that individually or collectively account for more than 50 percent of the total vegetative cover in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total vegetative cover. If greater than 50 percent of the dominant species have an OBL, FACW, or FAC status, the sample point meets the hydrophytic vegetation criterion.

If the sample point fails Indicator 1 and both hydric soils and wetland hydrology are not present, then the sample point does not meet the hydrophytic vegetation criterion, unless the site is a problematic wetland situation. However, if the sample point fails Indicator 1 but hydric soils and wetland hydrology are both present, the delineator must apply Indicator 2.

Indicator 2 is known as the Prevalence Index (PI). The prevalence index is a weighted average of the wetland indicator status for all plant species within the sampling plot. Each indicator status is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5). Indicator 2 requires the delineator to estimate the percent cover of each species in every stratum of the community and sum the cover estimates for any species that is present in more than one stratum. The delineator must then organize all species into groups according to their wetland indicator status and calculate the Prevalence Index using the following formula, where A equals total absolute percent cover:

$$PI = \frac{A_{OBL} + 2A_{FACW} + 3A_{FAC} + 4A_{FACU} + 5A_{UPL}}{A_{OBL} + A_{FACW} + A_{FAC} + A_{FACU} + A_{UPL}}$$

The Prevalence Index will yield a number between 1 and 5. If the Prevalence Index is equal to or less than 3, the sample point meets the hydrophytic vegetation criterion. However, if the community fails Indicator 2, the delineator must proceed to Indicator 3.

Indicator 3 is known as Morphological Adaptations. If more than 50 percent of the individuals of a FACU species have morphological adaptations for life in wetlands, that species is considered to be a hydrophyte and its indicator status should be reassigned to FAC. If such observations are made, the delineator must recalculate Indicators 1 and 2 using a FAC indicator status for this species. The sample point meets the hydrophytic vegetation criterion if either test is satisfied.

<u>Hydrology</u>
The Corps' jurisdictional wetland hydrology criterion is satisfied if an area is inundated or saturated for a period sufficient to create anoxic soil conditions during the growing season (a minimum of 14 consecutive days in the Arid West region). Evidence of wetland hydrology can include primary indicators, such as visible inundation or saturation, drift deposits, oxidized root channels, and salt crusts, or secondary indicators such as the FAC-neutral test, presence of a shallow aquitard, or crayfish burrows. The Arid West Supplement contains 16 primary hydrology indicators and 10 secondary hydrology indicators. Only one primary indicator is required to meet

the wetland hydrology criterion; however, if secondary indicators are used, at least two secondary indicators must be present to conclude that an area has wetland hydrology.

The presence or absence of the primary or secondary indicators described in the Arid West Supplement was used to determine if sample points within the Study Area met the wetland hydrology criterion.

<u>Soils</u>

The Natural Resource Conservation Service (NRCS) defines a hydric soil as follows:

> *"A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part."*
>
> Federal Register July 13, 1994, U.S. Department of Agriculture, NRCS

Soils formed over long periods of time under wetland (anaerobic) conditions often possess characteristics that indicate they meet the definition of hydric soils. Hydric soils can have a hydrogen sulfide (rotten egg) odor, low chroma matrix color, generally designated 0, 1, or 2, used to identify them as hydric, presence of redox concentrations, gleyed or depleted matrix, or high organic matter content.

Specific indicators that can be used to determine whether a soil is hydric for the purposes of wetland delineation are provided in the NRCS *Field Indicators of Hydric Soils in the U.S.* (USDA 2010). The Arid West Supplement provides a list of 23 of these hydric soil indicators which are known to occur in the Arid West region. Soil samples were collected and described according to the methodology provided in the Arid West Supplement. Soil chroma and values were determined using a standard Munsell soil color chart (Munsell Color 2009).

Hydric soils were determined to be present if any of the soil samples met one or more of the 23 hydric soil indicators described in the Arid West Supplement.

4.1.3 Difficult Wetland Situations

The Arid West Supplement (Corps 2008) includes recommended procedures for completing wetland delineations in areas of "difficult wetland situations" in which wetlands may lack one or more indicators due to natural or anthropogenic factors; these are discussed as atypical or problematic wetland conditions in the Corps Manual (Environmental Laboratory 1987). Although the Corps Manual and Arid West Supplement (Corps 2008) were utilized in the wetland determination, they do not provide exhaustive lists of the difficult situations and problem areas that can arise during delineations in the Arid West. In these situations, the Corps Manual and Regional Supplements stress the importance of using best professional judgment and knowledge of the ecology of the wetlands in the region during the collection and interpretation of data in difficult sites.

The Study Area is regularly maintained by EBMUD which consists of mowing vegetation within portions of the site that aren't paved or gravel. At the time of the site visit, vegetation had recently been mowed within portions of the northwest part of the Study Area. Therefore when delineating boundaries of wetland features within this part of the site, aerial imagery from Google Earth was used to determine the boundaries (Google Earth, 2019). These instances occurred where changes in topography were too slight to delineate boundaries, and upland vegetation wasn't present to provide a clear indication of shift to upland conditions.

4.1.4 WETS Analysis

A hydrologic analysis (i.e., WETS analysis; USDA 1997; Sprecher and Warne 2000) was conducted to determine whether precipitation levels during the three months prior to each aerial image used by WRA and prior to each site visit were above, below, or within the 30-year average for the region. Long-term precipitation data (i.e., the WETS table) were obtained from the weather station in Oakland, located approximately 4 miles northwest of the Study Area, part of the National Weather Service Cooperative Network. Daily precipitation data for the three months preceding the date of each aerial image used by WRA, as well as for the date of each site visit by WRA, were obtained from the Oakland Museum (OAMC1) weather station located approximately 4 miles northwest of the Study Area. A summary of the results of the WETS analysis is provided below in Table 1; the full analyses are provided as Appendix A.

Table 1. Summary of WETS Precipitation Analysis

Date	Description	Relative Precipitation Levels
October, 2014	Google Earth Aerial Image	Drier than Normal
March, 2017	Google Earth Aerial Image	Wetter than Normal
October, 2018	Google Earth Aerial Image	Normal
August 27, 2019	Delineation Site Visit	Normal

4.2 Non-Wetland Waters

This study also evaluated the presence of non-wetland waters potentially subject to Corps jurisdiction under Section 404 of the CWA. Non-wetland waters subject to Corps jurisdiction include lakes, rivers, and streams (including intermittent and ephemeral streams) in addition to all areas below the HTL in areas subject to tidal influence or to all areas below the OHWM in non-tidal areas. No non-wetland waters were found within the Study Area.

5.0 RESULTS

As described in Section 3.0, the site is primarily fill (gravel) and paved which leads to high runoff into any concave topography (e.g. depressions) present. Precipitation and urban runoff from the surrounding area lead to the presence of surface water within these concavities and allow for annual hydrophytic vegetation to establish year to year despite the historic usage of the site for commercial activities and active maintenance. Areas excluded from these historical commercial usages contain perennial vegetation (as well as annual vegetation) that persists year to year due to the lack of disturbance that the rest of the site receives.

Water from the Study Area doesn't drain into a traditional navigable water of the United States due to the presence of a large berm that runs along the entirety of the west side and prevents tidal exchange from the San Francisco Bay to the lowest point of the site in the southern corner.

Descriptions of the aquatic resources identified within the Study Area that are or are not potentially subject to federal jurisdiction under Section 404 of the CWA and/or Section 10 of the RHA are provided in the following sections. An overview of aquatic resources mapped within the Study Area is provided in Figure 4, and a summary of aquatic resource acreages is provided in Table 2.

Maps showing the location and extent of aquatic resources mapped within the Study Area are provided as Appendix B. Wetland Determination Data Forms are provided as Appendix C. Photographs of the Study Area are provided as Appendix D. A list of all plant species observed during the delineation site visits is included as Appendix E.

Table 2. Summary of Potentially Jurisdictional and Non-jurisdictional Features Mapped within the Study Area

Habitat Type	Classification*	Acres	Potentially Jurisdictional
Seasonal Wetland	PEM2A/C	0.02	Yes, 0.02 ac.
Wetland Drainage Ditch	PEM2A	0.03	No**
Construction-related Depressions	N/A	0.24	No***
	Total:	**0.29**	**0.02**

*See Federal Geographic Data Committee 2013
**(33 CFR 328.3) 3(ii).; ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands
***(33 CFR 328.3) 4.; manmade aquatic features in otherwise dry land such as small depressions that were created incidental to construction activity

5.1 Section 404 of the Clean Water Act Potentially Jurisdictional Features

5.1.1 Wetlands

<u>Seasonal Wetland PEM2A/C</u>

Seasonal wetlands within the Study Area are seasonally flooded. The southernmost corner of the Study Area contains the seasonally flooded seasonal wetland.

PEM2C

The seasonally flooded seasonal wetland within the southernmost corner of the Study Area ("SW-01") was delineated using changes in vegetation and a shift in topography. This feature was filled with dense vegetation except for the deepest part of the feature (located outside of the Study Area to the south), which was denuded and showed evidence of inundation in the form of soil cracking.

This feature contained hydrophytic vegetation such as cocklebur (*Xanthium strumarium*, FAC), cosmopolitan bulrush (OBL), tall flatsedge (*Cyperus eragrostis*, FACW), pennyroyal (OBL), and rabbitsfoot grass (FACW). Obligate perennial hydrophytes like cosmopolitan bulrush were present within this feature, but were not found within seasonal wetlands with temporarily flooded hydrology regimes. Soils within this feature were clay loams with none of the fill material present within other seasonal wetlands and the surrounding uplands. Soils were very dark grey (10YR 2/1) with 8 percent cover of concentrations in both the matrix and pore linings that were strong brown (7.5YR 4/6). Soils met the Redox Dark Surface (F6) indicator. Indicators of wetland hydrology consisted of primary indicators (B6) Surface Soil Cracks and (B7) Inundation Visible on Aerial Imagery (Google Earth 2019).

The seasonal wetland features were classified as PEM2A: Palustrine (P), emergent (EM), non-persistent (2), seasonally flooded (C). Wetland (SP03) and paired upland (SP04) sample points were prepared based on observations of the southwestern corner of the site. Data sheets can be found within Appendix C and photos of this feature type within Appendix D.

5.2 Potentially Non-Jurisdictional Features

Wetland Drainage Ditches

Seasonal wetlands within ditches were observed within the Study Area and ran along the northeastern border of the site and were delineated using changes in vegetation and a discernible shift in topography (feature labelled “WDD-01” and “WDD-02”). These features were comprised of an open ditch with open water in the center and dense vegetation along the fringes.

The seasonal wetland within the ditch contained hydrophytic vegetation such as hyssop loostrife (*Lythrum hyssopifolia*, OBL), rabbitsfoot grass (FACW), and tall flatsedge (FACW), as well as ruderal facultative vegetation such as Italian rye grass (FAC), bristly ox tongue (FAC), and curly dock (FAC). Soils were dark brown (10YR 3/2), gravelly clay and with increasing density of fill (gravel) with depth until shovel rejection at six inches. Shovel rejection due to fill was approximately six inches for the potential wetland feature. Soils were problematic as their dark colors and presence of fill may have masked redoximorphic features, but assumed to be hydric due to the dominant vegetation being FACW or OBL in nature and the observations of multiple primary wetland hydrology indicators. Indicators of wetland hydrology consisted of primary indicators (B6) Surface Soil Cracks and (B7) Inundation Visible on Aerial Imagery (Google Earth 2019).

While the wetland drainage ditch feature (“WDD-01” and “WDD-02”) met the three indicator test outlined in the 1987 Corps Manual, wetland drainage ditches within the Study Area are gravel lined, manmade, and built to convey stormwater therefore as defined by 33 CFR 328.3 (b) 3(ii) these features have been determined to be non-jurisdictional and therefore not Waters of the U.S. Per 33 CFR 328.3 (b) 3(ii):

> *“The following are not “waters of the United States” even where they otherwise meet the terms of paragraphs (a)(4) through (8) of this section[…], ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands”*

Construction-related Depression

Construction-related depressions were found within the western half of the Study Area (features labeled “CD-01” through “CD-06”). These features are concave topographic features that were incidentally created in uplands during routine and ongoing grading and levelling to support various site uses. These depressional features were filled with annual vegetation, some of which was the same ruderal vegetation found throughout the surrounding uplands. Vegetation within the western portion of the Study Area is regularly maintained (mowing) by EBMUD. During the site visit, the areas on the western side had been recently mowed and therefore little vegetation was observed within some of the construction-related depressions. As discussed in Section 4.1.3 due to this disturbance, the upland boundary for these features with mowed vegetation were delineated using aerial imagery (Google Earth 2019).

Features with observable vegetation contained species such as swampgrass (FACW) and pennyroyal (OBL), as well as other ruderal vegetation such as bristly ox-tongue (FAC) and bird’s-foot trefoil (*Lotus corniculatus,* FAC). Soils were dark brown (10YR 3/2), gravelly loam and with increasing density of fill (gravel) with depth until shovel rejection at six inches. Shovel rejection due to fill was approximately six inches for all these wetland features. Soils were problematic as their dark colors and presence of fill may have masked redoximorphic features. Indicators of wetland hydrology consisted of primary indicators (B6) Surface Soil Cracks and (B7) Inundation Visible on Aerial Imagery (Google Earth 2019).

These construction-related depression features are not classified by Cowardin et al. (See Federal Geographic Data Committee 2013). Paired sample points ("SP05" through "SP09") are shown in Figure 4. Sample points data sheets can be found within Appendix C and photos of this feature type within Appendix D.

While the construction-related depression features ("CD-01" through "CD-06") met the three indicator test outlined in the 1987 Corps Manual, construction-related depressions within the Study Area are gravel lined, manmade, and incidentally created during routine and ongoing maintenance and operations, therefore, as defined by 33 CFR 328.3 (b) 4, these features have been determined to be non-jurisdictional and therefore not Waters of the U.S. Per 33 CFR 328.3 4:

"The following are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(4) through (8) of this section[…], manmade aquatic features in otherwise dry land such as small depressions that were created incidental to construction activity"

6.0 CONCLUSION

The results of this delineation of aquatic resources were based on conditions observed during the time of the assessment and information provided to WRA by SupplyBank.org. It should be noted that the Corps makes all final decisions regarding regulatory jurisdiction, and WRA recommends securing a Jurisdictional Determination from the Corps before embarking on any project activities that could result in the loss of Waters of the United States.

7.0 REFERENCES

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2019 observed rainfall data from climate station: Oakland Museum, CA
Date of site visit: 2/1/2014

	Month	Rainfall Data from WETS: 3 yrs in 10 less than	Rainfall Data from WETS: Average	Rainfall Data from WETS: 3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	January	1.76	4.03	4.91	0.04	Dry	1	3	3
2nd month prior	December	1.81	4.27	5.07	0.15	Dry	1	2	2
3rd month prior	November	1.27	2.80	3.41	0.57	Dry	1	1	1
								SUM=	**6**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Upper San Leandro Filters, CA
2019 observed rainfall data from climate station: Upper San Leandro Filters, CA
Date of site visit: 3/1/2017

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	February	1.98	4.27	5.44	11.17	Wet	3	3	9
2nd month prior	January	1.81	4.46	5.08	12.09	Wet	3	2	6
3rd month prior	December	2.09	5.09	6.19	6.32	Wet	3	1	3
								SUM=	**18**

Note: If sum is:
6-9 prior period has been drier than normal
10-14 prior period has been normal
15-18 prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Oakland Museum, CA
2019 observed rainfall data from climate station: Oakland Museum, CA
Date of site visit: 10/1/2018

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	September	0.00	0.15	0.00	0.00	Normal	2	3	6
2nd month prior	August	0.00	0.06	0.00	0.00	Normal	2	2	4
3rd month prior	July	0.00	0.00	0.11	0.00	Normal	2	1	2
								SUM=	**12**

Note: If sum is:
- 6-9 prior period has been drier than normal
- 10-14 prior period has been normal
- 15-18 prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Oakland Museum, CA
2019 observed rainfall data from climate station: Oakland Museum, CA
Date of site visit: 8/27/2019

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	July	0.00	0.00	0.00	0.00	Normal	2	3	6
2nd month prior	June	0.00	0.21	0.14	0.00	Normal	2	2	4
3rd month prior	May	0.22	0.78	0.80	2.37	Wet	3	1	3
								SUM=	**13**

Note: If sum is:
6-9 prior period has been drier than normal
10-14 prior period has been normal
15-18 prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

Path: L:\Acad 2000 Files\29000\29251\GIS\ArcMap\Figure 1 Location.mxd

Sources: National Geographic, WRA | Prepared By: pkobylarz, 10/24/2019

Figure 1. Study Area Location

SupplyBank.Org Office & Distribution Center
Alameda County, California

0 0.25 0.5 Miles

N

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Sources: National Geographic, WRA | Prepared By: pkobylarz, 10/24/2019

Figure 2. Study Area Detail

SupplyBank.Org Office & Distribution Center
Alameda County, California

0 100 200 Feet N

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Sources: National Geographic, WRA | Prepared By: pkobylarz, 10/24/2019

Figure 3. Soil Types within Study Area

SupplyBank.Org Office & Distribution Center
Alameda County, California

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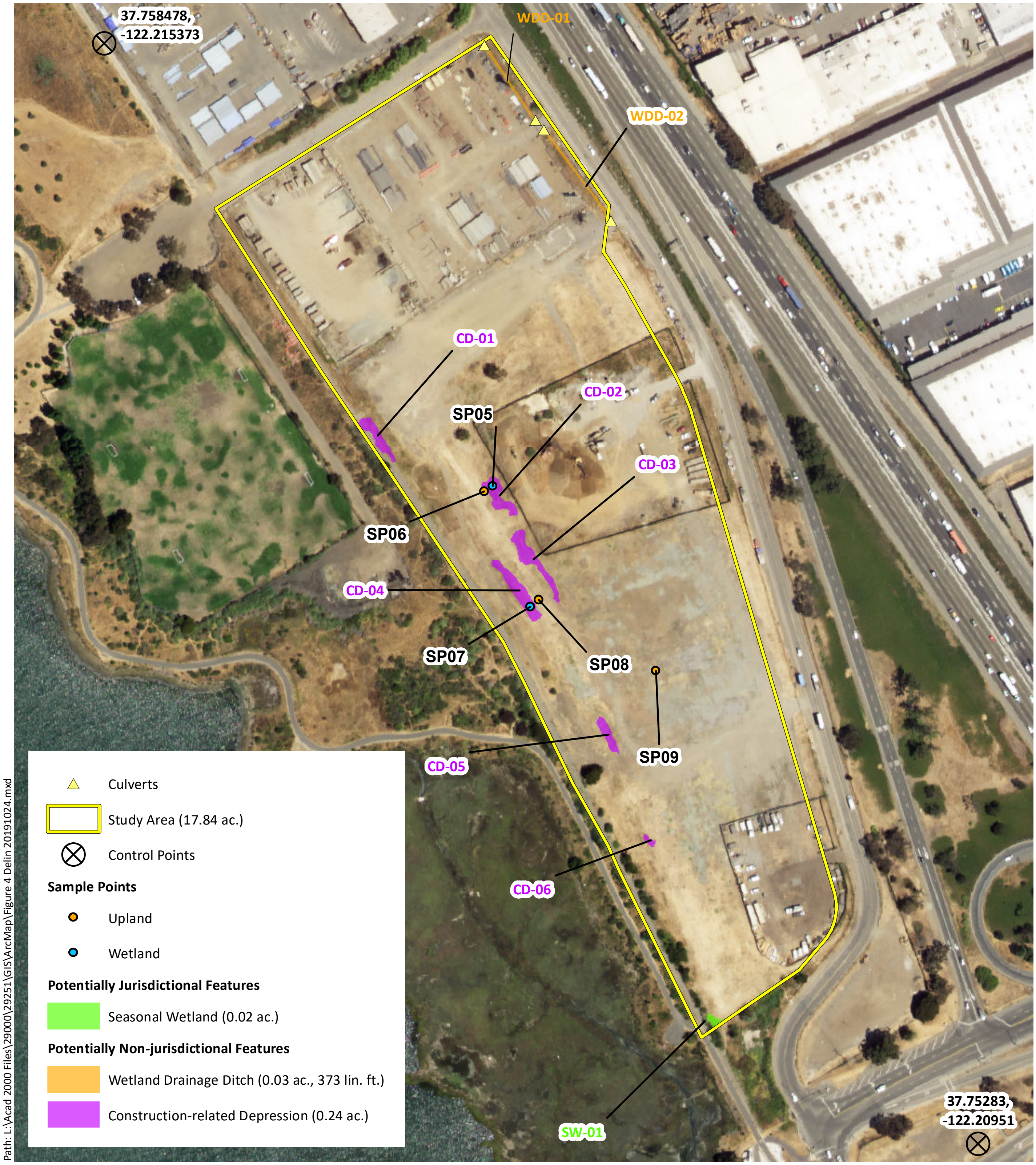

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Sources: National Geographic, WRA | Prepared By: pkobylarz, 10/24/2019

Figure 4. Wetland Delineation and Preliminary Jurisdictional Determination

SupplyBank.Org Office & Distribution Center
Alameda County, California

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Appendix F

Subject: File Number 2020-00081S

U.S. Army Corps of Engineers, March 2021

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102

March 8, 2021

Regulatory Division

Subject: File Number 2020-00081S

Mr. Bernhard Warzecha
FirstCarbon Solutions
1350 Treat Boulevard, Suite 380
Walnut Creek, California 94597
bwarzecha@fcs-intl.com

Dear Mr. Warzecha:

This correspondence is in response to your submittal of July 29, 2020, on behalf of SupplyBank.Org, requesting an approved jurisdictional determination of the extent of waters of the United States occurring on a 17.84-acre site located at 5872-5800 Oakport Street in the City of Oakland, Alameda County, California (Lat: 37.755957°, Long: -122.212086°; APNs 41-3903-02-8 and 41-3904-10-5).

All proposed discharges of dredged or fill material occurring below the plane of ordinary high water in non-tidal waters of the United States; or below the high tide line in tidal waters of the United States; or within the lateral extent of wetlands adjacent to these waters, typically require Department of the Army authorization and the issuance of a permit under Section 404 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1344 *et seq*.). Waters of the United States generally include the territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide; tributaries; lakes and ponds, and impoundments of jurisdictional waters; and adjacent wetlands.

All proposed structures and work, including excavation, dredging, and discharges of dredged or fill material, occurring below the plane of mean high water in tidal waters of the United States; in former diked baylands currently below mean high water; outside the limits of mean high water but affecting the navigable capacity of tidal waters; or below the plane of ordinary high water in non-tidal waters designated as navigable waters of the United States, typically require Department of the Army authorization and the issuance of a permit under Section 10 of the Rivers and Harbors Act of 1899, as amended (33 U.S.C. § 403 *et seq*.). Navigable waters of the United States generally include all waters subject to the ebb and flow of the tide; and/or all waters presently used, or have been used in the past, or may be susceptible for future use to transport interstate or foreign commerce.

The enclosed delineation map titled "Approved Jurisdictional Determination, SupplyBank.Org Office and Distribution Center, Alameda County, California, File No: 2020-

00081S," in one sheet and date certified March 4, 2021, accurately depicts the extent and location of wetlands and ditches within the boundary area of the site that are **not** subject to U.S. Army Corps of Engineers' regulatory authority under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act. These particular water bodies are non-jurisdictional waters pursuant to 33 C.F.R. §§ 328.3(b)(1) and 328.3(b)(5). This approved jurisdictional determination is based on the current conditions of the site, as verified during a field investigation of March 4, 2020, a review of available digital photographic imagery, and a review of other data included in your submittal. This approved jurisdictional determination will expire in five years from the date of this letter unless new information or a change in field conditions warrants a revision to the delineation map prior to the expiration date. The basis for this approved jurisdictional determination is explained in the enclosed *Approved Jurisdictional Determination Form (Interim) Navigable Waters Protection Rule*.

The current absence of jurisdictional waters of the United States within the boundary area of the site does not obviate any requirement to obtain other Federal, State, or local approvals necessitated by law. Any impacts to federally-listed threatened or endangered species and/or designated critical habitat may be subject to regulation by the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service under Section 10 of the Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 *et seq*.). If "waters of the state" are potentially present, the site may be subject to regulation by the California Regional Water Quality Control Board, San Francisco Bay Region, under the Porter-Cologne Water Quality Control Act, as amended (California Water Code § 1300 *et seq*.). Sites located along the margins of San Francisco Bay may be subject to regulation by the San Francisco Bay Conservation and Development Commission under the McAteer-Petris Act of 1965, as amended (Public Resources Code § 66600 *et seq*.), or the Suisun Marsh Preservation Act of 1977, as amended (Public Resources Code §§ 29000-29612 *et seq*.). You are, therefore, urged to contact these agencies directly to determine the need for other authorizations or permits.

You are advised that the approved jurisdictional determination may be appealed through the U.S. Army Corps of Engineers' *Administrative Appeal Process*, as described in 33 C.F.R. Part 331 (65 Fed. Reg. 16,486; Mar. 28, 2000) and outlined in the enclosed flowchart and *Notification of Administrative Appeal Options, Process, and Request for Appeal* (NAO-RFA) Form. If you do not intend to accept the approved jurisdictional determination, you may elect to provide new information to this office for reconsideration of this decision. If you do not provide new information to this office, you may elect to submit a completed NAO-RFA Form to the Division Engineer to initiate the appeal process; the completed NAO-RFA Form must be submitted directly to the Appeal Review Officer at the address specified on the NAO-RFA Form. You will relinquish all rights to a review or an appeal unless this office or the Division Engineer receives new information or a completed NAO-RFA Form within 60 days of the date on the NAO-RFA Form. If you intend to accept the approved jurisdictional determination, you do not need to take any further action associated with the Administrative Appeal Process.

You may refer any questions on this matter to Katerina Galacatos by telephone at 415-503-6778 or by e-mail at Katerina.Galacatos@usace.army.mil. All correspondence should be addressed to the Regulatory Division, South Branch, referencing the file number at the head of this letter.

The San Francisco District is committed to improving service to our customers. The Regulatory staff seeks to achieve the goals of the Regulatory Program in an efficient and cooperative manner while preserving and protecting our nation's aquatic resources. If you would like to provide comments on our Regulatory Program, please complete the Customer Service Survey Form available on our website:
http://www.spn.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,

Bryan Matsumoto
Senior Project Manager
Regulatory Division

Enclosures

Electronic Copies Furnished (w/ encls):

SupplyBank.Org, Oakland, CA (Benito Delgado-Olson, Benito@supplybank.org)
CA RWQCB, Oakland, CA (Katie Hart, Kathryn.Hart@waterboards.ca.gov)

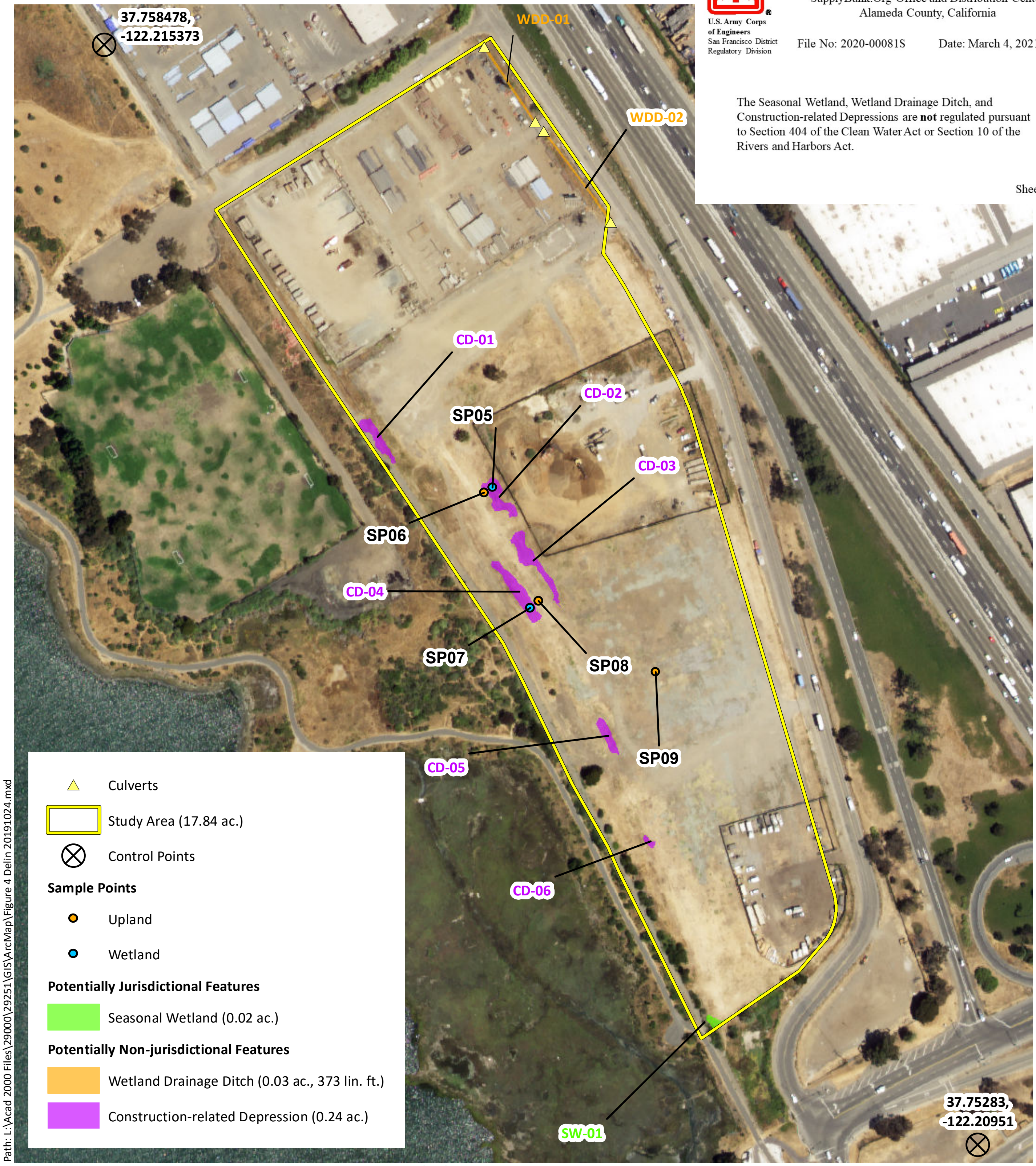
U.S. Army Corps of Engineers
San Francisco District
Regulatory Division

Approved Jurisdictional Determination
SupplyBank.Org Office and Distribution Center
Alameda County, California

File No: 2020-00081S Date: March 4, 2021

The Seasonal Wetland, Wetland Drainage Ditch, and Construction-related Depressions are **not** regulated pursuant to Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act.

Sheet 1 of 1



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Sources: National Geographic, WRA | Prepared By: pkobylarz, 10/24/2019

Figure 4. Wetland Delineation and Preliminary Jurisdictional Determination

SupplyBank.Org Office & Distribution Center
Alameda County, California

0 100 200 Feet

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Appendix G

Delineation of Aquatic Resources of Additional Areas at the Oakport Street Project and Regulatory Considerations

First Carbon Solutions, February 2021

UNITED STATES

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Inland Empire
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Sacramento Valley
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Suite 170-301
Rocklin, CA 95765

Utah
2901 Bluegrass Boulevard
Suite 200-62
Lehi, UT 84043

Connecticut
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Suite 450
Shelton, CT 06484

New York
10 Monument Street
Deposit, NY 13754

56 Broome Corporate Parkway
Conklin, NY 13748

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February 1, 2021

Benito Delgado-Olson
Executive Director, SupplyBank.org
7730 Pardee Lane
Oakland, CA 94621

Subject: Delineation of Aquatic Resources of Additional Areas at the Oakport Street Project and Regulatory Considerations

Dear Mr. Delgado-Olson:

This letter report serves as an amendment to the *Aquatic Resources Delineation Report for the Supplybank.Org Office & Distribution Center* prepared by WRA, revised October 29, 2019, (hereafter identified as "*WRA JD*"). This amendment addresses potential additional aquatic resources located east of the study area covered in the WRA JD, which are potentially regulated by the Regional Water Quality Control Board (RWQCB). The area covered in this report is shown as Study Area on Exhibit 1.

The letter report summarizes the methods, results, and gives recommendations related to regulatory implications. Attached to this letter is an Aquatic Resources Delineation Map (Exhibit 1), which proposes a determination of State-jurisdiction per the Porter-Cologne Water Quality Control Act. Also attached are photographs depicting the conditions of relevant areas (Attachment A), and seven United States Army Corps of Engineers (USACE) Wetland Determination Data Forms for the Arid West Region (Attachment B).

METHODS

The delineation of aquatic resources was conducted by certified wetland delineator and Senior Biologist Bernhard Warzecha, MSc., on January 20, 2021, following the USACE protocol for wetland delineations and the procedures outlined in the USACE Wetland Delineation Manual,[1] the USACE Regional Supplement,[2] the current National Wetland Plant List,[3] and others. These methods are consistent with the methods stated and described in the WRA JD. Specifically, the methods included establishing sample points to determine extent of wetland indicators related to vegetation, soils, and hydrology; and mapping of all features using a submeter-accurate Trimble R1 GPS device (Exhibit 1).

1 Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. U.S. Army Corps of Engineers.
2 United States Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). U.S. Army Engineer Research and Development Center Environmental Laboratory 3909 Halls Ferry Road Vicksburg.
3 United States Army Corps of Engineers (USACE). 2018. National Wetland Plant List 2018 - Arid West Version 1.

RESULTS

The following aquatic features were detected and evaluated. Their location and dimensions are shown on Exhibit 1.

Seasonal Wetland Ditch Sections A and B

Artificially constructed Seasonal Wetland Ditch Sections A (Attachment A, Photo 1) and B (Attachment A, Photo 2) are extensions of the drainage ditches WDD-01 and WDD-02 mapped and described in the WRA JD, which are draining north and west to the San Francisco Bay. Conditions are therefore similar as those described in the WRA JD; and confirmed through Sample Points 1 and 2 (Attachment B). However, it appears that the Ditch Sections A and B do not readily drain north and to the San Francisco Bay because of clogged culverts to the north of each section as shown on Exhibit 1. The clogged culverts appear to allow the ditches to pool water for long enough to develop and retain marginal wetland vegetation, faint redoximorphic features, and some seasonal ponding visible on aerial photography. Therefore, this feature could potentially be regulated as a water of the State by the RWQCB.

Seasonal Wetland Puddle C

Seasonal Wetland Puddle C (Attachment A, Photo 3) appears to be the result of a restricting layer of compacted fill (potentially associated with the embankment along Oakport Street), and lack of adequate drainage. About 3 inches of soil have built up over the compacted fill and currently supports approximately 20 percent cover of invasive wetland weeds. The seasonal wetland puddle ponds after rainfall, as indicated by the presence of an ordinary high-water mark, as well as the ponding that is visible on aerial photography. Therefore, this feature could potentially be regulated as a water of the State by the RWQCB.

Seasonal Wetland D

Seasonal Wetland D (Attachment A, Photo 6) is the only aquatic feature located east of Oakport Street within the Study Area and consists of a small but dense patch of narrow-leaf cattails (*Typha angustifolia*), which is a native obligate wetland species. Therefore, this feature could potentially be regulated as a water of the State by the RWQCB.

CONCLUSION AND RECOMMENDATIONS

All aquatic features detected within the Study Area are shown on Exhibit 1 and are described here. No additional aquatic features are present within the Study Area. Specifically, the only aquatic feature between Oakport Street and the I-880 off ramp is the small Seasonal Wetland D (Attachment A, Photo 6). The remainder of this area is upland (Sample Point 5; Attachment A, Photo 5 and Photo 7).

The aquatic features listed above and shown on Exhibit 1 are potentially considered by the RWQCB as waters of the State. However, all features are artificial, small, and have little to no habitat value. Furthermore, the mapped features west of Oakport Street (Features A, B, and C) do not appear to have a hydrological surface connection to the San Francisco Bay, except potentially under extreme rainfall conditions.

The RWQCB can, on a case-by-case basis, exempt certain artificial features of this type from certain permit requirements associated with the Porter-Cologne Water Quality Control Act and established through the RWQCB dredge and fill permitting program. Therefore, we recommend reaching out to the RWQCB to determine whether or not impacts (e.g., fill) of the features listed here would require an RWQCB Dredge or Fill Permit and to what extent mitigation requirements would be applicable.

If you should have any questions or concerns, please contact me at bwarzecha@fcs-intl.com.

Sincerely,

Bernhard Warzecha, Senior Biologist/Project Manager
FirstCarbon Solutions
1350 Treat Boulevard
Suite 380 Walnut Creek, CA 94597

Attachment A: Site Photographs
Attachment B: Wetland Determination Data Forms

Potential Waters of the State				
Feature	Length (linear feet)	Average Width (feet)	Area (square feet)	Area (acre)
Seasonal Wetland Ditch A	270	2	540	0.012
Seasonal Wetland Ditch B	60	2	120	0.003
Seasonal Wetland/Puddle C	360	16	5,700	0.131
Seasonal Wetland D	40	12	488	0.011
Totals within Study Area			**6,848**	**0.157**

Source: BING | FCS

FIRSTCARBON SOLUTIONS™

100 50 0 100 Feet

Exhibit 1
Aquatic Resources Delineation January 20, 2021

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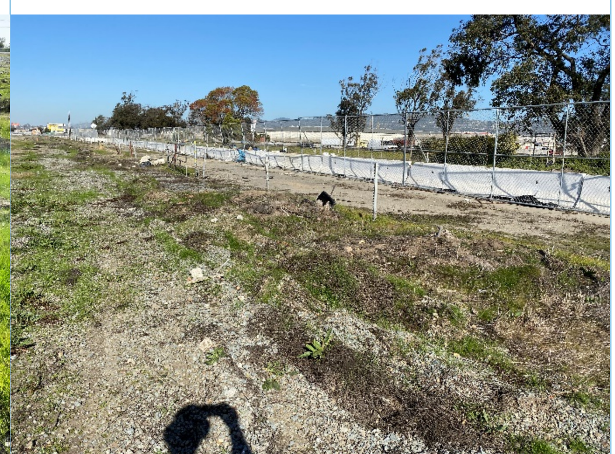
Attachment A: Site Photographs

Photograph 1: Current conditions at Seasonal Wetland Ditch A, looking south from clogged culvert.

Photograph 2: Current Conditions at Seasonal Wetland Ditch B, looking south from clogged culvert. Location of Sample Points 1 and 2.

Photograph 3: Seasonal Wetland Puddle C, looking south. Oakport Street is to the left hand.



Photograph 4: Condition south of Seasonal Wetland Puddle C, looking northeast.

Photograph 5: Conditions between I-880 off ramp and Oakport Street, looking south. Location of Sample Point 5.

Photograph 6: Seasonal Wetland D, looking south. Senescent but robust stand of narrow-leaf cattails.

Photograph 7: Conditions of the vacant lot between Oakport Street, Zhone Way, and I-880 off-ramp, in the most southern portion of the Study Area.

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Attachment B:
Wetlands Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Oakport Street City/County: Oakland, Alameda Co Sampling Date: 1/20/21

Applicant/Owner: Supplybank.org State: CA Sampling Point: SP-1

Investigator(s): Bernhard Warzecha Section, Township, Range: T2S R3W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 0-3

Subregion (LRR): ______ Lat: 37.757458° Long: -122.211910° Datum: WGS 84

Soil Map Unit Name: ______ 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 ___	**Is the Sampled Area within a Wetland?** Yes ✔ No ___
Hydric Soil Present?	Yes ✔ No ___	
Wetland Hydrology Present?	Yes ✔ No ___	

Remarks:

SP within 2-wide vegetated ditch; soils include compacted fill; plants ruderal; site heavily disturbed by encampments, repeated grading and fill, land use as fairground, maintenance yard etc.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
= Total Cover			
Herb Stratum (Plot size: 1m^2)			
1. Geranium molle	30	Y	n/a
2. Lythrum hyssopifolia	15	N	OBL
3. Festuca perennis [syn. Lolium perenne]	30	Y	FAC
4. Distichlis spicata	25	Y	FAC
5.			
6.			
7.			
8.			
= Total Cover	100		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 0 % 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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (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 Adaptations[1] (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 ___

Remarks:

SOIL

Sampling Point: SP-1

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 %	Type[1]	Loc[2]	Texture	Remarks
12	(+/-) 10Yr 3/3	97	2.5YR 5/6	3	C	PL	SL	includes pockets of sandy fill

[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 ______

Remarks:

includes fill; substrate heavily disturbed

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ 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 Tilled Soils (C6)
- ___ 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 ✔	Depth (inches): ______
Saturation Present? (includes capillary fringe)	Yes ______	No ✔	Depth (inches): ______

Wetland Hydrology Present? Yes ✔ No ______

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Oakport Street City/County: Oakland, Alameda Co Sampling Date: 1/20/21

Applicant/Owner: Supplybank.org State: CA Sampling Point: SP-2

Investigator(s): Bernhard Warzecha Section, Township, Range: T2S R3W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 0-3

Subregion (LRR): ______ Lat: 37.757458° Long: -122.211910° Datum: WGS 84

Soil Map Unit Name: ______ 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.

	Yes	No
Hydrophytic Vegetation Present?		✔
Hydric Soil Present?		✔
Wetland Hydrology Present?		✔

Is the Sampled Area within a Wetland? Yes ___ No ✔

Remarks:

Sample point 2 feet from vegetated ditch; soils include compacted fill; plants ruderal; site heavily disturbed by encampments, repeated grading and fill, land use as fairground, maintenance yard etc.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ______)			
1.			
2.			
3.			
4.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: ______)			
1.			
2.			
3.			
4.			
5.			
= Total Cover			
Herb Stratum (Plot size: 1m^2)			
1. Geranium molle	20	Y	n/a
2. Poaceae	60	Y	
3. Festuca perennis [syn. Lolium perenne]	15	N	FAC
4. Distichlis spicata	2	N	FAC
5. Plantago lanceolata	3	N	FAC
6.			
7.			
8.			
= Total Cover	100		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust ______

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species	20	x 3 = 60
FACU species		x 4 =
UPL species	80	x 5 = 400
Column Totals:	100 (A)	460 (B)

Prevalence Index = B/A = 4.6

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (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 ✔

Remarks:

Plants heavily disturbed, ruderal

SOIL

Sampling Point: SP-2

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 %	Type[1]	Loc[2]	Texture	Remarks
12	(+/-) 10Yr 3/3	100						includes pockets of sandy fill

[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 ✔

Remarks:

includes fill; substrate heavily disturbed

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ 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 Tilled Soils (C6)
- ___ 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 ✔ Depth (inches): ______

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

Wetland Hydrology Present? Yes ______ No ✔

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Oakport Street City/County: Oakland, Alameda Co Sampling Date: 1/20/21

Applicant/Owner: Supplybank.org State: CA Sampling Point: SP-3

Investigator(s): Bernhard Warzecha Section, Township, Range: T2S R3W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 0-3

Subregion (LRR): ______ Lat: 37.755730° Long: -122.210984° Datum: WGS 84

Soil Map Unit Name: ______ 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 ___	Is the Sampled Area within a Wetland? Yes ✔ No ___
Hydric Soil Present?	Yes ✔ No ___	
Wetland Hydrology Present?	Yes ✔ No ___	

Remarks:

Area a shallow depression (puddle) next to street with 3 inches of soil, then restrictive fill layer. Pools after rain, has ordinary high water mark.

VEGETATION – Use scientific names of plants.

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: 1m^2)			
1. Plantago coronopus	5	Y	FAC
2. Lythrum hyssopifolia	5	Y	OBL
3. Lepidium latifolium	3	Y	FAC
4. Distichlis spicata	3	Y	FAC
5.			
6.			
7.			
8.			
= Total Cover	16		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 84 % Cover of Biotic Crust 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (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 Adaptations[1] (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 ___

Remarks:

SOIL

Sampling Point: SP-3

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 %	Type[1]	Loc[2]	Texture	Remarks
3	(+/-) 10Yr 2/2	100	2.5YR 5/6	3	C	PL	SL	includes pockets of sandy fill

[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: compacted fill

Depth (inches): 3

Hydric Soil Present? Yes ✔ No ___

Remarks:

includes fill; substrate heavily disturbed;

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ 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 Tilled Soils (C6)
- ___ 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 ✔ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 1

Wetland Hydrology Present? Yes ✔ No ___

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

Remarks:

Area pools water after rain as it sits on compacted fill at 3 inch depth

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Oakport Street City/County: Oakland, Alameda Co Sampling Date: 1/20/21

Applicant/Owner: Supplybank.org State: CA Sampling Point: SP-4

Investigator(s): Bernhard Warzecha Section, Township, Range: T2S R3W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-3

Subregion (LRR): ______ Lat: 37.755730° Long: -122.211009° Datum: WGS 84

Soil Map Unit Name: ______ 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.

	Yes	No
Hydrophytic Vegetation Present?		✔
Hydric Soil Present?		✔
Wetland Hydrology Present?		✔

Is the Sampled Area within a Wetland? Yes ___ No ✔

Remarks:

SP next to shallow depression (puddle) next to street with 3 inches of soil, then restrictive fill layer. Pools after rain, has ordinary high water mark.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ______)			
1.			
2.			
3.			
4.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: ______)			
1.			
2.			
3.			
4.			
5.			
= Total Cover			
Herb Stratum (Plot size: 1m^2)			
1. Plantago coronopus	5	N	FAC
2. Lythrum hyssopifolia	2	N	OBL
3. Geranium molle	15	N	FAC
4. Distichlis spicata	5	N	FAC
5. Poaceae	73	Y	
6.			
7.			
8.			
= Total Cover	100		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (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 Adaptations[1] (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 ✔

Remarks:

SOIL

Sampling Point: SP-4

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 %	Type[1]	Loc[2]	Texture	Remarks
6	(+/-) 10Yr 2/2	100					SL	includes pockets of sandy fill

[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: compacted fill

Depth (inches): 6

Hydric Soil Present? Yes ______ No ✔

Remarks:

includes fill; substrate heavily disturbed;

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ 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 Tilled Soils (C6)
- ___ 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 ✔ Depth (inches): ____________

Saturation Present? (includes capillary fringe) Yes ______ No ✔ Depth (inches): ____________

Wetland Hydrology Present? Yes ______ No ✔

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Oakport Street City/County: Oakland, Alameda Co Sampling Date: 1/20/21

Applicant/Owner: Supplybank.org State: CA Sampling Point: SP-5

Investigator(s): Bernhard Warzecha Section, Township, Range: T2S R3W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-3

Subregion (LRR): ____ Lat: 37.755463° Long: -122.210626° Datum: WGS 84

Soil Map Unit Name: ____ 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.

	Yes	No
Hydrophytic Vegetation Present?		✔
Hydric Soil Present?		✔
Wetland Hydrology Present?		✔

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

Remarks:

Sample point within low point of shallow vegetated depression between Oakport St and off ramp

VEGETATION – Use scientific names of plants.

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: 1m^2)			
1. Bromus hordeaceous	50	Y	FACU
2. Carpobrotus chilensis	30	Y	FACU
3. Geranium molle	15	N	n/a
4. Unidentifiable Poaceae	15	N	
5.			
6.			
7.			
8.			
= Total Cover	100		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (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 Adaptations[1] (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 ✔

Remarks:

SOIL

Sampling Point: SP-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 %	Type[1]	Loc[2]	Texture	Remarks
12	(+/-) 10Yr 3/4	100					SL	includes pockets of sandy fill

[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 ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ 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 Tilled Soils (C6)
- ___ 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 ✔ Depth (inches): ______

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

Wetland Hydrology Present? Yes ______ No ✔

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Oakport Street City/County: Oakland, Alameda Co Sampling Date: 1/20/21

Applicant/Owner: Supplybank.org State: CA Sampling Point: SP-6

Investigator(s): Bernhard Warzecha Section, Township, Range: T2S R3W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-3

Subregion (LRR): ______ Lat: 37.753890° Long: -122.209974° Datum: WGS 84

Soil Map Unit Name: ______ 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 ___	Is the Sampled Area within a Wetland? Yes ✔ No ___
Hydric Soil Present?	Yes ✔ No ___	
Wetland Hydrology Present?	Yes ✔ No ___	

Remarks:

Sample point within small but dense patch of Typha angustifolia between Oakport St and I-880 off ramp

VEGETATION – Use scientific names of plants.

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: 1m^2)			
1. Typha angustifolia	95	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
= Total Cover	100		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

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 Adaptations[1] (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 ___

Remarks:

SOIL

Sampling Point: SP-6

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 %	Type[1]	Loc[2]	Texture	Remarks
12	10YR 3/4	95	2.5YR 5/6	5	c	pl/m	SL	includes fill

[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** ______

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ 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 Tilled Soils (C6)
- ___ 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 ✔ Depth (inches): ____________

Saturation Present? (includes capillary fringe) Yes ✔ No ______ Depth (inches): 6

Wetland Hydrology Present? **Yes** ✔ **No** ______

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Oakport Street City/County: Oakland, Alameda Co Sampling Date: 1/20/21

Applicant/Owner: Supplybank.org State: CA Sampling Point: SP-7

Investigator(s): Bernhard Warzecha Section, Township, Range: T2S R3W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 0-3

Subregion (LRR): ______ Lat: 37.755463° Long: -122.209860° Datum: WGS 84

Soil Map Unit Name: ______ 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 ✔	Is the Sampled Area within a Wetland? Yes ___ No ✔
Hydric Soil Present?	Yes ___ No ✔	
Wetland Hydrology Present?	Yes ___ No ✔	

Remarks:

Sample point between Typha patch and culvert pipe

VEGETATION – Use scientific names of plants.

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: 1m^2)			
1. Bromus hordeaceous	40	Y	FACU
2. Carpobrotus chilensis	25	Y	FACU
3. Geranium molle	10	N	n/a
4. Unidentifiable Poaceae	15	N	
5. Helminthotheca echioides	10	N	FAC
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	___ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (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 Adaptations[1] (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 ✔

Remarks:

SOIL

Sampling Point: SP-7

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 %	Type[1]	Loc[2]	Texture	Remarks
12	(+/-) 10Yr 3/3	100					SL	includes pockets of sandy fill

[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 ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ 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 Tilled Soils (C6)
___ 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 ✔ Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ______ No ✔ Depth (inches): ______

Wetland Hydrology Present? Yes ______ No ✔

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

Remarks:

Appendix H

Draft Compensatory Mitigation and Monitoring Plan for the Supplybank.Org Offices & Distribution Facility

First Carbon Solutions, April 3, 2022

FIRSTCARBON SOLUTIONS™

Draft Compensatory Mitigation and Monitoring Plan for the Supplybank.Org Offices & Distribution Facility

Prepared for:
Supplybank.org
SupplyBank.org
7730 Pardee Lane
Oakland, CA 94621

Prepared by:
FirstCarbon Solutions
1350 Treat Boulevard, Suite 380
Walnut Creek, CA 94597
925.357.2562

Contact: Mary Bean, Project Director
Bernhard Warzecha, Senior Biologist, Project Manager

Date: April 1, 2022

Table of Contents

List of Tables

List of Exhibits

Appendices

Appendix A: Engineering Plan Drawings

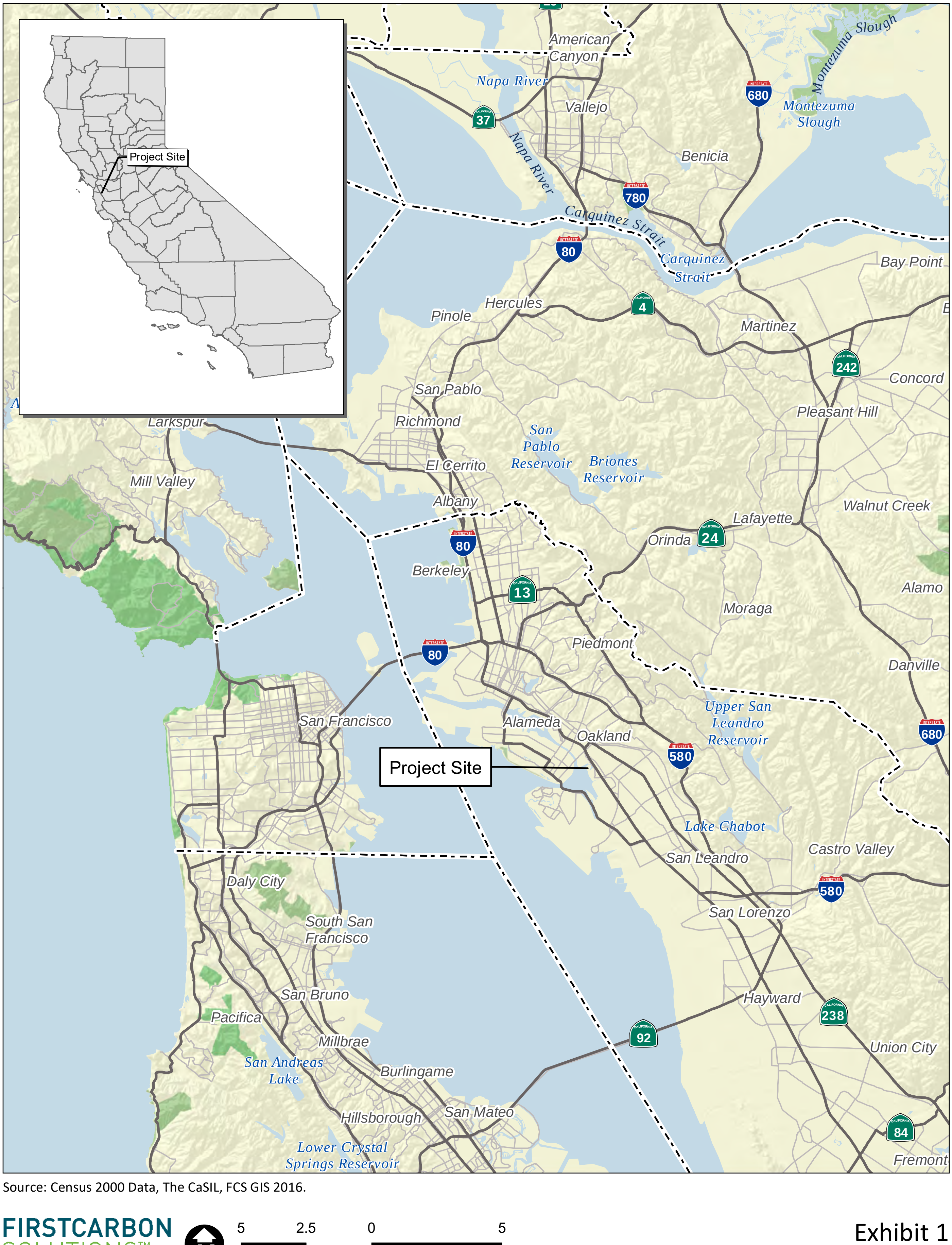
SECTION 1: INTRODUCTION

The following Draft Compensatory Mitigation and Monitoring Plan (Draft CMMP) for the Supplybank.Org Offices & Distribution Facility (Project) will guide implementation of compensatory mitigation intended to offset impacts related to unavoidable fill of potential waters of the State.

This CMMP is based in part on the *Aquatic Features Delineation Report* (WRA 2019), the *Delineation of Aquatic Resources of Additional Areas at the Oakport Street Project and Regulatory Considerations* (FCS 2021); and is intended to complement theProject's *Report of Waste Discharge* (*i.e.*, fill permit application for waters of the State) to the Regional Water Quality Control Board (RWQCB).

The purpose of this Draft CMMP is to define the specific approach, implementation, performance criteria, monitoring and reporting for the compensatory mitigation features intended to satisfy compliance with the Porter-Cologne Water Quality Control Act and the RWQCB's no-net-loss policy for waters of the State.

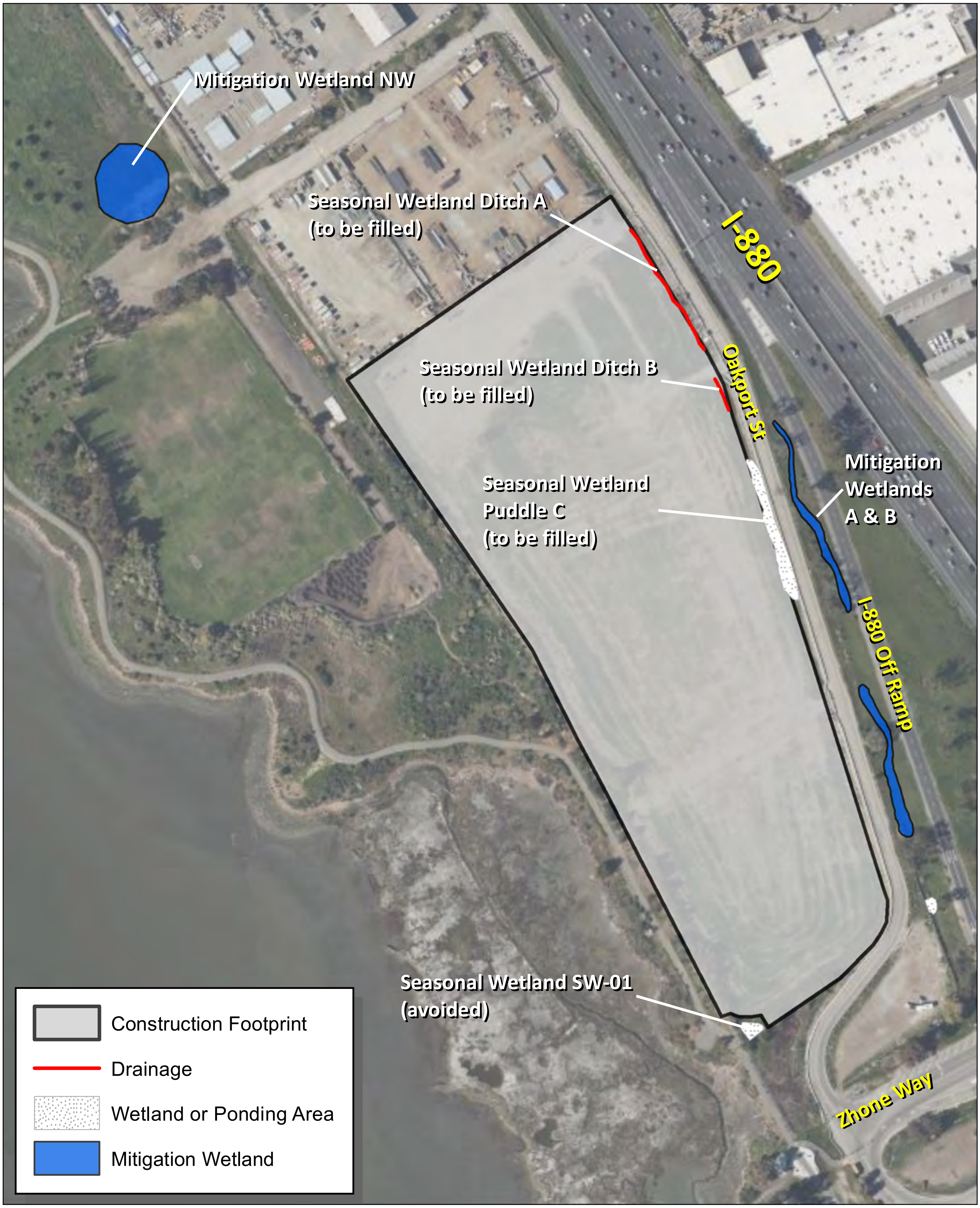
The regional location of the Project Site is depicted in Exhibit 1, and a spatial project overview including all relevant wetland elements is presented in Exhibit 2 and 4.



Source: Census 2000 Data, The CaSIL, FCS GIS 2016.

FIRSTCARBON SOLUTIONS™

Exhibit 1
Regional Location Map



Source: BING | FCS

FIRSTCARBON SOLUTIONS™

130 65 0 130
Feet

Exhibit 2
Project Overview

SECTION 2: WATERSHED PROFILE

A watershed profile is defined in Procedures section IV.D as "a compilation of data or information on the abundance, diversity, and condition of aquatic resources in a project evaluation area. The watershed profile shall include a map and a report characterizing the location, abundance, and diversity of aquatic resources in the project evaluation area, assessing the condition of aquatic resources in the project evaluation area, and describing the environmental stress factors affecting that condition. The scope and detail of the watershed profile is commensurate with the magnitude of impact associated with the proposed project, following guidance of the RWQCB.

2.1.1 - Evaluation Area

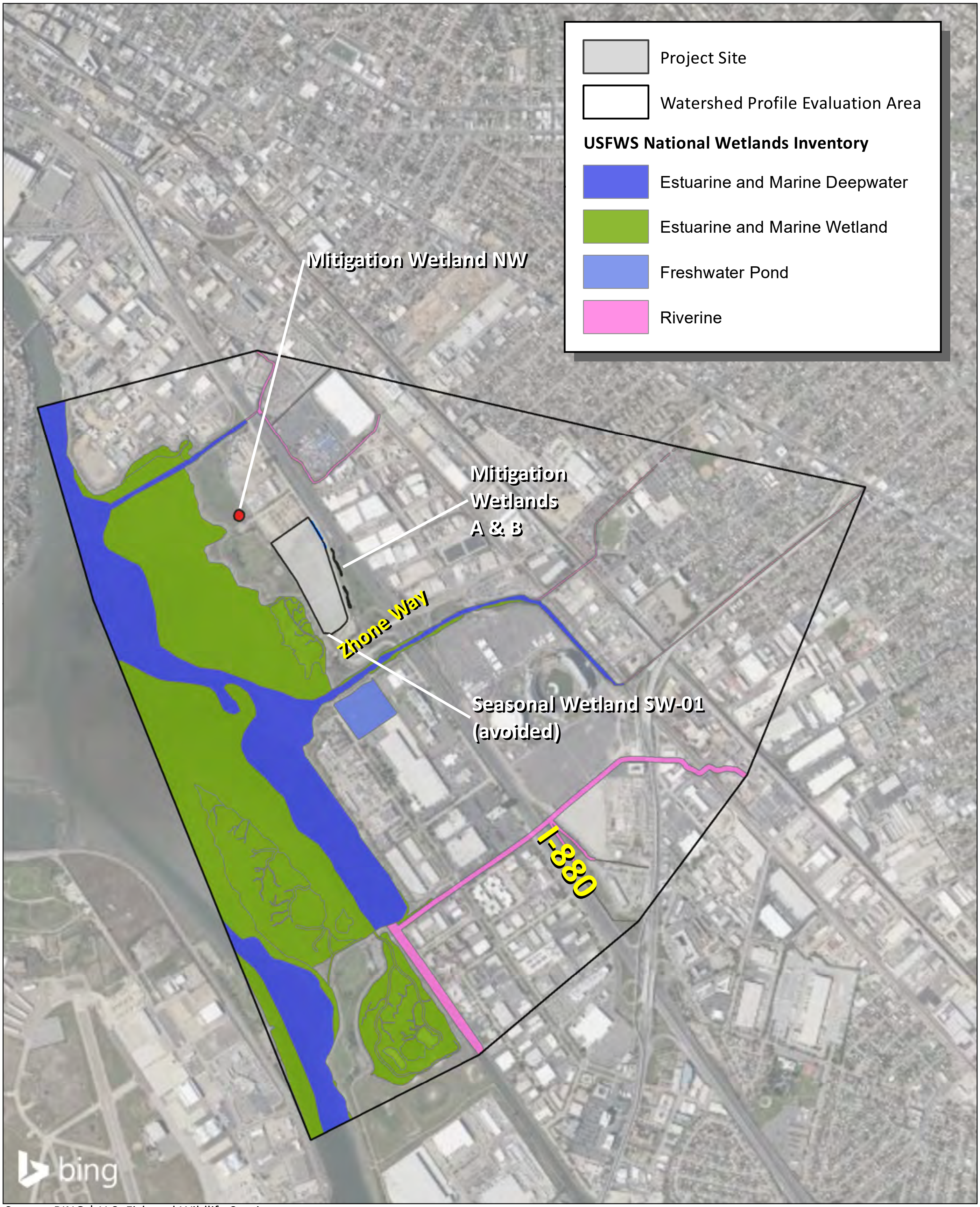
The 1,580-acre Evaluation Area (Exhibit 3) includes or intersects with all surrounding aquatic resources relevant to the Project Site and the proposed mitigation wetland sites.

2.1.2 - Location, Abundance and Diversity of Aquatic Resources

Location, abundance and diversity of aquatic resources in the evaluation area as mapped by the USFWS are shown on Exhibit 3, and include the Cowardin Types Estuarine and Marine Deepwater and Wetland; Freshwater Pond; and Riverine. Additional smaller wetlands (predominantly seasonal wetlands) not mapped by USFWS occur within the evaluation area, e.g., directly south of the Project site. Both the impacted resources and the proposed mitigation wetland sites are in close proximity to existing large and diverse aquatic resources, specifically the San Francisco Bay and associated tidal wetlands and tributaries

2.1.3 - Impacts, Constraints and Opportunities

The watershed analysis shows that project-related impacts to 0.147 acre of seasonal ditch wetlands (Exhibit 2; Table 1) would be relatively minor when compared to the existing extent of the adjacent aquatic resources of San Francisco Bay. However, due to the proximity of the impacted features to San Francisco Bay, certain beneficial functions of filtration and retention may be lost. This potential loss will be compensated for by implementing construction of mitigation wetlands as proposed in this plan, and the stormwater treatment infrastructure integrated into Project design. Therefore, the Project is anticipated to result in a net-benefit to beneficial uses and water quality of San Francisco Bay.



Source: BING | U.S. Fish and Wildlife Service

FIRSTCARBON SOLUTIONS™

1,000 500 0 1,000
Feet

Exhibit 3
Watershed Profile

SECTION 3: APPROACH TO COMPENSATORY MITIGATION

The Project proposes to establish 3 mitigation wetlands, as shown on Exhibit 2 and Appendix A and discussed in more detail here.

3.1.1 - Mitigation Wetlands A & B (linear)

The linear Mitigation Wetlands A & B are proposed to compensate for the loss of 2 sections of ephemeral, low-quality vegetated roadside drainage ditches (Seasonal Wetland Ditch A & B) and one unvegetated linear puddle (Seasonal Wetland/Puddle C) along Oakport Street determined by RWQCB in early 2021 to be regulated as a water of the State.

Nevertheless, adequate compensation will be achieved by establishing features similar in extent but higher quality on the east side of Oakport Street, as shown on the overview map (Exhibit 2) and the more detailed engineering drawings for these wetlands (Appendix A). Numerical dimensions of impacts, mitigation features and resulting ratios are presented in Section 1.2, below.

3.1.2 - Mitigation Wetland NW

Mitigation Wetland NW (Exhibit 4) is proposed to provide additional compensation for a) loss of temporary wetland function; and b) for potential previous loss of 0.24 acre of features identified throughout the site as "potential waters of the State" by the *Aquatic Features Delineation Report* (WRA 2019). However, these previously areas identified as construction-related depressions did not show soil wetland parameters or wetland hydrology, but these paramters were assumed by WRA to be present, and no wetlands were present during a 2021 follow up survey. If loss occurred, it resulted from routine EBMUD maintenance, including annual grading and gravelling unrelated to the proposed Project.

Nevertheless, additional compensatory mitigation for potential loss unrelated to the proposed project is pursued on request of RWQCB and will be achieved by establishing a 0.5-acre seasonal wetland of higher quality northwest of the project site (off-site), as shown on Exhibit 2 and 4. Numerical dimensions of impacts, mitigation features and resulting ratios are presented in Section 1.2, below. Detailed engineering plans for the proposed Mitigation Wetland NW will be provided once the conceptual mitigation approach presented here is approved by the RWQCB.

Source: BING | FCS

FIRSTCARBON SOLUTIONS™

130 65 0 130
Feet

Exhibit 4
Project Overview

3.2 - Summary of Impacts and Compensatory Mitigation

The following table presents a comparison of impacts and compensatory mitigation, including mitigation ratios.

Table 1: Impact and Mitigation

	Length (ft)	Average Width (ft)	Square feet	Acres
Impacts				
Permanent Impact on Seasonal Wetland Ditch A	270	2	540	0.012
Permanent Impact on Seasonal Wetland Ditch B	60	2	120	0.003
Permanent Impact on Seasonal Wetland/Puddle C	360	16	5,760	0.132
Sum Project-related Permanent Impacts	690	n/a	6,420	**0.147**
[Potential pre-Project loss of additional features due to EBMUD maintenance activity]	-	-	10,450	0.240
Sum Permanent Impacts	**690**	**1**	**16,870**	**0.387**
Compensatory Mitigation				
Mitigation Wetlands A & B	690	2	1,380	0.032
Mitigation Wetland NW	n/a	n/a	21,780	0.500
Sum Compensatory Mitigation	**690**	**2**	**23,160**	**0.532**
Net Gain Open Drainage Area (Compensatory Mitigation - Impacts)	**0**	**n/a**	**6,290**	**0.144**
Mitigation Ratio (Compensatory Mitigation : Impacted)	**> 1 : 1**		**> 1.3 : 1**	

SECTION 4: MITIGATION IMPLEMENTATION PLAN

The following section defines implementation for the three mitigation wetlands, including alignment and geomorphology, a restoration planting and maintenance plan, and measures to reduce and control erosion and the spread of invasive species.

4.1 - Geomorphology and Alignment

All mitigation wetlands will be excavated and contoured as defined by the engineering plans (Appendix A).

Mitigation Wetlands A & B will be contoured to result in linear wetland swales with concave vegetated banks at an angle not to exceed steepness of 1:2 (vertical: horizontal). These wetland swales will receive runoff from the project site, Oakport Street, and the area of and west of the I-880 off ramp. The swales will be contoured to form depressions that hold water long enough to establish wetland conditions, but will slightly slope to allow for heavy rain to drain to the existing culvert inlet at the south end of Mitigation Wetland B. The swales will be field-fitted to establish sinuosity according to the existing microtopography, and develop into natural seasonal wetland swales.

Mitigation Wetland NW will be contoured to result in a near-circular depressional wetland with vegetated banks. The boundaries will be field-fitted to establish a natural bank alignment according to the existing microtopography. This wetland will receive runoff primarily from the open area to its north and west.

4.2 - Implementation Timetable

Implementation of this CMMP will commence as soon as the entitlement process is complete and all funding is secured; but no later than initial ground disturbance for the overall Project.

4.3 - Revegetation Plan

4.3.1 - Revegetation of Mitigation Wetlands A & B

All newly constructed Mitigation Wetlands will be revegetated with adequate wetland vegetation in the fall following construction. Given the highly disturbed plant community and ubiquitous presence of invasive species surrounding the mitigation wetlands, and the highly variable and seasonal hydrological regime, initial herbaceous wetland revegetation will include only robust wetland species that have a realistic chance of establishing sustainable populations. These species are proposed to be primarily native species, including the species listed in Table 2, below. Additional species (including non-invasive, non-native wetland species if necessary) may be planted/seeded in coordination with a qualified restoration ecologist to maximize revegetation success.

Table 2: Wetland Plant Species Options for Wetlands A & B

Species	Common Name
Carex serratodens	Two toothed sedge
Carex barbarae	Santa Barbara sedge
Eleocharis macrostachya	Creeping spikerush
Juncus xiphioides	Iris-leaved rush
Juncus balticus	Wire rush
Juncus patens	Common rush
Hordeum brachyantherum	Meadow barley
Mimulus guttatus	Seep monkeyflower
Typha spp.	Cattails

4.3.2 - Revegetation of Mitigation Wetland NW

Mitigation Wetland NW is proposed to provide longer hydroperiods, and therefore will support an additional set of obligate wetland plants than listed in Table 2, including woody wetland species or phreatophytes. Therefore, the planting palette for Mitigation Wetland NW will include the species listed in Table 2, and additional species listed in Table 3. Additional native species may be planted/seeded in coordination with a qualified restoration ecologist to maximize revegetation success.

Woody riparian plantings can include live wood cuttings, container plants, or nursery stock. Live woody cuttings provide an economical means to propagate plants and are especially useful for bank stabilization because they have high survival and growth rates. Woody species that can be successfully propagated in the field from cuttings include willows (*Salix* spp.), dogwood (*Cornus* spp.), and cottonwood (*Populus fremontii*). Container plants or nursery stock are used to establish shrubs and trees that are difficult to propagate from seed or cuttings in natural settings. The riparian planting palette may include a selection of the species listed in 3.

Table 3: Additional Wetland/Phreatophyte Species Planting Palette (Options)

Species Name	Common Name
TREES	
Acer macrophyllum	Big leaf maple
Aesculus californica	California buckeye
Alnus rhombifolia	White alder
Fraxinus latifolia	Oregon ash
Juglans hindsii	Black walnut
Populus fremontii	Fremont's cottonwood
Quercus agrifolia	Coast live oak
Quercus lobata	Valley oak
Salix laevigata	Red willow
Salix lasiandra	Arroyo willow
Salix lucida	Shining willow
Umbellularia californica	Bay laurel
SHRUBS	
Baccharis pilularis	Coyote bush
Calycanthus occidentalis	Western spice bush
Heteromoles arbutifolia	Toyon
Rhamnus californica	Coffeeberry
Rosa californica	California wild rose
Symphoricarpos albus	Snowberry

Because the area to be enhanced with woody plantings is expected to provide seasonal wetland conditions during normal rainfall years. In recognition of these conditions, this Draft CMMP allows for plantings of native trees that are not considered riparian but that thrive in the vicinity of the project site, i.e., oak (*Quercus* spp.) which increases the probability for success of native tree cover establishment. All trees shall be planted in the fall or winter, above the bankfull elevation (approximately the 2-year storm event water level), and shall be spaced appropriately based on tree species and the desired canopy extent.

While native plants are adapted to the local weather patterns, irrigation shall be provided for the first 2 years, as necessary depending on rainfall. However, watering shall be kept to the minimum amount needed to keep the cuttings and seedlings alive and in a relatively vibrant condition. This will encourage root growth and adaptation to the California climate, as the intent is to establish self-sustaining native habitat.

Browse protection shall be installed and maintained as needed. Browse protection cages shall be removed after the trees have become well established and tolerant of browse damage. All planted trees shall be inspected and properly maintained, including repairing watering basins, removing weeds around the watering basins, and replacing/re-fastening weed fabric, as necessary. Structurally compromised trees (i.e., broken branches, limbs, etc.) shall be trimmed as necessary to remove structural damage that has the potential to cause mortality.

4.3.3 - Revegetation of Temporarily Disturbed Upland Areas

If currently naturally vegetated upland areas are impacted by construction of these wetlands, these areas will also be revegetated with a native upland seed mix as defined in Table 4, below.

After construction of mitigation wetlands, potentially disturbed surrounding upland areas shall be revegetated using a native seasonal seed mix. The native seed mix should include species listed in 4, below, or follow the guidance of a qualified restoration ecologist or landscape architect to achieve revegetation goals.

Table 4: Native Seed Mix Options for Upland Revegetation

Species	Common Name
Bromus carinatus	California brome
Elymus glaucus	blue wildrye
Hordeum californicum	California barley
Festuca idahoensis	Idaho fescue
Nassella pulchra	purple needlegrass
Poa secunda	pine bluegrass
Eschscholzia californica	California poppy
Lupinus nanus	sky lupine
Clarkia rubicunda,	wine cup clarkia
Achillea millifolium	white yarrow
Sisyrinchium bellum	blue-eyed grass
Vulpia microstachys	sixweeks fescue

All construction debris and trash shall be removed from the area and soil prior seeding. Roughening compacted soil using hand tools or mechanical methods such as discing may be necessary before broadcast seeding.

Broadcast seeding can be implemented by hand or by using mechanical seeding equipment. All seed shall be certified seed free and in conformance with the California State Seed Law of the Department of Agriculture. While native plants are adapted to the local weather patterns, it is helpful to provide additional water during the first 1 to 2 years, depending on rainfall. However, watering shall be kept to the minimum amount needed to keep seeded vegetation alive and in a relatively vibrant condition. This will encourage root growth and adaptation to the California climate, as the intent is to establish self-sustaining native habitat.

Additionally, invasive species shall be removed from all seeded and revegetated areas, as defined in Section 2.2.3, below.

4.3.4 - Invasive Species Control

Mechanical methods shall be implemented to eradicate and control invasive species (i.e., species listed by California Invasive Plant Council as highly invasive) at mitigation sites and areas affected by implementation of mitigation wetlands.

Weed control treatments shall include only legally permitted herbicide approved for application through manual and mechanical methods. The application of herbicides shall comply with all State and federal laws and regulations under the prescription of a Pest Control Advisor and implemented by a Licensed Qualified Applicator. The project shall only use herbicides that are registered for use in, or adjacent to aquatic habitats in California (not just EPA certified). Herbicides shall not be applied during or within 72 hours of a scheduled rain event. Where manual and/or mechanical methods are used, disposal of the plant debris shall take place at an appropriate off-site location. The timing of the weed control treatment shall be determined for each plant species with the goal of controlling populations before they start producing seeds and/or encroach into areas adjacent to rhizomatous shoots.

SECTION 5: PERFORMANCE CRITERIA

The following section defines Performance Criteria (PC) that need to be met for compensatory mitigation to be considered successful.

5.1 - Wetland Extent and Function

PC-1 By the end of the third wet season with normal or above-normal rainfall as defined by the NRCS WETS tool, and all subsequent years following normal or above-normal rainfall years, the aggregate wetland area of Mitigation Wetlands A, B, and NW shall include a minimum of 0.532 acre, as determined by a qualified wetland delineator using the U.S. Army Corps of Engineers (USACE) wetland delineation protocol as it relates to hydrophytic vegetation, hydric soil indicators, and hydrology indicators.

PC-2 Invasive plant species cover (California IPC rating “High”) shall never exceed 5 percent absolute cover for each monitoring year.

5.2 - Geomorphic Conditions

PC-3 The linear Mitigation Wetlands A & B shall not result in excessive erosion or sedimentation that threatens water quality or property.

SECTION 6: MONITORING AND REPORTING

Monitoring shall occur for 10 years, at the end of spring during the following monitoring years: Year 1 - 5, 8, and 10 after construction.

The first year of monitoring should begin in the calendar year after completing the Project. For example, if the Project is completed in 2023, then the first year of monitoring should begin in 2024 and the first monitoring report should be submitted by January 31, 2025.

The Applicant shall submit a monitoring report to RWQCB at the end of each monitoring year. The first annual report will be submitted 12 months after construction has been completed.

6.1 - Monitoring and Reporting for Wetland Extent and Function

The annual reports shall include the results of a wetland delineation for Mitigation Wetland A, B and NW following the requirements of the USACE wetland delineation protocol, specifically as it relates to the three-parameter test of hydrophytic vegetation, hydric soil indicators, and hydrology indicators. No formal wetland delineation report is required, however the report shall include a map of the wetland boundary, a quantification of wetland area, and a minimum of 2 Arid West Wetland Delineation Field Data Forms, covering a minimum of 3 sample point pairs, at a minimum one pair at a representative location of each Mitigation Wetland.

The annual reports shall compare data to previous years and detail progress toward meeting the success criteria. Photographs from four permanent photo documentation points shall be included to document conditions over time. At the end of 10 years, a final report shall be prepared that includes summaries of the monitoring data and representative photographs from the photo-documentation points, and the extent to which all performance criteria have been met.

Additionally, the monitoring report shall include a summary of extent of invasive plants presence, and efforts implemented to remove and control invasive plants.

6.2 - Geomorphic Monitoring and Reporting

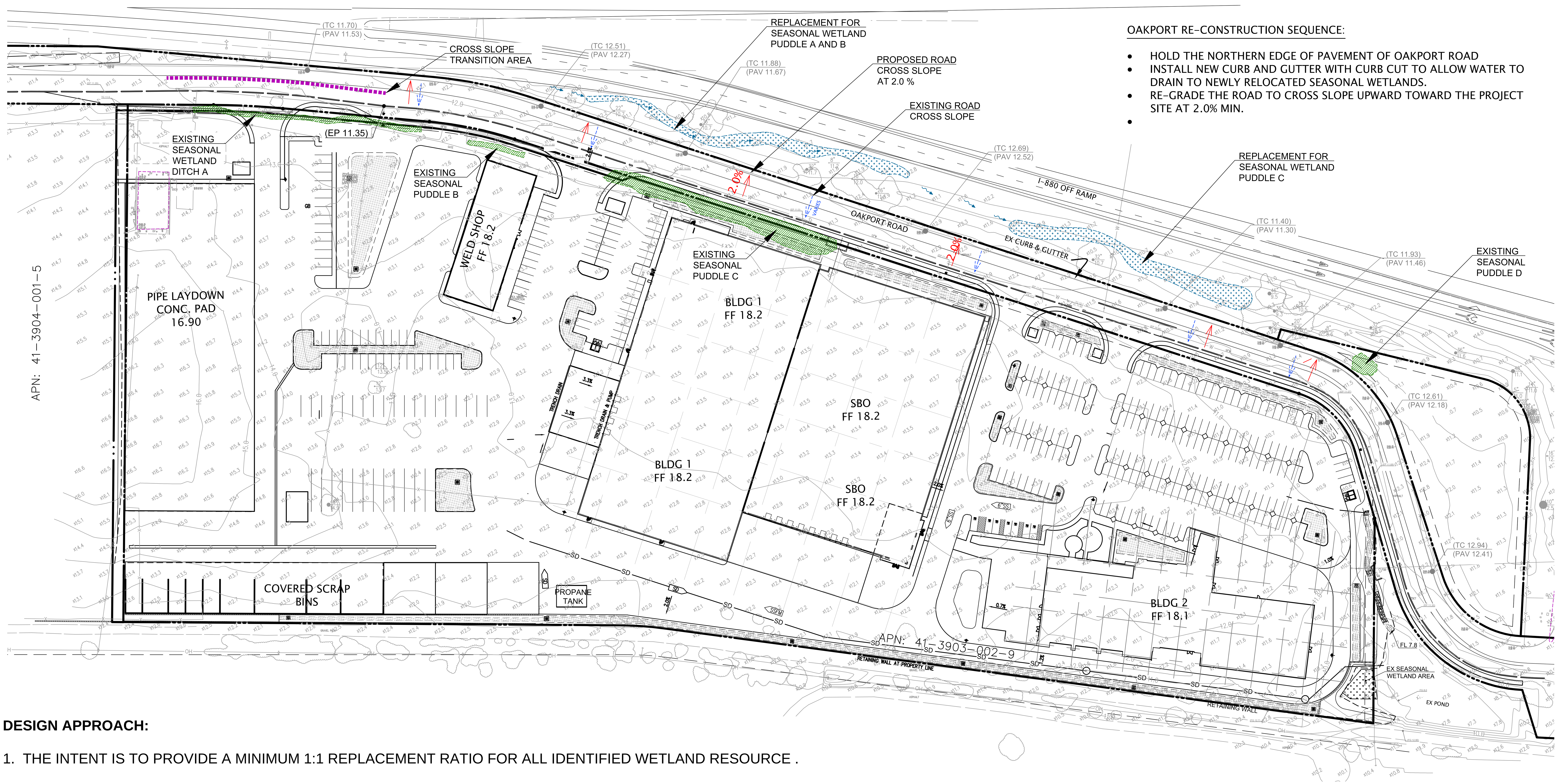
Geomorphic monitoring shall be conducted for a minimum of 5 years to ensure that the proposed linear mitigation wetlands are functioning as designed. Monitoring shall consist of visual inspections and photo-documentation performed annually by a qualified professional during the low flow summer season. Results of each monitoring effort, including a statement related to the extent to which the performance criteria PC-3 is met, shall be submitted to the RWQCB.

SECTION 7: ADAPTIVE MANAGEMENT AND REMEDIATION

If performance criteria are not being achieved, the Applicant shall implement adaptive management methods and remedial measures. Adaptive management and remedial measures, among others, may include increased hand-watering of the plants to improve plant establishment, changing browse protection techniques in response to browse damage, replacing dead plants with native plant species that would be expected to perform better given the specific circumstance of the underperforming area. If performance criteria cannot be achieved through above methods despite normal or above normal rainfall years, the Applicant shall in coordination with the RWQCB, excavate and then restore the Mitigation Wetlands to allow for larger and deeper depressional areas to pond and hold water to allow for longer hydroperiods and therefore to support wetland conditions on site.

Appendix A:
Linear Mitigation Wetlands Plan Drawing

CAUTION: IF THIS SHEET IS NOT 24"x36" IT IS A REDUCED PRINT



DESIGN APPROACH:

1. THE INTENT IS TO PROVIDE A MINIMUM 1:1 REPLACEMENT RATIO FOR ALL IDENTIFIED WETLAND RESOURCE .

2. THE EXISTING WETLAND RESOURCES ARE FED BY THE SEASONAL STORM WATER RUNOFF FROM THE ADJACENT UPLAND OAKPORT STREET PAVEMENT SURFACE AND NEARBY ADJACENT ROADSIDE LANDSCAPE AREAS.

3. THE REPLACEMENT RESOURCE AREAS HAVE BEEN CHOSEN FOR THEIR CLOSE PROXIMITY TO THE EXISTING FEATURES AND THEIR SIMILAR PHYSICAL PROPERTIES.

4. THE EXISTING LOCATION FOR THE REPLACEMENT RESOUCE IS A ROADSIDE LANDSCAPE AREA THAT IS NOT CURRENTLY A WETLAND AREA.

BACKGROUND AND DESCRIPTION OF THE PROPOSED REPLACEMENT OF THE SEASONAL WETLAND RESOURCES:

The location for the proposed replacements of the Seasonal Wetland Resources is across Oakport Street on the opposite roadside landscape buffer area. Currently, the pavement design of Oakport Street is sloped, directing surface runoff to the WEST sides of the road. The updated road will be redesigned to gradually slope the road to the East, or the side of the proposed replacement area. The ground will be modified slightly to create a depression similar the the West side of the road, creating the seasonal ditches and puddles similar to the west side of the road. The soil characteristics will be analyzed to determine the best location with similar attributes found on the west side. the proposed ratio will be at least 1:1, if not slightly more.

Reason for the relocation of the wetland resources: The existing locations of the wetland resources will be developed into a wider sidewalk area that will be in front of the proposed office building and warehouse facility as well as the upgraded and expanded existing EBMUD yard facility. The improvement of the Oakport Street industrial area is part of the Coliseum Master Plan Development.

0 25 50 100
SCALE: 1" = 50'
ORIGINAL GRAPHIC SCALE

Know what's below. Call 811 before you dig.

W:\SNR\17\0069\00\Civil\Exhibits\2021-05-05 oakport rd drainage exhibit\0069_oakport_exhibit.dwg

WARE MALCOMB
LEADING DESIGN FOR COMMERCIAL REAL ESTATE
4683 chabot dr
suite 300
pleasanton, ca 94588
p 925.244.9620
waremalcomb.com

REGISTERED PROFESSIONAL ENGINEER GERRY L PARCO No. 59608 CIVIL STATE OF CALIFORNIA
May 05, 2021
FOR AND ON BEHALF OF WARE MALCOMB

SUPPLYBANK.ORG OFFICES & DISTRIBUTION FACILITY
OAKPORT STREET
OAKLAND, CALIFORNIA

NO.	DATE	REMARKS

JOB NO.:	SNR17-0069
PA / PM:	GP
DRAWN BY:	SY
DATE:	JAN 15, 2019

SHEET
EXHIBIT B
Sheet 11 of

Appendix I

Request for Verification of Jurisdictional Delineation, SupplyBank.Org/Oakport Street Study Site

LSA, August 4, 2022

LSA

CARLSBAD
CLOVIS
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

August 4, 2022

Brian Wines
Regional Water Quality Control Board
1515 Clay Street # 1400
Oakland, California 94612

Subject: Request for Verification of Jurisdictional Delineation, SupplyBank.Org/Oakport Street Study Site, Oakland, Alameda County, California

Dear Mr. Wines:

On behalf of SupplyBank.Org, LSA is requesting re-verification of the extent of jurisdictional waters of the State of California under the Porter-Cologne Act on the SupplyBank.Org/ Oakport Street Study Site, Oakland, Alameda County, California. This letter reports the results of a delineation performed by LSA of the potential extent of waters of the State conducted on May 6, 2022, including wetlands, on the Study Site.

A previous delineation was conducted by WRA Environmental Consultants (WRA) on the Study Site on August 27, 2019 (WRA 2019) and then again by FirstCarbon Solutions (FCS) in 2021 (FCS 2021). This delineation was verified by the U.S. Army Corps of Engineers (Corps) on March 4, 2021 (see attached Approved Jurisdictional Delineation). The Corps' verification determined that with the exception of Seasonal Wetland SW-01, which is outside of the proposed project footprint, the Study Site does not contain any federally jurisdictional waters. This new delineation was conducted at your request because of your concerns regarding the seasonal timing of vegetation data in the original delineation. Data was collected in the original delineation at the end of the dry season rather than at the end of the wet season, which would have been more suitable for identifying the presence and extent of hydrophytic plant species.

SITE DESCRIPTION

The approximately 28.52-acre Study Site is located within the southern portion of the City of Oakland, along the western side of Interstate 880 and north of its interchange with Zhone Way. The Study Site includes a portion of the I-880 right-of-way west of the southbound off-ramp, Oakport Street, and extends westward to an abandoned railroad bed. The northern edge of the Study Site is the Peppermint Gate Access Road to the Oakport Field and shoreline trail. A separate portion of the Study Site is located north of the Peppermint Gate Access Road and west of the railroad bed.

The Study Site comprises portions of Alameda County Assessor's Parcels 1-3904-1-5, 41-3903-2-8, and 41-3902-3-22. The site is situated within un-sectioned lands with a projected location of Township 2 South, Range 3 West, in Section 17 on the Oakland East, California 7.5-minute USGS quadrangle, and is centered at approximately 37.7560° North Latitude and 122.2121° West

Longitude. Figures 1 and 2 (attached) depict the regional location and Study Site location, respectively.

The majority of the Study Site consists of a graded surface that is regularly used as an East Bay Municipal Utility District corporation and secondary storage yard. The site is also used for community events third-party storage, and as vehicular parking for off-site events. Study Site elevations range between 10 and 15 feet above mean sea level.

Land uses surrounding the Study Site include an East Bay Municipal Utility District Corporation Yards to the north, Highway 880 and commercial development to the east, more commercial development to the south, and San Leandro Bay shoreline to the west.

The Study Site is accessed from I-880 at the 66th Avenue exit and driving westward onto Zhone Way, then turning right/northward on Oakport Street.

Vegetation

The majority of the project site had been recently bladed at the time of the delineation for fire prevention purposes. The site consequently had less than 1 percent vegetation cover of regrowth of ruderal species such as prostrate knotweed (*Polygonum aviculare*), English plantain (*Plantago lanceolata*), buckhorn plantain (*P. coronopus*), curly dock (*Rumex crispus*), mayweed (*Anthemis cotula*), bristly ox-tongue (*Helminthotheca echioides*), filaree (*Erodium cicutarium*), bur clover (*Medicago polymorpha*), cheeseweed (*Malva parviflora*), and unidentified grasses. The western edge of the site was vegetated with grasses, including Italian rye (*Festuca perennis*), Mediterranean barley (*Hordium marinum*), wild oats (*Avena* spp.), and rip-gut (*Bromus diandrus*). Trees along I-880 and in the northern study area are mostly non-native and predominantly Eucalyptus species.

Soil

Soils on the entire Study Site are mapped as *Urban land* (Map Unit Symbol 146) (Web Soil Survey, https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm, accessed May 2, 2022). The Urban land soil itself is rated as non-hydric, but has a 5 percent hydric rating because of estimated inclusions of un-named soils in marshes which are assumed hydric. The soils observed on the Study Site appear to be imported fill.

Hydrology

The hydrology of the site was previously described in the 2021 delineation report. Base on observations conducted on the Study Site on May 6, 2022, hydrological conditions have not changed.

METHODS

The field investigations of potential jurisdictional wetlands were conducted using the routine determination method provided 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).

FIELD METHODS

LSA senior soil scientist Chip Bouril investigated the Study Site on May 6, 2022. Potential jurisdictional wetland boundaries were mapped using a global positioning system (GPS) receiver with potential sub-meter accuracy. Wetland boundaries were determined by following a combination of the limits of hydrophytic vegetation, relative elevation, and topographic breaks. LSA established fifteen sample points on the Study Site; their locations are shown on Figures 3 and 4.

The Study Site had received approximately 1.7 inches of rainfall during the month prior to the site investigation, but all surface soils observed were dry. During the site investigation, the locations previously delineated as potential waters were revisited, and the previous data points from the WRA and FCS delineations were re-established to the extent feasible.

RESULTS

Potential jurisdictional features and sample point locations are shown on Figures 3 and 4. The names of potential wetland features previously mapped by WRA and FCS were continued for consistency even if the feature dimensions changed.

CWA Jurisdiction

Seasonal Wetland D

This feature consists of a basin that drains to a storm drain culvert. A new sample point (SP-6R) was established in this feature at the likely location of the previous FSC Sample Point 6. Much of the immediate location around SP-6R was covered in mowed remains of cattail leaves, but there was only about 5 percent cover of living cattail shoots along with cover of Italian rye, winter vetch (*Vicia villosa*), and small plants that were likely willow weed (most likely *Persicaria lapathifolia*). The vegetation meets the hydrophytic vegetation criterion and the soil contained common redoximorphic mottling, but there was no surface evidence of wetland hydrology. SP-5 5 was established near the culvert inlet and did not meet any of the jurisdictional wetland criteria. The feature surrounding the cattail shoots and containing hydrophytic plant cover is mapped as Seasonal Wetland D, with a potential jurisdictional area of 170 square feet (0.004 acre).

Seasonal Wetland E

SP-8 and SP-9 were established within a subtle basin situated further north from Seasonal Wetland D. This feature meets jurisdictional wetland criteria and its extent is defined by the transition from Mediterranean barley and Italian rye to wild oats and rip-gut grass. The feature is mapped as Seasonal Wetland E with a potential jurisdictional area of 865 square feet (0.020 acre).

Construction Depressions CD-02 – CD-06

The area previously mapped by WRA as containing CD-02 through CD-06. These construction depressions are no longer present. The area had been bladed level and has no vegetation nor topographic evidence of the construction-related depressions. SP-5R and SP-7R were established at WRA's previous sample points 5 and 7, respectively. Vegetation at SP-5R included both hydrophytic and non-hydrophytic species, but total vegetation cover was only about 1 percent. The vegetation species observed meet the hydrophytic vegetation criterion through the dominance test, but not through the prevalence index. There was no evidence of hydric soils or of wetland hydrology. Vegetation at SP-7R also included both hydrophytic and non-hydrophytic species, but total vegetation cover was less than 1 percent. The vegetation species meet the hydrophytic vegetation criterion through the dominance test, but not through the prevalence index. There was no evidence of hydric soils or of wetland hydrology. Some of the graded soil surface at the approximate location of the previously mapped CD-02 have a slightly darker color and perhaps larger-sized pieces, but there was no concave or basin topography observed at any of the previously mapped CD-02 through CD-06 locations.

Seasonal Wetland SW-01

WRA mapped SW-01 in the southwestern corner of the Study Site. (This wetland was the only feature in the Study Site that was verified by the Corps as a jurisdictional water of the United States.) A chain link perimeter security fence extends through this location. SP-4 was established inside the fence in an area that has been rutted by maintenance vehicle tires and contains surface mud cracks. The vegetation cover at SP-4 meets the hydrophytic vegetation criterion, but there are no hydric soil indicators or wetland hydrology indicators other than the tire ruts. The ponding and soil saturation at this location may have been anomalous and too brief to establish wetland hydrology. A second sample Point (SP-7) was established nearby and at a slightly lower elevation outside the fence in an undisturbed location that contained algal matting and a very few ostracode shells, indicating seasonal inundation. The vegetation meets the hydrophytic criterion. The soil contains redoximorphic mottling, but at too low a concentration to meet indictors F6 or F8. SP-7 is located along the northern edge of a large basin that likely seasonally ponds and appears to have ponded after the October atmospheric river storm. This basin meets jurisdictional wetland criterion and is mapped as Seasonal Wetland 01, with a potential jurisdictional area of 1,290 square feet (0.030 acre).

Construction Depression CD-01

WRA previously mapped CD-01 along the western edge of the Study Site. Three new sample points (SP-1, SP-2, and SP-3) were established in this depression which is located outside a chain link perimeter security fence. The elevations in this depression are slightly lower than the maintained graded pad inside the fence to its east and the abandoned gravel railroad bed to its west. The northern end of this area is dammed by a gravel berm that created a shallow basin that had ponded water during the rainy season. SP-1 was placed in the center of the basin. Vegetation at SP-1 meets the hydrophytic vegetation criterion (with two obligate indicator species), and contains algal matting and abundant ostracode shells. However, the thin gravelly soil at SP-1 does not display hydric soil indicators. SP-2, which was placed nearby at a slightly higher elevation, also meets the jurisdictional hydrophytic vegetation criterion (although with facultative grasses), and displays water stains and adventitious grass roots, as well as common redoximorphic mottling in the soil. SP-3 was placed at a patch of rabbit's-foot grass (*Polypogon monspeliensis*) further south. It meets jurisdictional hydrophytic vegetation criteria, has matted roots and ostracode shells as evidence of seasonal ponding, but did not show redoximorphic soil mottling. These three sample points combine to define a shallow, linear basin that appears to seasonally receive and pond runoff from the graded areas to its east. Although this topographic basin was created by past grading and maintenance activities, it does not appear to be currently maintained. This feature is mapped as Seasonal Wetland CD-01, with a potential jurisdictional area of 2,840 square feet (0.065 acre).

Seasonal Wetland Puddle C

A series of formerly graded swales and rough ditch segments extend along some of the western Oakport Street frontage of the study site. FSC mapped a shallow swale as Seasonal Wetland Puddle C in this location. Two new sample points (SP-3R and SP-4R) were placed in this swale in the approximate locations of FCS sample points 3 and 4. The swale is a constructed drainage feature underlain by a gravelly base that is covered by a layer of sediments washed in from the graded area to the west. The swale showed clear evidence of recent ponding such as mud cracks and a few ostracode shells, likely resulting from the October 2021 atmospheric river storm. There was no standing water, soil saturation, or damp soil observed in this swale during the field investigation.

SP-3R was placed within the recently ponded area of the swale. Its vegetation cover was entirely hydrophytic plant species. Its soil above the compacted gravel layer at 4 inches did not display any redoximorphic mottling, but did have a surface layer of dark, organic-rich silt. Wetland hydrology indicators were mud cracks and ostracode shells. There was no algal matting present, implying relatively brief inundation. SP-4R was placed on the adjacent side slope of the swale. Its vegetation was mostly facultative and meets jurisdictional hydrophytic plant criteria, but its soil had no hydric soil indicators and there were no wetland hydrology indicators. The extent of this swale with jurisdictional wetland characteristics is mapped as Seasonal Wetland Puddle C, with a potential jurisdictional area of 3,310 square feet (0.076 acre). It was not clear where any overflow from this swale drains, if it does; there was no evidence of water flow observed in the swale.

Northern Ditches

A constructed ditch occurs north of Seasonal Wetland Puddle C on the western side of Oakport Street. SP-1R was placed in a segment of this ditch at the approximate location of FCS sample point 1. The vegetation in the ditch was a mixture of hydrophytic and non-hydrophytic species that clearly failed to meet the jurisdictional hydrophytic vegetation criterion. The soil contained rust stains adjacent to its common iron debris, but otherwise had no redoximorphic mottling. There were no indicators of wetland hydrology and no evidence of ponded or flowing surface water in this ditch segment. The ditch feature northward from this location is sporadic, having an excavated cross section in some locations and no ditch definition at all in others. At least one completely buried culvert end was observed. This sporadic ditch area contains common garbage and debris, but again shows no evidence of flowing water or wetland characteristics, and does not meet jurisdictional criteria as wetlands nor as other waters.

The northern ditches mapped as WDD-01 and -02 by WRA were not accessible because of chain link fencing and were not directly investigated but were viewed from a distance through the fence. No wetland characteristics were observed other than one potential mowed patch of cattails viewed from a distance through the fencing. Both ditches were described as containing "an open ditch with open water in the center and dense vegetation along the fringes" by WRA on August 27, 2019, but also as having mud cracks, so it is not clear whether there was actually standing water at the time of the delineation. No standing water and no obvious fringe of hydrophytic vegetation was observed on May 6, 2022, which suggests an artificial water source may have been present in the summer of 2019. As a default, these features are mapped following the WRA delineation as Seasonal Wetland Ditch WDD-01 with a potentially jurisdictional area of 515 square feet (0.012 acre) and WDD-02 with a potentially jurisdictional area of 615 square feet (0.014 acre).

Northwest Mitigation Area

This area, located north of the Peppermint Gate Access Road and west of the abandoned railroad grade, has a slightly convex topography and sandy soils that are predominantly vegetated with non-hydrophytic species. Sample Point 6, placed in a slight depression created by a berm of wood chips, displayed no potentially jurisdictional wetland characteristics.

Discussion of Observed Evidence of Seasonal Ponding

No additional WETS analysis was conducted for this delineation, but the analysis completed by WRA in their 2019 delineation is referenced. Rainfall in the 2020-21 and 2021-22 season was well below normal and may have affected wetland characteristics observed, possibly reducing the relative cover of hydrophytic plant species in some locations. Alternatively, the October 2021 atmospheric river storm, which has been described as a 50-year to 100-year storm, delivered high rainfall amounts in a short amount of time. In this predominantly flat and level study area with no clear or maintained drainage system, this storm event would be expected to have created abnormal surface runoff and ponding in any topographic basins. Thus, the observed evidence of ponding such as mud cracks may be of greater extent than typical of site hydrology. The early season soil saturation and ponding may also have increased the hydrophytic plant cover observed in and near the seasonally inundated areas from that of a more typical rainfall year.

Porter-Cologne Water Quality Control Act (RWQCB) Jurisdiction

Potentially jurisdictional waters of the State are shown on Figures 3 and 4.

Other Observations

No other evidence of potential waters of the State was observed on the Study Site.

CONCLUSIONS

Aquatic features subject to the Porter-Cologne Water Quality Control Act identified on the SupplyBank.Org/Oakport Street Study Site comprise seven seasonal wetlands with a total potential jurisdictional area of 0.221 acre. These potential jurisdictional areas and Study Site boundaries are mapped on Figures 3 and 4, which are 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.

Please contact Dan Sidle at (510) 376-5704 or at dan.sidle@lsa.net if you have any questions regarding this report.

Sincerely,

LSA Associates, Inc.

CHIP BOURIL

Chip Bouril
Senior Soil Scientist

Attachments: Figure 1: Regional Location Map
Figure 2: Site Location Map
Figure 3: Waters of the United States and Waters of the State
Figure 4: Waters of the United States and Waters of the State - Mitigation Area
Data Sheets 1 through 9, 1R, and 3R thorough 7R
U.S. Army Corps of Engineers Approved Jurisdictional Delineation (dated 3/8/2021)

cc: Jason Teramoto, SupplyBank.Org

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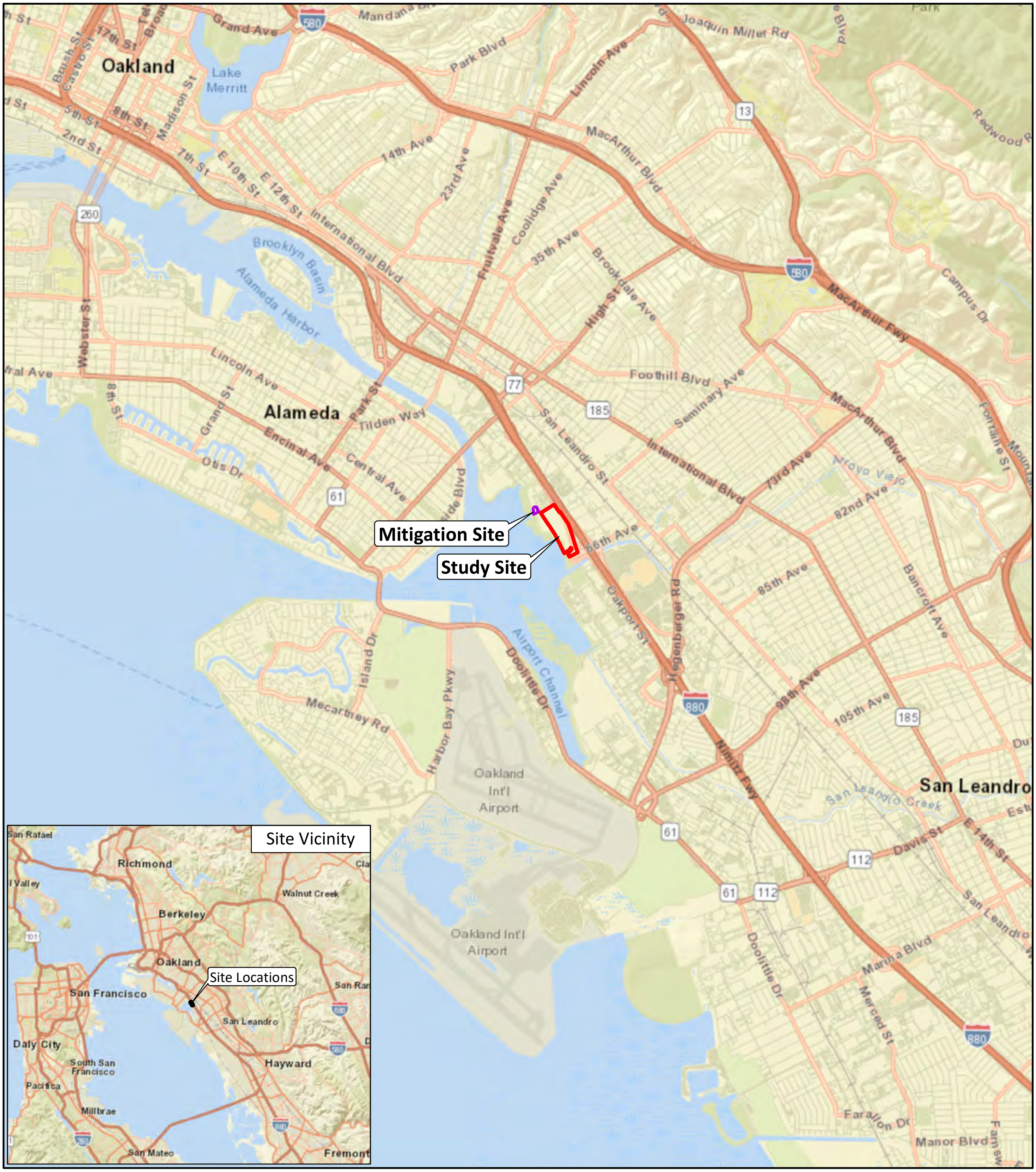


LSA

LEGEND

Study Site

Mitigation Site

FIGURE 1

N

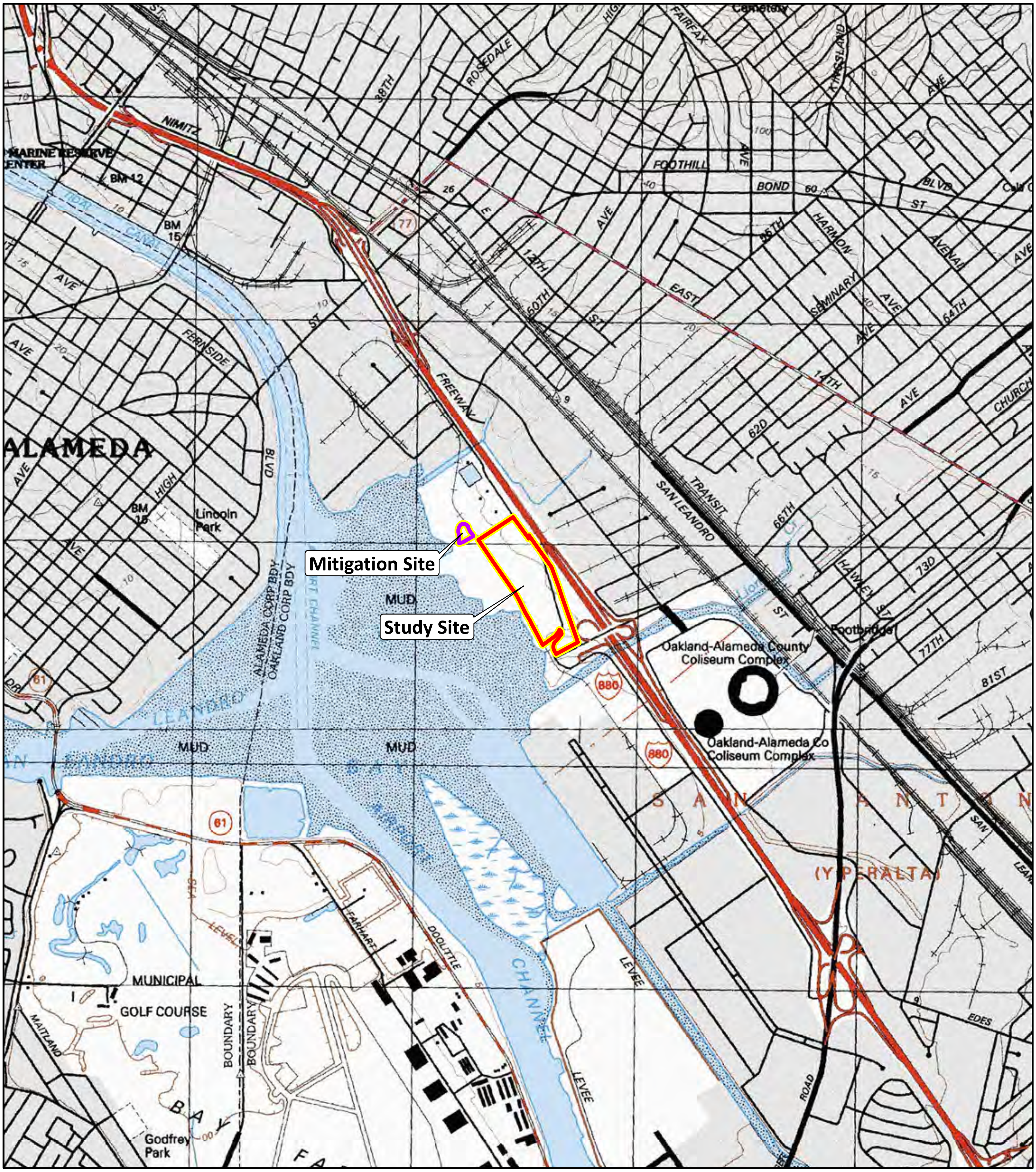
0 0.5 1
MILES

Oakport Street Project
Oakland, Alameda County, California

Regional Location Map

SOURCE: Esri World Street Map (2022).

I:\SLK2201\GIS\Maps\Delineation\Figure 1_Regional Location Map.mxd (6/14/2022)



LSA

LEGEND

Study Site

Mitigation Site

FEET 0 1000 2000

FIGURE 2

Oakport Street Project
Oakland, Alameda County, California

Site Location Map

SOURCE: USGS 7.5-minute Topo Quads - *Oakland East, Calif.* (1997) and *San Leandro, Calif.* (1993).

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WATERS OF THE UNITED STATES and WATERS OF THE STATE	Length (ft)	Width (ft)	Area (sq. ft.)	Area (acres)
WETLANDS				
SW-01	130	10	1,290	0.030
WETLANDS TOTAL			1,290	0.030
TOTAL WATERS OF THE UNITED STATES			1,290	0.030

WATERS OF THE STATE only	Length (ft)	Width (ft)	Area (sq. ft.)	Area (acres)
WETLANDS				
CD-01	205	14	2,840	0.065
Seasonal Wetland Puddle C	360	9	3,310	0.076
Seasonal Wetland E	70	12	865	0.020
Seasonal Wetland D	20	9	170	0.004
WDD-01	175	3	515	0.012
WDD-02	205	3	615	0.014
WETLANDS TOTAL			8,315	0.191
TOTAL WATERS OF THE STATE only			8,315	0.191

TOTAL WATERS OF THE STATE		
WATERS OF THE STATE only	8,315	0.191
WATERS OF THE UNITED STATES that are also WATERS OF THE STATE	1,290	0.030
TOTAL WATERS OF THE STATE	9,605	0.221

LSA

FIGURE 3

LEGEND
- Study Site
- Wetland Sample Point
- Non-wetland Sample Point

WATERS OF THE UNITED STATES and WATERS OF THE STATE
- Wetland

WATERS OF THE STATE Only
- Wetland

N

1 INCH = 150 FEET

0 75 150
FEET

Oakport Street Project
Oakland, Alameda County, California

Waters of the United States
and Waters of the State

SOURCE: Google Maps (2022).

I:\SLK2201\GIS\Maps\Delineation\Figure 3_Waters of the US and State.mxd (8/4/2022)

LSA

LEGEND

Study Site – Mitigation Area

Non-wetland Sample Point

WATERS OF THE UNITED STATES
and/or WATERS OF THE STATE
No jurisdictional features observed.

1 INCH = 80 FEET

0 40 80
FEET

SOURCE: Google Maps (2022).

FIGURE 4

Oakport Street Project
Oakland, Alameda County, California

Waters of the United States and
Waters of the State - Mitigation Area

I:\SLK2201\GIS\Maps\Delineation\Figure 4_Waters of the US and State - Mitigation Area.mxd (8/4/2022)

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: OAKLAND/ALAMEDA Sampling Date: 6 MAY 22

Applicant/Owner: ______ State: CA Sampling Point: 1

Investigator(s): C. Bouril Section, Township, Range: ______

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

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

Soil Map Unit Name: ______ 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 ______	Is the Sampled Area within a Wetland? Yes X No ______
Hydric Soil Present?	Yes X	No ______	
Wetland Hydrology Present?	Yes X	No ______	

Remarks:

PONDED IN OCTOBER STORM?

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. MENTHA POLEGIUM	25	X	OBL
2. LYTHRUM HYSSOPIFOLIA	15	X	OBL
3. LOTUS CORNICULATUS	20	X	FAC
4. DISTICHLIS SPICATA ?	3		FAC
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: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (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: ____

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-1½	10YR 3/4		—				GRVL	FILL
	-3/6							
1½+	HARD							

[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 (Al)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (All)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (Sl)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (Fl)
- ___ 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 (AlO) (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 INDICATORS.. CONSIDER HYDRIC BECAUSE OF PLANTS & HYDROLOGY INDICATORS

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (Al)
- ___ 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)
- X Biotic Crust (B12) ALL WET
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (Cl)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (CS)
- ___ Thin Muck Surface (C7)
- X Other (Explain in Remarks) OSTRACODES

Secondary Indicators (2 or more required)

- ___ Water Marks (Bl) **(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:

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: OAKLAND/ALAMEDA Sampling Date: 6MAY22

Applicant/Owner: ______ State: CA Sampling Point: 2

Investigator(s): ______ Section, Township, Range: ______

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

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

Soil Map Unit Name: ______ 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: 3' R)			
1. FESTUCA PERENNIS	55	X	FAC
2. HORDEUM MARINUM	35	X	FAC
3. HELMINTHOTHECA ECHIOIDES	10		FAC
4.			
5.			
6.			
7.			
8.			
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: 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)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2		7.5YR 4/6	10	C	PL	L	
2-4	"		"	6	C	PL	L	
4+	GRVL							

[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 (Al)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (All)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (Sl)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (Fl)
- ___ Loamy Gleyed Matrix F2)
- ___ Depleted Matrix (F3)
- X 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 (AlO) (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:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (Al)
- ___ 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)
- X Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (Cl)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (CS)
- ___ Thin Muck Surface (C7)
- X Other (Explain in Remarks)

ADVENTITIOUS ROOTS FAC

Secondary Indicators (2 or more required)

- ___ Water Marks (Bl) (**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:

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: OAKLAND/ALAMEDA Sampling Date: 6 MAY 22

Applicant/Owner: ______ State: CA Sampling Point: 3

Investigator(s): C. BOURU Section, Township, Range: ______

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

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

Soil Map Unit Name: ______ NWI classification: ______

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

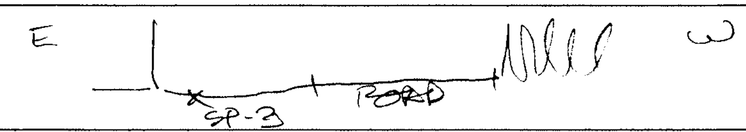
Are Vegetation ______ Soil ______ or Hydrology ______ Significantly disturbed? Are "Normal Circumstances" present? Yes ______ No ______

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 ______	**Is the Sampled Area within a Wetland?** Yes X No ______
Hydric Soil Present?	Yes ______	No X	
Wetland Hydrology Present?	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: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1. FESTUCA PERENNIS	55	X	FAC
2. POLYPOGON MONSPELIENSIS	20	X	FACW
3. LOTUS CORNICULATUS	15		FAC
4. HORDEUM MARINUM	10		FAC
5.			
6.			
7.			
8.			
Total Cover:			

Woody Vine Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
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)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0 – 1	10YR3/2		→				L	
1 – 3	10YR4/2		→ *				L	
	10YR4/3							
3 – 6	10YR6/2		— *				Si	
	10YR5/3							

[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: * SOME REDOX COLORS, [illegible] MIXED [illegible] WATER [illegible]

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)
X Biotic Crust (B12) WATER ROOTS,
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (C6)
___ Thin Muck Surface (C7)
X Other (Explain in Remarks) OSTRACODES

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:

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: ~~OAKLAND~~/ALAMEDA Sampling Date: 6 MAY 22

Applicant/Owner: ______ State: CA Sampling Point: 4

Investigator(s): C. BOURIL Section, Township, Range: ______

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

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

Soil Map Unit Name: ______ NWI classification: ______

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

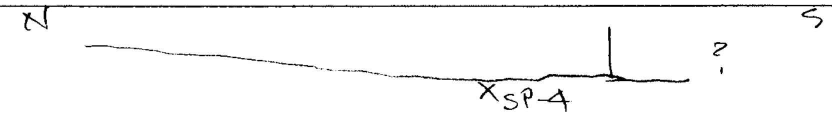
Are Vegetation ______ Soil ______ or Hydrology ______ Significantly disturbed? Are "Normal Circumstances" present? Yes ______ No ______

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 ______	**Is the Sampled Area within a Wetland?** Yes ______ No X
Hydric Soil Present?	Yes ______	No X	
Wetland Hydrology Present?	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: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (Plot size: 5' R)	Absolute % Cover	Dominant Species?	Indicator Status
1. LYTHRUM HYSSOPIFOLIA	15	X	OBL
2. KICKXIA ELATINE	10		UPL
3. POLYGONUM AVICULARE	5		FAC
4. LOTUS CORNICULATUS	5		FAC
5. RUMEX CRISPUS	10		FAC
6. FESTUCA PERENNIS	15	X	FAC
7.			
8.			
Total Cover:	60		

Woody Vine Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
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: 4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0 – 8	10YR3/2	50	—				CL	WOODY DEBRIS
	10YR4/2	50						

[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 (C6)
- ____ 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: MUD CRACKS, TIRE TRACKS FROM MOWING

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: OAKLAND/ALAMEDA Sampling Date: 6 MAY 22

Applicant/Owner: ______ State: CA Sampling Point: FCS TR 5

Investigator(s): C. BOURIL Section, Township, Range: ______

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

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

Soil Map Unit Name: ______ 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 ______

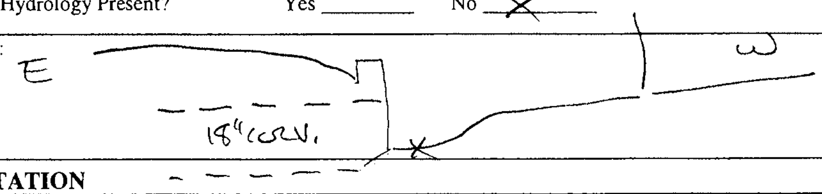
Are Vegetation ______ Soil ______ or Hydrology ______ Naturally problematic? (If needed, explain any answers in Remarks.)

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. EUC RED GUM			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1. ARCTOTHECA CALENDULA	20	X	NI?
2. CARPOBROTUS EDULIS	50	X	UPL?
3. FESTUCA PERENNIS	15		FAC
4. AVENA SP.	5		UPL
5.			
6.			
7.			
8.			
Total Cover:			

Woody Vine Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
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: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: Ø (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 ______ No X.

Remarks:

SOIL

Sampling Point: 7R

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 %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/2		7.5YR 4/4	<1	C	PL	L	
	BLACK							X STRUCTURE

[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 (Al)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (LRR C)
___ 1 cm Muck (A9) (LRR D)
___ Depleted Below Dark Surface (All)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (Sl)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (Fl)
___ 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 (AlO) (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 (Al)
___ 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 (Cl)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (CS)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

___ Water Marks (Bl) (**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: NO SEC. INDICATORS

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: OAKLAND/ALAMEDA Sampling Date: 6 MAY 22

Applicant/Owner: ______ State: CA Sampling Point: 6

Investigator(s): C. BOURIL Section, Township, Range: ______

Landform (hillslope, terrace, etc.): FLAT Local relief (concave, convex, none): ______ Slope (%): <4

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

Soil Map Unit Name: ______ 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 ______

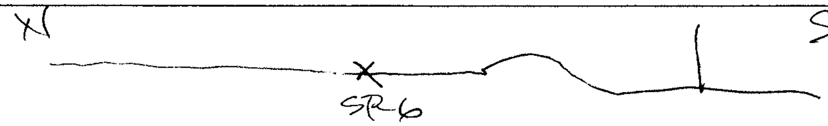
Are Vegetation ______ Soil ______ or Hydrology ______ Naturally problematic? (If needed, explain any answers in Remarks.)

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: X(



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: 3' R)			
1. ERODIUM BOTRYS	30	X	FACU
2. HORDEUM MARINUM	15		FAC
3. FESTUCA MYUROS	15		FACU
4. PLANTAGO CORONOPUS	5		FAC
5. DISTICHLIS SPICATA	20	X	FAC
6.			
7.			
8.			
Total Cover:	85		
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: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (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: 6

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 %	Type[1]	Loc[2]	Texture	Remarks
0-1/2	10YR 2/2		—				DUFF	
1/2-5	10YR 5/2		—				SAND	
5+	GRAVEL							

[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 (Al)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5) (LRR C)
- ____ 1 cm Muck (A9) (LRR D)
- ____ Depleted Below Dark Surface (All)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (Sl)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (Fl)
- ____ 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 (AlO) (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 (Al)
- ____ 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 (Cl)
- ____ Oxidized Rhizospheres along Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Plowed Soils (CS)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ____ Water Marks (Bl) (**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: NO INDICATORS

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: OAKLAND/ALAMEDA Sampling Date: 6 MAY 22

Applicant/Owner: ______ State: CA Sampling Point: 7

Investigator(s): C. BOURIL Section, Township, Range: ______

Landform (hillslope, terrace, etc.): FLAT Local relief (concave, convex, none): ______ Slope (%): <3

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

Soil Map Unit Name: ______ 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 ______

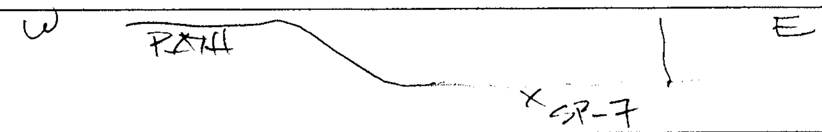
Are Vegetation ______ Soil ______ or Hydrology ______ Naturally problematic? (If needed, explain any answers in Remarks.)

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: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (Plot size: 4' R)	Absolute % Cover	Dominant Species?	Indicator Status
1. FESTUCA PERENNIS	30	Y	FAC
2. RUMEX CRISPUS	35	Y	FAC
3. LOTUS CORNICULATUS	5		FAC
4. HORDEUM MARINUM	5		FAC
5. RAPHANUS SATIVA	5		UPL
6.			
7.			
8.			
Total Cover:	80		

Woody Vine Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
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: 7

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 %	Type[1]	Loc[2]	Texture	Remarks
0-4	5YR3/2		7.5YR4/4	2	C	PL	L	
4-6	10YR4/3		—				CL	
6-+	10YR5/2		→				ROCK	

[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): ______

2

Hydric Soil Present? Yes X No ___

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)
Y Biotic Crust (B12) 75% WET
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (C6)
___ Thin Muck Surface (C7)
Y Other (Explain in Remarks)
FEW OSTRACODS

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:

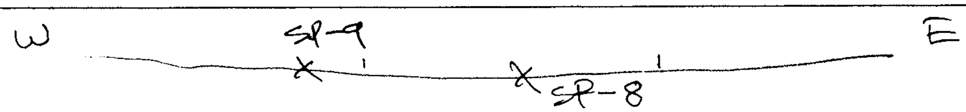
WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: OAKLAND/ALAMEDA Sampling Date: 6 MAY 22
Applicant/Owner: ______ State: CA Sampling Point: 8
Investigator(s): C. BOURN Section, Township, Range: ______
Landform (hillslope, terrace, etc.): ______ Local relief (concave, convex, none): ______ Slope (%): ______
Subregion (LRR): LRR C Lat: ______ Long: ______ Datum: ______
Soil Map Unit Name: ______ 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 ______	**Is the Sampled Area within a Wetland?** **Yes** X **No** ______
Hydric Soil Present?	Yes X	No ______	
Wetland Hydrology Present?	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. FESTUCA PERENNIS	60	X	FAC
2. HORDEUM MARINUM	40	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: 9

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 %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2		7.5YR 4/4	5	C	PL	L	

[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 (Al)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (All)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (Sl)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (Fl)
- ___ Loamy Gleyed Matrix F2)
- ___ Depleted Matrix (F3)
- X 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 (AlO) (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 ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (Al)
- ___ 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 (Cl)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (CS)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

MATTED VEG

Secondary Indicators (2 or more required)

- ___ Water Marks (Bl) (**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 ✓	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:

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: OAKLAND/ALAMEDA Sampling Date: 6 MAY 22

Applicant/Owner: ______ State: CA Sampling Point: 9

Investigator(s): C. BOURI Section, Township, Range: ______

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

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

Soil Map Unit Name: ______ 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: 4'R)			
1. AVENA SP.	60	X	UPL
2. BROMUS DIANDRUS	40	X	UPL
3.			
4.			
5.			
6.			
7.			
8.			
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: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: Ø (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 ______ No X.

Remarks:

SOIL

Sampling Point: ______

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
0-4	10YR 3/2		—					
4+	GRAVEL							

[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 [illegible]

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 (C6)
- ___ 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:

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: OAKLAND/ALAMEDA Sampling Date: 6 WK 8 Y 22

Applicant/Owner: ______ State: CA Sampling Point: FCS 1R

Investigator(s): C. BOURIL Section, Township, Range: ______

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

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

Soil Map Unit Name: ______ 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 X Significantly disturbed? Are "Normal Circumstances" present? Yes ______ No ______

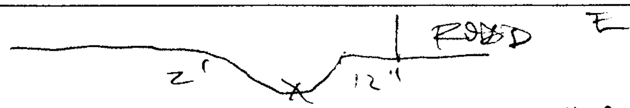
Are Vegetation ______ Soil ______ or Hydrology ______ Naturally problematic? (If needed, explain any answers in Remarks.)

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: (6)



NO OHW, CUTBANK, SED. TRANSPORT

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. VICIA VILOSA	20	X	UPL
2. RAPHANUS SATIVA	25	X	UPL
3. PLANTAGO LANCEOLATA	10		FAC
4. PLANTAGO CORONOPUS	10		FAC
5. LOTUS CORNICULATUS	20	X	FAC
6. HELMINTHOTHECA ECHIOIDES	5		FAC
7. MEDICAGO POLYMORPHA	5		FACU
8.			
Total Cover:	90		
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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (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 ______ No X.

Remarks: VEG. MOWED

SOIL

Sampling Point: R

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2		—				CL	DAMP

[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 (Al)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5) (LRR C)
- ____ 1 cm Muck (A9) (LRR D)
- ____ Depleted Below Dark Surface (All)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (Sl)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (Fl)
- ____ 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 (AlO) (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: RUST COLORS PRESENT, BUT ADJACENT TO IRON DEBRIS

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ____ Surface Water (Al)
- ____ 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 (Cl)
- ____ Oxidized Rhizospheres along Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Plowed Soils (CS)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ____ Water Marks (Bl) (**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: NO SFC. INDICATORS

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: ~~OAKLAND~~/ALAMEDA Sampling Date: 6 MAY 22

Applicant/Owner: ______ State: CA Sampling Point: FCS 3R

Investigator(s): C BOURK Section, Township, Range: ______

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

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

Soil Map Unit Name: ______ NWI classification: ______

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

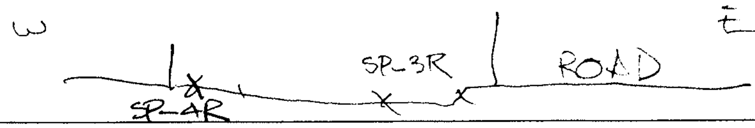
Are Vegetation ______ Soil ______ or Hydrology ______ Significantly disturbed? Are "Normal Circumstances" present? Yes ______ No ______

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 ______	**Is the Sampled Area within a Wetland?** Yes X No ______
Hydric Soil Present?	Yes ______	No ______	
Wetland Hydrology Present?	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. COTULA CORONOPIFOLIA	2		OBL
2. HORDEUM MARINUM	5		FAC
3. POLYPOGON MONSPELIENSIS	10	x	FACW
4. PLANTAGO CORONOPUS	30	x	FAC
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 R

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 %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1		—				SILT	SEDS FROM SITE
2-4	2.5Y 4/2		—				C/CL	?
4+	10YR 4/4		—				GRVL CL	FILL

[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 (Al)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (LRR C)
___ 1 cm Muck (A9) (LRR D)
___ Depleted Below Dark Surface (All)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (Sl)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (Fl)
___ 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 (AlO) (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 ___

Remarks: ARTIFICIAL RESTRICTIVE LAYER

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

___ Surface Water (Al)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
X 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 (Cl)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (CS)
___ Thin Muck Surface (C7)
X Other (Explain in Remarks)
3 OSTRACODES OBSERVED

Secondary Indicators (2 or more required)

___ Water Marks (Bl) (**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:

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: ~~OAKLAND~~/ALAMEDA Sampling Date: 6MAY22

Applicant/Owner: ______ State: CA Sampling Point: FCS 4R

Investigator(s): C. BOURIL Section, Township, Range: ______

Landform (hillslope, terrace, etc.): SLOPE Local relief (concave, convex, none): ______ Slope (%): 8

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

Soil Map Unit Name: ______ 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: 3' R)			
1. PLANTAGO CORONOPUS	20	X	FAC
2. FESTUCA PERENNIS	45	X	FAC
3. HORDEUM MARINUM	5		FAC
4. RAPHANUS SATIVA	10		UPL
5. HELMINTHOTHECA ECHIOIDES	20	X	FAC
6.			
7.			
8.			
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: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (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 Adaptations[1] (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: 4R

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 %	Type[1]	Loc[2]	Texture	Remarks
0--6	10YR3/2	80	—				L	MIXED FILL
	10YR2/2	20						

[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 (Al)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (LRR C)
___ 1 cm Muck (A9) (LRR D)
___ Depleted Below Dark Surface (All)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (Sl)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (Fl)
___ 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 (AlO) (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 (Al)
___ 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 (Cl)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (CS)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

___ Water Marks (Bl) (**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:

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: OAKLAND/ALAMEDA Sampling Date: 6 W 04 22

Applicant/Owner: ______ State: CA Sampling Point: WRA 5R

Investigator(s): C. Bouril Section, Township, Range: ______

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

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

Soil Map Unit Name: ______ NWI classification: ______

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

Are Vegetation X Soil X 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 ______	**Is the Sampled Area within a Wetland?** Yes ______ No X
Hydric Soil Present?	Yes ______	No X	
Wetland Hydrology Present?	Yes ______	No X	

Remarks:

PHOTO ~ 10-1015

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' R)			
1. POLYGONUM AVICULARE	1	X	FACW
2. PLANTAGO LANCEOLATA	<1	X	FAC
3. RUMEX CRISPUS	<1		FAC
4. ANTHEMIS COTULA	<1		FACU
5. HELMINTHOTHECA ECHIOIDES	<1		FAC
6. UE GRASS	<1		?
7.			
8.			
Total Cover:	1+		
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	1	x 2 =	2
FAC species	3	x 3 =	9
FACU species	1	x 4 =	4
UPL species		x 5 =	
Column Totals:	5 (A)		15 (B)

Prevalence Index = B/A = 3.00

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: [illegible]

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 %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR4/2		—				SRSL	
3-9	7.5YR3/2		—				"	
9-11	10YR3/3	60	—				"	
	10YR4/4	40						

[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 (C6)
____ 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: [illegible]

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: OAKLAND/ALAMEDA Sampling Date: 6 MAY 22

Applicant/Owner: ______ State: CA Sampling Point: FCS 6R

Investigator(s): C. BOURKE Section, Township, Range: ______

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

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

Soil Map Unit Name: ______ 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 ______	Is the Sampled Area within a Wetland? Yes X No ______
Hydric Soil Present?	Yes X	No ______	
Wetland Hydrology Present?	Yes X	No ______	

Remarks:

VEGETATION

Tree Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1. EUCALYPTUS CAMALDULENSIS?			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: ______)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: 5' R)			
1. FESTUCA PERENNIS	25	X	FAC
2. VICIA VILLOSA	15	X	UPL
3. GERANIUM DISSECTUM	5		UPL
4. GERANIUM ROBERTIANUM	5		FACU
5. PERSICARIA LAPATHIFOLIA?	15	X	FACW?
6. TYPHA ANGUSTIFOLIA	5		OBL
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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (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 Adaptations[1] (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: 6 F

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 %	Type[1]	Loc[2]	Texture	Remarks
0 - 10	10YR 3/2		5YR4/4	10	C	PL	L	

[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)
- X 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:

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)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ 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:

WETLAND DETERMINATION DATA FORM — Arid West Region

Project Site: SUPPLY BANK City/County: OAKLAND/ALAMEDA Sampling Date: 6 ul84 22

Applicant/Owner: ______ State: CA Sampling Point: WRA 7R

Investigator(s): C. Bouril Section, Township, Range: ______

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

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

Soil Map Unit Name: ______ NWI classification: ______

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

Are Vegetation X Soil X 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 ______	Is the Sampled Area within a Wetland? Yes ______ No X
Hydric Soil Present?	Yes ______	No X	
Wetland Hydrology Present?	Yes ______	No X	

Remarks:

PDCIE 11:00

VEGETATION

Tree Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: ______)			
1. CYNODON DACTYLON	<1		FACU
2. ERODIUM CICUTARIUM	"		UPL
3. POLYPOGON MONSPELIENSIS	"		FACW
4. PLANTAGO LANCEOLATA	"		FAC
5. MEDICAGO POLYMORPHA	"		FACU
Total Cover:			
Herb Stratum (Plot size: 10' R)			
1. HORDEUM MARINUM	"		FAC
2. TRIFOLIUM TOMENTOSUM	"		UPL?
3. PLANTAGO CORONOPUS	"		FAC
4. MALVA PARVIFLORA	"		UPL
5. RUMEX CRISPUS	"		FAC
6. POLYGONUM AVICULARE	"		FAC
7. HELMINTHOTHECA ECHIOIDES	"		FAC
8. ANTHEMIS COTULA	"		FACU
Total Cover:	<1		
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: 7 (A)

Total Number of Dominant Species Across All Strata: 13 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 54 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species	1	x 2 = 2
FAC species	6	x 3 = 18
FACU species	3	x 4 = 12
UPL species	3	x 5 = 15
Column Totals:	13 (A)	47 (B)

Prevalence Index = B/A = 3.62

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 ______.

Remarks:

SOIL

Sampling Point: 7-R

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

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-5	10YR3/2		—				SL	

[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 (Al)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (LRR C)
___ 1 cm Muck (A9) (LRR D)
___ Depleted Below Dark Surface (All)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (Sl)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (Fl)
___ 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 (AlO) (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 (Al)
___ 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 (Cl)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (CS)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

___ Water Marks (Bl) (**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:

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102

March 9, 2021

Regulatory Division

Subject: File Number 2007-00758S

Mr. Bernhard Warzecha
FirstCarbon Solutions
1350 Treat Boulevard, Suite 380
Walnut Creek, California 94597
bwarzecha@fcs-intl.com

Dear Mr. Warzecha:

This correspondence is in response to your submittal of July 21, 2020, on behalf of the Contra Costa County Public Works Department, requesting an approved jurisdictional determination of the extent of waters of the United States occurring on a 5.23-acre site located at 550 Sally Ride Drive in the City of Concord, Contra Costa County, California (Lat: 37.987487°, Long: -122.062311°).

All proposed discharges of dredged or fill material occurring below the plane of ordinary high water in non-tidal waters of the United States; or below the high tide line in tidal waters of the United States; or within the lateral extent of wetlands adjacent to these waters, typically require Department of the Army authorization and the issuance of a permit under Section 404 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1344 *et seq*.). Waters of the United States generally include the territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide; tributaries; lakes and ponds, and impoundments of jurisdictional waters; and adjacent wetlands.

The enclosed delineation map titled "Approved Jurisdictional Determination, Buchanan Field Fire Station 9, Contra Costa County, California, File No: 2007-00758S," in one sheet and date certified March 9, 2021, accurately depicts the extent and location of waters of the United States within the boundary area of the site that are subject to U.S. Army Corps of Engineers' regulatory authority under Section 404 of the Clean Water Act. These particular water bodies are jurisdictional waters pursuant to 33 C.F.R. § 328.3(a)(2). The enclosed delineation map further depicts the extent and location of a double box culvert and wetland ditches within the boundary area of the site that are **not** subject to U.S. Army Corps of Engineers' regulatory authority under Section 404 of the Clean Water Act. These particular water bodies are non-jurisdictional waters pursuant to 33 C.F.R. § 328.3(b)(1) and (b)(5). This approved jurisdictional determination is based on a review of available digital photographic imagery and maps and a review of other data included in your submittal. This approved jurisdictional determination will expire in five years from the date of this letter unless new information or a change in field conditions warrants a revision to the delineation map prior to the expiration date. The basis for this approved jurisdictional determination is explained in the enclosed *Approved Jurisdictional Determination Form (Interim) Navigable Waters Protection Rule*.

You are advised that the approved jurisdictional determination may be appealed through the U.S. Army Corps of Engineers' *Administrative Appeal Process*, as described in 33 C.F.R. Part 331 (65 Fed. Reg. 16,486; Mar. 28, 2000) and outlined in the enclosed flowchart and *Notification of Administrative Appeal Options, Process, and Request for Appeal* (NAO-RFA) Form. If you do not intend to accept the approved jurisdictional determination, you may elect to provide new information to this office for reconsideration of this decision. If you do not provide new information to this office, you may elect to submit a completed NAO-RFA Form to the Division Engineer to initiate the appeal process; the completed NAO-RFA Form must be submitted directly to the Appeal Review Officer at the address specified on the NAO-RFA Form. You will relinquish all rights to a review or an appeal unless this office or the Division Engineer receives new information or a completed NAO-RFA Form within 60 days of the date on the NAO-RFA Form. If you intend to accept the approved jurisdictional determination, you do not need to take any further action associated with the Administrative Appeal Process.

You may refer any questions on this matter to Katerina Galacatos by telephone at 415-503-6778 or by e-mail at Katerina.Galacatos@usace.army.mil. All correspondence should be addressed to the Regulatory Division, South Branch, referencing the file number at the head of this letter.

The San Francisco District is committed to improving service to our customers. My Regulatory staff seeks to achieve the goals of the Regulatory Program in an efficient and cooperative manner while preserving and protecting our nation's aquatic resources. If you would like to provide comments on our Regulatory Program, please complete the Customer Service Survey Form available on our website:
http://www.spn.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,

Bryan Matsumoto
Senior Project Manager
Regulatory Division

Enclosures

Electronic Copies Furnished (w/ encls):

Contra Costa County PWD, Martinez, CA (William Wahbeh, Will.Wahbeh@pw.cccounty.us)
CA RWQCB, Oakland, CA (Katie Hart, Kathryn.Hart@waterboards.ca.gov)

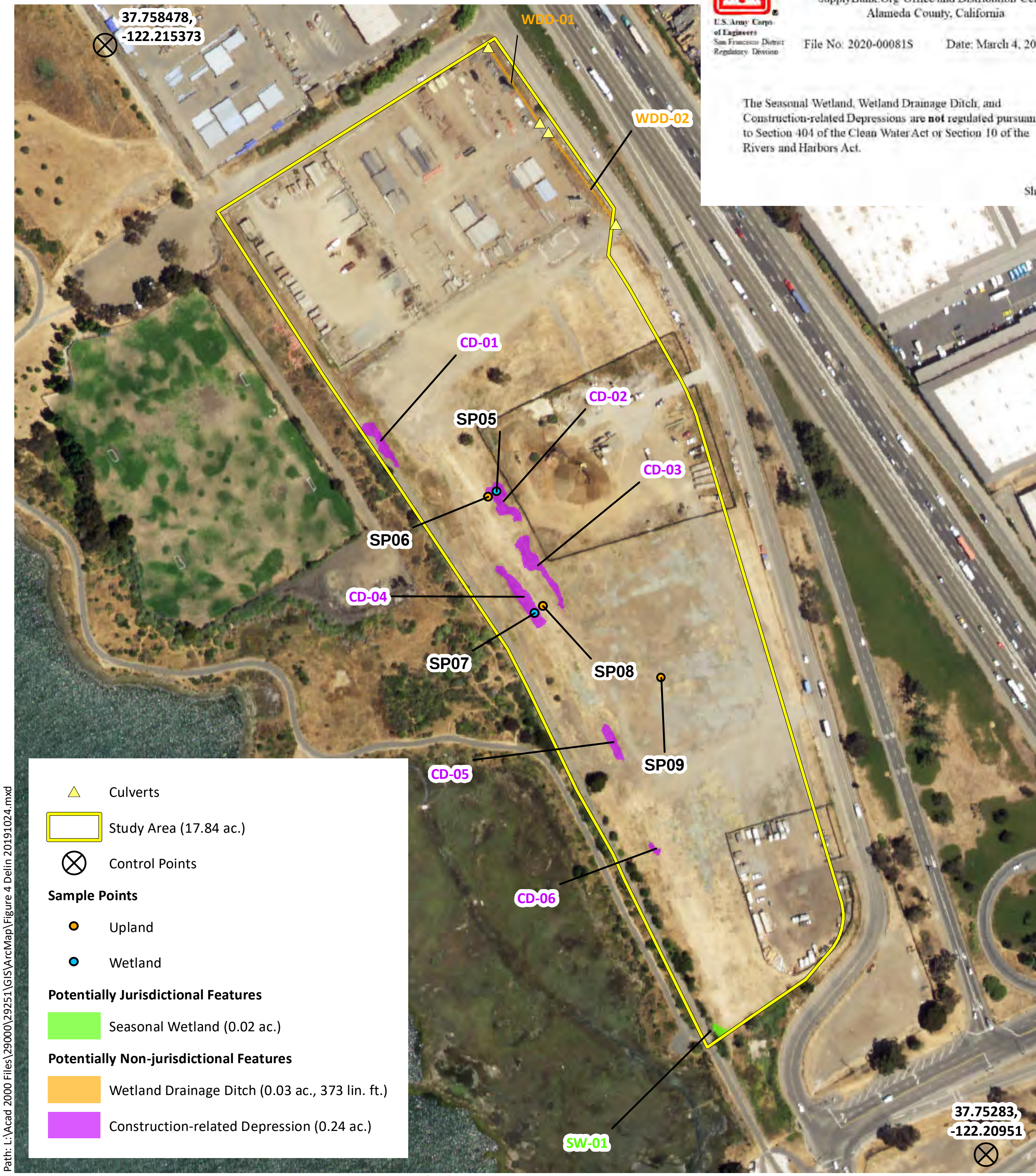
U.S. Army Corps of Engineers
San Francisco District
Regulatory Division

Approved Jurisdictional Determination
SupplyBank.Org Office and Distribution Center
Alameda County, California

File No: 2020-00081S Date: March 4, 2021

The Seasonal Wetland, Wetland Drainage Ditch, and Construction-related Depressions are **not** regulated pursuant to Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act.

Sheet 1 of 1



Sources: National Geographic, WRA | Prepared By: pkobylarz, 10/24/2019

Figure 4. Wetland Delineation and Preliminary Jurisdictional Determination

SupplyBank.Org Office & Distribution Center
Alameda County, California

0 100 200 Feet

N

wra
ENVIRONMENTAL CONSULTANTS

Approved Jurisdictional Determination
Buchanan Field Fire Station 9
Contra Costa County, California

U.S. Army Corps of Engineers
San Francisco District
Regulatory Division

File No: 2007-00758S Date: March 9, 2021

The Marsh Drive Drainage is regulated pursuant to Section 404 of the Clean Water Act.

Drainages A and B and the Double Box Culvert are **not** regulated pursuant to Section 404 of the Clean Water Act.

Sheet 1 of 1

DRAFT

Study Area

Aquatic Features

Artificial Drainage with Wetland Characteristic

Double Box Culvert

Sample Points

Upland

Wetland

Map Feature	Length (linear feet)	Average Width (linear feet)	Area (square feet)	Area (acre)
Marsh Drive Drainage	1,000	12	12,000	0.275
Drainage A	280	4	1,120	0.026
Drainage B	160	6	960	0.022
Double Box Culvert	60	12	720	0.017
All Aquatic Features	1,500	--	14,800	0.34

N

125 62.5 0 125

Feet

Data Sources: FCS | ESRI

Delineation Date: 06/30/2020

Exhibit 3
Aquatic Features Delineation

PROPOSED FIRE STATION #9 PROJECT
BUCHANAN FIELD, PACHECO, CA
CONTRA COSTA COUNTY PUBLIC WORKS
DELINEATION OF AQUATIC FEATURES

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Bernhard Warzecha, FirstCarbon Solutions		File Number: 2007-00758S	Date: 3/9/21
Attached is:			See Section below
☐	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
☐	PROFFERED PERMIT (Standard Permit or Letter of permission)		B
☐	PERMIT DENIAL		C
☑	APPROVED JURISDICTIONAL DETERMINATION		D
☐	PRELIMINARY JURISDICTIONAL DETERMINATION		E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/cecw/pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

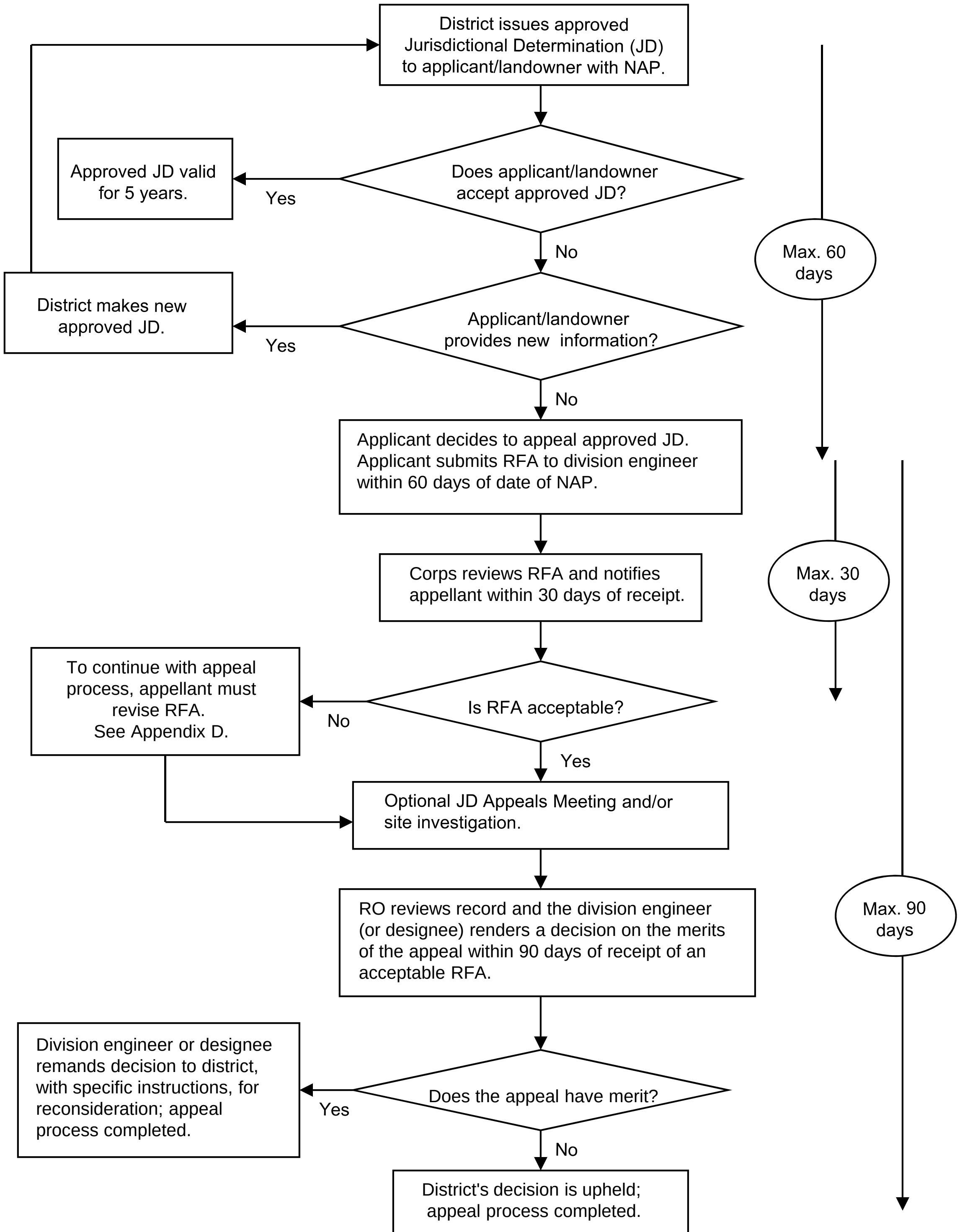
POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact:
Katerina Galacatos South Branch Chief, Regulatory Division San Francisco District, U.S. Army Corps of Engineers 450 Golden Gate Avenue, 4th Floor San Francisco, CA 94102-3404 Phone: (415) 503-6778 Email: Katerina.Galacatos@usace.army.mil	Thomas J. Cavanaugh Administrative Appeal Review Officer, U.S. Army Corps of Engineers South Pacific Division 450 Golden Gate Avenue, 6th Floor San Francisco, California 94102-3406 Phone: (415) 503-6574 Fax: (415) 503-6646 Email: thomas.j.cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

_______________________ Signature of appellant or agent.	Date:	Telephone number:

Administrative Appeal Process for Approved Jurisdictional Determinations



Appendix C

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 3/9/2021
ORM Number: SPN-2007-00758S
Associated JDs: AJD dated October 31, 2007 (SPN-2007-00758)
Review Area Location[1]: State/Territory: Ca City: Concord County/Parish/Borough: Contra Costa
Center Coordinates of Review Area: Latitude 37.98487 Longitude -122.062311

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.

☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).

☒ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).

☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)[2]

§ 10 Name	§ 10 Size		§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters):[3]				
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination
SPN-2007-00758 Marsh Drive Drainage	1,000	linear feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	Historic maps support the determination that the Marsh Drive Drainage is a relocated branch of Walnut Creek that contributed surface water to an (a)(1) water (lower Walnut Creek and Suisun Bay) through an (a)(2) water (Walnut Creek) and an (a)(4) water (wetlands adjacent to Walnut Creek) in a typical year. Also, the 2007 AJD and Google Earth photos support the determination that the Marsh Drive Drainage is an intermittent tributary.

[1] Map(s)/figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size		(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
SPN-2007-00758 Drainage A	280	linear feet	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).	There is no evidence to suggest that this ditch relocates a tributary, is constructed in a tributary, or is constructed in an adjacent wetland. The ditch collects runoff from adjacent uplands and is not known to convey water from any off-site tributaries. No tributaries or adjacent wetland were identified in the immediate vicinity of the ditch.
SPN-2007-00758 Drainage B	160	linear feet	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).	There is no evidence to suggest that this ditch relocates a tributary, is constructed in a tributary, or is constructed in an adjacent wetland. The ditch collects runoff from adjacent uplands and is not known to convey water from any off-site tributaries. No tributaries or adjacent wetland were identified in the immediate vicinity of the ditch.
SPN-2007-00758 Box Culvert	60	linear feet	(b)(1) Water or water feature that is not identified in (a)(1)-(a)(4) and does not meet the other (b)(1) subcategories.	The double box culvert in the Marsh Drive Drainage does not meet the definition of a tributary because it is not a natural feature and does not provide surface flow.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.

[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

☒ Information submitted by, or on behalf of, the applicant/consultant: "Aquatic Resources Delineation Report, New Fire Station 9, Buchanan Field, Pacheco, Contra Costa County, California," prepared by FirstCarbon Solutions, and dated July 21, 2020.

This information is sufficient for purposes of this AJD.

Rationale: N/A

☐ Data sheets prepared by the Corps: Title(s) and/or date(s).

☐ Photographs: Select. Title(s) and/or date(s).

☐ Corps site visit(s) conducted on: Date(s).

☒ Previous Jurisdictional Determinations (AJDs or PJDs): AJD dated October 31, 2007 (SPN-2007-00758)

☐ Antecedent Precipitation Tool: ***provide detailed discussion in Section III.B***.

☐ USDA NRCS Soil Survey: Title(s) and/or date(s).

☐ USFWS NWI maps: Title(s) and/or date(s).

☐ USGS topographic maps: Title(s) and/or date(s).

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A
Other Sources	EcoAtlas and historicaerials.com, accessed 3-5-2021; Google Earth, accessed 3-9-2021

B. Typical year assessment(s): There are multiple Google Earth photos showing water in the Marsh Drive Drainage at the beginning of the dry season (e.g., 4-12-2019, 4-2-2018), supporting the conclusion that this ditch is intermittent in a typical year. In these aerial photos, water is visible in the Marsh Drive Drainage from the project area to Grayson Creek, a perennial (a)(2) water that's tributary to Walnut Creek and Suisun Marsh, a TNW. Additionally, the 2007 AJD states that the Marsh Drive Drainage is intermittent.

C. Additional comments to support AJD: N/A

Appendix J

SupplyBank.org Office & Distribution Center Project, Section 404 (B)(1) Alternatives Analysis

LSA, October 2022

SECTION 404 (B)(1) ALTERNATIVES ANALYSIS

SUPPLYBANK.ORG OFFICE & DISTRIBUTION CENTER PROJECT

CITY OF OAKLAND, CALIFORNIA

LSA

October 2022

SECTION 404 (B)(1) ALTERNATIVES ANALYSIS

SUPPLYBANK.ORG OFFICES & DISTRIBUTION CENTER PROJECT

CITY OF OAKLAND, CALIFORNIA

Submitted to:

Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, California 94612

Prepared by:

LSA Associates, Inc.
157 Park Place
Point Richmond, California 94801

Project No. TER2202

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APPENDICES

FIGURES AND TABLES

FIGURES

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1.0 INTRODUCTION

1.1 PURPOSE OF THE ALTERNATIVES ANALYSIS

SupplyBank (applicant) is proposing to develop the SupplyBank.org Offices & Distribution Center Project (proposed project), which consists of the construction of an office building, warehouse and distribution center, and warehouse and corporation yard with internal circulation, landscaping, and parking within an approximately 16.4-acre project site in Oakland, Alameda County, California.

This Alternatives Analysis analyzes the project's compliance with the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures), which went into effect on May 28, 2020. Specifically, Appendix A of the Procedures, the State Supplemental Dredge or Fill Guidelines, are based on the U.S. Environmental Protection Agency (EPA) *Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredge or Fill Material* (40 CFR Part 230) (Guidelines). Consistent with the 404(b)(1) Guidelines and Appendix A of the Procedures, the purpose of this analysis is to identify the "Least Environmentally Damaging Practicable Alternative" (LEDPA).

This Alternatives Analysis report has been prepared for submittal to the Regional Water Quality Control Board (RWQCB) as part of the application for Waste Discharge Requirements (WDRs) for the fill of 0.371 acre of waters of State for the project. Partial Avoidance Alternative 3, as analyzed in Section 4.0, On-Site Alternatives Screening, was selected as the LEDPA. Thus, the project details and impact values described in Section 1.0 of this Alternatives Analysis, which reflect the applicant's initial preferred project, will differ slightly from the proposed project (i.e., the LEDPA) described in the current application for WDRs.

1.2 PROJECT BACKGROUND

1.2.1 Project Location

The approximately 16.4-acre project site spans two existing parcels, APN 41-3903-2-8 and a portion of APN 41-3903-1-5, located along Oakport Street in eastern Oakland, Alameda County. The project site is located in the Coliseum Industrial neighborhood of East Oakland, immediately north of the Oakland Airport Business Park and within the planning area of the City of Oakland's Coliseum Area Specific Plan. The project site is bounded by the East Bay Municipal Utility District (EBMUD) Oakport Wet Weather Treatment Plant and associated storage area to the north; Oakport Street to the east and south; and undeveloped grassland and estuary and Oakport field to the south and west. The project site is situated within unsectioned lands with a projected location of Township 2 South, Range 3 West, in Section 17 on the Oakland East, California 7.5 minute USGS quadrangle. Figures 1 and 2 depict the regional location and project site location, respectively.

Lands surrounding the project site to the north, east, and south are developed, consisting of commercial/industrial uses and East Creek Slough to the north, the Oakland Airport Business Park and Damon Slough to the south, and Interstate 880 (I-880) and large-scale warehouse and distribution centers to the east. To the west/southwest is undeveloped grassland and estuary, Oakport Field, and the San Leandro Bay.

The project site is accessible via I-880 at the 66th Avenue exit and driving westward onto Zhone Way, then turning right/northward on Oakport Street.

1.2.2 Project Description

The proposed project consists of the construction of an office building, warehouse building, and a warehouse and corporation yard with internal circulation, landscaping, and parking (Figures 3a and 3b). The facilities are proposed on property owned by EBMUD and would be utilized by both SupplyBank.org and EBMUD, as described in more detail below.

The main objectives of the proposed project are to provide a warehouse and corporation yard for EBMUD; to provide space for nonprofit tenants and support for local teachers, schools, and food security; to provide support for emergency preparedness and response; and to provide support for the local workforce through an EBMUD training program and re-entry job training program at the SupplyBank.org warehouse.

The project site is located within the Coliseum Area Specific Plan (CASP). The general plan land use designation of the project site is Business Mix, which is intended to consist of a flexible economic development zone that strives to accommodate older industries and anticipate new technologies, including both commercial and industrial operations and contain a wide range of business and business serving activities.[1] The project site is zoned as Commercial Mix District – 6 Industrial Zone (Oakport North), or D-CO-6, which is intended to apply to commercial, industrial, and institutional areas with strong locational advantages that make possible the attraction of higher intensity commercial and light industrial land uses and development types.

In the central and southern portion of the property under a long-term lease with EBMUD, SupplyBank.org would construct an approximately 160,000 square-foot office building and a 123,000 square-foot warehouse building. The top floor of the building would be used as the SupplyBank.org headquarters, and the remaining capacity in this building would be rented to other non-profit organizations for similar office use. The warehouse would be divided into two spaces; one space would serve as SupplyBank.org materials storage and distribution, and the other space would be reserved for EBMUD storage and materials.

In the northern portion of the property, an EBMUD warehouse and corporation yard would be constructed consisting of a 10,000 square-foot workshop, a 57,000 square-foot pipe and materials storage rack structure, and an approximately 28,800 square-foot storage bin used to store and source a variety of building materials. The workshop would be used for welding and EBMUD training operations. The pipe and materials storage rack structure would be located on the northerly property line and would consist of a peaked roofed structure (36 feet high at the peak) with open sides for easy access for forklift operations to store and supply large pipes and other materials used by EBMUD. The approximately 28,800 square-foot storage bin would be used to store and source a variety of building materials, such as sorted sands and gravels.

[1] City of Oakland. 1998. *Land Use and Transportation Element of the General Plan*. March.

The proposed project would include: three new vehicle entry points; an internal circulation loop that would connect between the office and warehouse, weld shop, and pipe storage structure; and City required improvements on Oakport Street, including street widening, street frontage planter, curb and gutter, and concrete sidewalk. Parking would be provided at a number of surface parking lots throughout the site.

The proposed project would include various utility improvements including an underground stormwater storage system as well as low-impact development (LID) measures, such as bio-retention facilities with underdrains distributed throughout the site and along the site perimeter to prevent flooding. The proposed project would include two underground stormwater storage systems to collect and retain stormwater flow from the site until surface stormwater flows subside before discharging into the surrounding storm drainage system once the peak flows have dissipated. Various bio-retention facilities would also be installed throughout the site that would be sized appropriately to meet or exceed the minimum treatment area required for each drainage management area within the site.

1.2.3 Existing Conditions

The majority of the project site consists of a graded surface that is regularly used as an EBMUD Wet Weather Treatment Plant, associated construction material storage site, and secondary storage yard. The undeveloped portion of the project site is also used for community events, third-party storage, and as vehicular parking for off-site events. Both parcels are currently owned by EBMUD. The topography and hydrology; vegetation communities; and jurisdictional aquatic features are described below.

Topography and Hydrology. Topography in the project area is mostly flat, with an average southward slope of 0.5 percent. Site elevations range between 10 and 15 feet above mean sea level. The natural hydrology of the project site has been permanently altered by the historical commercial usages and the associated paving, grading, leveling, and placing of fill throughout the site. The project site has been disconnected from tidal influence and natural wetlands hydrology by this development.[2]

Water from the project site drains either south via a vegetated ditch on the southeastern border of the site into the large depression separated from tidal influence by a berm that supports a hiking trail or north via a vegetated ditch through a series of culverts. [3] These culverts are blocked and the ditches are not readily draining, allowing the ditches to pool water.[4] Additionally, water from the project site runs off the uplands with impermeable paved surfaces or well-draining gravel into low depressional areas on the western side of the site before dissipating into existing vegetation. Specific hydrological features are described in greater detail below.

2 WRA Environmental Consultants. 2019. *Aquatic Resources Delineation Report, SupplyBank.Org Office & Distribution Center, Oakland, Alameda, California*. October 29.

3 Ibid.

4 First Carbon Solutions, FCS International, Inc. 2021. *Delineation of Aquatic Resources of Additional Areas at the Oakport Street Project and Regulatory Considerations*. February 1.

Vegetation. The majority of the project site had been recently mowed for fire suppression purposes at the time of the aquatic resources delineation site visit conducted by LSA on May 6, 2022.[5] The site consequently had less than 1 percent vegetation cover of regrowth of ruderal species, such as prostrate knotweed (*Polygonum aviculare*), English plantain (*Plantago lanceolata*), buckhorn plantain (*P. coronopus*), curly dock (*Rumex crispus*), mayweed (*Anthemis cotula*), bristly ox-tongue (*Helminthotheca echioides*), filaree (*Erodium cicutarium*), bur clover (*Medicago polymorpha*), cheeseweed (*Malva parviflora*), and unidentified grasses. The western edge of the site is vegetated with grasses, including Italian rye (*Festuca perennis*), Mediterranean barley (*Hordium marinum*), wild oats (*Avena* spp.), and rip-gut (*Bromus diandrus*). Trees along I-880 and in the northern study area are mostly non-native and predominantly Eucalyptus (*Eucalyptus* sp.) species.

Jurisdictional Aquatic Features and Impacts. As reflected in Figure 4 and Table A, below, the project site currently supports 0.244 acre of seasonal wetlands and 0.027 acre of other waters of the State with a total potential jurisdictional area of 0.271 acre[6]. In addition, approximately 0.240 acre of potential seasonal wetlands located in the central portion of the site, as previously delineated by WRA Environmental Consultants (WRA), were graded in spring 2022 during maintenance activities outside of the applicant's control. As specified by the RWQCB, these features are to be included in the assessment of the project's impact on waters of the State. Therefore, the overall total potential jurisdictional area of waters of the State is 0.511 acre, as reflected in Table A.

Table A: Aquatic Features on the Project Site

Type	Area (ac)
Wetland Features	
Seasonal Wetland SW-01	0.030
Construction Depression CD-01	0.065
Seasonal Wetland E	0.020
Seasonal Wetland D	0.004
Seasonal Wetland Ditch WDD-01	0.012
Seasonal Wetland Ditch WDD-02	0.014
Seasonal Wetland Ditch WDD-03	0.010
Seasonal Wetland Ditch WDD-04	0.004
Seasonal Wetland Puddle C	0.076
Seasonal Wetland Ditch WDD-05	0.007
Seasonal Wetland Ditch WDD-06	0.002
Wetland Features Subtotal	***0.244***
Other Waters of the State	
Culvert-01	0.001
Culvert-02	0.001

5 LSA. 2022. *Request for Verification of Jurisdictional Delineation, SupplyBank.Org/Oakport Street Study Site, Oakland, Alameda County, California*. August 9.

6 Based on site visits conducted by LSA on May 6 and October 12, 2022.

Table A: Aquatic Features on the Project Site

Type	Area (ac)
Culvert-03	0.001
RWQCB-Determined Channel	0.024
Other Waters Subtotal	***0.027***
Additional Potential Seasonal Wetlands Removed	
Graded Seasonal Wetlands	0.240
Additional Potential Seasonal Wetlands Removed Subtotal	***0.240***
TOTAL WETLANDS AND OTHER WATERS OF THE STATE	**0.511**

The applicant's preferred project, as reflected in Figures 3a and 3b, would result in approximately 0.455 acre of permanent impacts to wetlands and other waters of the State. Permanent impacts would include filling of 0.455 acre of wetlands as a result of the development of retaining walls, a bio-retention area, and covered scrap bins along the northwestern property boundary of the project site (construction depression CD-01); a bio-retention area and retaining wall along the southern project boundary (seasonal wetland SW-01); and the completion of City required improvements to Oakport Street, including street widening, street frontage planter, curb and gutter, and concrete sidewalk. The street frontage improvements would impact seasonal wetland ditches WDD-02 through WDD-06, seasonal wetland puddle C, and other waters of the State including culverts -02 and -03 and the RWQCB-determined channel. Impacts to 0.240 acre of potential seasonal wetlands in the central portion of the site, as previously delineated by WRA and graded during maintenance activities outside of the applicant's control, are also included in the permanent impact total.

1.3 REGULATORY REQUIREMENTS AND LEVEL OF ANALYSIS FOR THIS ALTERNATIVES ANALYSIS

1.3.1 RWQCB Regulatory Requirements

On April 2, 2019, the State Water Resources Control Board (SWRCB) adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures, which went into effect on May 28, 2020, require an alternatives analysis consistent with Section 230.10(a) of the State Supplemental Dredge or Fill Guidelines for discharges to waters of the State unless an exemption specified in Section IV.A.1.g of the Procedures applies. Procedures Section IV.B.3.a states that the permitting authority must "establish that the proposed project alternative is the LEDPA in light of all potential direct, secondary (indirect), and cumulative impacts on the physical, chemical, and biological elements of the aquatic ecosystem." Section 230.10(a) states that "No discharge of dredge or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences."

1.3.2 Scope and Level of Analysis

Under the Procedures, the project would be treated as a "Tier 3 project" because the project impacts wetlands. Per Section IV.A.1.h of the Procedures, an analysis of both off-site and on-site alternatives is required. Sections 3.0 and 4.0 of this Alternatives Analysis includes an assessment of off-site and on-site alternatives, respectively, that is consistent with the Procedures.

However, the Section 404(b)(1) Guidelines and the State Procedures do not specify that the same intensity of analysis will be required for all types of projects, but instead correlate the scope of the evaluation with the potential extent of adverse impacts on the aquatic environment. Consequently, the Guidelines and Procedures clearly afford flexibility to adjust the stringency of the alternatives analysis review for projects that would have only minor impacts. These flexibility provisions in the Federal Guidelines were recognized with the issuance of a joint Corps-U.S. Environmental Protection Agency (EPA) Memorandum to the Field dated August 23, 1993[7] and implemented through Corps Regulatory Guidance Letter 93-2 published in the Federal Register on September 10, 1993. Under the Guidelines, minor impacts are associated with activities that generally would have little potential to degrade the aquatic environment and include one, and frequently more, of the following characteristics:

- the impacts will occur in aquatic resources of limited natural function;
- the impacts are small in size and cause little direct impact; and
- the impacts have little potential for secondary or cumulative impacts; or cause only temporary impacts.

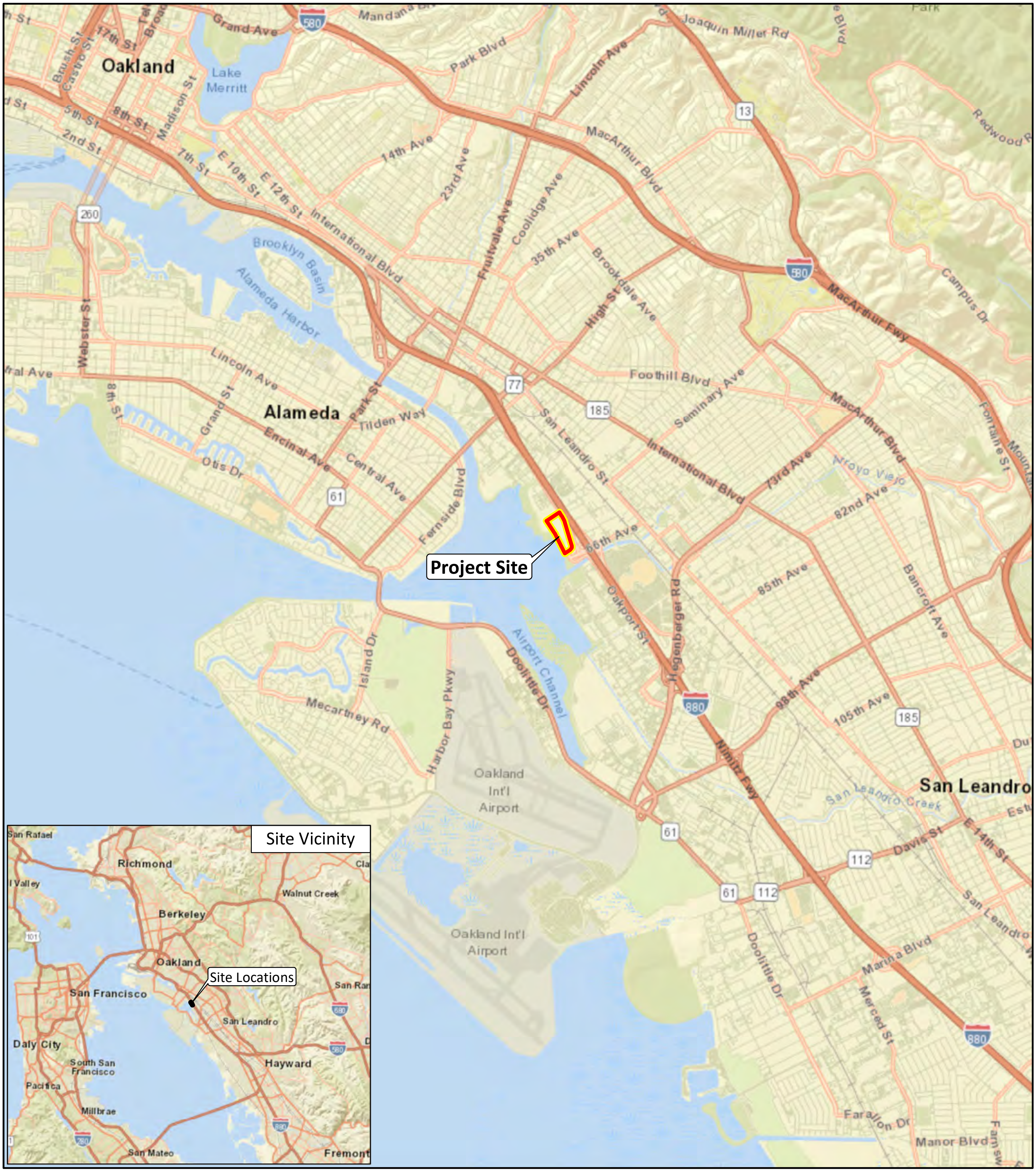
The aquatic features on the project site are of low quality and have been significantly disturbed by historic land use (e.g., community events, third-party storage, vehicular parking for off-site events) and by regular grading and discing. They also do not provide habitat for rare, threatened, or endangered species. Furthermore, the project was designed to avoid jurisdictional water features to the maximum extent practicable and, as discussed in Section 4.0, the impacts are small in size and cause little direct impact. Based on the low value of the aquatic features and the minimal area that will be impacted, an extensive analysis of possible alternatives is not warranted. Therefore, on-site and off-site alternatives were analyzed to the extent appropriate for this project.

1.4 PREPARERS OF THIS ALTERNATIVES ANALYSIS

This document was jointly authored by the following persons:

Kristin Nurmela, Associate/Natural Resources Planner, primary author
Dan Sidle, Associate Biologist, project manager
Ashley Manheim, Environmental Planner, co-author
Chip Bouril, Senior Soil Scientist, contributor

7 U.S. Environmental Protection Agency. 1993. Memorandum to the Field, Subject: "Appropriate Level of Analysis Required for Compliance with the Section 404(b)(1) Guidelines," U.S. Environmental Protection Agency and U.S. Department of the Army, Washington, D.C., 23 August 1993.



LSA

LEGEND

Project Site

0 0.5 1
MILES

SOURCE: Esri World Street Map (2022).

FIGURE 1

SupplyBank.org Office and Distribution Center Project
Oakland, Alameda County, California

Regional Location

I:\TER2202\GIS\Maps\Alternatives Analysis\Figure 1_Regional Location.mxd (10/4/2022)

LSA

LEGEND

Project Site

FIGURE 2

N

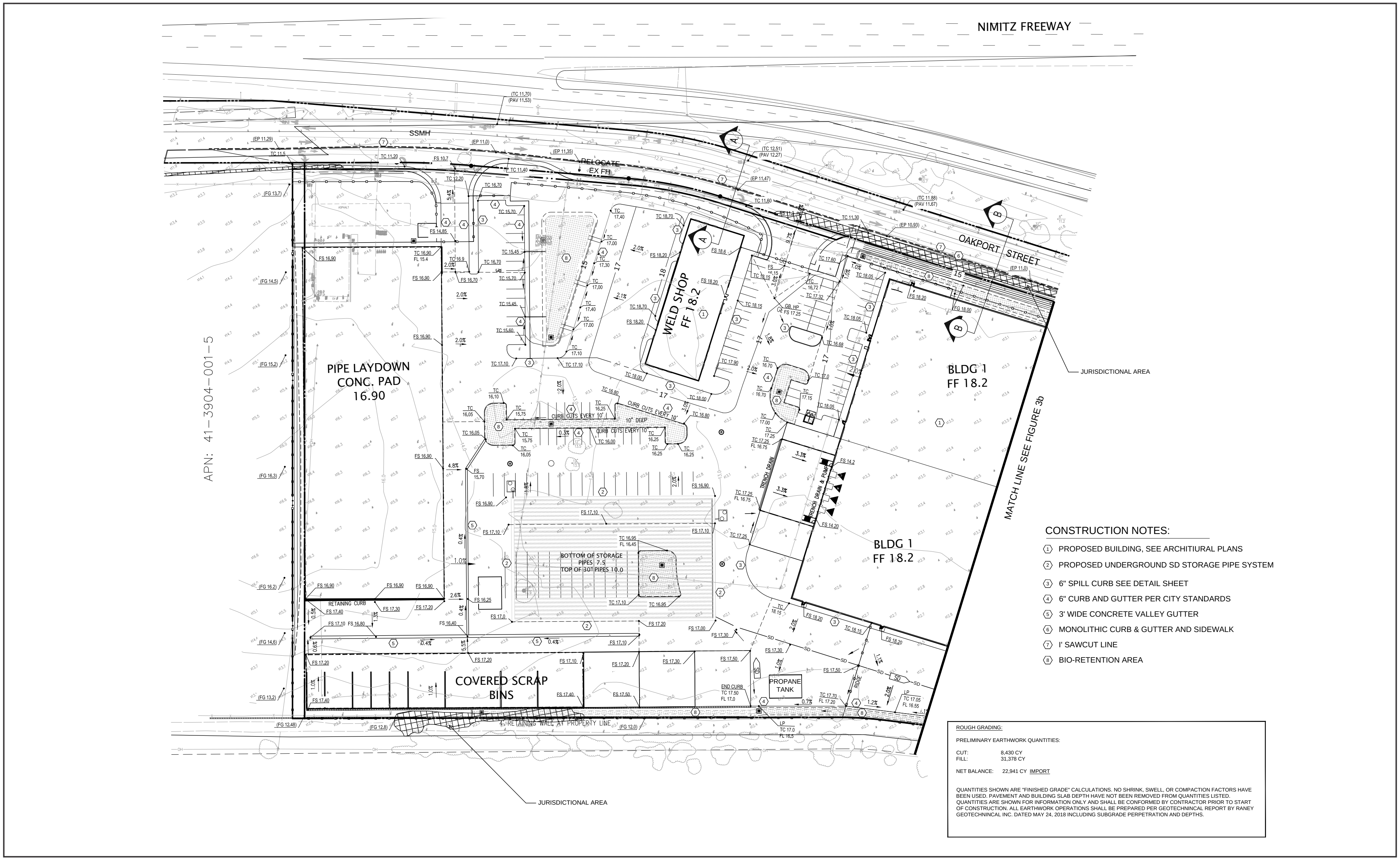
0 150 300
FEET

SupplyBank.org Office and Distribution Center Project
Oakland, Alameda County, California

Project Site Location

SOURCE: Google Maps (2022).

I:\TER2202\GIS\Maps\Alternatives Analysis\Figure 2_Project Site Location (Aerial).mxd (10/4/2022)



LSA

FIGURE 3a

N

0 80 160

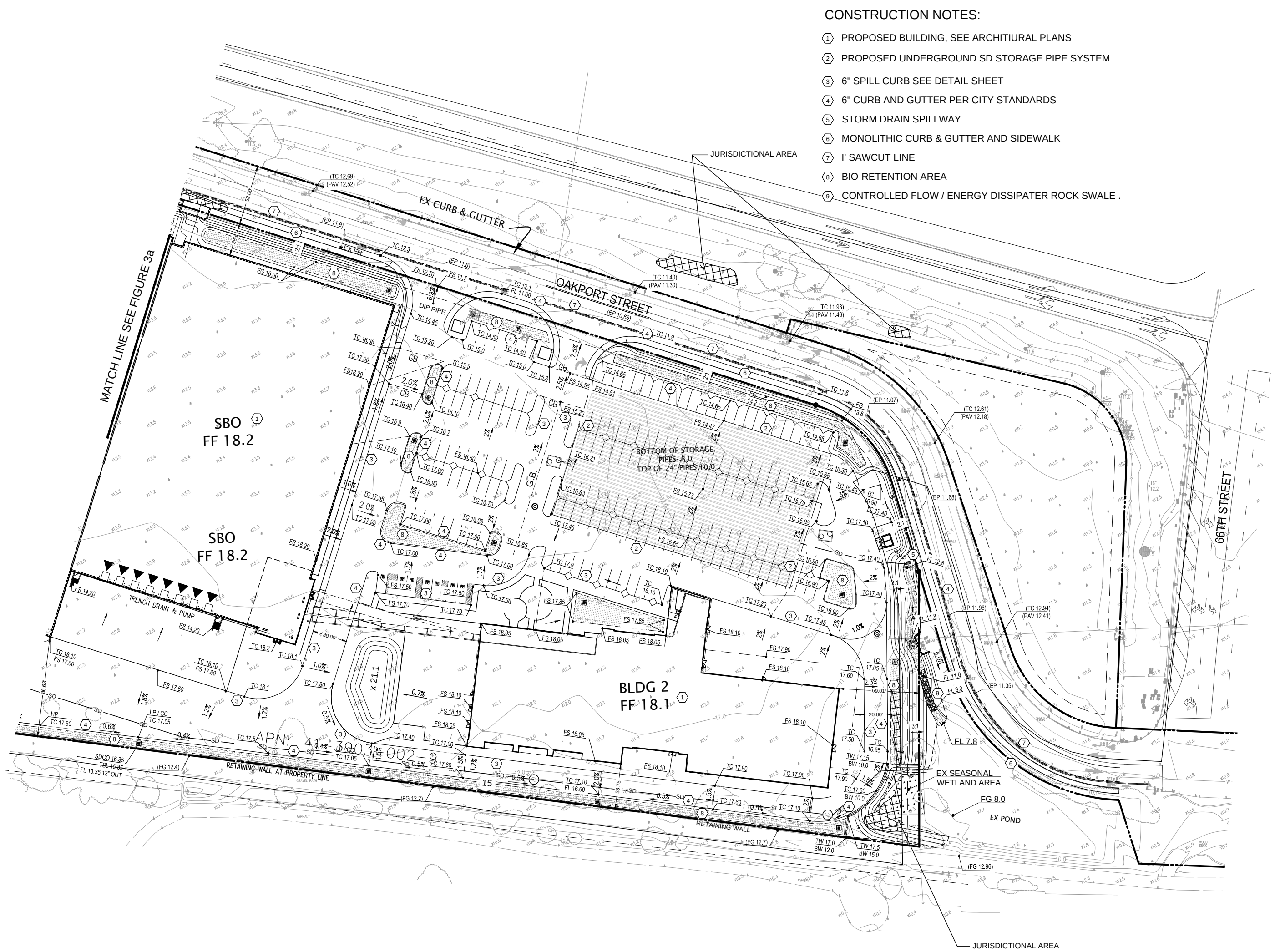
FEET

SOURCE: Ware Malcomb

SupplyBank.org Office and Distribution Center Project
Oakland, Alameda County, California

Applicant's Preferred Project

I:\TER2202\G\Preferred_Project.ai (10/12/2022)



LSA

FIGURE 3b

0 80 160
FEET

SOURCE: Ware Malcomb

SupplyBank.org Office and Distribution Center Project
Oakland, Alameda County, California

Applicant's Preferred Project

I:\TER2202\G\Preferred_Project.ai (10/12/2022)

WATERS OF THE UNITED STATES and WATERS OF THE STATE				
	Length (ft)	Width (ft)	Area (sq. ft.)	Area (acres)
WETLANDS				
SW-01	130	10	1,290	0.030
WETLANDS TOTAL			**1,290**	**0.030**
TOTAL WATERS OF THE UNITED STATES			**1,290**	**0.030**

WATERS OF THE STATE only				
	Length (ft)	Width (ft)	Area (sq. ft.)	Area (acres)
WETLANDS				
CD-01	205	14	2,840	0.065
Seasonal Wetland E	70	12	865	0.020
Seasonal Wetland D	20	9	170	0.004
Oakport Roadside Ditches				
WDD-01	175	3	515	0.012
WDD-02	205	3	615	0.014
WDD-03	295	1.5	443	0.010
WDD-04	115	1.5	173	0.004
Seasonal Wetland Puddle C	360	9	3,310	0.076
WDD-05	155	2	310	0.007
WDD-06	40	2	80	0.002
Oakport Roadside Ditches Total	1345		5,446	0.125
WETLANDS TOTAL			**9,321**	**0.214**
OTHER WATERS				
Oakport Roadside Ditches				
Culvert-01	30	2	60	0.001
Culvert-02	25	1.5	38	0.001
Culvert-03	30	1.5	45	0.001
Oakport Roadside Ditches Total	85		143	0.003
OTHER WATERS TOTAL			**143**	**0.003**
RWQCB-determined Channel	530	2	1,060	0.024
TOTAL WATERS OF THE STATE only			**10,524**	**0.241**

TOTAL WATERS OF THE STATE		
WATERS OF THE STATE only	**10,524**	**0.241**
WATERS OF THE UNITED STATES that are also WATERS OF THE STATE	**1,290**	**0.030**
TOTAL WATERS OF THE STATE	**11,814**	**0.271**

LSA

LEGEND
- Study Site
- Wetland Sample Point
- Non-wetland Sample Point

WATERS OF THE UNITED STATES and WATERS OF THE STATE
- Wetland

WATERS OF THE STATE Only
- Wetland
- Other Waters (Culvert)
- RWQCB-determined Channel

1 INCH = 150 FEET

0 75 150
FEET

FIGURE 4

SupplyBank.org Office and Distribution Center Project
Oakland, Alameda County, California

Potential Waters of the State

SOURCE: Google Maps (2022).

I:\SLK2201\GIS\Maps\Delineation\Figure 3_Waters of the US and State.mxd (10/14/2022)

2.0 PROJECT PURPOSE

2.1 BASIC PROJECT PURPOSE

Under the Section 404(b)(1) Guidelines and the State Procedures, the term "basic project purpose" refers to the fundamental purpose of the project and is used to determine "water dependency." For projects with a non-water dependent basic purpose, the Guidelines and State Procedures presume availability of practicable alternatives that do not involve fill in special aquatic sites and presume that those alternatives have fewer impacts on aquatic ecosystems. The basic purpose of the project is to construct an office and warehouse complex, which is not water dependent.

2.2 OVERALL PROJECT PURPOSE

The "Overall Project Purpose" serves as a major basis for evaluating the practicability of alternatives. In order for an alternative to be practicable, it must be available and capable of satisfying the Overall Project Purpose considering cost, logistics, and technology. The Overall Project Purpose differs from the basic purpose and relates more closely to the applicant's actual intended purpose.

Under the Section 404(b)(1) Guidelines and the State Procedures, the Overall Project Purpose is intended to provide a more detailed description of the applicant's intent for the proposed project. An alternative to the proposed project is considered practicable only if it can satisfy the Overall Project Purpose based on cost, logistics, and technology criteria. The Overall Project Purpose is the following:

> *To construct a nonprofit office center, warehouse, distribution center, and pipe and materials storage area to support SupplyBank.org and EBMUD operations consistent with the Coliseum Area Specific Plan.*

2.3 PROJECT MARKET AREA

The Section 404(b)(1) Guidelines and the State Procedures require that the practicability of any alternative site be evaluated on the basis of whether the site is available to the applicant and whether the project can be constructed on the site after taking into consideration costs, logistics, and technology in light of Overall Project Purpose. The geographic area to be reviewed for alternative sites should not be so broad as to make the analysis unreasonable, or so narrow as to effectively preclude potentially practicable alternatives (*Old Cutler Bay Association Permit Elevation Decision*, October 9, 1990).

A proponent's desire to participate in a particular market area reflects basic business decisions unique to each applicant's circumstances. A particular project type that may be suitable in one market may be unsuitable within another; and a particular project type suitable for one applicant may be unsuitable for another in light of the applicant's size and management capabilities, specialization, need for diversification, etc. Thus, per *Friends of the Earth v. Hintz*, 800 F.2d 822 (9th Cir. 1986) and other guidance, a proponent's business decisions must be considered as long as a reasonable range of alternatives exists, both within and outside of the selected project site.

Consistent with the Section 404(b)(1) Guidelines and the State Procedures, the applicant has defined its Overall Project Purpose in the geographically specific market area that includes sites within the Coliseum Area Specific Plan area and sites owned by EBMUD within an 8-mile radius of the project site. These areas are desirable for the proposed project due to their central location within the San Francisco Bay Area, proximity to public transportation, and proximity to the I-880 corridor, all attributes that would help in achieving the project objectives discussed in Section 1.2.2, Project Description. In this case, the market area contains 23 sites that could be evaluated as potential off-site alternatives (see Section 3.0).

3.0 OFF-SITE ALTERNATIVES SCREENING

This off-site analysis screened potential alternative project sites in order to answer the following fundamental questions as per the State Procedures and 40 CFR Section 230.10(a)(3):

- Whether there are practicable alternative sites that would not involve a discharge of fill to wetlands and other aquatic sites;
- Whether there are practicable alternative sites that would result in fewer impacts to wetlands and other aquatic sites than the applicant's project; and
- Whether there are practicable alternatives that do not have other significant adverse environmental consequences.

3.1 ANALYSIS APPROACH

The analysis approach entailed identification of parcels of land within the market area that have adequate size to accommodate the Overall Project Purpose and that were presumed as an initial matter to be available as alternative sites (i.e., not under public ownership). These parcels were then subjected to the two-tiered screening process described below to determine if the Overall Project Purpose could be achieved on these sites with fewer impacts to wetlands and other aquatic sites than the applicant's project.

The Section 404(b)(1) Guidelines and the State Procedures provide that an off-site alternative is "practicable" if it is available and capable of being built after taking into account (1) cost, (2) existing technology, and (3) logistics, in light of the Overall Project Purpose (40 CFR 230.10(a)(2)). LSA identified Level 1 and Level 2 screening criteria for off-site alternatives to assess each alternative using these three aspects of practicability. Any alternatives that passed the Level 1 and Level 2 screening would be considered potentially practicable alternatives.

None of the off-site alternatives evaluated by LSA passed Level 2 screening; therefore, no practicable off-site alternatives were found. The evaluation process and results of the evaluation are described below.

3.2 LEVEL 1 SCREENING RESULTS FOR OFF-SITE ALTERNATIVES

In order to locate potential off-site alternative locations, LSA reviewed the Coliseum Area Specific Plan area, land use maps, properties owned by EBMUD within an 8-mile radius of the project site, and aerial photography. For the Coliseum Specific Plan area, sites between 5 and 20 acres, not in public ownership at the present time, were subject to Level 1 screening. Public ownership included city, county, regional and state parks and recreation areas, open space or watershed lands, and cemeteries. All properties owned by EBMUD within an 8-mile radius of the project site with potentially developable area were also subject to Level 1 screening, regardless of size.

3.2.1 Level 1 Screening Criteria

Level 1 screening consisted of the following criteria:

- Location. The off-site alternatives must be located within the Coliseum Area Specific Plan area or, if owned by EBMUD, within an 8-mile radius of the project site to be consistent with the Overall Project Purpose. The Coliseum Area Specific Plan area, as shown in Figure 5, covers an approximately 800-acre area within the City of Oakland. The 8-mile radius for sites owned by EBMUD is reflected in the exhibit included in Appendix A. As described above, all alternatives needed to be within the Coliseum Area Specific Plan area on private, non-protected land and sized between 5 and 20 acres or on land owned by EBMUD within 8 miles of the project site.

- Parcel Size. The minimum parcel acreage reasonably capable of accommodating an office center, warehouse, distribution center, and pipe and materials storage area of the approximate size of the proposed project is approximately 5 acres. The maximum parcel size for practicably accommodating an office center, warehouse, distribution center, and pipe and materials storage area similar to the project is 20 acres. Sites larger than 20 acres could theoretically be purchased and later subdivided to create additional sites for sale. However, the upfront investment needed to purchase a parcel larger than what is required for a similar development project and the uncertainty associated with whether the parcel could be subdivided, as well as the cost associated with the subdivision process and the applicant's ability to sell the additional parcel(s) in order to recoup the upfront investment, would render any sites larger than 20 acres impracticable due to cost.

3.2.2 Level 1 Screening Results – Off-Site Alternatives

Within the Coliseum Area Specific Plan area, 14 parcels matched the location and parcel size screening criteria summarized above and were not under public ownership, as shown in Figure 5. These sites were then assessed according to the Level 2 Screening Criteria, as described below.

Nine undeveloped sites under the ownership of EBMUD that were identified as potential alternative project sites passed the Level 1 Screening Criteria, as shown in Appendix A. These sites were then assessed according to the Level 2 Screening Criteria, as described below.

3.3 LEVEL 2 SCREENING FOR OFF-SITE ALTERNATIVES

3.3.1 Level 2 Screening Criteria

The criteria discussed below were used for screening off-site locations that passed Level 1 screening. These criteria are considered negative screening criteria, because they reject potential project sites from further consideration. Sites that failed one or more of the Level 2 screening criteria were rejected as impracticable for the project's overall purpose and were excluded from further analysis.

3.3.1.1 Availability

As per the State Procedures and 40 CFR Section 230.10(a)(2) of the Guidelines, alternative sites must be available for acquisition and development consistent with the Overall Project Purpose. Property that is not under EBMUD ownership and/or not available for sale was excluded from further consideration based on the results of a September 2022 review of standard commercial real estate industry sources, including LoopNet[8] and Commercial Real Estate Exchange, Inc.[9] Within the Coliseum Area Specific Plan area, property for which development applications had been prepared at the time of market entry, or for which development applications were subsequently submitted, or are already approved, were excluded from further consideration. Information about development and planning applications was gathered from the City's Projects and Major Projects List webpages, which provide data on projects in the planning stages and under construction within the City.[10,11]

3.3.1.2 Incompatible Land Use Designation

The project is a commercial and industrial land use, and therefore it would only be permitted on land designated for commercial and industrial uses. In the Coliseum Area Specific Plan area, these City of Oakland Planning Code designations are "Business Mix," "Regional Commercial," and "Community Commercial." Within the portions of the Coliseum Area Specific Plan area that are within the boundaries of the Estuary Policy Plan, these land use designations include "Light Industry" and "General Commercial." All five of these designations would be suitable to accommodate the Overall Project Purpose of constructing an office center, warehouse, distribution center, and pipe and materials storage area. For the EBMUD-owned sites located outside of the City of Oakland and the Coliseum Area Specific Plan area, similar land use designations allowing for commercial and/or industrial uses would also be required to accommodate the proposed project.

Parcels within areas not designated for commercial and industrial land use (e.g., agricultural, open space, and residential land use designations) were excluded as non-practicable because changing the allowable land use would constitute a significant logistical constraint. Such parcels would require an amendment to the City's General Plan to allow the type and intensity of use required under the Overall Project Purpose. The General Plan amendment process requires extensive consultation with city planning staff, submittal of an application, CEQA documentation, environmental assessment, a public hearing before the planning commission, and an additional hearing before the city council, which considers the planning commission's recommendation. Further, proposed major changes in land use typically generate substantial public controversy from neighboring communities, often resulting in the proposed changes being rejected or significantly delayed. The combined effect of the length of time required to change General Plan land use designations, the costs associated with the amendment process, and the uncertainty of the outcome, all contribute to the logistical non-practicality of parcels with incompatible land use designations.

3.3.1.3 Access to Existing Infrastructure

Alternative sites were rejected as impracticable if they are not served by existing water and sewer lines and/or public road access, and would require inordinate expense to provide connection to such infrastructure. Development of a commercial/industrial project on such sites, consistent with the

8 LoopNet. 2022. LoopNet Online Real Estate Marketplace. Website: https://www.loopnet.com/. Accessed September 27, 2022.

9 Commercial Real Estate Exchange, Inc. (CREXi). 2022. CREXi Online CRE Marketplace. Website: https://www.crexi.com/. Accessed September 27, 2022.

10 City of Oakland, 2022. City of Oakland Projects Website: https://www.oaklandca.gov/projects. Accessed on September 27, 2022.

11 City of Oakland, 2022. Oakland Planning Bureau/Major Projects List. Website: https://oakgis.maps.arcgis.com/apps/mapviewer/index.html?webmap=4ec2a2b79c7f4f689e04550d7d6fa5a9. Accessed On September 27, 2022.

Overall Project Purpose, would: 1) require substantial time to process rights of access that would allow off-site infrastructure improvements; 2) require substantial additional construction costs greatly in excess of what is required for the project for extending these services to the site; and 3) potentially have additional risk of impacts to sensitive resources, including waters of the State and/or State and federally-listed species.

3.3.2 Level 2 Screening Results

The 23 potential off-site alternatives that met the Level 1 screening criteria, as reflected in Figure 5 and Appendix A, were analyzed using the Level 2 criteria. These results are summarized below in Table B.

Table B: Results of Level 2 Off-Site Alternatives Screening

Site	Assessor's Parcel Number	Acreage	Screening Criteria			FAILS SCREENING CRITERIA
			Availability	Incompatible Land Use Designation	Infrastructure Requirements	
Sites Owned by EBMUD						
1	257-090-001	8.7		X	X	**X**
2	30-1835-1-1	7.6		X		**X**
3	257-180-064	6.7		X	X	**X**
4	257-210-014	5.7		X	X	**X**
5	48C-7184-16	6.9		X		**X**
6	438-10-8-1	5.9		X		**X**
7	79-20-22-1	6.3		X		**X**
8	257-020-003	5.1		X	X	**X**
9	257-031-015	6.8		X	X	**X**
Sites within the Coliseum Area Specific Plan						
10	41-3902-3-17	18.8	X			**X**
11	41-3902-3-13	9.3	X			**X**
12	41-3902-16-3	7.8	X			**X**
13	41-3902-16-1	9.3	X			**X**
14	41-4209-6	5.7	X			**X**

Table B: Results of Level 2 Off-Site Alternatives Screening

Site	Assessor's Parcel Number	Acreage	Screening Criteria			FAILS SCREENING CRITERIA
			Availability	Incompatible Land Use Designation	Infrastructure Requirements	
15	42-4435-1-11	10.6	X			**X**
16	42-4328-8-1	6.6	X			**X**
17	42-4435-4-14	5.4	X			**X**
18	42-4425-24	12.3	X			**X**
19	42-4415-3-14	18	X			**X**
20	42-4415-3-11	7.9	X			**X**
21	42-4415-3-13	8	X			**X**
22	42-4425-13-3	5.9	X			**X**
23	42-4420-3-7	6	X			**X**

3.4 SUMMARY OF OFF-SITE ALTERNATIVES SCREENING

Results of the off-site alternatives screening demonstrate that there are no practicable off-site alternatives to the project site within the market area. Within the Coliseum Area Specific Plan area, 14 parcels matched the location and parcel size screening criteria summarized above, as shown in Figure 5. However, all parcels are currently developed and none are currently available for sale based on the results of a September 2022 review of standard commercial real estate industry sources, including LoopNet[12] and Commercial Real Estate Exchange, Inc.[13] All parcels within the Coliseum Area Specific Plan area that were over 20 acres are under public ownership. Therefore, there are no feasible alternative sites for the proposed project within the Coliseum Area Specific Plan area.

All of the properties under EBMUD ownership are available for lease to SupplyBank.org; however, none of them permit office/warehouse buildings or laydown facilities as shown in Appendix A. Furthermore, Sites 1, 3, 4, 8, and 9 are located in remote areas that do not have adequate infrastructure to support the proposed office center, warehouse, distribution center, and pipe and materials storage area.

12 LoopNet. 2022. Op. cit.
13 CREXi. 2022. Op. cit.

LSA

LEGEND

Project Site

Privately-owned Parcel between 5 and 20 acres

Coliseum Area Specific Plan

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SOURCE: Microsoft Bing Aerial Imagery (2022).

I:\TER2202\GIS\Maps\Alternatives Analysis\Figure 7_Off-Site Alternatives within the Coliseum Area SP Area.mxd (10/12/2022)

FIGURE 5

SupplyBank.org Office and Distribution Center Project
Oakland, Alameda County, California

Off-Site Alternatives Within the Coliseum Area Specific Plan Area

4.0 ON-SITE ALTERNATIVES SCREENING

The project team examined two design alternatives to the project consistent with the Overall Project Purpose. The purpose of these investigations was to determine if a practicable alternative project design could attain the Overall Project Purpose while resulting in fewer impacts to jurisdictional waters of the State than the project and while also avoiding other significant adverse environmental consequences, as per the State Procedures and 40 CFR Section 230.10(a)(3).

The Section 404(b)(1) guidelines and the State Procedures provide that an alternative is “practicable” if it is capable of being implemented, taking into account (1) cost, (2) technology, and (3) logistics, in light of the overall project purpose (40 CFR Section 230.10(a)(2)).

4.1 DESCRIPTIONS OF ALTERNATIVES

The project team evaluated three on-site alternatives consistent with the Overall Project Purpose. The alternative designs entailed various approaches for avoiding impacts to jurisdictional waters by modifying or reducing the development footprint of the project.

While the total developed area for each of these alternatives varies, all alternatives retain the concept of an office center, warehouse, distribution center, and pipe and materials storage area. Salient features of each alternative are discussed below.

4.1.1 Alternative 1 – Applicant’s Preferred Project

Alternative 1 is the applicant’s preferred proposed project as described in Section 1.2.2 and as shown on Figures 3a and 3b. This alternative would entail the construction of an office building, warehouse building, and a warehouse and corporation yard with internal circulation, landscaping, and parking. In the central and southern portion of the property, an approximately 160,000 square-foot office building and a 123,000 square-foot warehouse building would be constructed. In the northern portion of the property, an EBMUD warehouse and corporation yard would be constructed consisting of a 10,000 square-foot workshop, a 57,000 square-foot pipe and materials storage rack structure, and an approximately 28,000 square-foot storage bin used to store and source a variety of building materials. The proposed project would include three new vehicle entry points, an internal circulation loop, parking, and City required improvements on Oakport Street, including street widening, street frontage planter, curb and gutter, and concrete sidewalk. Various bio-retention facilities would also be installed throughout the site that would be sized appropriately to meet or exceed the minimum treatment area required.

Alternative 1 would result in approximately 0.455 acre of permanent impacts to wetlands and other waters subject to RWQCB jurisdiction as a result of the development of retaining walls, a bio-retention area, and covered scrap bins along the northwestern property boundary of the project site; a bio-retention area and retaining wall along the southern project boundary; and the completion of City required improvements to Oakport Street, including street widening, street frontage planter, curb and gutter, and a concrete sidewalk. Impacts to 0.240 acre of potential seasonal wetlands in the central portion of the site, as previously delineated by WRA and graded during maintenance activities outside of the applicant's control, are also included in the permanent impact total.

4.1.2 Alternative 2 – Partial Avoidance Along Oakport Street

Alternative 2 tests the practicability of avoiding impacts to seasonal wetland ditches WDD-02 through WDD-06, seasonal wetland puddle C, and other waters of the State including culverts -02 and -03 and the RWQCB-determined channel along Oakport Street by excluding the completion of the proposed improvements to Oakport Street, including street widening, street frontage planter, curb and gutter, and a concrete sidewalk. Under this alternative, all other project components would be similar to the proposed project, including the construction of an office building, warehouse building, and a warehouse and corporation yard with internal circulation, landscaping, and parking. Alternative 2 would result in permanent impacts to 0.324 acre of wetlands as a result of the development of retaining walls, a bio-retention area, and covered scrap bins along the northwestern property boundary of the project site; and a bio-retention area and retaining wall along the southern property boundary. Impacts to 0.240 acre of potential seasonal wetlands in the central portion of the site, as previously delineated by WRA and graded during maintenance activities outside of the applicant's control, are also included in the permanent impact total. Compared to Alternative 1, the Applicant's Preferred Project, Alternative 2 would result in a 29 percent reduction of impacts to wetlands and other waters of the State.

4.1.3 Alternative 3 – Partial Avoidance Along Western and Southern Property Boundaries

Alternative 3 (Figures 6a and 6b) tests the practicability of avoiding impacts to seasonal wetlands CD-01 and SW-1 in the western and southern areas of the project site by modifying and relocating the bio-retention areas, retaining walls, and covered scrap bins. Under this alternative, all other project components would be similar to the proposed project, including the construction of an office building, warehouse building, and a warehouse and corporation yard with internal circulation, landscaping, parking, and completion of required improvements to Oakport Street, including street widening, street frontage planter, curb and gutter, and a concrete sidewalk. Alternative 3 would result in permanent impacts to 0.371 acre of wetlands and other waters of the State as a result of the completion of required improvements to Oakport Street (0.131 acre) and accounting for the previously delineated seasonal wetlands that were graded during maintenance activities (0.240 acre). Compared to Alternative 1, the Applicant's Preferred Project, Alternative 3 would result in an 18 percent reduction of impacts.

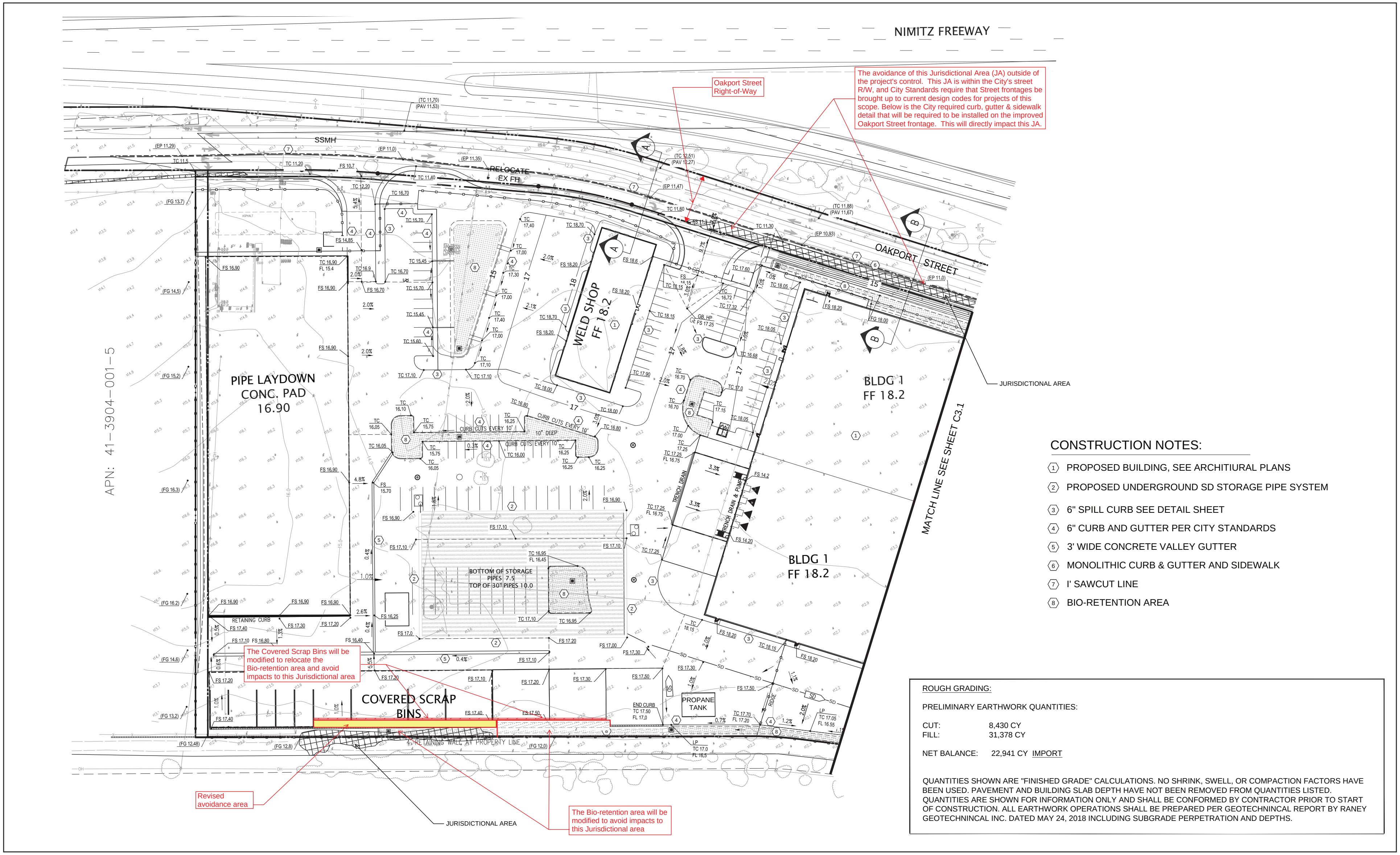

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FIGURE 6a

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SupplyBank.org Office and Distribution Center Project
Oakland, Alameda County, California

Alternative 3 - Partial Avoidance Along Western and Southern Property Boundaries

SOURCE: Ware Malcomb

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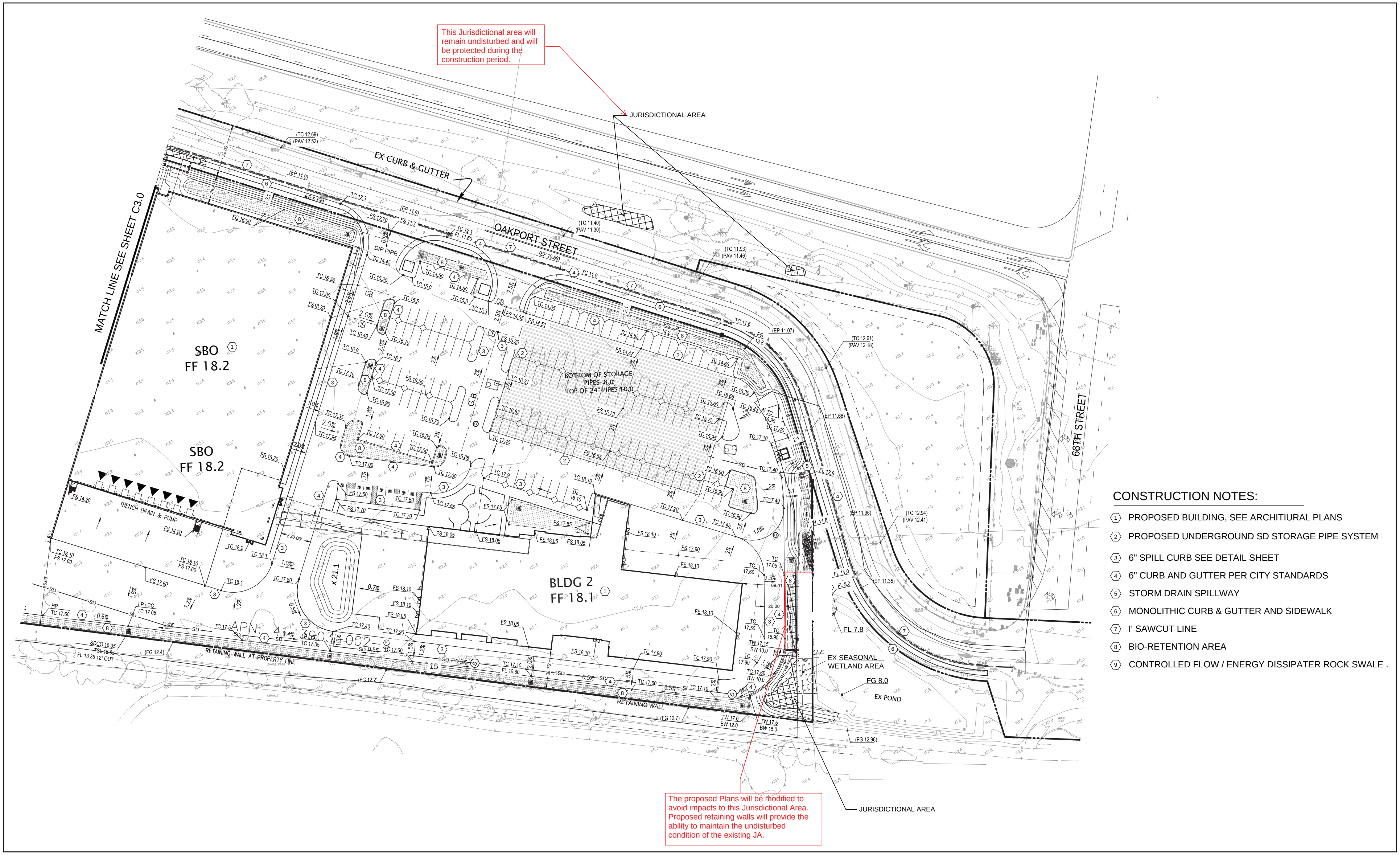

FIGURE 6b

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SupplyBank.org Office and Distribution Center Project

Oakland, Alameda County, California

Alternative 3 - Partial Avoidance Along Western and Southern Property Boundaries

SOURCE: Ware Malcomb

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4.2 ANALYSIS OF ON-SITE ALTERNATIVES

The on-site alternatives analysis focused on identifying the practicable alternative with the least damage to the aquatic environment. On-site alternatives were tested for their consistency with the Overall Project Purpose and for practicability from the standpoints of cost, logistics, technology, and the potential for other significant adverse environmental consequences. Practicable alternatives were then compared to determine the LEDPA.

4.2.1 Consistency with Overall Project Purpose

Under the Section 404(b)(1) Guidelines and Procedures, an applicant is only required to consider alternatives that would attain the Overall Project Purpose (see Section 2.2). Alternatives that would not attain the Overall Project Purpose are assumed *a priori* to be impracticable alternatives. As described in Section 2.2, the Overall Project Purpose is to construct a nonprofit office center, warehouse, distribution center, and pipe and materials storage area to support SupplyBank.org and EBMUD operations consistent with the Coliseum Area Specific Plan.

4.2.2 Practicability Screening Criteria

The comparison criteria are those required under 40 CFR §230 for determining the LEDPA.

- **Cost Screening Criteria.** The 404(b)(1) Guidelines consider an alternative to be impracticable if the projected costs are substantially greater than the costs normally associated with the particular type of project (see preamble to the Guidelines "Economic Factors" in 45 FR 85343, 12/24/80 and Corps Regulatory Guidance Letter 93-02). If an alternative would cause the development costs to increase substantially and/or result in an unreasonable expense to the applicant, then the alternative may be considered impracticable under the Guidelines.

  For the purposes of this analysis, project costs are considered to be the fundamental expenditures to construct the project. The financial costs borne by the developer include on- and off-site improvements costs (e.g., grading, roads, water, sewer, storm drainage, etc.), engineering and design costs, and development and permit fees. The costs associated with the applicant's preferred project (Alternative 1) are considered the baseline against which the other alternatives could be compared. Any alternative that would significantly increase project costs beyond the applicant's preferred alternative would result in a project too costly to be practicable under the Guidelines and State Procedures.

- **Logistical Screening Criteria.** Logistical considerations may affect the practicability of an alternative in light of the project's overall purpose. Logistical barriers associated with construction, operation, or maintenance of the project could include permitting constraints, City requirements, health and safety constraints, or legal and land use constraints. For the proposed project, alternatives may face logistical constraints related to City of Oakland regulations or requirements, Coliseum Area Specific Plan design standards, policies, and/or binding contractual agreements regarding land use and zoning. If such logistical barriers are likely to result in City disapproval of an alternative, then they can be considered a legitimate reason to consider the alternative impracticable.

- **Technological Screening Criteria.** In a practicability analysis, an assessment of existing technology typically involves an evaluation of available engineering and construction methods and techniques. The technology employed to construct, operate, or maintain an alternative must be adequate to ensure that the Overall Project Purpose can be reasonably met.

- **Other Significant Adverse Environmental Consequences.** An alternative is not the LEDPA where it may cause other significant adverse environmental consequences (e.g., impacts to biological resources, including rare and threatened or endangered species, cultural resources, floodplain effects, etc.).

4.2.3 Screening Results - On-Site Alternatives

The results of the on-site alternatives screening are described below.

4.2.3.1 Alternative 1 – Proposed Project

Alternative 1, the proposed project, is practicable in terms of cost, logistics, and technology. Alternative 1 provides a baseline against which the other alternatives were compared (see Section 4.1).

4.2.3.2 Alternative 2 – Partial Avoidance Along Oakport Street

Alternative 2 is practicable in terms of cost and technology, but not in terms of logistics. Under this alternative, the completion of improvements to Oakport Street including street widening, street frontage planter, curb and gutter, and a concrete sidewalk would be excluded from the proposed project, reducing impacts to seasonal wetland ditches WDD-02 through WDD-06, seasonal wetland puddle C, and other waters of the State including culverts -02 and -03 and the RWQCB-determined channel. However, the City of Oakland has full jurisdiction over the proposed improvements along Oakport Street and is requiring that the applicant implement these improvements as part of the project consistent with City design and development standards. Thus, Alternative 2 would fail the logistics criterion, as this alternative would be rejected by the City.

In summary, Alternative 2 is rejected because it would be impracticable from a logistics standpoint due to City requirements.

4.2.3.3 Alternative 3 – Partial Avoidance Along Western and Southern Property Boundaries

Alternative 3 is practicable in terms of cost, technology, and logistics. Under this alternative, impacts to seasonal wetlands CD-01 and SW-1 in the western and southern areas of the project site would be avoided by modifying and relocating bio-retention areas, retaining walls, and covered scrap bins. All other project components would be similar to the proposed project, including the construction of an office building, warehouse building, and a warehouse and corporation yard with internal circulation, landscaping, parking, and completion of required improvements to Oakport Street, including street widening, street frontage planter, curb and gutter, and a concrete sidewalk. Alternative 3 would result in an 18 percent reduction of impacts compared to Alternative 1 (i.e., 0.371 acre versus 0.455 acre).

In summary, Alternative 3 is consistent with the Overall Project Purpose and practicable in terms of cost, technology, and logistics.

4.3 DETERMINATION OF PRACTICABILITY AND THE LEAST ENVIRONMENTALLY DAMAGING ALTERNATIVE

Based on the analysis of the on-site alternatives, Alternative 2 was determined to be impracticable because it failed the logistical screening criteria, per 40 CFR Section 230.10(a)(2), due to this Alternative's inconsistency with City requirements. Alternatives 1 and 3 were both determined to be consistent with the Overall Project Purpose and practicable from a cost, logistics, and technological standpoint. However, Alternative 3 would result in less impact to potential waters of the State when compared with Alternative 1. Therefore, Alternative 3, Partial Avoidance Along Western and Southern Property Boundaries, is determined to be the LEDPA and is the proposed project reflected in the current application for WDRs.

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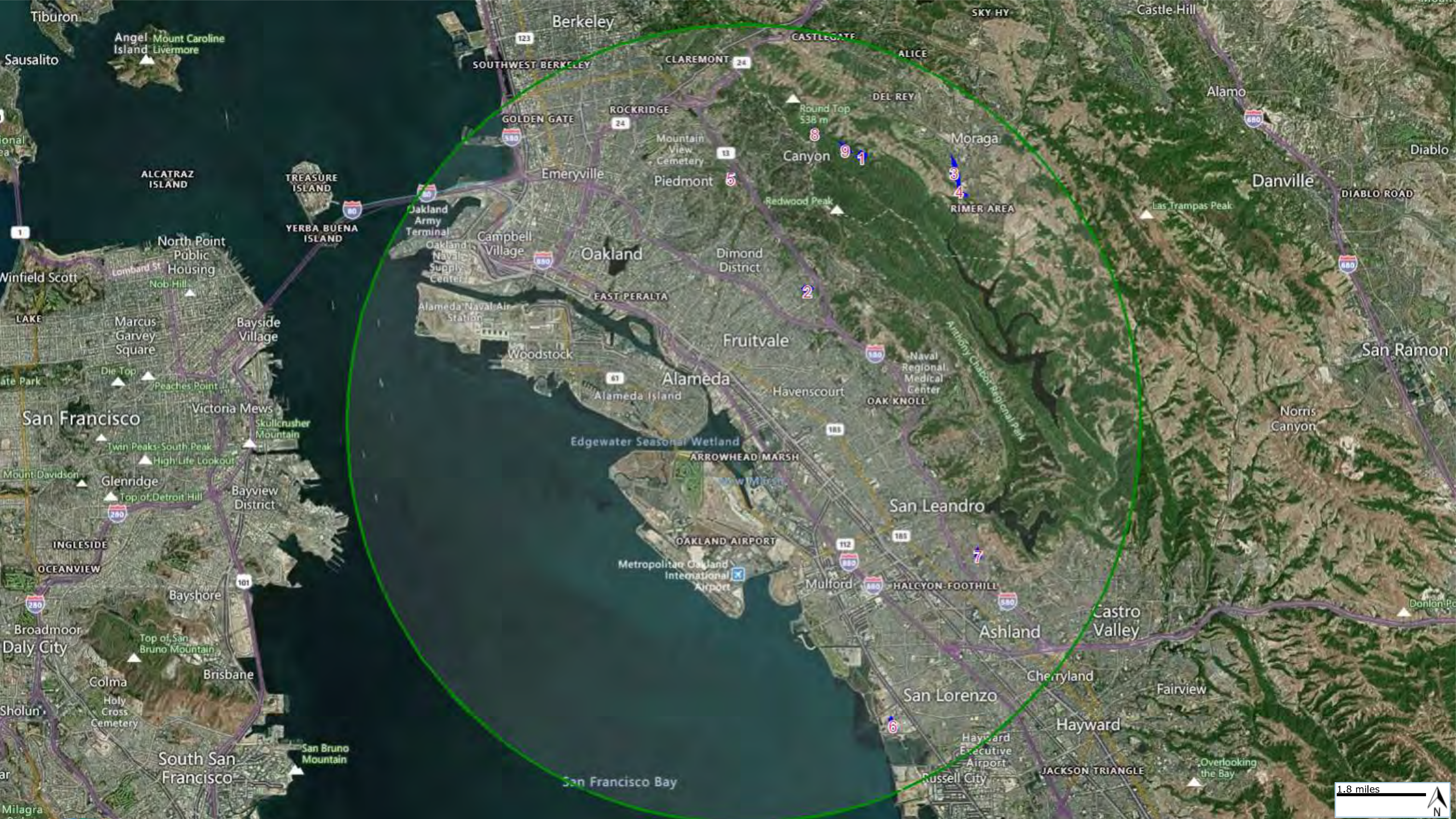
APPENDIX A

EBMUD-OWNED SITES WITHIN AN 8-MILE RADIUS


Berkeley
Castle Hill
Sky Hy
Castlegate
Alice
Claremont
Southwest Berkeley
Tiburon
Angel Island
Mount Caroline Livermore
Sausalito
Rockridge
Golden Gate
Del Rey
Round Top 538 m
Moraga
Mountain View Cemetery
Canyon
Piedmont
Emeryville
Alamo
Danville
Diablo
Diablo Road
Alcatraz Island
Treasure Island
Yerba Buena Island
Oakland Army Terminal
Campbell Village
Redwood Peak
Rimer Area
Las Trampas Peak
Oakland Naval Supply Center
Oakland
Dimond District
North Point Public Housing
Lombard St
Nob Hill
Winfield Scott
East Peralta
Alameda Naval Air Station
Lake
Marcus Garvey Square
Bayside Village
Fruitvale
Woodstock
Anthony Chabot Regional Park
Naval Regional Medical Center
San Ramon
Die Top
Peaches Point
Alameda
Havenscourt
Alameda Island
Oak Knoll
San Francisco
Victoria Mews
Skullcrusher Mountain
Norris Canyon
Twin Peaks-South Peak
Edgewater Seasonal Wetland
High Life Lookout
Arrowhead Marsh
Mount Davidson
Glenridge
Bayview District
Top of Detroit Hill
San Leandro
Ingleside
Oakland Airport
Metropolitan Oakland International Airport
Oceanview
Mulford
Halcyon-Foothill
Bayshore
Castro Valley
Ashland
Broadmoor
Daly City
Top of San Bruno Mountain
Brisbane
Cherryland
Colma
Fairview
San Lorenzo
Holy Cross Cemetery
Sholun
Hayward
Hayward Executive Airport
San Bruno Mountain
South San Francisco
Russell City
Jackson Triangle
Overlooking the Bay
San Francisco Bay
Milagra Ridge
1.8 miles
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1

SITE ADDR		**SITE CITY**	CANYON	**SITE ZIP**	94516
APN	257-090-001	**OWNER NAME 1**	EAST BAY MUNICIPAL UTILITY	**ASSESSED VALUE**	17904
LOT ACREAGE	8.7467	**LOT SQUARE FEET**	381006	**STANDARD USE CODE CATEGORY DESC**	MISCELLANEOUS
STANDARD USE CODE DESC	GOVERNMENTAL, PUBLIC				

While vacant land is associated with this property, the site is designated for watershed use only. No office/warehouse building or laydown facilities are permitted.

2

SITE ADDR	39TH AV	**SITE CITY**	OAKLAND	**SITE ZIP**	94619
APN	30-1835-1-1	**OWNER NAME 1**	EAST BAY MUNICIPAL UTILITY DISTRICT	**ASSESSED VALUE**	
LOT ACREAGE	7.56	**LOT SQUARE FEET**	329167	**STANDARD USE CODE CATEGORY DESC**	MISCELLANEOUS
STANDARD USE CODE DESC	MISCELLANEOUS, MISCELLANEOUS				

Property is developed with the 39th Avenue Reservoir. While there is some developable area remaining, no office/warehouse building or laydown facilities are permitted.

3

SITE ADDR	CANYON RD	**SITE CITY**	MORAGA	**SITE ZIP**	94556
APN	257-180-064	**OWNER NAME 1**	EAST BAY MUNICIPAL UTILITY	**ASSESSED VALUE**	82123
LOT ACREAGE	6.74	**LOT SQUARE FEET**	293594	**STANDARD USE CODE CATEGORY DESC**	MISCELLANEOUS
STANDARD USE CODE DESC	GOVERNMENTAL, PUBLIC				

While vacant land is associated with this property, the site is designated for watershed use only. No office/warehouse building or laydown facilities are permitted.

4

SITE ADDR	CANYON RD	**SITE CITY**	MORAGA	**SITE ZIP**	94556
APN	257-210-014	**OWNER NAME 1**	EAST BAY MUNICIPAL UTILITY	**ASSESSED VALUE**	91720
LOT ACREAGE	5.69	**LOT SQUARE FEET**	247856	**STANDARD USE CODE CATEGORY DESC**	MISCELLANEOUS
STANDARD USE CODE DESC	GOVERNMENTAL, PUBLIC				

While vacant land is associated with this property, the site is designated for watershed use only. No office/warehouse building or laydown facilities are permitted.

5

SITE ADDR	ESTATES DR	**SITE CITY**	OAKLAND	**SITE ZIP**	94603
APN	48C-7184-16	**OWNER NAME 1**	EAST BAY MUNICIPAL UTILITY DISTRICT	**ASSESSED VALUE**	
LOT ACREAGE	6.88	**LOT SQUARE FEET**	299503	**STANDARD USE CODE CATEGORY DESC**	MISCELLANEOUS
STANDARD USE CODE DESC	MISCELLANEOUS, MISCELLANEOUS				

Property is developed with the Estates Number 1 Reservoir. While there is some developable area remaining, no office/ warehouse building or laydown facilities are permitted.

6

SITE ADDR	GRANT AVE	**SITE CITY**	SAN LORENZO	**SITE ZIP**	94580
APN	438-10-8-1	**OWNER NAME 1**	EAST BAY MUNICIPAL UTILITY DISTRICT	**ASSESSED VALUE**	
LOT ACREAGE	5.89	**LOT SQUARE FEET**	256424	**STANDARD USE CODE CATEGORY DESC**	MISCELLANEOUS
STANDARD USE CODE DESC	MISCELLANEOUS, MISCELLANEOUS				

Property developed with the Bayside Groundwater Well. While there is some developable area remaining, no office/ warehouse building or laydown facilities are permitted.

7

SITE ADDR	MARINEVIEW DR	**SITE CITY**	SAN LEANDRO	**SITE ZIP**	94577
APN	79-20-22-1	**OWNER NAME 1**	EAST BAY MUNICIPAL UTILITY DISTRICT	**ASSESSED VALUE**	
LOT ACREAGE	6.34	**LOT SQUARE FEET**	276013	**STANDARD USE CODE CATEGORY DESC**	MISCELLANEOUS
STANDARD USE CODE DESC	MISCELLANEOUS, MISCELLANEOUS				

Property developed with the Van Reservoir. While there is some developable area remaining, no office/ warehouse building or laydown facilities are permitted.

8

SITE ADDR	PINEHURST RD	**SITE CITY**	CANYON	**SITE ZIP**	94516
APN	257-020-003	**OWNER NAME 1**	EAST BAY MUNICIPAL UTILITY	**ASSESSED VALUE**	7076
LOT ACREAGE	5.14	**LOT SQUARE FEET**	223898	**STANDARD USE CODE CATEGORY DESC**	MISCELLANEOUS
STANDARD USE CODE DESC	GOVERNMENTAL, PUBLIC				

While vacant land is associated with this property, the site is designated for watershed use only. No office/warehouse building or laydown facilities are permitted.

9

SITE ADDR	PINEHURST RD	**SITE CITY**	CANYON	**SITE ZIP**	94516
APN	257-031-015	**OWNER NAME 1**	EAST BAY MUNICIPAL UTILITY	**ASSESSED VALUE**	9205
LOT ACREAGE	6.8	**LOT SQUARE FEET**	296208	**STANDARD USE CODE CATEGORY DESC**	MISCELLANEOUS
STANDARD USE CODE DESC	GOVERNMENTAL, PUBLIC				

While vacant land is associated with this property, the site is designated for watershed use only. No office/warehouse building or laydown facilities are permitted.

Appendix K

Cultural Resources Inventory Report for the SupplyBank Project

SWCA Environmental Consultants, September 2022

Cultural Resources Inventory Report for the SupplyBank Project, Oakland, Alameda County, California

JANUARY 2023

PREPARED FOR

Lamphier-Gregory

PREPARED BY

SWCA Environmental Consultants

CULTURAL RESOURCES INVENTORY REPORT FOR THE SUPPLYBANK PROJECT, OAKLAND, ALAMEDA COUNTY, CALIFORNIA

Prepared for

Lamphier-Gregory
4100 Redwood Road, STE 20A - #601
Oakland, CA 94916
Attn: Scott Gregory, President

Prepared by

Christina Alonso, M.A., RPA, Kerry Boutte, M.A., RPA, and
Brandon Foster, M.A.

Principal Investigator

Joshua Peabody, M.S., RPA

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Half Moon Bay, California 94019
(650) 440-4160
www.swca.com

SWCA Project No. 74496

SWCA Cultural Resources Report No. 22-609

January 2023

Archaeological and other heritage resources can be damaged or destroyed through uncontrolled public disclosure of information regarding their location. This document contains sensitive information regarding the nature and location of archaeological sites, which should not be disclosed to the general public or unauthorized persons.

Information regarding the location, character, or ownership of a cultural resource is exempt from the Freedom of Information Act pursuant to 54 USC 307103 (National Historic Preservation Act) and 16 USC Section 470(h) (Archaeological Resources Protections Act)

MANAGEMENT SUMMARY

Purpose and Scope: SWCA Environmental Consultants (SWCA) was retained by Lamphier-Gregory to provide archaeological support for the SupplyBank Project (project) on East Bay Municipal Utility District (EBMUD) properties located at 5601 Oakport Street in the city of Oakland. SWCA understands that the East Bay Municipal Utility District (EBMUD) owns two adjacent properties— Parcel 1 (to the south) is approximately 15.7 acres, and Parcel 2 (to the north) is approximately 28.9 acres in size. SupplyBank.Org (SupplyBank) seeks to acquire the rights to develop Parcel 1 and approximately 2 acres of Parcel 2 through a parcel map waiver. The site will continue to be owned by EBMUD, and the new development will be managed by SupplyBank as part of a long-term land lease agreement. The new development will include properties with a total of 293,000 square feet of building space including an office building, a warehouse, and a weld shop. The intent of this cultural resources inventory report is to identify potential cultural resources within and adjacent to the project area and, in turn, assist in the project's requirements to achieve California Environmental Quality Act (CEQA) compliance.

Dates of the Investigation: SWCA sent a records search request with a 0.25-mile buffer around the project area to the California Historical Resources Information System (CHRIS) Northwest Information Center (NWIC) on July 15, 2022. The records search results (NWIC File No. 22-0099) were received on August 17, 2022, indicating that there are no previously recorded cultural resources in the project area. SWCA performed an intensive archaeological survey of the project area on August 25, 2022. SWCA contacted the California Native American Heritage Commission (NAHC) on July 15, 2022, requesting a search of its Sacred Lands File for traditional cultural resources. SWCA sent letters to NAHC-identified Native American contacts via email on August 30, 2022, with hard copies following by regular mail on September 1, 2022. Follow-up telephone calls were made on September 2, 2022. Native American outreach performed as part of this review does not constitute formal consultation. Chairperson Irene Zwierlein of the Amah Mutsun Band of Mission San Juan Bautista requested on-site worker sensitivity training for both tribal and archaeological resources detailing who to contact in the event of an inadvertent discovery. Chairperson Corrina Gould of the Confederated Villages of Lisjan requested the CHRIS results and final report. The remainder of the telephone calls went unanswered.

Investigation Constraints: None.

Number and Types of Identified Cultural Resources: There are no previously recorded cultural resources within the project area, and no resources were reported during intensive archaeological survey.

Report Format: The format of this report follows *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (California Office of Historic Preservation [OHP] 1990).

Conclusions: There are no previously recorded cultural resources and no newly identified cultural resources within the project area. With implementation of conditions to comply with regulatory compliance measures related to the inadvertent discovery of archaeological resources and human remains, SWCA finds that the proposed project will have a less-than-significant impact on cultural resources under CEQA.

Recommendations: No cultural resources were noted on the ground surface during the intensive archaeological pedestrian survey. However, the possibility of encountering cultural resources during excavation remains. If cultural materials are uncovered during project work, the Inadvertent Discovery procedures provided at the end of this report should be followed.

Disposition of Data: This report will be filed with the NWIC and Half Moon Bay, California, office of SWCA. Field notes, photographs, and records related to the current study are on file at SWCA's Half Moon Bay office.

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INTRODUCTION

SWCA Environmental Consultants (SWCA) was retained by Lamphier-Gregory to provide archaeological support for the SupplyBank Project (project) located at 5601 Oakport Street in the city of Oakland, Alameda County, California (Figure 1 and Figure 2). SWCA understands that the East Bay Municipal Utility District (EBMUD) owns two adjacent properties— Parcel 1 (to the south) is approximately 15.7 acres, and Parcel 2 (to the north) is approximately 28.9 acres in size. SupplyBank.Org seeks to acquire the rights to develop Parcel 1 and approximately 2 acres of Parcel 2 through a parcel map waiver. The site will continue to be owned by EBMUD, and the new development will be managed by SupplyBank.Org as part of a long-term land lease agreement. The new development will include properties with a total of 293,000 square feet (sf) of building space, including an office building, a warehouse, and a weld shop.

The purpose of the current study was to identify, evaluate, and record any cultural resources that may be present within the project area. SWCA archaeologist Brandon Foster, M.A., conducted the fieldwork for this project, and SWCA archaeologists Kerry Boutte, M.A., RPA coauthored the report. These efforts were carried out under the direction of and reviewed for quality assurance/quality control by SWCA Senior Project Manager Christina Alonso, M.A., Registered Professional Archaeologist (RPA) and Cultural Resources Principal Investigator Joshua Peabody, M.A., RPA, who meets and exceeds the requirements of the Secretary of the Interior (SOI) Professional Qualification Standards in Archaeology (National Park Service 1983). All work was completed to achieve California Environmental Quality Act (CEQA) compliance as it relates to cultural resources.

Project Description and Location

The project site falls within the Coliseum industrial neighborhood of East Oakland, north of the Oakland Airport Business Park and within the planning area of the City of Oakland's Coliseum Area Specific Plan (see Figure 2). The project site is adjacent to Interstate 880 (I-880), and a portion of the project area forms the shoreline of the Oakland Estuary/San Leandro Bay. The site is approximately 0.25 mile northwest of the Oracle Arena/Oakland Coliseum, approximately 0.7 mile west of the Coliseum Bay Area Rapid Transit District (BART) Station, and approximately 3 miles northeast of the Oakland International Airport terminal.

Access to the site is provided primarily from I-880 via the westbound Zhone Way/66th Avenue interchange. The project site is within the northwest quadrant of this interchange, adjacent to the southbound off-ramp at Zhone Way. Westbound Zhone Way terminates just before the Oakland Estuary/San Leandro Bay at Oakport Street, and the project site fronts onto Oakport Street at this location.

The Project site involves two parcels, both of which are owned by EBMUD. Parcel 1 is the primary Project site and Parcel 2 is the adjacent property (see Figure 2), a portion of which is proposed to be combined into Parcel 1 to make it a larger site.

Project Description: Parcel 1

The approximately 15.7-acre parcel (Assessor's Parcel Number [APN] 41-3903-2-8) fronts Oakport Street along the eastern perimeter and Oakport Street/Zhone Way to the southeastern perimeter. The property, is a vacant site with perimeter fencing, and no internal improvements. EBMUD permits this property to be used as a temporary circus grounds during the summer and for other seasonal outdoor use, such as Christmas tree sales or pumpkin sales, but generally the property remains vacant.

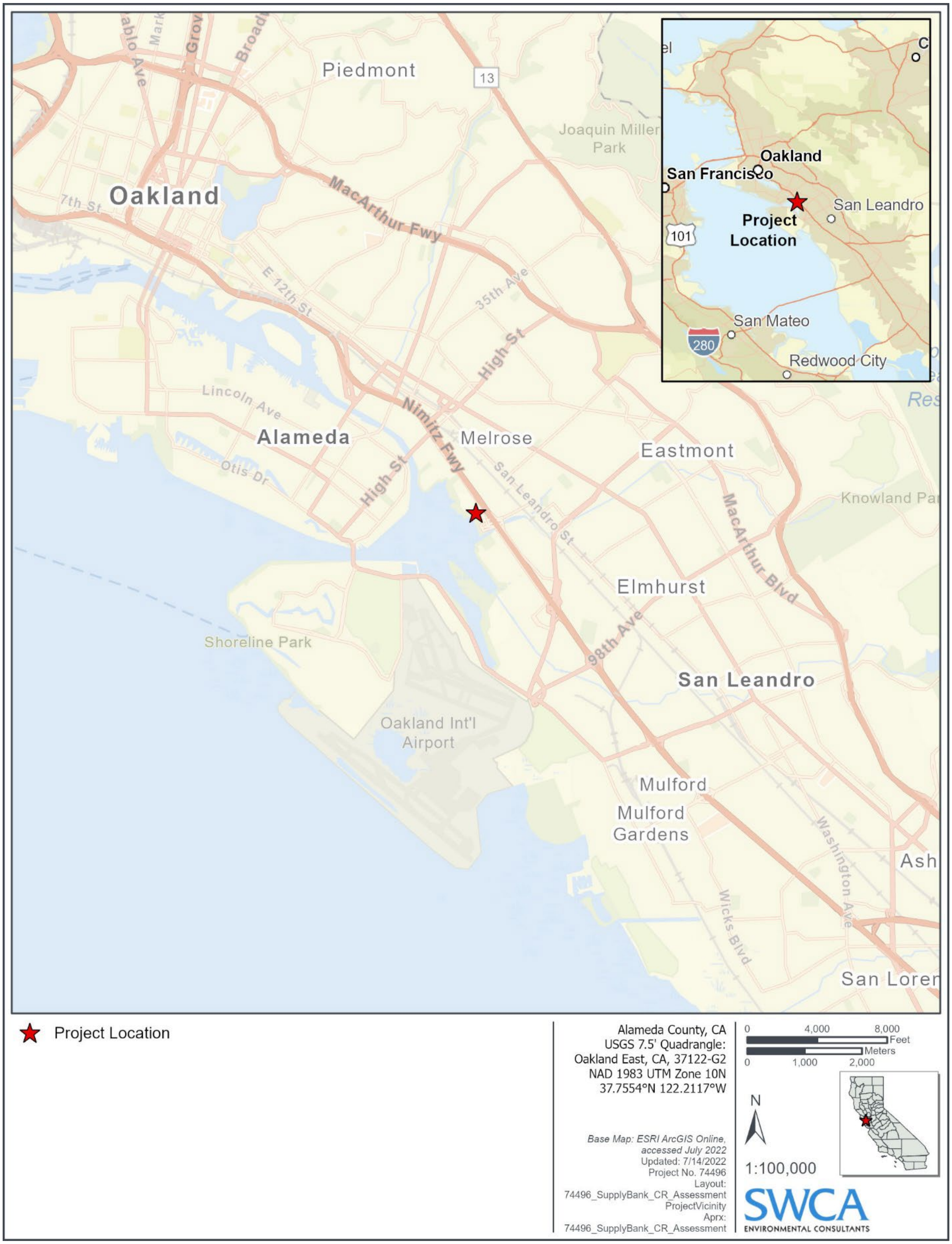

Figure 1. Project location map.

Figure 2. Project area map.

The development plan for Parcel 1 includes construction of four new buildings as well as on-site improvements to landscaping, parking, and the frontage. A new 85-foot high, five-story, 160,000-square-foot office building would be constructed at the southernmost portion of Parcel 1. A new 123,000-square-foot warehouse would be constructed in the middle portion of Parcel 1. A small (approximately 10,000-square-foot) weld shop would be constructed on the north-central portion of Parcel 1. An additional structure to be added to Parcel 1 would be an approximately 26,000-square-foot pipe and materials storage rack structure. A 12,000-square-foot storage bin will be added to the project area and used to store and source a variety of building materials, such as sorted sands and gravels. This storage bin facility would be placed along the northwestern property boundary and would replace the similar storage bins currently located on Parcel 2.

The project will also provide various landscaping including 58 trees around all of the buildings and within the surface parking lots. The project's office building would include a rooftop terrace.

Three additional new curb cuts would be added along Oakport Street to improve vehicle access, and a fourth curb cut would provide a separate entrance to the office building's surface parking lot. Parking will be provided at a number of surface parking lots throughout the site. The primary parking lot for the office building would be at the front of the building and would include 208 parking spaces, including five Americans with Disabilities Act (ADA)-accessible spaces adjacent to the office building entry. A secondary surface parking lot between the warehouse and the weld shop will provide an additional 48 parking spaces, and an additional secondary surface parking lot at the rear of the site would provide an additional 48 parking spaces. Approximately 12 larger truck parking spaces would be provided in front of the materials storage bins. The project also includes the installation of new curb, gutter, and sidewalks along the Parcel 1 frontage in Oakport Street.

REGULATORY FRAMEWORK

This regulatory framework section identifies the state and local laws, statutes, guidelines, and regulations that govern the identification and treatment of cultural resources, as well as the analysis of potential impacts to cultural resources. The lead agency must consider the provisions and requirements of this regulatory framework when rendering decisions on projects that have the potential to affect cultural resources.

State Regulations

The California Office of Historic Preservation (OHP), a division of the California Department of Parks and Recreation (DPR), is responsible for carrying out the duties described in the California Public Resources Code (PRC) and maintaining the California Register of Historical Resources (CRHR). The state-level regulatory framework also includes CEQA, which requires the identification and mitigation of substantial adverse impacts that may affect the significance of eligible historical and archaeological resources.

California Environmental Quality Act

CEQA requires a lead agency to analyze whether historical and/or archaeological resources may be adversely affected by a proposed project. Under CEQA, a "project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment" (PRC Section 21084.1). Answering this question is a two-part process: first, the determination must be made as to whether the proposed project involves cultural resources. Second, if cultural resources are present, the proposed project must be analyzed for a potential "substantial adverse change in the significance" of the resource.

HISTORICAL RESOURCES

According to State CEQA Guidelines Section 15064.5, for the purposes of CEQA, historical resources are as follows:

- A resource listed in, or formally determined eligible…for listing in the CRHR (PRC Section 5024.1; Title 14 California Code of Regulations [CCR] Section 4850 et seq.).
- A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k), or identified as significant in a historic resources survey meeting the requirements of Section PRC 5024.1(g).
- Any object, building, structure, site, area, place, record, or manuscript that the lead agency determines to be eligible for national, state, or local landmark listing; generally, a resource shall be considered by the lead agency to be historically significant (and therefore a historic resource under CEQA) if the resource meets the criteria for listing in the CRHR (as defined in PRC Section 5024.1; 14 CCR Section 4852).

Resources nominated to the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity (as defined above) does not meet the National Register of Historic Places (NRHP) criteria may still be eligible for listing in the CRHR.

According to CEQA, the fact that a resource is not listed in or determined eligible for listing in the CRHR or is not included in a local register or survey shall not preclude the lead agency from determining that the resource may be a historical resource (PRC Section 5024.1). Pursuant to CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource may have a significant effect on the environment (State CEQA Guidelines Section 15064.5(b)).

Substantial Adverse Change and Indirect Impacts to Historical Resources

The State CEQA Guidelines specify that a "substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (Section 15064.5). Material impairment occurs when a project alters in an adverse manner or demolishes "those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion" or eligibility for inclusion in the NRHP, the CRHR, or a local register. In addition, pursuant to State CEQA Guidelines Section 15126.2, the "direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."

Pursuant to State CEQA Guidelines Section 15378, study of a project under CEQA requires consideration of "the whole of an action, which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." State CEQA Guidelines Section 15064(d) further defines direct and indirect impacts as follows:

> (1) A direct physical change in the environment is a physical change in the environment which is caused by and immediately related to the project.
>
> (2) An indirect physical change in the environment is a physical change in the environment, which is not immediately related to the project, but which is caused indirectly by the project. If a direct physical change in the environment in turn causes

another change in the environment, then the other change is an indirect physical change in the environment.

(3) An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project. A change which is speculative or unlikely to occur is not reasonably foreseeable.

ARCHAEOLOGICAL RESOURCES

In terms of archaeological resources, PRC Section 21083.2(g) defines a "unique archaeological resource" as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If it can be demonstrated that a proposed project will cause damage to a unique archaeological resource, the lead agency may require that reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Sections 21083.2(a)–(c)). CEQA notes that, if an archaeological resource is neither a unique archaeological resource nor a historical resource, the effects of the project on those resources shall not be considered to be a significant effect on the environment (State CEQA Guidelines Section 15064.5(c)(4)).

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

Created in 1992 and implemented in 1998, the CRHR is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Sections 21083.2 and 21084.1). Certain properties, including those listed in or formally determined eligible for listing in the NRHP, and California Historical Landmarks numbered 770 and higher are automatically listed in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys, or designated by local landmarks programs may be nominated for listing in the CRHR. According to PRC Section 5024.1(c), a resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

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

As previously stated, resources nominated to the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance, and resources whose historic integrity does not meet NRHP criteria may still be eligible for listing in the CRHR.

PROJECT SETTING

Environmental Setting

The project area is located just inland from San Leandro Bay, which is located within the larger San Francisco Bay, and is formed by the shorelines of Oakland, Alameda, and Bay Farm Island. The project is also part of the 1.3-square-mile San Leandro Bay watershed, which drains the inland shoreline areas of urban Oakland from the mouths of Elmhurst to Sausal Creeks. The entirety of the project area was reclaimed sometime in the late 1940s. At that time, the project area was likely filled with urban rubble and dredge sand like other portions of the bay that were reclaimed (Resilient by Design 2018). Prior to this event, San Leandro Bay was dominated by tidal marsh that gave way to seasonal wetlands inland. Beach and sand dunes that formed the original shoreline date to the late Quaternary period.

In recent years, portions of the marsh and seasonal wetlands have been restored. Certain parking lots have since been converted to seasonal wetlands of saltgrass (*Distichlis spicata*) and pickleweed (*Sarcocornia pacifica*), while tidal areas now contain gum plant (*Grindelia* sp.), saltgrass, pickleweed, and cordgrass (*Spartina foliosa*). Cordgrass is also prevalent along tidal sloughs and channels, and saltgrass is returning along the inland rim of the marsh (Alameda County Flood Control & Water Conservation District 2022).

Cultural Setting

The following sections provide background for the cultural and historical contexts of the project area, including a synopsis of the archaeological record in the greater region, summary of available ethnographic literature and current status for tribal groups and native inhabitants of the region, and a summary of regional and local histories.

Prehistoric Overview

The project is situated in what is generally described as the San Francisco Bay Region, which is one of eight arbitrary organizational divisions of the state (Moratto 1984). This region includes all of today’s San Francisco, San Mateo and Marin Counties and portions of Alameda, Contra Costa, Napa, Santa Clara, Santa Cruz, Solano, and Sonoma Counties. Beginning in 1948, the Central California Taxonomic System (CCTS) was the primary temporal classification system being used and focused on burial practices and grave goods in the Early, Middle, and Late periods. This system, while outdated, became the building blocks for the current temporal schemes associated with California archaeology. The prehistory of this region is currently divided into six periods: Early Holocene (Lower Archaic; 8,000–3,500 B.C.), Early period (Middle Archaic; 3,500–500 B.C.), Lower Middle period (Initial Upper Archaic; 500 B.C.–A.D. 430), Upper Middle period (Late Upper Archaic, A.D. 430–1050), Initial Late period (Lower Emergent; A.D. 1050–1550), and Terminal Late period (A.D. 1550–1776) (Milliken et al. 2007:101, 114–118). The San Francisco Bay area is where three different systems for organizing the archaeological record meet—the Early-Middle-Later Period, the Archaic-Emergent, and a hybrid system (Milliken et al. 2007). Therefore, a variety of period names within each section are mentioned below. Table 1 provides a short synopsis of the varying time schemes for the East Bay Area, Contra Costa County Region.

Table 1. East Bay Interior/Central Bay Shore Region Periods, Patterns, and Aspects

<table>
<tr><td>Geologic Period</td><td colspan="2">Early Holocene</td><td colspan="8">Mid-Holocene</td><td colspan="9">Late Holocene</td></tr>
<tr><td>Economic Period</td><td colspan="2">Paleo</td><td colspan="3">Lower Archaic</td><td colspan="5">Middle Archaic</td><td colspan="6">Upper Archaic</td><td colspan="3">Emergent</td></tr>
<tr><td rowspan="2">Shell Bead Period (Scheme D)</td><td colspan="5" rowspan="2">Early Holocene</td><td colspan="5" rowspan="2">Early Period</td><td colspan="6">Middle Period</td><td colspan="3">Late Period</td></tr>
<tr><td>EMT</td><td colspan="2">M1</td><td>M2</td><td>M3</td><td>M4</td><td>MLT</td><td>L1</td><td>L2</td></tr>
<tr><td>Central Bay Patterns</td><td colspan="3">Undesignated</td><td colspan="6">Lower Berkeley Pattern</td><td colspan="7">Upper Berkeley Pattern</td><td colspan="3">Augustine</td></tr>
<tr><td>Aspect Variant (Central Bayshore)</td><td colspan="7">Unknown</td><td>Undesignated</td><td colspan="4">Stege Aspect</td><td colspan="4">Ellis Landing (Meganos: 1375–1225 B.P.)</td><td colspan="3">Emeryville A</td></tr>
<tr><td>Aspect Variant (East Bay Interior)</td><td></td><td colspan="3">Undesignated</td><td colspan="2"></td><td colspan="2">Undesignated</td><td colspan="4">Undesignated</td><td colspan="4">Ellis Landing (Meganos: 1500–1000 B.P.)</td><td colspan="3">Emeryville/Hollister</td></tr>
</table>

Timeline B.P. 11k 10k 9k 8k 7k 6k 5k 4k 3k 2k 1k 500

Source: Summarized from Milliken et al. (2007)

EARLY PERIOD/MIDDLE ARCHAIC (3,500–500 B.C.)

Archaeological sites characteristic of the Early period/Middle Archaic in the project area date to as early as 5,500 years ago and as late as 2,500 years ago (3,500–500 B.C.). Such sites often contain manos and metates (grinding stones), as well as many mortar fragments, indicating that acorns and/or various seeds formed an important part of the diet (Moratto 1984:201). The period is marked by the first cut bead, the grooved *Olivella biplicata* rectangle bead (Vellanoweth 2001). Mortars and pestles begin to appear in the Bay Area archaeological record during this period. Also on the peninsula coast, *Olivella* rectangular beads (type L1) and Rossi square-stemmed and large side-notched projectile points are diagnostic of the Early period (Hylkema 2002:250).

LOWER MIDDLE PERIOD/INITIAL UPPER ARCHAIC (500 B.C.–A.D. 430)

People inhabiting the San Francisco Bay region during the Lower Middle period (also known as the Berkeley period) practiced a maritime hunting and gathering economy. Large accumulations of shellfish remains, or "shell mounds," formed over hundreds, or even thousands, of years through accretion at village sites fronting the Bay that were reused seasonally or year-round (Lightfoot 1997:135). These numerous shell mounds contain hundreds of burials as well as ceremonial items, house floors, hearths, and storage pits, indicating they were used as burial, ceremonial, and residential places (Lightfoot 1997:131–136; Lightfoot and Luby 2002:276–277).

Artifacts typical of the Lower Middle period include spire-lopped *Olivella*, *Olivella* saucer beads, and circular abalone (*Haliotis* spp.) ornaments (Milliken et al. 2007:115). Assemblages generally have a relatively small frequency of flaked stone points; projectile points are commonly contracting stemmed and lanceolate types, some of which are made from obsidian (Hylkema 2002). Burials are variable-flexed and semi-flexed with inconsistent orientation.

Milling implements include large and small boulder or cobble mortars and various types of pestles, indicating that acorns formed an important part of the diet. In the South Bay, processing of hard seeds continued to be important throughout this period, as evidenced by the number of milling slabs and handstones in the artifact assemblages from that area (Hylkema 2002:244–245, 252). Other plant resources included hazel nuts, cattail seeds, grass, and soaproot bulbs; the latter were roasted in earth ovens.

UPPER MIDDLE PERIOD/LATE UPPER ARCHAIC (A.D. 430–1050)

The Upper Middle period/Late Upper Archaic is marked by the collapse of the Olivella saucer bead trade network at circa A.D. 430 in the Bay Region (Milliken et al. 2007:116). The period is also marked by shifts and changes in subsistence practices, foraging, and land use patterns that begin to reflect patterns known from historic-period Native American groups in the area. A substantial increase in the intensity of subsistence exploitation, including fishing, hunting, and gathering (particularly the acorn), evidenced in the archaeological record, correlates directly with population growth (Moratto 1984:211–214). Bow and arrow technology, the use of harpoons, and tubular tobacco pipes appear during this period. However, a greater emphasis is placed on the procurement and processing of vegetal foods, especially acorns, as evidenced in the increase of milling tools, especially the mortar and pestle. Both coiled and twined basketry were used as domestic and ceremonial items. Population size and the number of settlements increased during this period, although the large shell mound villages of the Lower Middle period were apparently no longer favored residential places (Lightfoot and Luby 2002:264, 277). There appears to be an increase in grave goods, particularly during the Upper Middle period, compared with fewer grave goods identified during the Lower Middle period components in Bay Area sites.

During the Upper Middle period, the climate fluctuated between cooler, wetter periods and warmer, drier periods. During cooler, wetter periods, alluvial deposition increased, with comparatively little deposition occurring in the drier intervals. Extended periods of relatively little rainfall, referred to as the Medieval Climatic Anomaly (MCA), produced droughts across the West between about A.D. 650 and 850 and again in the Late period between about A.D. 1150 and 1250. The dry conditions during the MCA may be related to the abandonment of shell mound villages as primary residential locations, which began around A.D. 700 (Lightfoot and Luby 2002:277, 279). Settlement strategies were apparently reorganized and focused on a more dispersed pattern, with the establishment of both coastal and interior habitation areas, coinciding with the exploitation of seasonally available resources.

INITIAL LATE PERIOD/LOWER EMERGENT (A.D. 1050–1550)

The Late period ushers in a time of status differentiation and the rise of secret societies and cults and associated traits. Exchange networks, with the use of clamshell disk beads as a form of currency, expanded during this period. Exchange items included magnesite, steatite, *Olivella* beads, and obsidian. Compared with the Middle period, the use and occurrence of shell beads with burials blossomed (Milliken and Bennyhoff 1993). Abalone (*Haliotis* spp.) banjo pendants may represent the introduction and spread of the Kuksu cult, which began during the transition from the Middle to Late period in the Bay Area (Hylkema 2002:260). The magnitude of non-dietary *Olivella* shells in coastal sites during the Late period, coupled with a concomitant increase of the shells in mortuary contexts throughout central California during this period, attests to the rise of both exchange networks and status differentiation, with coastal peoples supplying the shells to interior groups. Partial cremation appears or reappears during this time and also marks an increase in social stratification along with an increased diversity of grave goods in the wealthiest of graves (Milliken et al. 2007:217).

During the Late period along the peninsula coast, site assemblages indicate there is an increase in hunting of birds and marine mammals, especially sea otters. At the same time, there is a decrease in terrestrial fauna in the archaeological record (Hylkema 2002:254–255).

TERMINAL LATE PERIOD/PROTOHISTORIC AMBIGUITIES (A.D. 1550–1776)

The Terminal Late period is marked by the abrupt disappearance of the *Olivella* sequin and cup beads ca. A.D. 1500 to 1550 (Milliken et al. 2007:117). During this period and before the Spanish arrived in full force, a cultural shift was occurring. The North Bay began to take a more dominant role in the production of new technology and trade items, including clamshell disk beads, the toggle harpoon, hopper mortar, corner-notched projectile points, and magnesite tube beads. The precise reason for this cultural shift is unknown but could have been driven by conflict between groups or the spread of European diseases northward from Mexico prior to A.D. 1776 (Milliken et al. 2007:117–118).

Ethnography

CHOCHENYO OHLONE REGION

The area immediately surrounding the project area was traditionally known as the Chochenyo linguistic group of the Ohlone, which compose a branch of the Penutian language family (Kroeber 1925; Levy 1978). Within this regional group were several tribelets inhabiting the East Bay from the from the Carquinez straight to the southeastern border with the Tamayen speaking groups of the south bay region and along the western side of the East Bay hills in the northern Diablo range bordering the Bay Miwok territory. The Chochenyo Ohlone people were not affiliated as a single political entity at the time of European contact, but rather consisted of 14 or more separate and politically independent tribelets, making the Chochenyo speaking Ohlone the largest group of the Bay Area region (Milliken et al. 2009).

In the northern region of the East Bay along the San Pablo Bay in the Vallejo/Benicia area were the Huchiun-Aguasto, whose borders met with the Coast Miwok to the west and the Patwin to the north. Across the Carquinez Straight to the south resided the Carquin, who bordered territories of the Bay Miwok to the east and the Patwin to the north. To the west of the Carquin resided the Hutchian groups, who managed the territory from the Berkeley Hills to the bay shore encompassing the modern cities of El Cerrito, Emeryville, Berkeley, Alameda, and most of Oakland. To the south of the Hutchian resided the Jalquin-Irgin, who inhabited the modern Hayward region and San Leandro Creek watershed. With borders of the territory abutting the Bay Miwok, the Jalquin-Irgin were said to have been a bilingual speaking group. The Tuibun inhabited the Coyote Creek area and the mouth of Alameda Creek; the Causen territory encompassed the Sunol Valley, the Tuanan resided in the mountain areas of Alameda Creek and the Arroyo del Valle, and the Luecha groups of the southern East Bay ranged the area southeast of Livermore and bordered the Tamyen-speaking Ohlone and the western edge of the Delta Yokuts to the east. North of the Tamyen border tribelets and within the interior of the East Bay were the Causen of the Sunol area, Pelnen of the Pleasanton region, Yulien who inhabited the Livermore area, Seunen of the San Ramon/Dublin region, Ssouyen who managed the Blackhawk/Tassajara area, and Ssaoam who ranged from the southern region of Mt. Diablo to the Byron area, bordering with the Delta Yokuts (Hodge 1910; Santa Cruz Museum of Natural History 2022).

Spanish mission records, diaries, and journals have provided most of the information for use in studying the Chochenyo Ohlone people, as little ethnographical research has been conducted in the twentieth century (Kroeber 1925; Levy 1978:495). The most thorough study, by Milliken (1995), used mission records, and Margolin’s book (1978) reconstructs Native American life in the Bay Area.

Each tribelet’s territory contained a main village and smaller satellite villages. Usually these were situated along a river or stream for easy access to water. Coastal people did not build right on the shoreline, but usually on an overlooking bluff. Dwellings were domed structures consisting of a tule- or grass-covered framework of poles, with a rectangular doorway and central hearth (Levy 1978:492). The Chochenyo Ohlone people both buried and cremated the deceased, sometimes depending on the availability of sufficient firewood; though based on ethnographic inquiries, cremation appears to have been most prevalent (Kroeber 1925). This was conducted on the day of the death, along with burning the property of the deceased. There is no mention of cemeteries associated with the villages (Levy 1978:490–491).

The rich resources of the ocean, bays, valleys, and mountains provided the Ohlone people with food and all their material needs (Levy 1978:491–492). The primary food staple was the acorn, supplemented by a great variety of animal and plant resources. Four species of oak were utilized, depending on availability and the desirability of the species: coast live, valley, tanbark, and black. Buckeye, laurel, pine nuts, and hazelnuts were eaten. The seeds of dock, chia and other salvias, tarweed, and holly-leaf cherry were collected and ground into meal. The plant diet also consisted of several berry-producing plants, wild onions, carrots, tule roots, and greens of clover and other annuals. There were also large and small game, consisting of deer, elk, antelope, bear, and mountain lion. Seals and stranded whales onshore were taken, and smaller game included raccoon, ground squirrels, woodrat, mouse, mole, dog, rabbit, and jackrabbit. Migrating waterfowl were the most important bird resource, which included geese, ducks, and coots; local birds taken were pigeon, quail, and hawks, but not eagle, owls, ravens, or vultures. Freshwater fish included steelhead, salmon, and sturgeon, while the ocean provided shark, sardine, and lampreys. All varieties of reptiles were eaten (but not amphibians), as well as a selection of insects. Marine resources were also relied on heavily, as much of Chochenyo Ohlone territory borders the East Bay region. The reliance on shellfish, particularly mussels, and other marine resources (i.e., fish, sea lions, and beached whales) is evidenced by the extensive shell mounds that line the San Francisco Bay and adjacent areas, which are said to be the richest in any part of the state (Kroeber 1925:466–467).

A wide array of tools, implements, and enclosures were used by the Chochenyo Ohlone people for hunting and gathering natural resources. Among those used for hunting land mammals and birds were the bow and arrow, traps and snares, deer’s-head disguises, bolas, nets and net sinkers, and enclosures/blinds. Communal hunting drives were employed for rabbits. Nets and poisons were used to harvest fish. Tule watercrafts were used for transportation and hunting fish and waterfowl on the enclosed bays and marshes. Many plants were collected using wooden tools: long poles for dislodging acorns and pinecones, fire-hardened digging sticks for roots, and beaters for dislodging seeds. Once collected, seeds, roots, and nuts were placed in burden baskets and transported for processing or storage (Levy 1978:491).

The Chochenyo Ohlone people used a variety of tools to process food resources. These included portable stone mortars and pestles, bedrock mortars, hopper mortars, anvils, woven strainers, winnowers, leaching and boiling baskets, woven drying trays, and knives. Various foods were baked in earthen ovens. Wooden paddles were carved for stirring food in the boiling baskets. There were shell spoons, basket dippers, and mush bowls for serving the food, and woven water jugs and storage containers for keeping it afterwards. The presence of exotic items such as obsidian, steatite, and shell indicates that the Chochenyo Ohlone people traded with adjacent coastal groups and mountain tribes (Levy 1978:493).

Not all resources were gathered at home. There was trading with the Plains Miwok, Sierra Miwok, and Yokuts. The Chochenyo Ohlone people provided mussels, abalone shells, dried abalone, and salt to the Yokuts and *Olivella* shells to the Miwok. They received pine nuts from the Yokuts, but any other goods the Chochenyo Ohlone people received are unrecorded.

Historic Overview

Post-contact history for the state of California is generally divided into three periods: the Spanish period (1769–1822), the Mexican period (1822–1848), and the American period (1848–present). Although there were brief visits by Spanish, Russian, and British explorers from 1529 to 1769, the beginning of Spanish settlement in California occurred in 1769 with a settlement at San Diego and the first (Mission San Diego de Alcalá) of 21 missions established from 1769 to 1823.

European exploration along the coastal region of California began as early as 1542 when Juan Rodríguez Cabrillo sailed the coastline of California. The region was not extensively explored until the Portolá and Anza expedition in 1762, with permanent settlement by individuals of European descent occurring in the early part of the nineteenth century (California State Lands Commission 2014; Gudde 1998). Word of Mexican victory, after a decade of revolt against the Spanish crown, reached California in 1822, marking the beginning of the Mexican period. This period was characterized by an extensive era of land grant awards. As a result of the California Land Act of 1851, there were 813 claims of Spanish and Mexican land grants, many of which were patented by this time. These land grants were presented to the Surveyor General's Office and to the Land Commission, thus making them legally owned properties and suggesting the area was truly settled (California State Lands Commission 2014).

With the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican American War, California became a territory of the United States (National Archives 2022). The discovery of gold in 1848 at Sutter's Mill near Sacramento and the resulting Gold Rush influenced the history of the state and the nation (California Department of Conservation [CDOC] 2022). The rush of tens of thousands of people to the gold fields had a devastating impact on the lives of indigenous Californians, with the introduction and concentration of diseases, the loss of land and territory (including traditional hunting and gathering locales), violence, malnutrition, and starvation. Thousands of settlers and immigrants continued to pour into the state, particularly after the completion of the transcontinental railroad in 1869 (CDOC 2022).

The land encompassing the project area was originally part of Rancho San Antonio, a vast estate extending approximately 15 miles along the eastern shore of San Francisco Bay, from San Leandro Creek on the south to El Cerrito Creek to the north, which is now part of the boundary between Alameda and Contra Costa Counties. Totaling some 44,000 acres, this land grant extended east from the bay to the crest of the Contra Costa Hills to the east. Rancho San Antonio was originally granted to Luís María Peralta, a soldier who had served nearly 40 years in the Spanish Army and had helped establish Mission Santa Cruz and Mission San José. Peralta never lived on the rancho, but his four sons—Hermenegildo Ignacio, José Domingo, Antonio María, and José Vicente—and their families did, along with their herds of cattle (Kyle 2002).

Americans began visiting the region as early as 1846, and in 1850, when most of the lands of Domingo and Vicente Peralta was sold, the first encroachment upon Rancho San Antonio was made by Americans. When California became a state in 1848, Mexican landowners faced an uphill battle against the American legal system. Although Article IX of the Treaty of Guadalupe Hidalgo declared that Mexican land grants would be honored under the new American government, American settlers drawn to California's fertile lands moved into old land grants, laying claim to them, or simply squatting on the lands, defying the legal owners. A federal statute passed in 1851 attempted to regularize the process of patenting these lands with a commission appointed for this purpose. While Mexican land grant holders had 2 years to prove the validity of their grants to the courts, the burden of proof was upon the Mexican owners, not the squatters. Because many of the grants were made at a time when land plot surveying, boundary marking, and of land fencing was uncommon, these lawsuits often favored squatters. On average, it took 17 years for a claim to be patented, and often the original litigants had died, or the costs of litigation compelled the rancho owners to sell off their land piecemeal, which was the case for the remainder of Rancho San Antonio (Kyle 2002:xv).

Oakland was the nucleus for population expansion in the East Bay following the opening of the Central Pacific Railroad in 1869. However, the city largely remained residential until the turn of the century when the East Bay communities of Alameda, Oakland, and Berkeley gained prominence as commuter centers. Ferry rides across the bay were much cheaper than train rides north up the San Francisco Peninsula. A network of streetcar and interurban routes were established to provide access to ferryboat docks on piers and quays. Following the 1906 earthquake, many previous residents of San Francisco moved to Oakland, which did not suffer from the earthquake and ensuing fire (Peters et al. 2004:162).

In 1893 the City of Oakland gained ownership of the Port of Oakland from the Southern Pacific Railroad, ending their monopoly (Port of Oakland 2022). Oakland's location, where rails and water transportation met, helped establish Oakland as an industrial and shipping center in the early twentieth century. In 1916 General Motors built a Chevrolet automobile plant at 73rd Avenue and MacArthur Boulevard. Several other car companies followed, and the large influx of factory workers led to rapid home construction in the late 1920s. An estimated 13,000 new homes were built between 1920 and 1924 alone (Alameda County Health Services Agency 2001:7). Canning became a large portside industry around the same time. Produce was brought in from all over California for canning at several large plants, which included the Josiah Lusk Canning Company, which took over the H.G. Prince Company; the Oakland Preserving Company, which started the Del Monte Brand; and the California Packing Company. By 1943 the Oakland canning industry was valued at an estimated 100 million dollars, only second to shipbuilding (Oakland Museum of California 2003).

Shipbuilding at the Oakland shipyards flourished during World War II to produce the large numbers of ships required for the war effort. Because so many white men had enlisted, the U.S. Maritime Commission required shipbuilding companies to extend job opportunities to women and racial minorities, who had previously been excluded from this type of employment. The cities of Richmond and Oakland experienced a rapid increase of blacks from the South who sought to escape Jim Crow laws and make better lives for themselves and their families (Arroyo 2022). Oakland's population swelled by a third from 1940 to 1945 from three percent of the population in 1940 to over 12 percent in 1950, an increase of approximately 300 percent (MacDonald 1999). While the shipbuilding industry provided better economic opportunities, blacks were still forced to adhere to a subservient role in society, occupying the most unskilled and menial jobs while being overlooked and excluded from leadership and supervisory roles. Black women were often concentrated in the most physically demanding and labor-intensive jobs (Arroyo 2022).

The end of World War II also saw the halt of Oakland's boom as large companies like General Motors and General Electric moved their plants out to larger suburban tracts. Oakland experienced a loss of nearly 10,000 manufacturing jobs, and some 23,000 residents left between 1950 and 1970 (MacDonald 1999). Economic downturn and simmering racial tensions increased during the 1950s. Black, Indigenous, and People of Color (BIPOC) were impacted by federal housing redlining policies adopted in the 1930s, which excluded communities of color from homeownership. Residents of redlined neighborhoods, including West Oakland and East Oakland, were denied access to credit, resulting in a cycle of disinvestment and poverty. Racially restrictive policies were adopted by private developers and realtors to prevent neighborhoods from being redlined, thereby inhibiting BIPOC residents from moving into these areas.

Construction of Highway 17, now Interstate 880 or Nimitz Freeway, and, later, Bay Area Rapid Transit (BART) lines through historic communities, such as West Oakland and Chinatown, disrupted community cohesion and economic viability. Greater areas of East and North Oakland became open to BIPOC families beginning in the 1950s, yet these areas still felt the effects of disinvestment and deterioration of housing and public spaces and a massive loss of employment in nearby industrial sectors. Taken together, these factors led to a large-scale abandonment of the city's main corridors, resulting in a loss of purchasing power by consumers, particularly wealthier white residents, who went elsewhere to live and shop. Disinvestment of BIPOC communities occurred between the 1950s and 1990s, effectively eroding communities' physical and social infrastructure (City of Oakland 2022a).

Oakland played a large part in the 1960s civil rights movement as demonstrations and civil unrest resulted in passage of the Civil Rights Act of 1964. Around the same time, grassroots community organizations sprang up in Oakland, including the Black Panther Party, Oakland Community Organizations (PICO/OCO), Unity Council, Intertribal Friendship house, and many others to organize and demand protections and equal rights (City of Oakland 2022b). However, decades of disinvestment limited the ability of these communities to effectively respond to serious health problems generated by the War on Drugs and the crack cocaine epidemic that targeted increased arrests of Black Oaklanders, and HIV-AIDS.

During the late 1990s, Oakland became an attractive location for real estate investment, spurred in part by then-Mayor-of-Oakland Jerry Brown's 10K initiative that proposed scattered market-rate housing across downtown. "Reverse redlining," which targeted predatory lending practices and subprime loans in historically redlined neighborhoods, resulted in enormous waves of foreclosures in East and West Oakland. Some 93 percent of the foreclosed properties were then acquired by investors, which helped to reinvigorate downtown and uptown Oakland. However, residential and commercial gentrification followed, directly and indirectly resulting in the displacement of residents in these areas, due in part by an inequitable housing market (City of Oakland 2022a).

METHODS

Records Search

On July 15, 2022, SWCA requested a records search from the California Historical Resources Information System (CHRIS) Northwest Information Center (NWIC) at Sonoma State University in Rohnert Park, California, to identify known cultural resources and previous cultural resource studies within 0.25 mile of the project area. A letter dated August 17, 2022, from the NWIC summarizing the results of the records search (NWIC File No. 22-0099) is provided in Appendix A of this report.

Prior Studies within 0.25 Mile of the Project Area

The CHRIS search identified 31 previously conducted cultural resource studies within 0.25 mile of the project area, including multiple studies that produced several different reports. Portions of 22 of these studies intersect the project area. However, most of these are literature reviews, regional studies, research reports, and dissertations. Of those, two reports included archaeological field studies (S-000779 and S-021021). The project area has not been subject to recent, location-specific archaeological survey. The results of the CHRIS records search for previous studies conducted within the 0.25-mile radius of the project area are listed in Tables 2 and 3 but have not been carried over in further discussion.

Table 2. Previous Studies within the Project Area

NWIC Report Number	Title of Study	Type of Study	Author	Year
S-000779	*Preliminary Cultural Resources Assessment of the East Bay Municipal Utility District (EBMUD) Wet Weather Facilities/Overflow Project Facilities Sites, Alameda and Contra Costa Counties, California*	Archaeological, Field study	David Chavez	1977
S-000779	*Supplement to Preliminary Cultural Resources Assessment of the East Bay Municipal Utility District (EBMUD) Wet Weather Facilities/Overflow Project Facilities Sites, Alameda and Contra Costa Counties, California*	Archaeological, Field study	David Chavez	1979
S-000848	*A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas, Vol. III, Socioeconomic Conditions, Chapter 7: Historical & Archaeological Resources*	Archaeological, Architectural/historical, Management/planning, Other research	David A. Fredrickson; The Anthropology Laboratory, Sonoma State College; Winzler & Kelly Consulting Engineers	1976
S-001784	*Preliminary Cultural Resources Identification: San Francisco Bay Study for Corps of Engineers Projects*	Literature search	David Chavez	1979

NWIC Report Number	Title of Study	Type of Study	Author	Year
S-002458	*Overview of Prehistoric Archaeology for the Northwest Region, California, Archaeological Sites Survey: Del Norte, Humboldt, Mendocino, Lake, Sonoma, Napa, Marin, Contra Costa, Alameda*	Archaeological, Other research	Neil Ramiller, Suzanne Ramiller, Roger Werner, and Suzanne Stewart; Northwest Regional Office, California Archaeological Sites Survey, Anthropological Studies Center, Sonoma State University	1981
S-002458	*Prehistoric Archaeology Overview Northwest Region; California Archaeological Inventory, Volume I: Humboldt and Del Norte Counties*	Archaeological, Other research	Suzanne Ramiller; Anthropological Studies Center, Sonoma State University	1982
S-002458	*Archaeological Overview of Mendocino and Lake Counties*	Archaeological, Other research	Roger H. Wemer; Anthropological Studies Center, Sonoma State University	1982
S-002458	*Prehistoric Archaeology Overview Northwest Region; California Archaeological Inventory, Volume 3: Napa and Sonoma Counties*	Archaeological, Other research	Suzanne Stewart; Anthropological Studies Center, Sonoma State University	1982
S-002458	*Archaeological Overview of Alameda, Contra Costa, and Marin Counties*	Archaeological, Other research	Suzanne B. Stewart; Anthropological Studies Center, Sonoma State University	1982
S-002458	*Environmental Overview of the Northwest Region*	Archaeological, Other research	Neil Ramiller; Anthropological Studies Center, Sonoma State University	1985
S-007903	*Cultural Resources Evaluation for the East Bay Municipal Utility District Infiltration/Inflow Project (P.O. 951 1143 EA)*	Archaeological, Management/planning, Other research	David Chavez; David Chavez & Associates	1985
S-009462	*Identification and Recording of Prehistoric Petroglyphs in Marin and Related Bay Area Counties*	Thesis/dissertation	Teresa Ann Miller; San Francisco University	1977
S-009583	*Ecology of the Pre-Spanish San Francisco Bay Area*	Other research, Thesis/dissertation	David W. Mayfield; San Francisco State University	1978
S-009795	*Late Prehistoric Obsidian Exchange in Central California*	Other research, Thesis/dissertation	Thomas Lynn Jackson; Stanford University	1986
S-014621	*Archaeological Resources Review for the Oakland Enterprise Zone EIR, Alameda County, California*	Archaeological, Management/planning, Other research	David Chavez; David Chavez & Associates	1992
S-015529	*California, Oregon, and Washington: Archaeological Resource Study*	Archaeological, Other research	Robert L. Gearhart II, Clell L. Bond, Steven D. Hoyt, James H. Cleland, James Anderson, Pandora Snethcamp, Gary Wesson, Jack Neville, Kim Marcus, Andrew York, and Jerry Wilson; Espey, Huston & Associates, Inc.; Dames & Moore	1993
S-016660	*Prehistoric Rock Art of Alameda and Contra Costa Counties, California*	Archaeological, Other research, Thesis/dissertation	Jeffrey B. Fentress; California State University, Hayward	1992

NWIC Report Number	Title of Study	Type of Study	Author	Year
S-017773	*Contract 04E634-EP, Task Order #9, Historic Map Review for CALTRANS Maintenance Facilities (letter report)*	Literature search	Angela M. Banet; Basin Research Associates, Inc.	1992
S-017835	*Biological Distance of Prehistoric Central California Populations Derived from Non-Metric Traits of the Cranium*	Thesis/dissertation	Judy Myers Suchey; University of California, Riverside	1975
S-018217	*Cultural Resources Evaluations for the Caltrans District 04 Phase 2 Seismic Retrofit Program, Status Report*	Archaeological, Architectural/historical, Other research	Glenn Gmoser; California Department of Transportation	1996
S-020395	*PCNs of the Coast Ranges of California: Religious Expression of the Result of Quarrying?*	Other research, Thesis/dissertation	Donna L. Gillette; California State University, Hayward	1998
S-021021	*Draft Cultural Resources Survey Report for the Oakport Groundwater Injection/Extraction Pilot Project, Oakland, Alameda County, California*	Archaeological, Field study	Trish Fernandez; Jones & Stokes Associates, Inc.	1998
S-030204	*The Distribution and Antiquity of the California Pecked Curvilinear Nucleated (PCN) Rock Art Tradition*	Archaeological, Other research	Donna L. Gillette; University of California, Berkeley	2003
S-032596	*The Central California Ethnographic Community Distribution Model, Version 2.0, with Special Attention to the San Francisco Bay Area, Cultural Resources Inventory of Caltrans District 4 Rural conventional Highways*	Archaeological, Other research	Randall Milliken, Jerome King, and Patricia Mikkelsen; Consulting in the Past; Far Western Anthropological Research Group, Inc.	2006
S-033239	*Alameda Watershed, Natural and Cultural Resources: San Francisco Watershed Management Plan*	Archaeological, Architectural/historical, Management/planning, Other research	David Chavez; Environmental Science Associates	1994
S-033600	*Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4*	Archaeological, Other research	Jack Meyer and Jeff Rosenthal; Far Western Anthropological Research Group, Inc.	2007
S-048927	*The Economy and Archaeology of European-made Glass Beads and Manufactured Goods Used in First Contact Situations in Oregon, California, and Washington*	Archaeological, Architectural/historical, Thesis/dissertation	Donald Scott Crull; University of Sheffield, England	1997
S-049780	*San Francisco Bay-Delta Regional Context and Research Design for Native American Archaeological Resources, Caltrans District 4*	Archaeological, Management/planning, Other research	Brian F. Byrd, Adrian A. Whitaker, Patricia J. Mikkelsen, and Jeffrey S. Rosenthal; California Department of Transportation, District 4	2017
S-049780	*FHWA_2016_0615_001, Caltrans District 4 Archaeological Context*	OHP Correspondence	Julianne Polanco; California Office of Historic Preservation	2016

Table 3. Previous Studies within 0.25 Mile of Project Area

NWIC Report Number	Title of Study	Type of Study	Author	Year
S-007919	*Archaeological Resource Assessment of Flood Control Channels F, H, and I, Oakland, California (letter report)*	Archaeological, Field study	Benjamin Ananian	1986

NWIC Report Number	Title of Study	Type of Study	Author	Year
S-030894	*New Tower ("NT") Submission Packet FCC Form 620, 880 & 66th Avenue, CA-2507C*	Archaeological, Field study	Scott Billat; Earth Touch, Inc.	2005
S-033020	*Archaeological Records Search, Limited Literature Review, and Field Review, Coliseum BART to Bay Trail Connector, Oakland, Alameda County, BART to Bay Trail #F12C02; #PBWKS 2382 (letter report)*	Archaeological, Field study	Colin I. Busby; Basin Research Associates	2006
S-033545	*Draft Comprehensive Management and Use Plan and Environmental Impact Statement, Juna Bautista de Anza National Historic Trail, Arizona and California*	Archaeological, Architectural/historical, Management/planning, Other research	National Park Service	1994
S-042891	*PG&E External Corrosion Direct Assessment (EDCA) Line 153 Segment 144.5EW (letter report)*	Archaeological, Field study	Amy E. Foutch; Far Western Anthropological Research Group, Inc.	2012
S-046399	*Historic Property Survey Report for the MTC Interstate 880 Express Lane Phase I Project, Alameda and Santa Clara Counties, California: State Route 84 04-ALA-84 PM R3.0-R6.1, State Route 92 04-ALA-92 PM R2.5-R6.5, Interstate 880, 04-SCL-880 PM 7.5-10.5, 04-ALA-880 PM R0.0-26.4, EA 04-3G920*	Archaeological, Architectural/historical, Management/planning	Laura Leach-Palm and Chandra Miller; Far Western Anthropological Research Group, Inc.	2015
S-046399	*Archaeological Survey Report for the MTC Interstate 880 Express Lane Phase I Project, Alameda and Santa Clara Counties, California: State Route 84, 04-ALA-84 PM R3.0-R6.1, State Route 92, 04-ALA-92 PM R2.5-R6.5, Interstate 880, 04-SCL-880 PM 7.5-10.5, 04-ALA-880 PM R0.0-26.4, EA 04-3G920*	Archaeological, Excavation, Field Study	Laura Leach-Palm and Philip Kaijankoski; Far Western Anthropological Research Group, Inc.	2015
S-046399	*Extended Phase I Report for the MTC Interstate 880 Express Lane Phase I Project, Alameda and Santa Clara Counties, California: State Route 84, 04-ALA-84 PM R3.0-R6.1, State Route 92, 04-ALA-92 PM R2.5-R6.5, Interstate 880, 04-SCL-880 PM 7.5-10.5, 04-ALA-880 PM R0.0-26.4, EA 04-3G920*	Archaeological, Excavation, Field study	Philip Kaijankoski, Jack Meyer, and Laura Leach-Palm; Far Western Anthropological Research Group, Inc.	2015
S-046399	*Environmentally Sensitive Area Action Plan for the Metropolitan Transportation Commission's Interstate Express, Lane Phase I Project, Alameda and Santa Clara Counties, California: State Route 84, 04-ALA-84 PM R3.0-R6.1, State Route 92, 04-ALA-92 PM R2.5-R6.5, Interstate 880, 04-SCL-880 PM 7.5-10.5, 04-ALA-880 PM R0.0-26.4, EA 04-3G920*	Archaeological, Architectural/historical, Management/planning, Other research	Laura Leach-Palm; Far Western Anthropological Research Group, Inc.	2015
S-046399	*Historic Resource Evaluation Report for the MTC Express Lanes I-880 Project, Alameda and Santa Clara Counties, California: 04-SCL-880 PM 7.38-10.5, 04-ALA-880 PM, R0.0-26.66, 04-ALA-92 PM R.2.29-6.73, 04-ALA-84 PM R2.7-6.22, Project EA: 04-3G920, EIF 041000110*	Architectural/historical, Evaluation, Field study	Chandra Miller; JRP Historical Consulting, LLC	2015
S-046399	*Supplemental Archaeological Survey Report for the MTC Interstate 880 Express Lane Phase I Project, Alameda and Santa Clara Counties, California, Interstate 880, 04-SCL-880 PM 7.5-10.5, 04-ALA-880 PM R0.0-26.4, EA 04-3G920*	Archaeological, Field study, Management/planning	Adrian R. Whitaker; Far Western Anthropological Research Group, Inc.	2016

NWIC Report Number	Title of Study	Type of Study	Author	Year
S-046599	*Extended Phase I Investigation for the Alameda Interstate 880 Median Barrier Replacement Project, Alameda County, California; Interstate 880, 04-ALA-880, PM R2.9-27.6, EA 04-2J070, Project ID 040000425*	Archaeological, Excavation	Philip Kaijankoski, Jack Meyer, and Laura Leach-Palm; Far Western Anthropological Research Group, Inc.	2015
S-047303	*Cultural Resources Investigation for AT&T Mobility CCL00894 "Oakland Coliseum" 8000 South Coliseum Way, Oakland, Alameda County, California (letter report)*	Literature search	Carolyn Losee; Archaeological Resources Technology	2016
S-051961	*Cultural Resource Records Search and Site Visit Results for Cellco Partnership and Their Controlled Affiliates Doing Business as Verizon Wireless Candidate "'Coliseum Marketplace SC1', 5401 Coliseum Way, Oakland, Alameda County, California (letter report)*	Archaeological, Field study	Jason A. Coleman; HELIX Environmental Planning, Inc.	2016

Previously Recorded Cultural Resources within 0.5 Mile of the Project

The CHRIS records search did not result in the identification of previously recorded resources within the project area or within the 0.25-mile radius of the project area.

Historic Research

Research methodology focused on review of a variety of primary and secondary source materials relating to the history and development of the project area. Sources included, but were not limited to, historic maps, aerial photographs, and written histories of the area.

According to the U.S. Bureau of Land Management (BLM) General Land Office 1870 survey map (BLM 2022), the project is located within Lot Number 37 and is depicted as part of the Rancho San Antonio land claim, an extensive claim comprising 43,000 acres of land that encompasses the cities of San Leandro, Oakland, Alameda, Emeryville, Piedmont, Berkeley, and Albany (OHP 2022). It extends from the Pacific coastline inland to the Oakland Hills summit. The grant extends north to Cerrito Creek and southeast to San Leandro Bay.

Based on topographic maps of the area, the entirety of the project area was marshland until the late 1940s. Sometime between 1947 and 1949 (Nationwide Environmental Title Research, LLC [NETR] 2022a, 2022b), most of the marshland comprising the project area was reclaimed, except for the western extent. In 1958 a portion of Highway 17 was rerouted to just east of the project area and renamed the Nimitz Freeway (Kleps 1959). The nearest paved road to the project area, Oakport Street, appears to have been constructed sometime between 1956 (NETR 2022c) and 1960 (NETR 2022d) based on topographic maps of those dates. Much of the remaining infrastructure comprising the project area appear to have been constructed sometime between 1966 (NETR 2022e) and 1969 (NETR 2022f).

The earliest aerial photograph of the project area, dating to 1946 (NETR 2022g) corroborates the fact that the project area had not yet fully been reclaimed from marshland. However, by 1958 (NETR 2022h), at least one large warehouse and several other smaller facilities had been constructed along Oakport Street near East Creek Slough at the northeast extent of Parcel 2 in the project area. Development of Parcel 1 does not appear to have begun until at least 1980 (NETR 2022i). In sum, historical imagery suggests that the project area and its immediate vicinity have experienced extensive previous disturbance due to reclamation and construction activities, both of which occurred after World War II.

Sacred Lands File Search and Initial Native American Coordination

A search of the California Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was requested on July 15, 2022, with the intent of identifying culturally sensitive areas and obtaining a list of Native American contacts who may have specific knowledge of the vicinity. The NAHC response was received on August 25, 2022, providing a negative result and a list of seven Native American tribes and individuals who may have knowledge of cultural resources in the project area. SWCA sent outreach letters via email to all Native American contacts on August 30, 2022, with hard copies following by regular mail on September 1, 2022. Examples of tribal outreach letters and details regarding tribal correspondence are presented in Appendix A. Follow-up telephone calls were made on September 2, 2022. Chairperson Irene Zwierlein of the Amah Mutsun Band of Mission San Juan Bautista requested on-site worker sensitivity training for both tribal and archaeological resources detailing who to contact in the event of an inadvertent discovery. Chairperson Corrina Gould of the Confederated Villages of Lisjan requested the CHRIS results and final report. The remainder of the telephone calls went unanswered, and two telephone numbers were disconnected. Native American outreach performed as part of this review does not constitute formal consultation.

Archaeological Resource Fieldwork

Archaeological Survey

SWCA archaeologist Brandon Foster conducted an intensive pedestrian survey of the project area on August 25, 2022. The survey was conducted using pedestrian transects spaced 5 to 15 meters apart where vegetation conditions and safety considerations allowed. Periodic boot scrapes were employed to expose soils when vegetation obscured the ground surface. The entirety of the project area was subject to intensive pedestrian survey.

RESULTS

Archaeological Survey Results

The project is located approximately 100 feet from the shoreline of San Leandro Bay in Oakland. Based on archival research (see previous Historic Research section), the entirety of the project area was reclaimed sometime in the late 1940s. At that time, the project area was likely filled with urban rubble and dredge sand like other portions of the bay that were reclaimed (Resilient by Design 2018). More than three-quarters of the project area consists of a considerably disturbed and fenced dirt lot southeast of an EBMUD facility (Figure 3). Ground visibility in this portion of the project area was 100 percent.

The remainder of the project area, just southwest of the fence line, is bisected along its length by a graveled path that trends northwest-southeast through the entire project area (Figure 4). Approximately halfway along the length of the project area, the graveled path is bounded on the outside by a paved pedestrian trail approximately 15 feet to the southwest (Figure 5). The area between these two paths is heavily vegetated with grasses and coastal scrub. Ground visibility in this portion of the project area was between five and 10 percent. Boot scrapes were employed in open areas where vegetation was not as dense to expose soils.

No archaeological resources, artifacts, or features were observed within the project area.

Figure 3. Overview of fenced dirt lot, facing southeast.

Figure 4. Overview of project area outside (southwest of) fenced lot, facing southeast.

Figure 5. Southern end of project area outside fenced lot, facing northwest.

SUMMARY AND CONCLUSIONS

This cultural resources inventory included a CHRIS NWIC records search, a SLF search through the NAHC, a buried site sensitivity analysis, a review of historic aerials and relevant literature, and an intensive pedestrian survey. The pedestrian survey of the project area conducted on August 25, 2022, produced negative results.

Results of the CHRIS records search indicated that no known cultural resources are located within the project area. A review of historic maps and aerial photographs failed to indicate the presence of historic structures or features within the project area, and there is a low potential to encounter intact buried archaeological deposits within the project area.

SWCA sent an email with a map depicting the project to the NAHC on July 15, 2022, requesting a review of its SLF. The NAHC response was received on August 25, 2022, indicating the results of the SLF search were negative and providing a list of Native American tribes and individuals who may also have knowledge of cultural resources in the project area. SWCA sent outreach letters to all provided Native American contacts on August 30, 2022, and September 1, 2022. Follow-up telephone calls were made on September 2, 2022. Chairperson Irene Zwierlein of the Amah Mutsun Band of Mission San Juan Bautista requested on-site worker sensitivity training for both tribal and archaeological resources detailing who to contact in the event of an inadvertent discovery. Chairperson Corrina Gould of the Confederated Villages of Lisjan requested the CHRIS results and final report. The remainder of the telephone calls went unanswered, and two telephone numbers were disconnected.

With implementation of conditions to comply with regulatory compliance measures related to the inadvertent discovery of archaeological resources and human remains, SWCA finds that the proposed project will have a less-than-significant impact on archaeological resources. Although no cultural resources were noted on the ground surface during this pedestrian survey, the possibility of encountering cultural resources during excavation remains. If cultural materials are uncovered during project work, the Inadvertent Discovery procedures noted below should be followed.

Inadvertent Discoveries

In the event that unanticipated cultural resources are exposed during disturbance activities, work within 15 meters (50 feet) of the find must stop and an SOI-qualified archaeologist (SWCA Senior Project Manager Christina Alonso [925-399-9220]) must be notified immediately. Work may not resume until a qualified archaeologist can evaluate the significance of the find. Disturbance activities may continue in other areas. If the discovery proves significant, additional work such as archaeological testing, data recovery, or consultation with stakeholders may be warranted.

Discovery of Human Remains

The discovery of human remains during the course of the project is a possibility. If human remains are encountered, then the procedures outlined by the NAHC, in accordance with Section 7050.5 of the California Health and Safety Code and PRC Section 5097.98, would be followed. If the monitor determines that a discovery includes human remains:

1. All ground-disturbing work within the immediate vicinity (25 feet) of the find would halt.
2. The archaeologist would contact the Alameda County Coroner:

   Alameda County Medical Examiner & Coroner
   2901 Peralta Oaks Court
   Oakland, California 94605
   Phone: (530) 382-3000
   Web: alamedacountysheriff.org

3. As a courtesy, the County Coroner would also notify the NAHC:

   Native American Heritage Commission
   915 Capitol Mall, Room 364
   Sacramento, California 95814
   Phone: (916) 373-3710
   Email: nahc@nahc.ca.gov

The County Coroner would have 2 working days to examine the remains after being notified in accordance with California Health and Safety Code Section 7050.5. If the Alameda County Coroner determines that the remains are Native American and are not subject to the County Coroner's authority, the County Coroner has 24 hours to notify the NAHC of the discovery.

The NAHC would immediately designate and notify the Native American Most Likely Descendant (MLD), who will have 48 hours after being granted access to the location of the remains to inspect them and provide recommendations for the treatment of them.

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California Historical Resources Information System

CHRIS Data Request Form

ACCESS AND USE AGREEMENT NO.: 81.00 **IC FILE NO.:** ______

To: Northwest Information Center

Print Name: Christina Alonso Date: 07/15/2022

Affiliation: SWCA Environmental Consultants

Address: 60 Stone Pine Road

City: Half Moon Bay State: CA Zip: 94019

Phone: (925) 399-9220 Fax: ______ Email: Christina.Alonso@swca.com

Billing Address (if different than above): ______

Billing Email: swca.com-vision@invoice.ca1.chromeriver.com Billing Phone: ______

Project Name / Reference: SupplyBank

Project Street Address: 5601 Oakport Street, Oakland

County or Counties: Alameda

Township/Range/UTMs: T02S, R03W, S17

USGS 7.5' Quad(s): Oakland East

PRIORITY RESPONSE (Additional Fee): yes ☐ / no ☒

TOTAL FEE NOT TO EXCEED: $800.00
(If blank, the Information Center will contact you if the fee is expected to exceed $1,000.00)

Special Instructions:

Information Center Use Only

Date of CHRIS Data Provided for this Request: ______

Confidential Data Included in Response: yes ☐ / no ☐

Notes: ______

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California Historical Resources Information System

CHRIS Data Request Form

Mark the request form as needed. Attach a PDF of your project area (with the radius if applicable) mapped on a 7.5' USGS topographic quadrangle to scale 1:24000 ratio 1:1 neither enlarged nor reduced and include a shapefile of your project area, if available. Shapefiles are the current CHRIS standard for submitting digital spatial data for your project area or radius. **Check with the appropriate IC for current availability of digital data products.**

- Documents will be provided in PDF format. Paper copies will only be provided if PDFs are not available at the time of the request or under specially arranged circumstances.
- Location information will be provided as a digital map product (Custom Maps or GIS data) unless the area has not yet been digitized. In such circumstances, the IC may provide hand drawn maps.
- In addition to the $150/hr. staff time fee, client will be charged the Custom Map fee when GIS is required to complete the request [e.g., a map printout or map image/PDF is requested and no GIS Data is requested, or an electronic product is requested (derived from GIS data) but no mapping is requested].

For product fees, see the CHRIS IC Fee Structure on the OHP website.

1. Map Format Choice:

Select One: Custom GIS Maps ☐ GIS Data ☒ Custom GIS Maps **and** GIS Data ☐ No Maps ☐

Any selection below left unmarked will be considered a "no. "

Location Information:

	Within project area	Within 1/4 mi. radius
ARCHAEOLOGICAL Resource Locations[1]	yes ☒ / no ☐	yes ☐ / no ☒
NON-ARCHAEOLOGICAL Resource Locations	yes ☒ / no ☐	yes ☐ / no ☒
Report Locations[1]	yes ☒ / no ☐	yes ☐ / no ☒
"Other" Report Locations[2]	yes ☐ / no ☒	yes ☐ / no ☒

3. Database Information:

(contact the IC for product examples, or visit the SSJVIC website for examples)

	Within project area	Within 1/4 mi. radius
ARCHAEOLOGICAL Resource Database[1]		
List (PDF format)	yes ☐ / no ☒	yes ☐ / no ☒
Detail (PDF format)	yes ☐ / no ☒	yes ☐ / no ☒
Excel Spreadsheet	yes ☒ / no ☐	yes ☒ / no ☐
NON-ARCHAEOLOGICAL Resource Database		
List (PDF format)	yes ☐ / no ☒	yes ☐ / no ☒
Detail (PDF format)	yes ☐ / no ☒	yes ☐ / no ☒
Excel Spreadsheet	yes ☒ / no ☐	yes ☒ / no ☐
Report Database[1]		
List (PDF format)	yes ☐ / no ☒	yes ☐ / no ☒
Detail (PDF format)	yes ☐ / no ☒	yes ☐ / no ☒
Excel Spreadsheet	yes ☒ / no ☐	yes ☒ / no ☐
Include "Other" Reports [2]	yes ☒ / no ☐	yes ☒ / no ☐

4. Document PDFs (paper copy only upon request)**:**

	Within project area	Within 1/4 mi. radius
ARCHAEOLOGICAL Resource Records[1]	yes ☒ / no ☐	yes ☒ / no ☐
NON-ARCHAEOLOGICAL Resource Records	yes ☒ / no ☐	yes ☐ / no ☒
Reports[1]	yes ☐ / no ☒	yes ☐ / no ☒
"Other" Reports[2]	yes ☐ / no ☒	yes ☐ / no ☒

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California Historical Resources Information System

CHRIS Data Request Form

5. Eligibility Listings and Documentation:

	Within project area	Within 1/4 mi. radius
OHP Built Environment Resources Directory[3]:		
Directory listing only (Excel format)	yes ■ / no ☐	yes ☐ / no ■
Associated documentation[4]	yes ■ / no ☐	yes ☐ / no ■
OHP Archaeological Resources Directory[1,5]:		
Directory listing only (Excel format)	yes ■ / no ☐	yes ☐ / no ■
Associated documentation[4]	yes ■ / no ☐	yes ☐ / no ■
***California Inventory of Historic Resources* (1976):**		
Directory listing only (PDF format)	yes ■ / no ☐	yes ☐ / no ■
Associated documentation[4]	yes ■ / no ☐	yes ☐ / no ■

6. Additional Information:

The following sources of information may be available through the Information Center. However, several of these sources are now available on the OHP website and can be accessed directly. The Office of Historic Preservation makes no guarantees about the availability, completeness, or accuracy of the information provided through these sources. Indicate below if the Information Center should review and provide documentation (if available) of any of the following sources as part of this request.

Caltrans Bridge Survey	yes ☐ / no ■
Ethnographic Information	yes ☐ / no ■
Historical Literature	yes ☐ / no ■
Historical Maps	yes ☐ / no ■
Local Inventories	yes ☐ / no ■
GLO and/or Rancho Plat Maps	yes ☐ / no ■
Shipwreck Inventory	yes ☐ / no ■
Soil Survey Maps	yes ☐ / no ■

[1] In order to receive archaeological information, requestor must meet qualifications as specified in Section III of the current version of the California Historical Resources Information System Information Center Rules of Operation Manual and be identified as an Authorized User or Conditional User under an active CHRIS Access and Use Agreement.

[2] "Other" Reports GIS layer consists of report study areas for which the report content is almost entirely non-fieldwork related (e.g., local/regional history, or overview) and/or for which the presentation of the study area boundary may or may not add value to a record search.

[3] Provided as Excel spreadsheets with no cost for the rows; the only cost for this component is IC staff time. Includes, but not limited to, information regarding National Register of Historic Places, California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and historic building surveys. Previously known as the HRI and then as the HPD, it is now known as the Built Environment Resources Directory (BERD). The Office of Historic Preservation compiles this documentation and it is the source of the official status codes for evaluated resources.

[4] Associated documentation will vary by resource. Contact the IC for further details.

[5] Provided as Excel spreadsheets with no cost for the rows; the only cost for this component is IC staff time. Previously known as the Archaeological Determinations of Eligibility, now it is known as the Archaeological Resources Directory (ARD). The Office of Historic Preservation compiles this documentation and it is the source of the official status codes for evaluated resources.

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CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA
COLUSA
CONTRA COSTA
DEL NORTE
HUMBOLDT
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO
SAN MATEO
SANTA CLATA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
1400 Valley House Drive, Suite 210
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
http://nwic.sonoma.edu

8/17/2022 NWIC File No.: 22-0099

Christina Alonso
SWCA Environmental Consultants
60 Stone Pine Road
Half Moon Bay, CA 94019

Re: SupplyBank

The Northwest Information Center received your record search request for the project area referenced above, located on the Oakland East USGS 7.5' quad(s). The following reflects the results of the records search for the project area and a ¼ mi. radius:

Resources within project area:	None listed
Resources within ¼ mi. radius:	None listed
Reports within project area:	[22] Please see attached list, page 3
Reports within ¼ mi. radius:	S-7919, 30894, 33020, 33545, 42891, 46399, 46599, 47303, 51961

Resource Database Printout (list):		☐ enclosed	☒ not requested	☐ nothing listed
Resource Database Printout (details):		☐ enclosed	☒ not requested	☐ nothing listed
Resource Digital Database Records:		☐ enclosed	☐ not requested	☒ nothing listed
Report Database Printout (list):		☐ enclosed	☒ not requested	☐ nothing listed
Report Database Printout (details):		☐ enclosed	☒ not requested	☐ nothing listed
Report Digital Database Records:		☒ enclosed	☐ not requested	☐ nothing listed
Resource Record Copies:		☐ enclosed	☐ not requested	☒ nothing listed
Report Copies:	[within]	☒ enclosed	☐ not requested	☐ nothing listed
OHP Built Environment Resources Directory:		☒ enclosed	☐ not requested	☐ nothing listed
Archaeological Determinations of Eligibility:		☐ enclosed	☐ not requested	☒ nothing listed
CA Inventory of Historic Resources (1976):		☐ enclosed	☐ not requested	☒ nothing listed
GLO and/or Rancho Plat Maps:		☐ enclosed	☒ not requested	☐ nothing listed
Historical Maps:		☐ enclosed	☒ not requested	☐ nothing listed

Local Inventories:	☐ enclosed	☒ not requested	☐ nothing listed
Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed
Shipwreck Inventory:	☐ enclosed	☒ not requested	☐ nothing listed

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Annette Neal

Researcher

DocCo	DocNo
S-	000779
S-	000848
S-	001784
S-	002458
S-	007903
S-	009462
S-	009583
S-	009795
S-	014621
S-	015529
S-	016660
S-	017773
S-	017835
S-	018217
S-	020395
S-	021021
S-	030204
S-	032596
S-	033239
S-	033600
S-	048927
S-	049780

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

August 25, 2022

Christina Alonso
SWCA Environmental Consultants

Via Email to: Christina.Alonso@swca.com

Re: Supply Bank Project, Alameda County

Dear Ms. Alonso:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Cody.Campagne@nahc.ca.gov.

Sincerely,

Cody Campagne

Cody Campagne
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Alameda County
8/25/2022

Amah MutsunTribal Band of Mission San Juan Bautista Irene Zwierlein, Chairperson 3030 Soda Bay Road Lakeport, CA, 95453 Phone: (650) 851 - 7489 Fax: (650) 332-1526 amahmutsuntribal@gmail.com	Costanoan
Costanoan Rumsen Carmel Tribe Tony Cerda, Chairperson 244 E. 1st Street Pomona, CA, 91766 Phone: (909) 629 - 6081 Fax: (909) 524-8041 rumsen@aol.com	Costanoan
Indian Canyon Mutsun Band of Costanoan Kanyon Sayers-Roods, MLD Contact 1615 Pearson Court San Jose, CA, 95122 Phone: (408) 673 - 0626 kanyon@kanyonkonsulting.com	Costanoan
Indian Canyon Mutsun Band of Costanoan Ann Marie Sayers, Chairperson P.O. Box 28 Hollister, CA, 95024 Phone: (831) 637 - 4238 ams@indiancanyons.org	Costanoan
Muwekma Ohlone Indian Tribe of the SF Bay Area Monica Arellano, Vice Chairwoman 20885 Redwood Road, Suite 232 Castro Valley, CA, 94546 Phone: (408) 205 - 9714 marellano@muwekma.org	Costanoan
North Valley Yokuts Tribe Katherine Perez, Chairperson P.O. Box 717 Linden, CA, 95236 Phone: (209) 887 - 3415 canutes@verizon.net	Costanoan Northern Valley Yokut
North Valley Yokuts Tribe Timothy Perez, P.O. Box 717 Linden, CA, 95236 Phone: (209) 662 - 2788 huskanam@gmail.com	Costanoan Northern Valley Yokut
The Ohlone Indian Tribe Andrew Galvan, P.O. Box 3388 Fremont, CA, 94539 Phone: (510) 882 - 0527 Fax: (510) 687-9393 chochenyo@AOL.com	Bay Miwok Ohlone Patwin Plains Miwok
Wuksache Indian Tribe/Eshom Valley Band Kenneth Woodrow, Chairperson 1179 Rock Haven Ct. Salinas, CA, 93906 Phone: (831) 443 - 9702 kwood8934@aol.com	Foothill Yokut Mono
The Confederated Villages of Lisjan Corrina Gould, Chairperson 10926 Edes Avenue Oakland, CA, 94603 Phone: (510) 575 - 8408 cvltribe@gmail.com	Bay Miwok Ohlone Delta Yokut

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Supply Bank Project, Alameda County.

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60 Stone Pine Road, Suite 100
Half Moon Bay, California 94019
Tel 650.440.4160 Fax 650.440.4165
www.swca.com

August 30, 2022

Andrew Galvan
The Ohlone Indian Tribe
P.O. Box 3388
Fremont, CA 94539

Re: SupplyBank Cultural Resources Assessment, City of Oakland, California/ SWCA Project No. 74496

Dear Andrew Galvan:

SWCA Environmental Consultants (SWCA) was retained by Lamphier-Gregory to provide archaeological support for the SupplyBank Project (project). The project is subject to review under the California Environmental Quality Act (CEQA).

SupplyBank seeks to acquire the rights to develop two adjacent parcels of property owned by EBMUD at 5601 Oakport Street in the City of Oakland, Alameda County, California, via a parcel map waiver. Parcel 1 (to the north) is approximately 30.7 acres in size, and Parcel 2 (to the south) is approximately 14.4 acres. While the entirety of Parcel 2 will be developed, only 2 acres of Parcel 1 will be developed. The site will continue to be owned by EBMUD, and the new development will be managed by SupplyBank.Org as part of a long-term land lease agreement. The new development will include properties with a total of 293,000 square feet of building space, including an office building, a warehouse, and a weld shop.

The Project area is located within the City of Oakland, Alameda County, California within the Oakland East, CA 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle. The work is located west of Oakport Street and approximately 100 feet east of San Leandro Bay.

SWCA submitted a cultural resources records search through the NWIC on July 15, 2022 and received results on August 17, 2022. A search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was submitted on July 15, 2022, with **negative** results.

SWCA is requesting any additional information you may have regarding properties, features, or cultural materials within the Project APE (see attached) that may be of concern to local Native Americans.

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Any comments you may have regarding cultural resources in this area would be greatly appreciated. Please feel free to contact me with any concerns, or if you have additional questions about the project. You may reach me by phone at (925)399-9220 or email me at Christina.Alonso@swca.com.

Thank you for your time and assistance in this matter, I look forward to hearing from you.

Sincerely,

Christina Alonso
Senior Project Manager
Attachment 1 – Project Maps

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USGS 7.5-Minute Aerial Map of Oakland, California, depicting the project area (APE).

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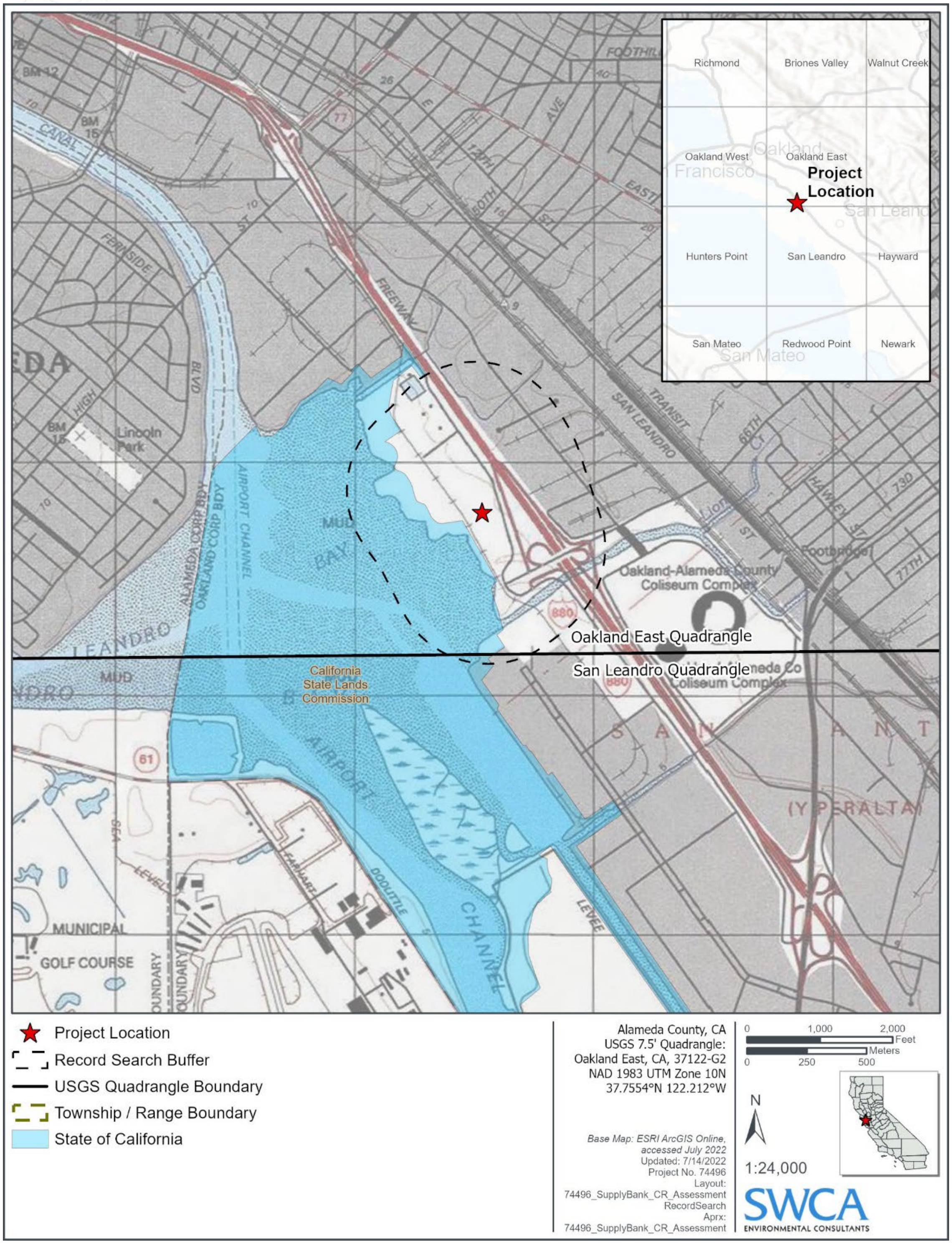

USGS 7.5-Minute Topographic Map of Oakland, California, depicting the project area (APE) with a 0.25-mile search buffer.

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August 30, 2022

Ann Marie Sayers, Chairperson
Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister, CA 95024

Re: SupplyBank Cultural Resources Assessment, City of Oakland, California/ SWCA Project No. 74496

Dear Chairperson Ann Marie Sayers:

SWCA Environmental Consultants (SWCA) was retained by Lamphier-Gregory to provide archaeological support for the SupplyBank Project (project). The project is subject to review under the California Environmental Quality Act (CEQA).

SupplyBank seeks to acquire the rights to develop two adjacent parcels of property owned by EBMUD at 5601 Oakport Street in the City of Oakland, Alameda County, California, via a parcel map waiver. Parcel 1 (to the north) is approximately 30.7 acres in size, and Parcel 2 (to the south) is approximately 14.4 acres. While the entirety of Parcel 2 will be developed, only 2 acres of Parcel 1 will be developed. The site will continue to be owned by EBMUD, and the new development will be managed by SupplyBank.Org as part of a long-term land lease agreement. The new development will include properties with a total of 293,000 square feet of building space, including an office building, a warehouse, and a weld shop.

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Thank you for your time and assistance in this matter, I look forward to hearing from you.

Sincerely,

Christina Alonso
Senior Project Manager
Attachment 1 – Project Maps

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August 30, 2022

Corrina Gould, Chairperson
The Confederated Villages of Lisjan
10926 Edes Avenue
Oakland, CA 94603

Re: SupplyBank Cultural Resources Assessment, City of Oakland, California/ SWCA Project No. 74496

Dear Chairperson Corrina Gould:

SWCA Environmental Consultants (SWCA) was retained by Lamphier-Gregory to provide archaeological support for the SupplyBank Project (project). The project is subject to review under the California Environmental Quality Act (CEQA).

SupplyBank seeks to acquire the rights to develop two adjacent parcels of property owned by EBMUD at 5601 Oakport Street in the City of Oakland, Alameda County, California, via a parcel map waiver. Parcel 1 (to the north) is approximately 30.7 acres in size, and Parcel 2 (to the south) is approximately 14.4 acres. While the entirety of Parcel 2 will be developed, only 2 acres of Parcel 1 will be developed. The site will continue to be owned by EBMUD, and the new development will be managed by SupplyBank.Org as part of a long-term land lease agreement. The new development will include properties with a total of 293,000 square feet of building space, including an office building, a warehouse, and a weld shop.

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Sincerely,

Christina Alonso
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Attachment 1 – Project Maps

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August 30, 2022

Irene Zwierlein, Chairperson
Amah Mutsun Tribal Band of Mission San Juan Bautista
3030 Soda Bay Road
Lakeport, CA 95453

Re: SupplyBank Cultural Resources Assessment, City of Oakland, California/ SWCA Project No. 74496

Dear Chairperson Irene Zwierlein:

SWCA Environmental Consultants (SWCA) was retained by Lamphier-Gregory to provide archaeological support for the SupplyBank Project (project). The project is subject to review under the California Environmental Quality Act (CEQA).

SupplyBank seeks to acquire the rights to develop two adjacent parcels of property owned by EBMUD at 5601 Oakport Street in the City of Oakland, Alameda County, California, via a parcel map waiver. Parcel 1 (to the north) is approximately 30.7 acres in size, and Parcel 2 (to the south) is approximately 14.4 acres. While the entirety of Parcel 2 will be developed, only 2 acres of Parcel 1 will be developed. The site will continue to be owned by EBMUD, and the new development will be managed by SupplyBank.Org as part of a long-term land lease agreement. The new development will include properties with a total of 293,000 square feet of building space, including an office building, a warehouse, and a weld shop.

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Any comments you may have regarding cultural resources in this area would be greatly appreciated. Please feel free to contact me with any concerns, or if you have additional questions about the project. You may reach me by phone at (925)399-9220 or email me at Christina.Alonso@swca.com.

Thank you for your time and assistance in this matter, I look forward to hearing from you.

Sincerely,

Christina Alonso
Senior Project Manager
Attachment 1 – Project Maps

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August 30, 2022

Katherine Perez, Chairperson
North Valley Yokuts Tribe
P.O. Box 717
Linden, CA 95236

Re: SupplyBank Cultural Resources Assessment, City of Oakland, California/ SWCA Project No. 74496

Dear Chairperson Katherine Perez:

SWCA Environmental Consultants (SWCA) was retained by Lamphier-Gregory to provide archaeological support for the SupplyBank Project (project). The project is subject to review under the California Environmental Quality Act (CEQA).

SupplyBank seeks to acquire the rights to develop two adjacent parcels of property owned by EBMUD at 5601 Oakport Street in the City of Oakland, Alameda County, California, via a parcel map waiver. Parcel 1 (to the north) is approximately 30.7 acres in size, and Parcel 2 (to the south) is approximately 14.4 acres. While the entirety of Parcel 2 will be developed, only 2 acres of Parcel 1 will be developed. The site will continue to be owned by EBMUD, and the new development will be managed by SupplyBank.Org as part of a long-term land lease agreement. The new development will include properties with a total of 293,000 square feet of building space, including an office building, a warehouse, and a weld shop.

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Sincerely,

Christina Alonso
Senior Project Manager
Attachment 1 – Project Maps

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August 30, 2022

Kanyon Sayers-Roods
Indian Canyon Mutsun Band of Costanoan
1615 Pearson Court
San Jose, CA 95122

Re: SupplyBank Cultural Resources Assessment, City of Oakland, California/ SWCA Project No. 74496

Dear Kanyon Sayers-Roods:

SWCA Environmental Consultants (SWCA) was retained by Lamphier-Gregory to provide archaeological support for the SupplyBank Project (project). The project is subject to review under the California Environmental Quality Act (CEQA); East Bay Municipal Utility District (EBMUD) will be the lead agency.

SupplyBank seeks to acquire the rights to develop two adjacent parcels of property owned by EBMUD at 5601 Oakport Street in the City of Oakland, Alameda County, California, via a parcel map waiver. Parcel 1 (to the north) is approximately 30.7 acres in size, and Parcel 2 (to the south) is approximately 14.4 acres. While the entirety of Parcel 2 will be developed, only 2 acres of Parcel 1 will be developed. The site will continue to be owned by EBMUD, and the new development will be managed by SupplyBank.Org as part of a long-term land lease agreement. The new development will include properties with a total of 293,000 square feet of building space, including an office building, a warehouse, and a weld shop.

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Thank you for your time and assistance in this matter, I look forward to hearing from you.

Sincerely,

Christina Alonso
Senior Project Manager
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Half Moon Bay, California 94019
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August 30, 2022

Kenneth Woodrow, Chairperson
Wuksache Indian Tribe/Eshom Valley Band
1179 Rock Haven Ct.
Salinas, CA 93906

Re: SupplyBank Cultural Resources Assessment, City of Oakland, California/ SWCA Project No. 74496

Dear Chairperson Kenneth Woodrow:

SWCA Environmental Consultants (SWCA) was retained by Lamphier-Gregory to provide archaeological support for the SupplyBank Project (project). The project is subject to review under the California Environmental Quality Act (CEQA).

SupplyBank seeks to acquire the rights to develop two adjacent parcels of property owned by EBMUD at 5601 Oakport Street in the City of Oakland, Alameda County, California, via a parcel map waiver. Parcel 1 (to the north) is approximately 30.7 acres in size, and Parcel 2 (to the south) is approximately 14.4 acres. While the entirety of Parcel 2 will be developed, only 2 acres of Parcel 1 will be developed. The site will continue to be owned by EBMUD, and the new development will be managed by SupplyBank.Org as part of a long-term land lease agreement. The new development will include properties with a total of 293,000 square feet of building space, including an office building, a warehouse, and a weld shop.

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Thank you for your time and assistance in this matter, I look forward to hearing from you.

Sincerely,

Christina Alonso
Senior Project Manager
Attachment 1 – Project Maps

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Half Moon Bay, California 94019
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www.swca.com

August 30, 2022

Monica Arellano, Vice Chairwoman
Muwekma Ohlone Indian Tribe of the SF Bay Area
20885 Redwood Road, Suite 232
Castro Valley, CA 94546

Re: SupplyBank Cultural Resources Assessment, City of Oakland, California/ SWCA Project No. 74496

Dear Vice Chairwoman Monica Arellano:

SWCA Environmental Consultants (SWCA) was retained by Lamphier-Gregory to provide archaeological support for the SupplyBank Project (project). The project is subject to review under the California Environmental Quality Act (CEQA).

SupplyBank seeks to acquire the rights to develop two adjacent parcels of property owned by EBMUD at 5601 Oakport Street in the City of Oakland, Alameda County, California, via a parcel map waiver. Parcel 1 (to the north) is approximately 30.7 acres in size, and Parcel 2 (to the south) is approximately 14.4 acres. While the entirety of Parcel 2 will be developed, only 2 acres of Parcel 1 will be developed. The site will continue to be owned by EBMUD, and the new development will be managed by SupplyBank.Org as part of a long-term land lease agreement. The new development will include properties with a total of 293,000 square feet of building space, including an office building, a warehouse, and a weld shop.

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Sincerely,

Christina Alonso
Senior Project Manager
Attachment 1 – Project Maps

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August 30, 2022

Tony Cerda, Chairperson
Costanoan Rumsen Carmel Tribe
244 E. 1st Street
Pomona, CA 91766

Re: SupplyBank Cultural Resources Assessment, City of Oakland, California/ SWCA Project No. 74496

Dear Chairperson Tony Cerda:

SWCA Environmental Consultants (SWCA) was retained by Lamphier-Gregory to provide archaeological support for the SupplyBank Project (project). The project is subject to review under the California Environmental Quality Act (CEQA).

SupplyBank seeks to acquire the rights to develop two adjacent parcels of property owned by EBMUD at 5601 Oakport Street in the City of Oakland, Alameda County, California, via a parcel map waiver. Parcel 1 (to the north) is approximately 30.7 acres in size, and Parcel 2 (to the south) is approximately 14.4 acres. While the entirety of Parcel 2 will be developed, only 2 acres of Parcel 1 will be developed. The site will continue to be owned by EBMUD, and the new development will be managed by SupplyBank.Org as part of a long-term land lease agreement. The new development will include properties with a total of 293,000 square feet of building space, including an office building, a warehouse, and a weld shop.

The Project area is located within the City of Oakland, Alameda County, California within the Oakland East, CA 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle. The work is located west of Oakport Street and approximately 100 feet east of San Leandro Bay.

SWCA submitted a cultural resources records search through the NWIC on July 15, 2022 and received results on August 17, 2022. A search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was submitted on July 15, 2022, with **negative** results.

SWCA is requesting any additional information you may have regarding properties, features, or cultural materials within the Project APE (see attached) that may be of concern to local Native Americans.

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Any comments you may have regarding cultural resources in this area would be greatly appreciated. Please feel free to contact me with any concerns, or if you have additional questions about the project. You may reach me by phone at (925)399-9220 or email me at Christina.Alonso@swca.com.

Thank you for your time and assistance in this matter, I look forward to hearing from you.

Sincerely,

Christina Alonso
Senior Project Manager
Attachment 1 – Project Maps

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60 Stone Pine Road, Suite 100
Half Moon Bay, California 94019
Tel 650.440.4160 Fax 650.440.4165
www.swca.com

August 30, 2022

Timothy Perez
North Valley Yokuts Tribe
P.O. Box 717
Linden, CA 95236

Re: SupplyBank Cultural Resources Assessment, City of Oakland, California/ SWCA Project No. 74496

Dear Timothy Perez:

SWCA Environmental Consultants (SWCA) was retained by Lamphier-Gregory to provide archaeological support for the SupplyBank Project (project). The project is subject to review under the California Environmental Quality Act (CEQA).

SupplyBank seeks to acquire the rights to develop two adjacent parcels of property owned by EBMUD at 5601 Oakport Street in the City of Oakland, Alameda County, California, via a parcel map waiver. Parcel 1 (to the north) is approximately 30.7 acres in size, and Parcel 2 (to the south) is approximately 14.4 acres. While the entirety of Parcel 2 will be developed, only 2 acres of Parcel 1 will be developed. The site will continue to be owned by EBMUD, and the new development will be managed by SupplyBank.Org as part of a long-term land lease agreement. The new development will include properties with a total of 293,000 square feet of building space, including an office building, a warehouse, and a weld shop.

The Project area is located within the City of Oakland, Alameda County, California within the Oakland East, CA 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle. The work is located west of Oakport Street and approximately 100 feet east of San Leandro Bay.

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Thank you for your time and assistance in this matter, I look forward to hearing from you.

Sincerely,

Christina Alonso
Senior Project Manager
Attachment 1 – Project Maps

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: SupplyBank

County: Alameda County

USGS Quadrangle Name: Oakland East

Township: 02S **Range:** 03W **Section(s):** 17

Company/Firm/Agency: SWCA Environmental Consultants

Street Address: 60 Stone Pine Road

City: Half Moon Bay **Zip:** 94019

Phone: 925-399-9220

Fax:

Email: Christina.Alonso@swca.com

Project Description:

The project is located at 5601 Oakport Street. SWCA understands that East Bay Mud (EBMUD) owns these two adjacent properties; Parcel 1 (to the north) is approximately 30.7 acres in size, and Parcel 2 (to the south) is approximately 14.4 acres. SupplyBank seeks to acquire the rights to develop Parcel 2 and approximately 2 acres of Parcel 1 via a parcel map waiver. The site will continue to be owned by EBMUD and the new development will be managed by SupplyBank.Org as part of a long-term land lease agreement. The new development will include properties with a total of 293,000 square feet of building space including an office building, a warehouse, and a weld shop.

Nimitz Fwy
Coliseum Way
50th Ave
Tidewater Ave
Oakport St
Parcel 2
Parcel 1
Oakport St
Nimitz Fwy
Coliseum Way
66th Av
Lions Creek
Project Area
Project Site Parcels
Alameda County, CA
USGS 7.5' Quadrangle:
Oakland East, CA, 37122-G2
NAD 1983 UTM Zone 10N
37.7576°N 122.2139°W
Base Map: ESRI ArcGIS Online, accessed July 2022
Updated: 7/14/2022
Project No. 74496
Layout:
74496_SupplyBank_CR_Assessment
ProjectLocation
Aprx:
74496_SupplyBank_CR_Assessment
0 410 820 Feet
0 100 200 Meters
N
1:10,000
SWCA
ENVIRONMENTAL CONSULTANTS

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

August 25, 2022

Christina Alonso
SWCA Environmental Consultants

Via Email to: Christina.Alonso@swca.com

Re: Supply Bank Project, Alameda County

Dear Ms. Alonso:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Cody.Campagne@nahc.ca.gov.

Sincerely,

Cody Campagne

Cody Campagne
Cultural Resources Analyst

Attachment

Page 1 of 1

Appendix L

Geotechnical Engineering Report for Oakport Buildings in Oakland, Alameda, California

Terracon Consultants, Inc. June 15, 2018

Terracon GeoReport

Geotechnical Engineering Report

Oakport Buildings

Oakland, Alameda, California

June 15, 2018

Terracon Project No. ND175105

Prepared for:

SupplyBank.Org
Oakland, CA

Prepared by:

Terracon Consultants, Inc.
Concord, California

REPORT TOPICS

Note: This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES
SITE LOCATION AND EXPLORATION PLANS
EXPLORATION RESULTS (Boring/CPT Logs and Laboratory Data)
SUPPORTING INFORMATION (General Notes, Unified Soil Classification System, Liquefaction Analysis, Seismic Data)

REPORT SUMMARY

Topic [1]	Overview Statement [2]
Project Description	63,640 square foot (sf) warehouse 60,480 sf warehouse 25,000 sf 4-story office building 10,000 sf butler building (assumed metal frame with metal siding) Max. Column loads: 150-200 kips (warehouses), 300-400 kips (office building) Max. Wall loads: 4-8 kips per lineal foot Max. Slab loads: 300 psf Pipe laydown area with pipe stockpiled up to 7 feet high Materials (sand and gravel) bins with walls up to 10 feet tall and stockpiles up to 14 feet tall Fills up to 4 feet may be required to achieve final grade in some areas of the site. Excavations up to 4 feet are anticipated for loading dock and elevator pit construction. Expected traffic indexes/loads for pavement areas: ■ Auto Parking Areas: 5.0 ■ Auto Road: 5.5 ■ Truck Parking Areas: 6.0 ■ Truck Ramps and Roads: 8.0 Average Daily Truck Traffic (ADTT) for rigid pavements: ■ Car Parking and Access Lanes: 1 (Category A) ■ Truck Parking: 25 (Category B) ■ Dumpster Pad per Category C
Geotechnical Characterization	Up to 11 feet of Undocumented Fill blankets the site Approximately 3 to 7½ feet of elastic SILT (Bay Mud) underlies the FILL. Interbedded layers of native CLAY and SAND with varying consistencies/densities underlying the Bay Mud extend to the maximum depths explored. Groundwater was encountered in the borings at depths as shallow 3 feet below the ground surface (bgs).
Earthwork	Remove and re-compact existing undocumented fill in pavement and hardscape areas to a minimum depth of 2 feet bgs. Surface lean clays have moderately plasticity and are sensitive to moisture variation. The upper 24 inches of subgrade below hardscapes should consist of low volume change material (LVC). Existing fill may be reused as structural fill provided it is processed to remove debris, particles greater than 3 inches in greatest dimension, and organic material.
Shallow Foundations	Shallow foundations may be used to support low height landscaping walls (<3 feet in height) and light poles. Allowable bearing pressure = 500 lbs/sq ft Expected settlements: < 2-inch total, < 1-inch differential Shallow foundations may be considered for support of buildings and retaining walls in areas mitigated with **Ground Improvement** methods.

Deep Foundations	Buildings and accessory structures, including retaining walls, should be supported by driven piles unless **Ground Improvement** methods are used to mitigate anticipated settlements.
Retaining Structures	Office building elevator pit. Warehouse loading dock walls. Material Bin walls. **Lateral Earth Pressures** have been provided for use in design.
Pavements	Pavement sections are provided with subgrade prepared as noted in **Earthwork**. Alternative pavement sections utilizing triaxial geogrid reinforcement or lime/cement treatment are provided.
General Comments	This section contains important information about the limitations of this geotechnical engineering report.

1. If the reader is reviewing this report as a pdf, the topics above can be used to access the appropriate section of the report by simply clicking on the topic itself.
2. This summary is for convenience only. It should be used in conjunction with the entire report for design purposes.

Geotechnical Engineering Report

Oakport Buildings
5801 Oakport Street
Oakland, Alameda, California
Terracon Project No. ND175105
June 15, 2018

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed warehouses, office building, butler building, and associated parking and drives to be located at 5801 Oakport Street in Oakland, Alameda, California. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Site preparation and earthwork
- Soil corrosivity
- Liquefaction
- Foundation design and construction
- Floor slab design and construction
- Lateral earth pressures
- Pavement design and construction
- Infiltration rates
- Seismic site classification and design parameters per 2016 CBC

The geotechnical engineering scope of services for this project included the advancement of 28 test borings to depths ranging from approximately 5 to 51½ feet below existing site grades. Additionally, two cone penetrometer test (CPT) soundings were advanced to a depth of 100 feet bgs.

Maps showing the site and boring and CPT locations are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs and/or as separate graphs in the **Exploration Results** section of this report.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information	The project is located at 5801 Oakport Street in Oakland, Alameda, California. The parcel is approximately 16.4 acres in size. 37.7557°N 122.2115°W (approximate) (See Exhibit D)
Existing Improvements	The project location is primarily vacant land with an asphalt paved area on the northeastern portion of the site. The northern portion of the site is being used as an East Bay Municipal Utility District (EBMUD) backfill and pipe storage yard. We understand the parcel is also occasionally utilized for a carnival and parking.
Current Ground Cover	Earthen, grasses, and some fill and debris piles.
Existing Topography	The property is relatively flat with a gentle slope from the east down to the west.
Geology	The subsurface conditions consist of man-made artificial fill overlying Bay Mud and alluvial marine deposits.[1] The project site is not located within an Alquist-Priolo Earthquake Fault Zone based on our review of the State Fault Hazard Maps.[2] The project site is located in an area as being a liquefaction hazard zone having a very high susceptibility to earthquake-induced liquefaction.[3]

PROJECT DESCRIPTION

Our initial understanding of the project was provided in our proposal and was discussed in the project planning stage. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

Item	Description
Information Provided	A conceptual site plan of the project prepared by Ware Malcomb was provided by SupplyBank.org via email.
Project Description	The approximately 16.4-acre property is located west of Interstate 880 and borders San Leandro Bay. The property will be developed with two warehouses, an office building, a butler building, and associated parking and drives. Development will include material bins and a pipe laydown area.

[1] Dibblee, T.W., and Minch, J.A., 2005, Geologic map of the Oakland East quadrangle, Contra Costa and Alameda Counties, California: Dibblee Geological Foundation, Dibblee Foundation Map DF-160, scale 1:24,000
[2] California Department of Conservation Division of Mines and Geology (CDMG), *"Digital Images of Official Maps of Alquist-Priolo Earthquake Fault Zones of California, Southern Region"*, , 2012.
[3] Witter, R.C., Knudsen, K.L., Sowers, J.M., Wentworth, C.M., Koehler, R.D., Randolph, C.E., 2006, Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California: A Digital Database, U.S. Geological Survey OFR 2006-1037.

Item	Description
Proposed Structures	■ 63,640 square foot (sf) warehouse ■ 60,480 sf warehouse ■ 25,000 sf, 4-story office building ■ 10,000 sf butler building. ■ Material bin retaining walls
Building Construction	■ The warehouse buildings will consist of concrete tilt-up construction with concrete slab floors. A portion of the buildings will have depressed loading docks. The exterior walls will extend up to 45 feet above the ground surface. ■ The office and butler buildings will consist of wood-frame and metal frame construction with concrete slab floors. ■ The material bin walls will be up to 10 feet tall and consist of concrete construction.
Maximum Loads (provided)	■ Warehouse columns: 150 to 200 kips ■ Office building columns: 300 to 400 kips ■ Walls: 4 to 8 kips per linear foot (klf) ■ Slabs: 300 pounds per square foot (psf) ■ Material Bin stockpiles: 1,700 psf
Grading	Up to 4 feet of cuts and 4 feet of fills are anticipated to develop final grade across the site and facilitate the office elevator pit and warehouse loading dock construction.
Retaining Structures	The office building will have at least one elevator pit. We anticipate the pit will extend 3 to 4 feet below the ground surface (bgs) The warehouses will have loading docks that will require to retain up to 4 feet of soil. The Materials Bins will require retaining walls up to 10 feet tall.
Pavements	Paved drives and parking will be constructed as part of development. Traffic indices (TIs) used for flexible pavements sections are as follows: ■ Auto Parking Areas: TI = 5.0 ■ Auto Road: TI = 5.5 ■ Truck Parking Areas: TI = 6.0 ■ Truck Ramps and Roads: TI = 8.0 Average Daily Truck Traffic used for rigid pavements are as follows: ■ Car Parking and Access Lanes: ADTT = 1 (Category A) ■ Truck Parking: ADTT = 25 (Category B) ■ Dumpster Pads: Per Category C The pavement design period is 20 years.
Estimated Start of Construction	Fall 2018

GEOTECHNICAL CHARACTERIZATION

Subsurface Profile

We understand the site was originally a tidal marshland. Miscellaneous fill was placed over the marshland in the 1950s and 1960s to create the existing relatively level parcel. We have developed a general characterization of the subsurface soil and groundwater conditions based upon our review of the data and our understanding of the geologic setting and planned construction. The following table provides our geotechnical characterization.

The geotechnical characterization forms the basis of our geotechnical calculations and evaluation of site preparation, foundation options and pavement options. As noted in **General Comments**, the characterization is based upon widely spaced exploration points across the site, and variations are likely.

Stratum	Approximate Depth to Bottom of Stratum (feet)	Material Description	Consistency/Density
1[1, 7]	5½ to 11	UNDOCUMENTED FILL SAND with variable amounts of gravel, silt and clay; CLAY with variable amounts of sand and gravel Some debris encountered throughout the fill	Very loose to very dense Soft to hard
2[2]	12½ to 17	Elastic SILT (Bay Mud)	Very soft to soft
3[3]	18½ to 34	SAND with variable amounts of gravel, silt and clay	Very loose to dense
4[4]	20½ to 50½	CLAY with variable amounts of silt and sand	Soft to stiff
5[5]	Undetermined	SAND with variable amounts of clay and gravel	Loose to dense
6[6]	Undetermined	Silty CLAY	Stiff

Stratum	Approximate Depth to Bottom of Stratum (feet)	Material Description	Consistency/Density

1. Borings B13 through B24 terminated within this stratum.
2. Boring B27 terminated in this stratum.
3. Borings B2, B11, B25, and B26 terminated within this stratum.
4. Borings B6 and B10 terminated within this stratum.
5. Borings B1, B3, B8 and B9 terminated within this stratum.
6. Boring B7 terminated within this stratum. Stratum only encountered in Boring B7.
7. Practical auger refusal was encountered in boring B12 at a depth of 7 feet bgs. Refusal is defined as the depth below the ground surface at which a boring can no longer be advanced with the soil drilling technique being used. Refusal is subjective and is based upon the type of drilling equipment used, the types of augers used, and the effort exerted by the driller. We anticipate refusal was encountered in buried debris in the FILL or gravel/boulders. Additional borings, auger probes, test pits, or geophysical testing could be performed to obtain more specific subsurface information.

Conditions encountered at each boring/CPT location are indicated on the individual boring and CPT logs shown in the **Exploration Results** section and are attached to this report. Stratification boundaries on the boring logs represent the approximate location of changes in native soil types; in situ, the transition between materials may be gradual.

Groundwater Conditions

The boreholes were observed while drilling and after completion for the presence and level of groundwater. In addition, delayed water levels were also obtained in some borings. The water levels observed in the boreholes can be found on the boring logs in **Exploration Results**, and are summarized below.

Boring Number	Approximate Depth to Groundwater while Drilling (feet) [1]	Approximate Depth to Groundwater after Drilling (feet) [1]
B1	5	3 (3 hr. reading)
B2	9½	5 (6 hr. reading)
B3	8	3 (1 hr. reading)
B6	3	Not measured (NM)
B7	14	NM
B8	21½	NM
B9	6½	NM
B10	7	3 (0 hr. reading)
B11	17	NM
B15	Not encountered (NE)	4 (3 hr. reading)
B16	NE	3 (3 hr. reading)
B21	NE	4 (2 hr. reading)
B23	3	NM
B25	3	3 (1 hr. reading)
B26	8½	NM
B27	5	NM

1. Below ground surface

Groundwater was not observed in the remaining borings while drilling, or for the short duration the borings could remain open. However, this does not necessarily mean the borings terminated above groundwater, or the water levels summarized above are stable groundwater levels. Due to the low permeability of the soils encountered in the borings, a relatively long period may be necessary for a groundwater level to develop and stabilize in a borehole. Long term observations in piezometers or observation wells sealed from the influence of surface water are often required to define groundwater levels in materials of this type.

Groundwater level fluctuations occur due to seasonal variations in the amount of tidal fluctuations, rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structures may be higher or lower than the levels indicated on the boring/CPT logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project. **Dewatering should be anticipated and planned for in proposed excavations. The depth of dewatering below the bottom of excavations should be determined by the contractor and/or designer.** Pump tests for dewatering were not included in the scope of work for this report. However, Terracon can perform pump tests for an additional fee, if desired.

GEOTECHNICAL OVERVIEW

The subject site has several geotechnical considerations that will affect the construction and performance of the proposed warehouses, office building, butler building, pavements, hardscapes, and material bin walls. The following geotechnical considerations have been identified at the subject site:

- Liquefaction Considerations
- Undocumented Fill Considerations
- Compressible Bay Mud Considerations
- Moderately Plastic Soil Considerations

Liquefaction Considerations

A liquefaction potential analysis was calculated from a depth of 3 to 50 feet below the ground surface. Potentially liquefiable layers were encountered in our analysis at multiple depths with the largest liquefiable layer being located between the approximate depths of 15 and 30 feet bgs in several of the borings/CPTs. Based on our review of the calculations by various methods, it is our opinion the anticipated total liquefaction-induced settlements across the site may vary between 2 to 4½ inches. We anticipate the differential liquefaction-induced settlement across the proposed building footprints may be up to 2 inches as a result of the varying lithology encountered in our borings and CPTs. The effects of this anticipated liquefaction settlement can be mitigated by supporting the proposed buildings on **Deep Foundations** that derive support below to the potentially liquefiable soils or by **Ground Improvement** methods such as Deep Soil Mixing (DSM).

Undocumented Fill Considerations

Approximately 5½ to 11 feet of undocumented fill consisting of sand with variable amounts of clay, silt, and gravel and clay with variable amounts of sand and gravel blanketed the site. Debris consisting of wood fragments, concrete, and refuse was encountered throughout the fill. The density/consistency of the undocumented fill encountered in our borings varied from very loose to medium dense and soft to very stiff. Such undocumented fill can result in differential settlement and damage to proposed structures relying on the fill for structural support. As a result, the fill is not suitable to support the proposed buildings and retaining walls.

While the undocumented fill is not suitable to support the proposed buildings, the fill should be adequate to support proposed pavements and hardscapes provided **Earthwork** is conducted per the recommendations provided herein. The fill below pavement and hardscape areas should be over-excavated to a depth of 2 feet and the resulting subgrade should be scarified to a minimum depth of 12 inches, moisture conditioned, and compacted per the recommendations in the **Earthwork** section of this report. Following compaction of the subgrade, the over-excavated areas may be backfilled with compacted structural fill. The 2 feet of over-excavation is not required in areas improved by DSM or below buildings supported by **Deep Foundations**.

Even with the recommended earthwork procedures, there is an inherent risk for the owner that compressible fill or unsuitable material within or buried by the fill will not be discovered. This risk of unforeseen conditions cannot be eliminated without completely removing all the existing undocumented fill, but can be reduced by following the recommendations contained in this report. To take advantage of the cost benefit of not removing the entire amount of undocumented fill, the owner must be willing to accept the risk associated with building over the undocumented fills following the recommended reworking of the material.

Compressible Bay Mud Considerations

The undocumented fill blanketing the site was underlain by 3 to 7½ feet of elastic silt (Bay Mud) to depths varying from 12½ to 17 feet bgs. The underlying Bay Mud is a largely unconsolidated and compressible geologic unit. We understand the undocumented fill was placed in the early 1960's over tidal marshland. Laboratory testing indicated the Bay Mud was slightly over-consolidated indicating primary settlement due to the existing fill placement is likely complete.

We understand site grades may be elevated up to 4 feet in some areas across the site to accommodate development. In addition, stockpiles of soil and gravel up to 14 feet high area are anticipated in the Materials Bin area of the development. Placement of additional fill and stockpiled material will likely trigger new consolidation settlement of the Bay Mud.

A consolidation settlement analysis was performed to estimate the anticipated total settlement under the weight of the new fill placement and stockpiled soil. The analysis was performed using the results of laboratory testing and our experience. A Bay Mud thickness of 7½ feet was used in our calculations. The results of our analysis are presented in the following Table for both normal weight and lightweight fill.

Consolidation Settlement from Fill Placement		
Additional Fill Height (feet)	**Fill Load (psf)**	**Estimated Total Consolidation Settlement (inches)**
	Normal Weight Engineered Fill (Unit Weight = 120 pcf)	
1	120	3
2	240	5½
3	360	7½
4	480	9
	Stockpiled Sand and Gravel (Unit Weight = 120 pcf)	
12	1,440	19
14	1,680	20½
	Lightweight Engineered Fill (Unit Weight = 50 pcf or less)	
1	50	1½
2	100	2½
3	150	3½
4	200	4½

These settlements due to fill placement and/or stockpiled materials could be reduced by various **Ground Improvement** methods including placement of lightweight fill, DSM, and rammed aggregate piers (RAP). In order to avoid the effect of these total and associated differential settlements on the proposed buildings, the buildings should be supported by **Deep Foundations** or subgrade mitigated by **Ground Improvement** methods. In addition, special design details should be considered for underground utility lines; site development such as hardscape, entrances, and pavement adjacent to pile or DSM supported structures; and site drainage. In areas not improved by DSM or other **Ground Improvement** methods, the anticipated differential movement should be considered when planning development in these areas. Long term maintenance should be planned for in pavement, drainage, and hardscape areas adjacent to building entrances. It is recommended utilities and piping be designed with flexible connections and/or other means to accommodate such soil movement to reduce the potential for damage. Utility and drain lines designed for gravity flow should consider and account for anticipated settlements.

Moderately Plastic Soil Considerations

The surficial soils across the project site are generally moderately plastic (expansive). Additional areas of localized moderately to highly plastic clays may be present where borings were not performed.

These plastic clays are prone to volume change with changes in moisture which may lead to excessive shrinking and swelling of pavements and hardscapes. In order to address the effects of the moderate to high volume change soils, we recommend exterior hardscapes be underlain by a minimum of 24 inches of low volume change (LVC) material. Using an LVC zone as recommended in this report may not eliminate all future subgrade volume change and resultant slab movements. However, the procedures outlined herein should help to reduce the potential for subgrade volume changes.

This report provides recommendations to help mitigate the effects of soil shrinkage and expansion. However, even if these procedures are followed, some movement and cracking in the slabs should be anticipated. The severity of cracking and other (cosmetic) damage such as uneven slabs will likely increase if any modification of the site results in excessive wetting or drying of the expansive soils. Eliminating the risk of movement and distress may not be feasible, but it may be possible to further reduce the risk of movement if significantly more extensive measures are used during construction. We would be pleased to discuss other construction alternatives with you upon request.

The **General Comments** section provides an understanding of the report limitations.

EARTHWORK

Earthwork will include clearing and grubbing, excavations and fill placement. The following sections provide recommendations for use in the preparation of specifications for the work. Recommendations include critical quality criteria as necessary to render the site in the state considered in our geotechnical engineering evaluation for foundations, floor slabs, and pavements.

Site Preparation

Prior to placing fill, existing vegetation and root mat, debris, stockpiled soil and any otherwise unsuitable material should be removed. Complete stripping of the topsoil should be performed in the proposed building and parking/driveway areas.

The subgrade should be proof-rolled with an adequately loaded vehicle such as a fully loaded tandem axle dump truck. The proof-rolling should be performed under the direction of the

Geotechnical Engineer. Areas excessively deflecting under the proof-roll should be delineated and subsequently addressed by the Geotechnical Engineer. Such areas should either be removed or modified by stabilizing as noted in the following section **Soil Stabilization**. Excessively wet or dry material should either be removed or moisture conditioned and recompacted. Exposed surfaces should be free of mounds and depressions which could prevent uniform compaction.

Subgrade Preparation

After clearing any required cuts should be made. The undocumented fill below pavement and hardscape areas should be over-excavated to a minimum depth of 2 feet. Terracon should be present to observe the subgrade conditions during over-excavation. The presence of over-sized debris or a high volume of organic material may warrant additional over-excavation at the time of grading operations. If needed, a geotextile fabric may be utilized as a separator between the undocumented fill and engineered fill. This over-excavation requirement is not required in areas improved by **Ground Improvement** methods or below slabs in buildings supported by **Deep Foundations**.

Once any required cuts have been made, and prior to placing any engineered fill the subgrade soil should be scarified and compacted. The depth of scarification of subgrade soils and moisture conditioning of the subgrade is highly dependent on the time of year of construction and the site conditions that exist immediately prior to construction. If construction occurs during the winter or spring, when the subgrade soils are typically already in a moist condition, scarification and compaction may only be 12 inches. If construction occurs during the summer or fall when the subgrade soils have been allowed to dry out deeper, the depth of scarification and moisture conditioning may be as much as 18 inches. Due to the shallow groundwater, the subgrade soil at the over-excavated depth is likely to be in an elevated moisture condition and compaction will likely require some drying before it can be compacted. A representative from Terracon should be present to observe the exposed subgrade and specify the depth of scarification and moisture conditioning required.

Following scarification and compaction of the subgrade, the over-excavated areas may be backfilled with compacted structural fill and any additional fill may be placed and compacted.

The moisture content and compaction of subgrade soils should be maintained until foundation/slab/pavement construction. Care should be taken to prevent wetting or drying of the bearing materials during construction.

Bay Mud was encountered as shallow as 5½ feet bgs. The depths to Bay Mud will fluctuate across the site and could be encountered at shallower depths. As a result, very soft Bay Mud conditions could be encountered in the bottom of excavations. These soils will likely be unworkable. The contractor may utilize dry crushed rock or clean granular fill material placed over a geotextile such as Mirafi RS580i or equivalent to stabilize wet subgrade materials in the bottom of the excavation prior to backfill. If further soil stabilization is needed or another method is preferred or desired, Terracon should be consulted to evaluate the situation as needed.

Fill placed on Bay Mud or in areas where Bay Mud is covered with less than 3 feet of soil can cause failure within the mud if large amounts of fill are placed too quickly. The weight of the fill can cause the Bay Mud to fail and flow away from the fill as a wave. In order to help reduce the potential for mud waves during fill placement, the first layer of fill should be placed slowly and in as thin a layer as possible without allowing the grading equipment to sink into the mud. In these areas lightweight equipment should be used to help minimize the required thickness of the first layer. We recommend monitoring the pore pressure in the Bay Mud during placement to help mitigate the potential for mud waves. The amount of the fill placed on a daily basis may need to be limited to help minimize pore pressure build up and subsurface failure.

Soil Stabilization

Methods of subgrade improvement, as described below, could include scarification, moisture conditioning and recompaction, and removal of unstable materials and replacement with granular fill (with or without geosynthetics). The appropriate method of improvement, if required, would be dependent on factors such as schedule, weather, the size of the area to be stabilized, cost and the nature of the instability. More detailed recommendations can be provided during construction as the need for subgrade stabilization occurs. Performing site grading operations during warm seasons and dry periods would help to reduce the amount of subgrade stabilization required.

If the exposed subgrade is unstable during proof rolling operations, it could be stabilized using one of the methods outlined below.

- **Scarification and Compaction** – It may be feasible to scarify, dry, and compact the exposed soils. The success of this procedure would depend primarily upon favorable weather and sufficient time to dry the soils. Stable subgrades likely would not be achievable if the thickness of the unstable soil is greater than about 1 foot, if the unstable soil is at or near groundwater levels, or if construction is performed during a period of wet or cool weather when drying is difficult.

- **Aggregate Base** – The use of Caltrans Class II aggregate base is the most common procedure to improve subgrade stability. Typical undercut depths would be expected to range from about 6 to 18 inches below finished subgrade elevation with this procedure. The use of high modulus geotextiles (i.e., engineering fabric or geogrid) could also be considered after underground work such as utility construction is completed. Prior to placing the fabric or geogrid, we recommend that all below-grade construction, such as utility line installation, be completed to avoid damaging the fabric or geogrid. Equipment should not be operated above the fabric or geogrid until one full lift of aggregate base is placed above it. The maximum particle size of granular material placed over geotextile fabric or geogrid should meet the manufacturer's specifications.

Further evaluation of the need and recommendations for subgrade stabilization can be provided during construction as the geotechnical conditions are exposed.

Existing Undocumented Fill

As noted in **Geotechnical Characterization**, 5½ to 11 feet of undocumented fill blanketed the site. The fill is considered undocumented as we have no records to indicate the degree of control that was performed during placement. Support of foundations, floor slabs, and pavements on or above existing fill soils is discussed in this report.

The density/consistency of the undocumented fill encountered in our borings varied from loose to medium dense and soft to very stiff. Such undocumented fill can result in differential settlement and damage to proposed structures relying on the fill for structural support. As a result, the fill is not suitable to support the proposed buildings. While the undocumented fill is not suitable to support the proposed buildings, the fill should be adequate to support proposed pavements and exterior hardscapes provided **Earthwork** is conducted per the recommendations provided herein. If the owner elects to construct pavements and hardscapes on the existing fill, the following protocol should be followed. The fill below pavement and hardscape areas should be over-excavated to a depth of 2 feet and the resulting subgrade should be scarified to a minimum depth of 12 inches, moisture conditioned, and compacted per the recommendations in the **Earthwork** section of this report. Following compaction of the subgrade, the over-excavated areas may be backfilled with compacted structural fill. The 2 feet of over-excavation is not required in areas improved by **Ground Improvement** methods.

Even with the recommended earthwork procedures, there is an inherent risk for the owner that compressible fill or unsuitable material within or buried by the fill will not be discovered. This risk of unforeseen conditions cannot be eliminated without completely removing all the existing undocumented fill, but can be reduced by following the recommendations contained in this report. To take advantage of the cost benefit of not removing the entire amount of undocumented fill, the owner must be willing to accept the risk associated with building over the undocumented fills following the recommended reworking of the material.

Fill Material Types

Fill required to achieve design grade should be classified as structural fill and general fill. Structural fill is material used below, or within 5 feet of structures or pavements. General fill is material used to achieve grade outside of these areas. Earthen materials used for structural and general fill should meet the following material property requirements:

Fill Type[1]	USCS Classification	Acceptable Location for Placement
Lean Clay	CL (LL<45)	All structural and general fill locations and elevations, except as LVC material unless material explicitly meets LVC requirements.
Moderate to High Plasticity Material[2]	CH or CL (LL≥45 or PI≥25)	> 24 inches below finished grade in structural fill areas and in all general fill locations and elevations
Well-graded Granular[3]	GM, GC, SM, or SC	All structural and general fill locations and elevations
Low Volume Change (LVC) Material[4]	CL (LL<30 & PI<10) or Well-graded Granular Material [3]	All structural and general fill locations and elevations
On-site Soils[5]	SP, SM, SC, SW	All structural and general fill locations and elevations
	CL, CH	>24 inches below finished grade in structural and general fill locations
	MH	>24 inches below grade in general fill locations
Lightweight[6]	SM, SC, SP, SW, GM, GC Cellular Concrete EPS Geofoam	All structural and general fill locations and elevations

1. Compacted structural fill should consist of approved materials that are free of organic matter and debris. A sample of each material type should be submitted to Terracon for evaluation at least two weeks prior to grading.
2. Delineation of moderate to highly plastic clays should be performed in the field by a qualified geotechnical engineer or their representative, and could require additional laboratory testing.
3. Caltrans Class II aggregate base may be used for this material.
4. Low plasticity cohesive soil or granular soil having low plasticity fines. Material should be approved by the geotechnical engineer.
5. This material should be removed and recompacted if used as an engineered or structural fill as described in section **Fill Compaction Requirements**. The onsite undocumented fill may be used at structural or general fill provided the material is processed to remove debris, particles greater than 3 inches in greatest dimension, and organic material.
6. This material should have a maximum moist unit weight of 50 pcf or less.

Fill Compaction Requirements

Structural and general fill should meet the following compaction requirements.

Item	Structural Fill	General Fill
Maximum Lift Thickness[2]	8 inches or less in loose thickness when heavy, self-propelled compaction equipment is used 4 to 6 inches in loose thickness when hand-guided equipment (i.e. jumping jack or plate compactor) is used	Same as Structural fill
Minimum Compaction Requirements [1,3]	90% of max. below foundations 95% of max. above foundations and below floor slabs and pavements	90% of max.
Water Content Range [1]	Low plasticity cohesive: +1% to +3% above optimum High plasticity cohesive: +2% to +4% above optimum Granular: -2% to +2% above optimum	As required to achieve min. compaction requirements[4]

1. Maximum density and optimum water content as determined by the Modified Proctor test (ASTM D 1557).
2. Reduced lift thicknesses are recommended in confined areas (e.g., utility trenches, foundation excavations, and foundation backfill) and when hand-operated compaction equipment is used.
3. We recommend that engineered fill be tested for moisture content and compaction during placement. Should the results of the in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested as required until the specified moisture and compaction requirements are achieved. This procedure is intended for soils with 30 percent or less material larger than ¾ inch. Accordingly, we recommend full time proof roll observation be performed instead of moisture density testing for materials containing more than 30 percent aggregate retained on the ¾-inch sieve.
4. Specifically, moisture levels should be maintained low enough to allow for satisfactory compaction to be achieved without the cohesionless fill material pumping when proof rolled.

Utility Trench Backfill

Special design may be required for the utilities at this site. Utility design should account for the anticipated settlements provide in **Geotechnical Overview.** It is recommended utilities and piping be designed with flexible connections and/or other means to accommodate such soil movement to preclude damage. Utility and drain lines designed for gravity flow should consider steeper gradients to account for anticipated settlements, especially where such lines enter buildings supported by piles or in areas improved by **Ground Improvement** methods.

As indicated, Bay Mud was encountered at depths varying from 5½ to 11 feet bgs in our boring and CPTs. The Bay Mud extended to depths of between 12½ and 17 feet bgs. The depth of Bay Mud can and will vary across the site. Depending on the planned depth of utilities, groundwater and very soft Bay Mud conditions should be anticipated in the bottom of the planned trench excavations. The soils will likely be unworkable. The contractor may utilize dry crushed rock or clean granular fill material placed over a geotextile such as Mirafi RS580i or equivalent to stabilize wet subgrade materials in the bottom of the excavation prior to backfill. If further soil stabilization is needed, Terracon should be consulted to evaluate the situation as needed.

All trench excavations should be made with sufficient working space to permit construction including backfill placement and compaction. Lightweight fill should be considered for utility trench backfill to help reduce the potential for greater differential settlements. If utility trenches are backfilled with relatively clean granular material, they should be capped with at least 18 inches of cementitious flowable fill or cohesive fill in non-pavement areas to reduce the infiltration and conveyance of surface water through the trench backfill. Attempts should also be made to limit the amount of fines migration into the clean granular material. Fines migration into clean granular fill may result in unanticipated localized settlements over a period of time. To help limit the amount of fines migration, Terracon recommends the use of a geotextile fabric that is designed to prevent fines migration in areas of contact between clean granular material and fine-grained soils. Terracon also recommends that clean granular fill be tracked or tamped in place where possible in order to limit the amount of future densification which may cause localized settlements over time.

Utility trenches are a common source of water infiltration and migration. Utility trenches penetrating beneath the buildings should be effectively sealed to restrict water intrusion and flow through the trenches, which could migrate below the buildings. The trench should provide an effective trench plug that extends at least 5 feet from the face of the building exterior. The plug material should consist of cementitious flowable fill or low permeability clay. The trench plug material should be placed to surround the utility line. If used, the clay trench plug material should be placed and compacted to comply with the water content and compaction recommendations for structural fill stated previously in this report.

Post construction trenching through geogrid in the pavement areas shall be accomplished with conventional trenching equipment. Repairs to the trenched section shall be accomplished using a full structural replacement of the displaced materials or with a repaired section that is identical to the original section. If the trench section is repaired to match the original, the trench backfill must be compacted to the same or higher density and the geogrid must be over-lapped a minimum 3-inches at the proper geogrid elevation.

Grading and Drainage

All grades must provide effective drainage away from the buildings during and after construction and should be maintained throughout the life of the structures. Water retained next to the buildings can result in soil movements greater than those discussed in this report. Greater movements can result in unacceptable differential floor slab and/or foundation movements, cracked slabs and walls, and roof leaks. The roofs should have gutters/drains with downspouts that discharge onto splash blocks at a distance of at least 10 feet from the buildings.

Exposed ground should be sloped and maintained at a minimum 5 percent away from the buildings for at least 10 feet beyond the perimeter of the buildings. Locally, flatter grades may be necessary to transition ADA access requirements for flatwork. The Civil Engineer should account for long-term differential settlements in the design of site grades. After building construction and landscaping, final grades should be verified to document effective drainage has been achieved. Grades around the structures should also be periodically inspected and adjusted as necessary as part of the structure's maintenance program. Where paving or flatwork abuts the structure a maintenance program should be established to effectively seal and maintain joints and prevent surface water infiltration.

Planters located within 10 feet of the structures should be self-contained or lined with an impermeable membrane to prevent water from accessing building subgrade soils. Sprinkler mains and spray heads should be located a minimum of 5 feet away from the building lines.

Trees or other vegetation whose root systems have the ability to remove excessive moisture from the subgrade and foundation soils should not be planted next to the structures. Trees and shrubbery should be kept away from the exterior of the structures a distance at least equal to their expected mature height.

Earthwork Construction Considerations

Upon completion of filling and grading, care should be taken to maintain the subgrade water content prior to construction of floor slabs and hardscapes. Construction traffic over the completed subgrades should be avoided. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. Water collecting over, or adjacent to, construction areas should be removed. If the subgrade desiccates, saturates, or is disturbed, the affected material should be removed, or the materials should be scarified, moisture conditioned, and re-compacted, prior to slab construction.

The groundwater table could affect over-excavation efforts, especially for over-excavation and replacement of lower strength soils. A temporary dewatering system consisting of sumps with pumps could be necessary to achieve the recommended depth of over-excavation for required excavations. **Dewatering should be anticipated and planned for in proposed excavations. The depth of dewatering below the bottom of excavations should be determined by the contractor and/or designer.** Pump tests for dewatering were not included in the scope of work for this report. However, Terracon can perform pump tests for an additional fee, if desired.

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, "Excavations" and its appendices, and in accordance with any applicable local, and/or state regulations. Stockpiles of soil, construction materials, and construction equipment should not be placed near trenches or excavations.

Construction site safety is the sole responsibility of the contractor who controls the means, methods, and sequencing of construction operations. Under no circumstances shall the information provided herein be interpreted to mean Terracon is assuming responsibility for construction site safety, or the contractor's activities; such responsibility shall neither be implied nor inferred.

Construction Observation and Testing

The earthwork efforts should be monitored under the direction of the Geotechnical Engineer. Monitoring should include documentation of adequate removal of vegetation and top soil, proof-rolling and mitigation of areas delineated by the proof-roll to require mitigation.

Each lift of compacted fill should be tested, evaluated, and reworked as necessary until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the building areas and 5,000 square feet in pavement areas. One density and water content test for every 50 linear feet per lift of compacted utility trench backfill.

In areas of excavations, the bearing subgrade should be evaluated under the direction of the Geotechnical Engineer. In the event that unanticipated conditions are encountered, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions, including assessing variations and associated design changes.

SHALLOW FOUNDATIONS

Shallow foundations may be utilized to support light poles and low height (< 3 feet) landscape walls if needed. If it is elected to proceed with ground improvement measures, such as DSM, in building areas shallow foundations such as mat or post-tensioned slabs may be considered. Terracon can consult with the project Structural Engineer and ground improvement contractor to develop additional supplemental recommendations for these foundation types as needed.

If the site has been prepared in accordance with the requirements noted in **Earthwork**, the following design parameters are applicable for shallow foundations supporting light poles and low height landscape walls.

Design Parameters – Compressive Loads

Item	Description
Maximum Net Allowable Bearing pressure [1]	500 psf
Required Bearing Stratum [3]	1 foot compacted structural fill
Minimum Foundation Width	12 inches
Maximum Foundation Width	60 inches
Ultimate Passive Resistance [2,6] **(equivalent fluid pressures)**	250 pcf
Ultimate Coefficient of Sliding Friction [3,6]	0.30
Minimum Embedment below Finished Grade [4]	18 inches
Estimated Static Total Settlement from Structural Loads [7]	2 inches – Pad footings 4 inches – Strip footings
Estimated Static Differential Settlement [5,7]	About 1/2 of total settlement

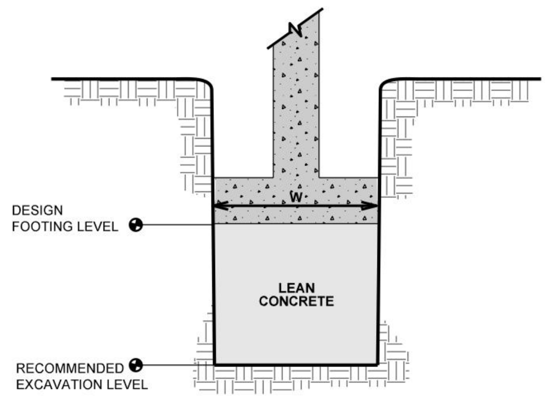
1. The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. An appropriate factor of safety has been applied. These bearing pressures can be increased by 1/3 for transient loads unless those loads have been factored to account for transient conditions. Values assume that exterior grades are no steeper than 20% within 10 feet of structure.
2. Use of passive earth pressures require the sides of the excavation for the spread footing foundation to be nearly vertical and the concrete placed neat against these vertical faces or that the footing forms be removed and compacted structural fill be placed against the vertical footing face.
3. Can be used to compute sliding resistance where foundations are placed on suitable soil/materials. Should be neglected for foundations subject to net uplift conditions.
4. Embedment necessary to minimize the effects of seasonal water content variations. For sloping ground, maintain depth below the lowest adjacent exterior grade within 5 horizontal feet of the structure.
5. Differential settlements are as measured over a span of 40 feet.
6. Passive pressure and sliding friction may be combined to resist sliding provided the passive pressure is reduced by 50 percent.
7. Settlements are static settlements and do not account for settlement due to liquefaction.

Foundation Construction Considerations

As noted in **Earthwork**, the footing excavations should be evaluated under the direction of the Geotechnical Engineer. The base of all foundation excavations should be free of water and loose soil, prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations should be removed/reconditioned before foundation concrete is placed.

To ensure foundations have adequate support, special care should be taken when footings are located adjacent to trenches. The bottom of such footings should be at least 1 foot below an imaginary plane with an inclination of 1.5 horizontal to 1.0 vertical extending upward from the nearest edge of the adjacent trench.

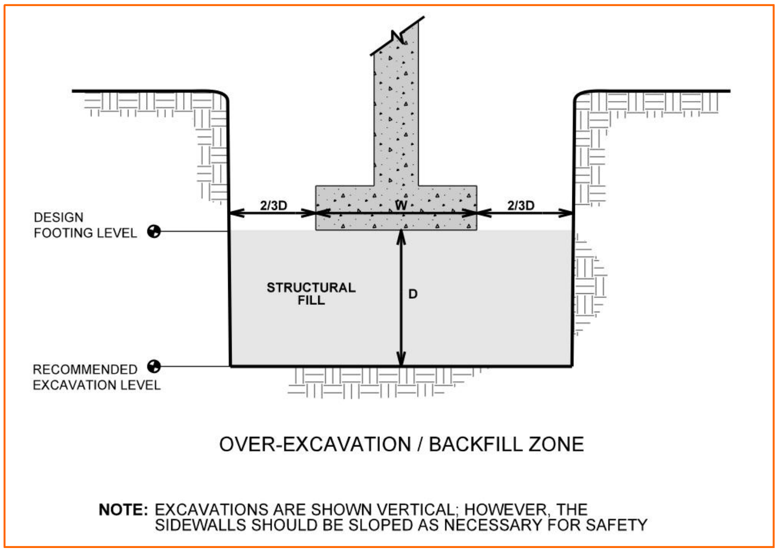
If unsuitable bearing soils are encountered at the base of the planned footing excavation, the excavation should be extended deeper to suitable soils, and the footings could bear directly on these soils at the lower level or on lean concrete backfill placed in the excavations. This is illustrated on the sketch below.



LEAN CONCRETE BACKFILL

NOTE: EXCAVATIONS ARE SHOWN VERTICAL; HOWEVER, THE SIDEWALLS SHOULD BE SLOPED AS NECESSARY FOR SAFETY

Over-excavation for structural fill placement below footings should be conducted as shown below. The over-excavation should be backfilled up to the footing base elevation, with structural fill placed, as recommended in the **Earthwork** section.



GROUND IMPROVEMENT

As an alternative to supporting the buildings on deep foundations as a result of the anticipated settlement due to liquefaction, undocumented fill, and compressible Bay Mud, shallow foundations such as mat or post-tensioned slabs could be considered if ground improvement methods are utilized. Ground improvement methods are proprietary systems designed by licensed contractors who could provide further information regarding support options. It is our opinion Deep Soil Mixing (DSM) would be the most appropriate option to help mitigate the combined effects associated with the liquefaction, undocumented fil, and compressible Bay Mud concerns at this site. However, if the Contractor or Structural Engineer have worked with a different ground improvement method that has proven successful to mitigate the hazards present at this site with similar subgrade soil conditions, Terracon could consider such options if desired.

In addition, settlements in excess of 20 inches are anticipated in the Materials Bin and Pipe Laydown areas due to consolidation of the undocumented fill and compressible Bay Mud. In order to mitigate the excessive settlement under the loading of the proposed stockpiles and pipes to provide a suitable bearing surface for the construction of retaining walls for the Materials Bins, ground improvement methods of DSM or rammed aggregate piers (RAP) could be considered.

Deep Soil Mixing

Deep Soil Mixing (DSM) is achieved through a process of in-situ mixing the subsurface soils with cement or a lime-cement combination. This will result in physiochemical stabilization of the soils to increase the compressive and shear strength of the material and to decrease settlement. DSM is accomplished by either a wet mixing method using primarily cement, or a dry mixing method using lime-cement. The wet mixing method should be used for this site based on the subgrade soils and groundwater conditions. This method would significantly improve the stiffness/density and strength of the very soft to soft Bay Mud and loose sands that underlay the site. By improving the stiffness/density and strength of the very soft to soft Bay Mud and loose sands, DSM would also help improve the Seismic Site Class required for design at the site resulting in cost savings to the project. Additionally, while we believe the potential for lateral spread is low at this site, DSM would provide an added assurance against lateral spreading to occur by stabilizing potentially liquefiable soils. DSM would also help reduce the costs for future maintenance as future settlement in the improved areas would be low.

This process will require a specialty ground improvement contractor to complete this process. Since this would be specialty work, we recommend consideration of using a design-build process if this alternative is selected. DSM would occur after site clearing/preparation and prior to fill placement. We anticipate at least 3 to 4 feet of engineered fill would be placed over the DSM improved soil.

Typically, with DSM there is some potential to generate an excess volume of material that could be used as fill across the site or would require some exportation.

The soil properties of the areas improved by DSM should be verified to confirm the construction methods being used and the improved ground are meeting design specifications. This can be performed by conducting pre-construction laboratory testing to confirm proposed construction methods and mixes will achieve the desired design specifications and by post-construction verification consisting of either in-situ testing by cone penetrometer testing (CPT), dilatometer testing (DMT), standard penetration testing (SPT), or pressuremeter testing (PMT) or by obtaining cores for laboratory testing.

While there would be no need for instrumentation or monitoring during construction; post-construction survey monuments placed on the surface in the ground improved affected area are recommended to evaluate the performance of the contractor's work. Temporary handling of surface drainage could be readily accommodated through the construction area and would be the responsibility of the contractor.

Key elements for this alternative that need to be considered for design and construction are:

- Development of bridging documents for the recommended design-build process;
- Development of temporary drainage measures through the construction area to be implemented by the contractor;
- Development of a QA/QC plan to evaluate compliance with the plans developed in the design build process; and,
- Development of a post-construction monument plan for future evaluation of the performance of the work (if required).

Rammed Aggregate Piers

As an alternative to excessive settlement under stockpiled material loads at the Materials Bin and Pipe Laydown areas and as a way to facilitate the construction of retaining walls up to 10 feet tall at the Materials Bin area, the existing undocumented fill and compressible Bay Mud could be reinforced with a Rammed Aggregate Pier (RAP) system installed on a grid pattern. This option would eliminate the need for significant over-excavation or **Deep Foundations**, and would allow for the placement of stockpiled materials and retaining wall foundations directly atop the RAP-reinforced subgrade. RAP systems are typically installed after clearing and grubbing and prior to beginning of fill construction. The RAP system will serve to stiffen the existing undocumented fill and Bay Mud, and will also serve as gravel conduits for the dissipation of pore-water pressure, thereby shortening the time required for consolidation settlements.

Piers are constructed by advancing a drill or mandrel to design depths, then building a bottom bulb of clean, open-graded stone. The pier is built on top of the bottom bulb, using graded aggregate placed in thin lifts (12 to 24 inches compacted thickness). Shaft lengths typically range from 8 to 40 feet below footing bottoms. We anticipate shafts would extend to depths of 20 feet or less for this site. The result of construction is a reinforced zone of soils directly under the stockpiled materials and footings, which allows of the construction of shallow spread footings sized for relatively higher bearing pressures and with lower anticipated settlements.

A properly designed RAP ground improvement system should meet the following design criteria:

Bearing Capacity Factor of Safety = 2.0
Global Stability (static) = 1.3
Global Stability (dynamic) = 1.1
Post-construction Settlement < 2-inch
Post-construction Differential Settlement < 1"/40'

RAP systems should be designed and constructed by a specialty ground improvement contractor. Since this would be specialty work, we recommend consideration of using a design-build process if this alternative is selected. The contractor should provide detailed design calculations sealed by a professional engineer licensed in the State of California.

DEEP FOUNDATIONS

Steel piles driven to into firm native soil below the Bay Mud and liquefiable soil layers can be used to support the proposed buildings and retaining walls. Steel sections driven through the very soft Bay Mud and liquefiable soils to their design capacity, using an appropriately sized hammer, could be designed using a maximum allowable working stress of 35% of the steel's yield stress under axial load and 55% of the steel's yield stress under combined axial and bending stress.

Long-term settlement of a driven pile foundation designed and constructed in accordance with the recommendations presented in this report should be about ½ inch or less in addition to elastic shortening. Once the pile loads and layout are determined, Terracon should review the design and update anticipated settlements as needed.

Driven Pile Design Parameters

The following table can be used for preliminary design of pile capacities for individual conical tipped, closed ended, 18-inch diameter, steel pipe piles. The values are considered to be adequate for estimation of allowable (Factor of Safety = 3) load carrying capacity for driven piles ranging in depth from 65 to 100 feet. We recommend preliminarily designing for a tip elevation of 70 to 80 feet below existing grade. Driven piles should be spaced at least three pile widths apart (center-to-center) if side friction is used for compressive loads.

Driven Steel Pipe Pile Design Summary [1, 2]				
Approximate Depth (feet)	Stratigraphy [3]		Skin Friction (psf) [4]	End Bearing Pressure (ksf) [5]
	No.	Material		
0-8	1	FILL	0	0
8-17	2	Elastic Silt (Bay Mud)	0	0
17-34	3	Sand with clay	0	0
34-42	4	Sandy Clay	0[6]	0
42-65	6	Silty Clay	250	0
65-85[5]	-	Sand	1,150	47
85-100[5]	-	Clay	250	3

1. Design capacities are dependent upon the method of installation, and quality control parameters. The values provided are estimates and should be verified when installation protocol have been finalized.
2. Design capacities can be increased by 33% for highly transient loads
3. See **Subsurface Profile** in **Geotechnical Characterization** for more details on Stratigraphy
4. Applicable for compressive loading only. Reduce to 2/3 of values shown for uplift loading. Effective weight of pile can be added to uplift load capacity.
5. Piles should extend 5 feet into the bearing stratum for end bearing to be considered.
6. Skin friction should not be used in this layer due to the presence of liquefiable sand lenses and transitional soils.

Placement of new fill across the site will result in settlement that should be considered in pile foundation design. A static drag load of 9.5 kips per pile should be accounted for in pile design due to the anticipated settlement. A dynamic drag load of 48 kips per pile has been estimated above the neutral plan due to liquefaction following a seismic event. These drag loads were calculated for a conical tipped, closed ended, 18-inch diameter steel pipe pile. If a different pile type or diameter will be used, Terracon should be consulted to provide revised drag loads for design. The project Structural Engineer should confirm combined drag and design loads do not exceed the structural capacity of the pile. If desired, down drag can be reduced the following methods:

- Pre-drilling oversized holes prior to pile driving and filling the resulting annular space with bentonite slurry
- Providing a casing sleeve around the piles to separate the piles from direct contact with settling soils
- Coating the piles with bitumen to allow slippage.

Driven Pile Lateral Loading

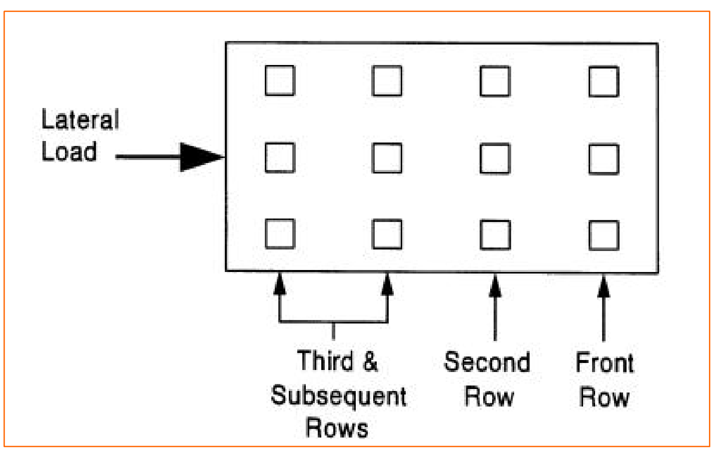
The following table lists input values for use in LPILE analyses. LPILE will estimate values of k_h and E_{50} based on strength; however, non-default values of k_h should be used where provided, in particular for the sand strata. Since deflection or a service limit criterion will likely control lateral capacity design, no safety/resistance factor is included with the parameters.

Stratigraphy [1]		L-Pile Soil Model	S_u (psf) [2]	f [2]	g' (pcf) [2,3]	ε_{50} [2]	K (pci) [2]	
Depth (feet)	Material						Static	Cyclic
5-8	FILL	Stiff Clay without free water (Reese)	250	--	48	0.02	100	--
8-17	Elastic Silt	Soft Clay (Matlock)	150	--	23	0.03	20	--
17-34	Sand with clay	Liquefied Sand	--	--	58	--	--	--
34-42	Sandy Clay	Stiff Clay without free water (Reese)	500	--	58	0.02	100	--
42-65	Silty Clay	Stiff Clay without free water (Reese)	1,250	--	58	0.007	400	150

Stratigraphy [1]		L-Pile Soil Model	S_u (psf) [2]	f [2]	g' (pcf) [2,3]	ε_{50} [2]	K (pci) [2]	
Depth (feet)	Material						Static	Cyclic
65-85	Sand	Sand (Reese)	--	38	72	--	125	--
85-100	Clay	Stiff Clay without free water (Reese)	4,400	--	52	0.004	2,000	800

1. See **Subsurface Profile** in **Geotechnical Characterization** for more details on Stratigraphy.
2. Definition of Terms:
   - S_u: Undrained shear strength
   - f : Internal friction angle
   - g': Effective unit weight
   - ε_{50}: Non-default E50 strain
   - K: Horizontal modulus of subgrade reaction
   - q_u: Non-default soil modulus – static. Refer to software guidelines for cyclic loading.
3. Buoyant unit weight values should be used below water table
4. Parameters assume groundwater is located at depth of 3 feet bgs.

When piles are used in groups, the lateral capacities of the piles in the second, third, and subsequent rows of the group should be reduced as compared to the capacity of a single, independent pile. Guidance for applying p-multiplier factors to the p values in the p-y curves for each row of pile foundations within a pile group where the piles have a minimum spacing of 3 pier diameters are as follows:



- Front row: P_m = 0.8;

- Second row: P_m = 0.4
- Third and subsequent row: P_m = 0.3.

The load capacities provided herein are based on the stresses induced in the supporting soil strata. The structural capacity of the piles should be checked to assure they can safely accommodate the combined stresses induced by axial and lateral forces. Lateral deflections of piles should be evaluated using an appropriate analysis method, and will depend upon the pile's diameter, length, configuration, stiffness and "fixed head" or "free head" condition. We can provide additional analyses and estimates of lateral deflections for specific loading conditions upon request. The load-carrying capacity of piles may be increased by increasing the section (for H-piles), diameter (for pipe piles) and/or length.

Driven Pile Construction Considerations

The contractor should consider predrilling the pile locations through the undocumented fill due to the presence of debris throughout the fill. The pre-drilling should not extend more than 2 feet into the underlying Bay Mud. Soils that are pre-drilled should not be relied on for lateral support. We recommend the bore hole be no larger in diameter than the smallest dimension of the pile.

The contractor should select a driving hammer and cushion combination which can install the selected piling without overstressing the pile material. The hammer should have a rated energy in foot-pounds at least equal to 15 percent of the design compressive load capacity in pounds. The contractor should submit the pile driving plan and the pile hammer-cushion combination to the engineer for evaluation of the driving stresses in advance of pile installation. During driving a maximum of 10 blows per inch is recommended to reduce the potential of damage to the piles.

If practical refusal is experienced above the design embedment elevation, the pile may be on an obstruction and a replacement pile should be driven adjacent to the original pile. If this occurs, the situation should be evaluated by Terracon during the pile driving operations. The contractor should be prepared to cut or splice piles, as necessary. Splicing of piles should be in accordance with specifications provided by the project Structural Engineer.

Pile driving conditions, hammer efficiency, and stress on the pile during driving could be better evaluated during installation using a Pile Driving Analyzer (PDA). A Terracon representative should observe pile driving operations. Each pile should be observed and checked for buckling, crimping and alignment in addition to recording penetration resistance, depth of embedment, and general pile driving operations.

Vibrations during pile driving can cause settlement of fill materials and can adversely affects improvements on adjacent sites. Potential settlement of the fill materials across the site following pile driving should be planned and accounted for. The condition of improvements on adjacent site should be documented prior to pile installation and should be monitored during construction.

Pile driving should be stopped and Terracon contacted if movement or cracking of the existing improvements is observed. Monitoring vibration levels during pile driving should be considered. Although vibrations from pile driving may be below levels that will cause structural damage, they may be felt by occupants of the adjacent buildings.

Some ground heave may be experienced as a result of pile driving at each site. Therefore, it is recommended that the top elevations of the initial piles driven be surveyed. If any heave is noted after the driving of subsequent piles, the piles should be re-driven to their original top elevation. This problem can be particularly acute in pile groups.

The pile driving process should be performed under the direction of the Geotechnical Engineer. The Geotechnical Engineer should document the pile installation process including soil and groundwater conditions encountered, consistency with expected conditions, and details of the installed pile.

As indicated in the **Corrosivity** section of this report, testing indicated soils at the site exhibit a moderate to high corrosive potential to buried metal. We recommend that a certified corrosion engineer determine the need for corrosion protection and design appropriate protective measures for the piles.

Indicator Piles

For estimating purposes, we have recommended piles extend a minimum depth of 65 feet bgs. However, the subsurface profile across the site has significant variations. Subsequently, variations in the required pile lengths should be anticipated and planned for. In order to help establish final pile driving criteria, we recommend installing indicator piles. The number of and locations of the indicator piles required will be dependent on the layout of the piles and the site conditions at the time of construction. Terracon should review the final foundation plans and recommend the locations and quantity of indicator piles. Indicator piles should be at least 5 feet longer than anticipated pile lengths to confirm field pile capacities. The indicator piles should be driven with the same equipment as planned for use during production pile driving. Indicator piles may be used as production piles provided the piles meet minimum lengths and no structural damage occurs to the pile during installation.

Pile load testing is recommended to further optimize the proposed pile foundation design. The contractor typically is responsible for the supplying the required equipment and materials and conducting the testing program. Pile load testing should be reviewed and monitored by Terracon and the project Structural Engineer.

SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7-10. The Site Classification at this site could be improved from a Site Class F to a Site Class D by performing **Ground Improvement** that would improve the stiffness/density and strength of the very soft to soft Bay Mud and loose, potentially liquefiable sands which could help in cost savings to the project.

Description	Value
2016 California Building Code Site Classification (CBC) [1]	F [2, 4]
Site Latitude	37.7555°N
Site Longitude	122.2120°W
S_s, Spectral Acceleration for a Short Period [3,4]	1.856g
S_1, Spectral Acceleration for a 1-Second Period [3,4]	0.745g
F_a, Site Coefficient [3,4]	0.9
F_v, Site Coefficient (1-second period) [3,4]	2.4
S_{DS}, Spectral Acceleration for a Short Period [3,4]	1.114g
S_{D1}, Spectral Acceleration for a 1-Second Period [3,4]	1.192g

1. Seismic site classification in general accordance with the *2016 California Building Code*.
2. The 2016 California Building Code (CBC) uses a site profile extending to a depth of 100 feet for seismic site classification. A CPT at this site was extended to a maximum depth of 100 feet bgs. Additional deeper borings or geophysical testing may be performed to confirm the conditions.
3. These values were obtained using online seismic design maps and tools provided by the USGS (http://earthquake.usgs.gov/hazards/designmaps/).
4. The site qualifies as a site class F due to the presence of liquefiable soils. A site class E was used to develop the listed seismic design parameters due to the presence of the very soft to soft Bay Mud with low shear strength and high moisture contents. Structures may use the listed design parameters provided they have a period of 0.5s or less. Should the anticipated structures have a period greater than 0.5s, a site-specific ground motion analysis should be conducted to develop seismic design parameters. Terracon is qualified to perform such an analysis.

Faulting and Estimated Ground Motions

The site is located in the San Francisco Bay Area of California, which is a relatively high seismicity region. The type and magnitude of seismic hazards affecting the site are dependent on the distance to causative faults, the intensity, and the magnitude of the seismic event. The following table indicates the distance of the fault zones and the associated maximum credible earthquake that can be produced by nearby seismic events, as calculated using the USGS Unified Hazard

Tool. Segments of the Hayward-Rogers Creek Fault, which is located approximately 5 kilometers from the site, are considered to have the most significant effect at the site from a design standpoint.

Characteristics and Estimated Earthquakes for Regional Faults			
Fault Name	**Approximate Contribution (%)**	**Approximate Distance to Site (kilometers)**	**Maximum Credible Earthquake (MCE) Magnitude**
Hayward- Rodgers Creek: HS, aPriori_D2.1	15.35	5.07	6.68
Hayward – Rodgers Creek: HS, MoBal	14.07	5.07	6.65
Hayward- Rodgers Creek: HN+HS, aPriori_D2.1	11.88	5.07	6.91
Hayward – Rodgers Creek: HN+HS, MoBal	11.14	5.07	6.86

Based on the ASCE 7-10 Standard, the peak ground acceleration (PGA_M) at the subject site is approximately 0.644g. The site is not located within an Alquist-Priolo Earthquake Fault Zone based on our review of the State Fault Hazard Maps.[4]

LIQUEFACTION

Liquefaction is a mode of ground failure that results from the generation of high pore water pressures during earthquake ground shaking, causing loss of shear strength. Liquefaction is typically a hazard where loose sandy soils or low plasticity fine grained soils exist below groundwater. The California Geologic Survey (CGS) has designated certain areas within California as potential liquefaction hazard zones. These are areas considered at a risk of liquefaction-related ground failure during a seismic event, based upon mapped surficial deposits and the presence of a relatively shallow water table. The project site and surrounding area is located within a liquefaction hazard zone designated as having very high susceptibility to liquefaction[5]. Therefore, a liquefaction analysis was performed to determine the liquefaction induced settlement.

Groundwater was observed in our borings at the time of field exploration at depths varying from 3 to 21½ bgs.

[4] California Department of Conservation Division of Mines and Geology (CDMG), *"Digital Images of Official Maps of Alquist-Priolo Earthquake Fault Zones of California, Southern Region"*, CDMG Compact Disc 2000-003, 2000.

[5] Witter, R.C., Knudsen, K.L., Sowers, J.M., Wentworth, C.M., Koehler, R.D., Randolph, C.E., 2006, Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California: A Digital Database, U.S. Geological Survey OFR 2006-1037.

A liquefaction analysis was performed in general accordance with California Geologic Survey Special Publication 117. The liquefaction study utilized the software "LiquefyPro" by CivilTech Software and "CLiq" by GeoLogismiki Geotechnical Software. This analysis was based on the soil data from the CPT soundings. A Peak Ground Acceleration (PGA) of 0.644g and a mean magnitude of 6.76 for the project site was used. Analysis were performed on data obtained from both CPT1 and CPT2. Calculations utilized a groundwater depth of 3 feet bgs. CPT calculations were assessed using the Robertson (NCEER 2001), Robertson (2009), Idriss & Boulanger (2008), Moss et al. (2006), and Boulanger & Idriss (2014) methods. Settlement analysis in the "LiquefyPro" software was performed using the Ishihara/Yoshimine and method.

A liquefaction potential analysis was calculated from a depth of 3 to 50 feet below the ground surface. Based on the analysis, liquefiable layers were encountered at multiple depths with the largest liquefiable layer being located between the depths of 15 and 30 feet bgs. Based on our review of the calculations by the various methods, it is our opinion the anticipated total liquefaction-induced settlements across the site may vary between 2 to 4½ inches. Due to the lithology encountered in our borings and CPTs, we anticipate the differential liquefaction-induced settlement across the proposed building footprints may be up to 2 inches.

The project site has an approximate elevation of 8 to 12 feet above Mean Sea Level (MSL) based on a review of GoogleEarth Pro. The distance to San Leandro Bay varies along the property. The Bay is located about 350 to 550 feet west of the site. However, due to the discontinuous layers of undocumented fill and Bay Mud located in the upper 12 to 15 feet of subgrade soils, we believe the potential for lateral spreading is considered to be low. However, while we believe the potential for lateral spread is low at this site, DSM would provide an added assurance against lateral spreading to occur by stabilizing potentially liquefiable soils.

We anticipate a brief loss of shear strength during a significant seismic event where liquefaction may occur. The bearing strength and vertical and lateral stiffness of the subsurface soils will be reduced to the residual shear strength of the liquefiable layer, causing the anticipated settlement noted above.

Accurate evaluation of the effects of liquefaction-induced instability requires accurate estimation of the shear strength of the liquefied soils. Terracon should be consulted to evaluate the subsurface conditions and foundation capacities after a significant event where liquefaction has occurred.

FLOOR SLABS

Due to anticipated settlements from liquefaction and consolidation settlement, the building floor slabs should be entirely structurally supported by **Deep Foundations.** Alternative floor slab options may be considered if the subgrade in the area of the buildings is improved by DSM.

Floor Slab Design

The use of a vapor retarder should be considered beneath concrete slabs on grade covered with wood, tile, carpet, or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder.

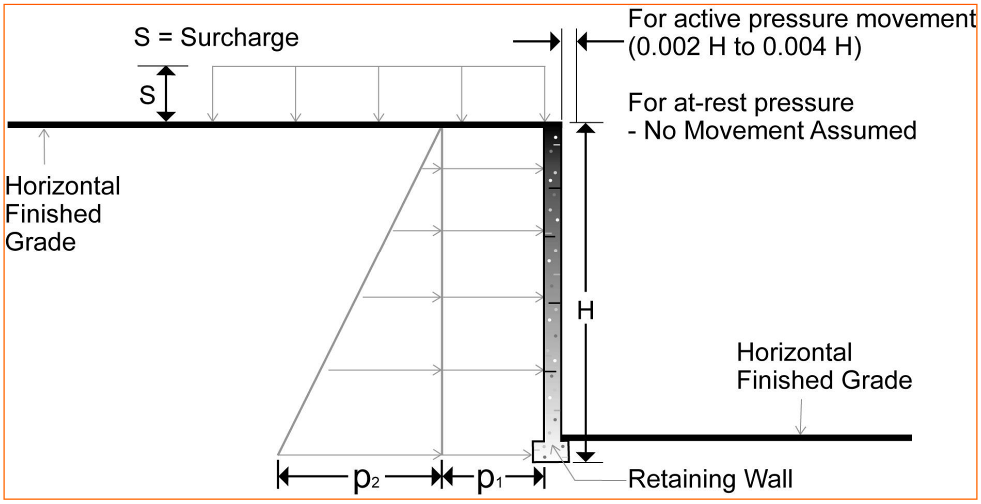
LATERAL EARTH PRESSURES

Design Parameters

The lateral earth pressure recommendations given in the following paragraphs are applicable to the design of rigid retaining walls subject to slight rotation, such as cantilever or gravity type concrete walls. These recommendations are not applicable to the design of modular block - geogrid reinforced backfill walls. Recommendations covering these types of wall systems are beyond the scope of services for this assignment. However, we would be pleased to develop recommendations for the design of such wall systems upon request.

Low height (< 3 feet) landscape retaining walls may be supported by spread footings designed per the recommendations provided in **Shallow Foundations**. Retaining walls taller than 3 feet should be supported by **Deep Foundations** or **Shallow Foundations** supported on subgrade improved by **Ground Improvement** measures.

Structures with unbalanced backfill levels on opposite sides should be designed for earth pressures at least equal to values indicated in the following table. Earth pressures will be influenced by structural design of the walls, conditions of wall restraint, methods of construction and/or compaction and the strength of the materials being restrained. Two wall restraint conditions are shown. Active earth pressure is commonly used for design of free-standing cantilever retaining walls and assumes wall movement. The "at-rest" condition assumes no wall movement and is commonly used for basement walls, loading dock walls, or other walls restrained at the top. The recommended design lateral earth pressures do not include a factor of safety and do not provide for possible hydrostatic pressure on the walls (unless stated).



Lateral Earth Pressure Design Parameters				
Earth Pressure Condition [1]	**Coefficient for Backfill Type** [2]	**Surcharge Pressure** [3, 4, 5] **p_1 (psf)**	**Effective Fluid Pressures (psf)** [2, 4, 5]	
			Unsaturated [6]	**Submerged** [6]
Active (Ka)	Structural fill/ Stockpile Sand and Gravel - 0.31	(0.31)S	(40)H	(80)H
	Native Soil - 0.53	(0.53)S	(65)H	(95)H
At-Rest (Ko)	Structural fill/ Stockpile Sand and Gravel - 0.47	0.47)S	(55)H	(90)H
	Native Soil - 0.69	(0.69)S	(85)H	(105)H
Passive (Kp)	Structural fill/ Stockpile Sand and Gravel – 3.25	---	(390)H	(250)H
	Native Soil – 1.89	---	(225)H	(175)H

1. For active earth pressure, wall must rotate about base, with top lateral movements 0.002 H to 0.004 H, where H is wall height. For passive earth pressure, wall must move horizontally to mobilize resistance.
2. Uniform, horizontal backfill, compacted to at least 90 percent of the ASTM D 698 maximum dry density, rendering a maximum unit weight of 120 pcf.
3. Uniform surcharge, where S is surcharge pressure.
4. Loading from heavy compaction equipment is not included.
5. No safety factor is included in these values.
6. In order to achieve "Unsaturated" conditions, follow guidelines in **Subsurface Drainage for Below Grade Walls** below. "Submerged" conditions are recommended when drainage behind walls is not incorporated into the design.

Backfill placed against structures should consist of structural fill or low plasticity native soils. For the structural fill values to be valid, the structural backfill must extend out and up from the base of the wall at an angle of at least 45 and 60 degrees from vertical for the active and passive cases, respectively.

Total lateral earth pressures acting on retaining walls during a seismic event will likely include the active or at-rest static forces and a dynamic increment. The active dynamic increment should be applied to the wall as resultant force acting at 0.6H height from the base of the wall and the at-rest dynamic increment should be applied to the wall as resultant force acting at 0.63H height from the base of the wall. Such increments should be added to the static earth pressures. A dynamic lateral earth resultant force of $9H^2$ (in units of pounds per linear foot (plf), where H (in units of feet) is the height of the soil behind the wall[6] should be used in design.

Heavy equipment should not operate within a distance closer than the exposed height of retaining walls to prevent lateral pressures more than those provided. Compaction of each lift adjacent to walls should be accomplished with hand-operated tampers or other lightweight compactors. Over-compaction may cause excessive lateral earth pressures which could result in wall movement.

Retaining Wall Drainage

Drainage should not be required behind the Materials Bin walls retaining clean gravel and sand. However, for all other retaining walls, to control hydrostatic pressure behind the wall we recommend that a drain be installed at the bottom of the wall with a collection pipe leading to a reliable discharge. The drainage should consist of either a composite drain or a 12-inch thick free draining gravel blanket. Free draining gravel should consist of Caltrans Class II permeable material or ¾ inch clean gravel wrapped in Mirafi 140N filter fabric or equivalent. The drainage should extend from the bottom of the wall to within 12 inches of the top of the wall. The drainage should be capped with 12 inches of compacted cohesive soil. The collection pipe should be designed by the Civil Engineer but should be a minimum 4-inch diameter perforated Schedule 40 PVC or ABS drain pipe and should slope to an existing drainage system or to a positive gravity outlet. A typical earth retaining wall drain detail is illustrated on the following sketch.

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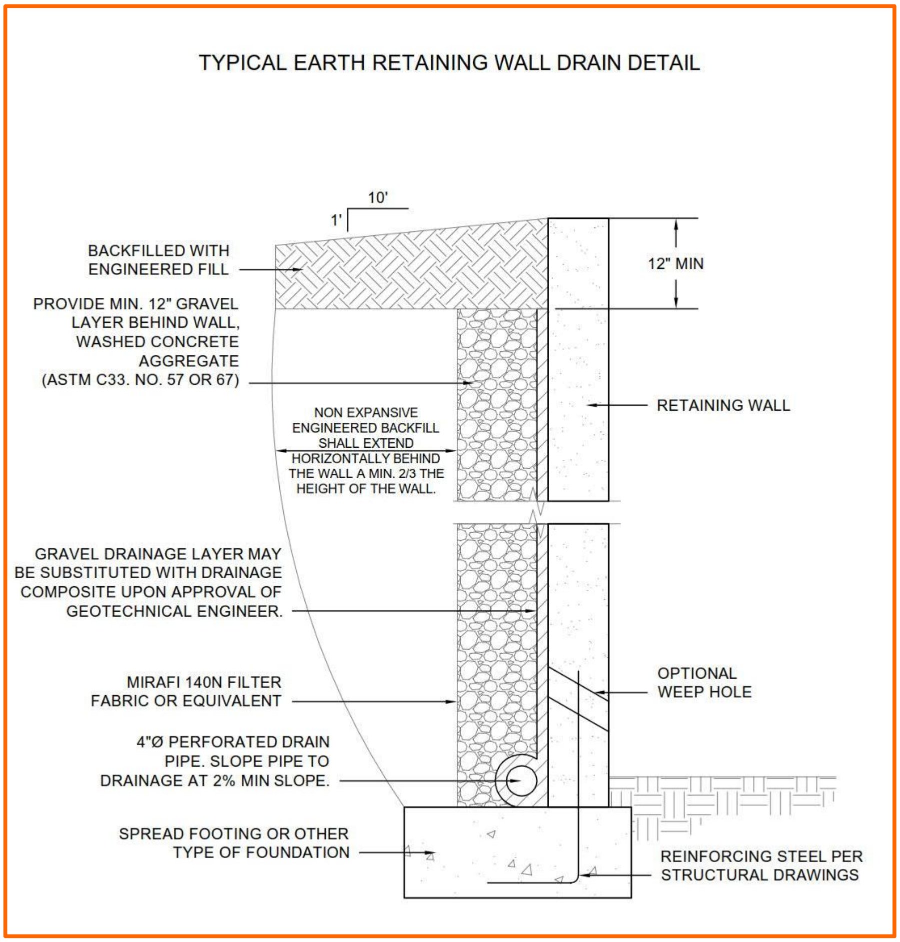
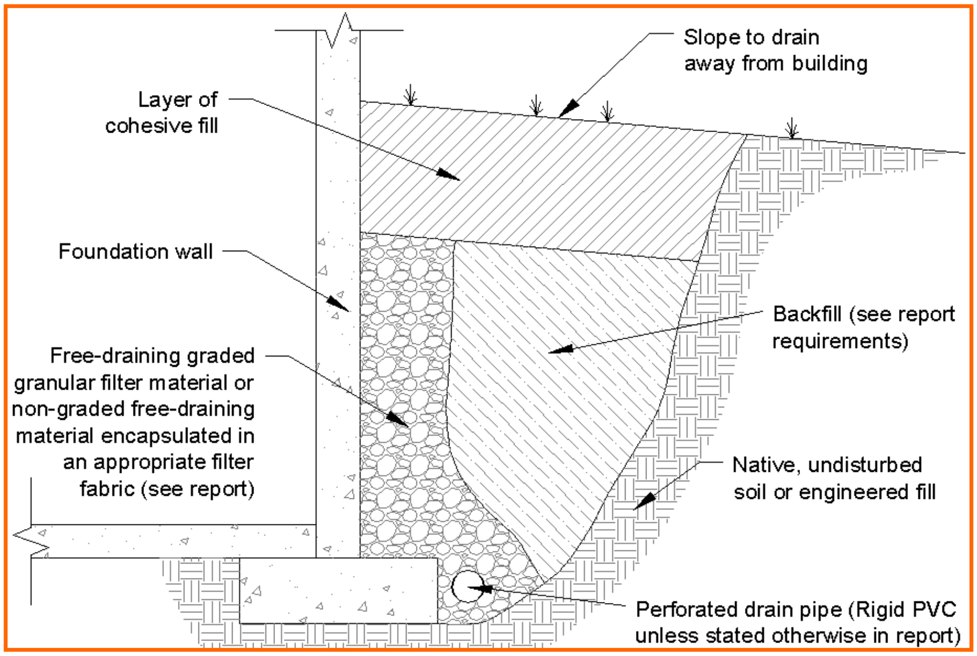
[6] *Seed & Whitman (1970)*



Subsurface Drainage for Below Grade Walls

A perforated rigid plastic drain line installed behind the base of walls and extends below adjacent grade is recommended to prevent hydrostatic loading on the walls. The invert of a drain line around a below-grade building area or exterior retaining wall should be placed near foundation bearing level. The drain line should be sloped to provide positive gravity drainage to daylight or to a sump pit and pump. The drain line should be surrounded by clean, free-draining granular material having less than 5 percent passing the No. 200 sieve, such as No. 57 aggregate. The free-draining aggregate should be encapsulated in a filter fabric. The granular fill should extend to within 1 foot of final grade, where it should be capped with compacted cohesive fill to reduce infiltration of surface water into the drain system.



As an alternative to free-draining granular fill, a pre-fabricated drainage structure may be used. A pre-fabricated drainage structure is a plastic drainage core or mesh which is covered with filter fabric to prevent soil intrusion, and is fastened to the wall prior to placing backfill.

PAVEMENTS

General Pavement Comments

Pavement designs are provided for the traffic conditions and pavement life conditions as noted in **Project Description** and in the following sections of this report. A critical aspect of pavement performance is site preparation. Pavement designs, noted in this section, must be applied to the site, which has been prepared as recommended in the **Earthwork** section.

On most project sites, the site grading is accomplished relatively early in the construction phase. Fills are placed and compacted in a uniform manner. However, as construction proceeds, excavations are made into these areas, rainfall and surface water saturates some areas, heavy traffic from concrete trucks and other delivery vehicles disturbs the subgrade and many surface irregularities are filled in with loose soils to improve trafficability temporarily. As a result, the pavement subgrades, initially prepared early in the project, should be carefully evaluated as the time for pavement construction approaches.

We recommend the moisture content and density of the top 12 inches of the subgrade be evaluated and the pavement subgrades be proofrolled within two days prior to commencement of actual paving operations. Areas not in compliance with the required ranges of moisture or density should be moisture conditioned and recompacted. Particular attention should be paid to high traffic areas that were rutted and disturbed earlier and to areas where backfilled trenches are located. Areas where unsuitable conditions are located should be repaired by removing and replacing the materials with properly compacted fills.

After proof rolling and repairing deep subgrade deficiencies, the entire subgrade should be scarified and developed as recommended in the **Earthwork** section this report to provide a uniform subgrade for pavement construction. Areas that appear severely desiccated following site stripping may require further undercutting and moisture conditioning. If a significant precipitation event occurs after the evaluation or if the surface becomes disturbed, the subgrade should be reviewed by qualified personnel immediately prior to paving. The subgrade should be in its finished form at the time of the final review.

Support characteristics of subgrade for pavement design do not account for shrink/swell movements of an expansive clay subgrade or long term subsidence of the site due to the long consolidation of soft clays/silts (Bay Mud), such as soils encountered on this project. Thus, the pavement may be adequate from a structural standpoint, yet still experience cracking and deformation due to shrink/swell or settlement related movement of the subgrade.

Pavement Design Parameters

Design of Asphaltic Concrete (AC) pavement sections were calculated using the Caltrans Highway Design Manual, latest edition, and a 20-year design life. Design of Portland Cement Concrete (PCC) pavement sections were designed using ACI 330R-08, "Guide for the Design and Construction of Concrete Parking Lots."

Two representative samples of the near surface soil taken from our borings were tested in a Terracon laboratory to determine the Hveem Stabilometer Value (R-value). The tests produced R-values of 20 and less than 5. Due to the variability of the subgrade soils, a design R-Value of 5 was used to calculate the AC pavement thickness sections. A modulus of subgrade reaction of 50 pci was use for the PCC pavement designs. The values were empirically derived based upon our experience with the describe soil type subgrade soils and our understanding of the quality of the subgrade as prescribed by the **Site Preparation** conditions as outlined in **Earthwork**. A modulus of rupture of 550 psi was used for pavement concrete.

Based on this relatively low R-value, the conventional pavement sections will be relatively thick. The deeper pavement sections will require more off haul of material on site if the same grades are kept. As an alternative to conventional pavement sections, the pavement sections can be constructed with triaxial geogrid reinforcement or cement/lime treatment of the subgrade soils may be performed to improve their physical support characteristics and reduce the pavement section.

Cement/lime treatment involves treating the pavement subgrade soils with a certain percentage of high calcium quicklime and cement, usually 3.5 to 5 percent based on the dry unit weight of the soil, for a depth of 12 inches. For estimating purposes, we recommend using 2.5 percent lime, 2.5 percent cement, and a soil unit weight of 110 pounds per cubic foot. For a 12-inch treatment depth, this results in an estimated minimum spread rate of 2.75 pounds of cement and 2.75 pounds of lime per square foot. The actual amount of cement and lime to be used should be determined by Terracon and by laboratory testing **at least three weeks prior** to the start of grading operations. Cement/lime treatment is performed after rough grading of the pavement areas is completed. Recommendations for conventional, geogrid reinforced, and cement/lime treated pavement sections are presented below.

Pavement Section Thicknesses

The following table provide options for AC, AC with geogrid reinforcement, AC with cement/lime treatment and PCC Sections:

Asphaltic Concrete Design				
Layer	Thickness (inches)			
	Auto Parking Areas (TI=5.0 assumed)[3]	Auto Road (TI=5.5 assumed)[3]	Truck Parking Areas (TI=6.0 assumed)[3]	Truck Ramps and Roads (TI=8.0 assumed)[3]
AC [1, 2]	3.0	3.5	3.5	5.0
Aggregate Base [1]	10.0	11.0	13.0	17.5

1. All materials should meet the current Caltrans Highway Design Manual specifications
   - Asphaltic Base – Caltrans Class 2 aggregate base
2. A minimum 1.5-inch surface course should be used on ACC pavements.
3. The traffic index (TI) is a measure of traffic wheel loading frequency and intensity of anticipated traffic.

The follow table provides options for AC pavement sections reinforced with geogrid. The sections were calculated using the Tensar SpectraPave4PRO-California software. The geogrid material shall be Tensar TriAx TX5 or an equivalent conforming to the physical properties in the 2015 Greenbook Standard Specifications, Multi-Axial Geogrid Table 213-5.2 (E) Type R2. The geogrid shall be placed directly on the subgrade below the aggregate base layer. Adjacent rolls of geogrid shall be overlapped a minimum of 1 foot. Soft subgrade conditions may require up to 3 feet of overlap at the discretion of the geotechnical engineer. The development of wrinkles in the geogrid shall be avoided. A minimum loose fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. When underlying substrate is trafficable with minimal rutting, rubber tired equipment may pass over the geogrid reinforcement at slow speeds (less than 10 mph). The geogrid should be installed in accordance with the manufacturer’s specifications.

Asphaltic Concrete Design with Geogrid Reinforcement				
Layer	**Thickness (inches)**			
	Auto Parking Areas (TI=5.0 assumed)[3]	**Auto Road (TI=5.5 assumed)**[3]	**Truck Parking Areas (TI=6.0 assumed)**[3]	**Truck Ramps and Roads (TI=8.0 assumed)**[3]
AC [1, 2]	3.0	3.5	3.5	5.0
Aggregate Base [1]	5.0	6.0	8.0	11.0

1. All materials should meet the current Caltrans Highway Design Manual specifications
   - Asphaltic Base – Caltrans Class 2 aggregate base
2. A minimum 1.5-inch surface course should be used on ACC pavements.
3. The traffic index (TI) is a measure of traffic wheel loading frequency and intensity of anticipated traffic.

Reinforced pavement design procedures developed by grid producers rely on product specific field and laboratory research. In some cases, this research has tested pavement sections within a limited range of subgrade conditions and pavement thicknesses. Extrapolations are typically used for thicker pavement sections outside those parameters based on computer modeling. These methods represent the state of the practice but have not always been specifically verified by performance testing.

Cement/Lime Treated Asphaltic Concrete Design				
Layer	**Thickness (inches)**			
	Auto Parking Areas (TI=5.0 assumed) [3]	**Auto Road (TI=5.5 assumed)** [3]	**Truck Parking Areas (TI=6.0 assumed)** [3]	**Truck Ramps and Roads (TI=8.0 assumed)** [3]
AC [1,2]	3.0	3.5	3.5	5.0
Aggregate Base [1]	5.0	5.0	6.0	8.0
Cement/lime Treated Subgrade [4,5,6]	12.0	12.0	12.0	12.0

1. All materials should meet the current Caltrans Highway Design Manual specifications
   - Asphaltic Base – Caltrans Class 2 aggregate base
   - Cement/Lime Treat Materials
2. A minimum 1.5-inch surface course should be used on ACC pavements.
3. The traffic index (TI) is a measure of traffic wheel loading frequency and intensity of anticipated traffic.
4. Cement/lime treated subgrade soil will produce a minimum R-value of 50.
5. Cement/lime treated subgrade soil will produce a minimum unconfined compressive strength of 300 pounds per square inch.
6. Since it is not possible to compact the subgrade soil beneath the cement/lime treated portion, an additional 3 inches of cement/lime treated soil has been added to the calculated pavement section.

Portland Cement Concrete Design			
Layer	**Thickness (inches)**		
	Car Parking and Access Lanes [1]	**Truck Parking** [1]	**Dumpster Pads** [1,3]
PCC [2]	5.0	6.5	7.5
Aggregate base [2]	4.0	4.0	4.0

1. Car Parking and Access Lanes: ADTT = 1 truck per day
   Truck Parking: ADTT = 25 trucks per day
   Dumpster Pads: Per Category C
2. All materials should meet the current Caltrans Highway Design Manual specifications.
3. The trash container pad should be large enough to support the container and the tipping axle of the collection truck.

<u>As more specific traffic information becomes available for the project, we should be contacted to reevaluate the pavement calculations.</u>

Rigid PCC pavements will perform better than AC in areas where short-radii turning and braking are expected (i.e. entrance/exit aprons) due to better resistance to rutting and shoving. In addition, PCC pavement will perform better in areas subject to large or sustained loads. We recommend rigid pavement for the dumpster area to include the area where the trucks will pick up the dumpster. An adequate number of longitudinal and transverse control joints should be placed in the rigid pavement in accordance with ACI and/or AASHTO requirements. Expansion (isolation) joints must be full depth and should only be used to isolate fixed objects abutting or within the paved area.

All concrete for rigid pavements should have a minimum flexural strength of 550 psi, a minimum compressive strength of 4,500 psi. and be placed with a maximum slump of four inches. Proper joint spacing will also be required to prevent excessive slab curling and shrinkage cracking. All joints should be sealed to prevent entry of foreign material and dowelled where necessary for load transfer.

We recommend all PCC pavement details for joint spacing, joint reinforcement, and joint sealing be prepared in accordance with American Concrete Institute (ACI 330R and ACI 325R.9). PCC pavements should be provided with mechanically reinforced joints (doweled or keyed) in accordance with ACI 330R. Where practical, we recommend early-entry cutting of crack-control joints in PCC pavements. Cutting of the concrete in its “green” state typically reduces the potential for micro-cracking of the pavements prior to the crack control joints being formed, compared to cutting the joints after the concrete has fully set. Micro-cracking of pavements may lead to crack formation in locations other than the sawed joints, and/or reduction of fatigue life of the pavement.

Thickened edges should be used along outside edges of concrete pavements. Edge thickness should be at least 2 inches thicker than concrete pavement thickness and taper to the actual concrete pavement thickness 36 inches inward from the edge. Integral curbs may be used in lieu of thickened edges.

Pavement Drainage

Pavements should be sloped to provide rapid drainage of surface water. Water allowed to pond on or adjacent to the pavements could saturate the subgrade and contribute to premature pavement deterioration. In addition, the pavement subgrade should be graded to provide positive drainage within the granular base section. Appropriate sub-drainage or connection to a suitable daylight outlet should be provided to remove water from the granular subbase.

The pavement surfacing and adjacent sidewalks should be sloped to provide rapid drainage of surface water. Water should not be allowed to pond on or adjacent to these grade-supported slabs, since this could saturate the subgrade and contribute to premature pavement or slab deterioration. In areas where pavement sections abut bioswales, curb should extend below the planned AB section to intercept water infiltration below the pavement section. Water migration in and out of the pavement sections may result in repeated shrinkage and swelling and increasing pavement section fatigue.

Pavement Maintenance

The pavement sections represent minimum recommended thicknesses and, as such, periodic maintenance should be anticipated. Therefore, preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment. Maintenance consists of both localized maintenance (e.g. crack and joint sealing and patching) and global maintenance (e.g. surface sealing). Preventive maintenance is usually the priority when implementing a pavement maintenance program. Additional engineering observation is recommended to determine the type and extent of a cost-effective program. Even with periodic maintenance, some movements and related cracking may still occur and repairs may be required.

Pavement performance is affected by its surroundings. In addition to providing preventive maintenance, the civil engineer should consider the following recommendations in the design and layout of pavements:

- Final grade adjacent to paved areas should slope down from the edges at a minimum 2%.
- Subgrade and pavement surfaces should have a minimum 2% slope to promote proper surface drainage.
- Install below pavement drainage systems surrounding areas anticipated for frequent wetting.
- Install joint sealant and seal cracks immediately.
- Seal all landscaped areas in or adjacent to pavements to reduce moisture migration to subgrade soils.
- Place compacted, low permeability backfill against the exterior side of curb and gutter.
- Place curb, gutter and/or sidewalk directly on clay subgrade soils rather than on unbound granular base course materials.

CORROSIVITY

The table below lists the results of laboratory soluble sulfate, soluble chloride, electrical resistivity, and pH testing. The values may be used to estimate potential corrosive characteristics of the on-site soils with respect to contact with the various underground materials which will be used for project construction.

Corrosivity Test Results Summary						
Boring	**Sample Depth (feet)**	**Soil Description**	**Soluble Sulfate (pp,)**	**Soluble Chloride (ppm)**	**Electrical Resistivity (Ω-cm)**	**pH**
B7	1-2½	SW-SC	103	233	1,164	8.27
B26	1-2	SW-SC	135	78	2,134	8.60

These test results are provided to assist in determining the type and degree of corrosion protection that may be required for the project. We recommend that a certified corrosion engineer determine the need for corrosion protection and design appropriate protective measures.

Resistivity

The resistivity value indicates the samples tested exhibit a moderate to high corrosive potential to buried metal pipes.

Evaluation of the test results is based upon the guidelines of J.F. Palmer, "Soil Resistivity Measurements and Analysis", Materials Performance, Volume 13, January 1974. The following table outlines the guidelines for soil resistivity for corrosion potential.

Corrosion Potential of Soil on Steel	
Soil Resistivity (ohm-cm)	**Corrosion Potential**
0 to 1,000	Very High
1,000 to 2,000	High
2,000 to 5,000	Moderate
> 5,000	Mild

Sulfates

Results of the soluble sulfate testing indicate the samples of on-site soil tested pose a negligible exposure to sulfate when classified in accordance with Table 19.3.1.1 of Section 19.3.1 of the ACI 318-14 Design Manual. However, due to the shallow groundwater table and exposure to seawater, we recommend, as a minimum, a sulfate exposure class S1 and a chloride class C2 be considered for this site. Concrete should be designed in accordance with the provisions of the ACI 318-14 Design Manual, Section 19.3.

Laboratory pH

Data suggests the soil pH should not be the dominant soil variable affecting soil corrosion if the soil has a pH in the 5 to 8 range. The pH of the samples tested were above the recommended range, and should therefore be considered when determining soil corrosion potential.

INFILTRATION TESTING

We understand that three bioswales are planned to be constructed along the western edge of the site. The surficial stratum of lean clay present across much of the site can prevent surface water from infiltrating into the subgrade. Additionally, silt and clay sized soil particles can migrate into and clog filter drainage systems if they are not properly designed or maintained. Consequently, special care should be taken in the design of the drainage plan for the site. Planned bioswales at the site should be located no closer than 5 feet to structural site improvements.

Three infiltration tests were performed near the locations of planned bioswales at an approximate depth of 24 inches below the ground surface. The soil 24 inches below ground surface at the test locations classified as sandy lean clay to sandy lean clay with gravel.

The infiltration test was performed in general accordance with ASTM D3385; using a 12-inch diameter and 24-inch diameter double-ring infiltrometer. Depths of water levels were measured in each of the rings at regular intervals, and if needed, water was added to the rings to manually replenish the lost water. Readings were made until the infiltration rate roughly stabilized. The infiltration results are presented on the following tables.

Infiltration Test #1					
Time		Incremental Infiltration Rate			
Elapsed Time (min)	Elapsed Time (hr)	Inner (in/hr)	Annulus (in/hr)	Inner (cm/hr)	Annulus (cm/hr)
Start		0.00	0.00	0.00	0.00
25	0.42	0.15	0.15	0.38	0.38
45	0.75	0.08	0.08	0.21	0.21
30	0.5	0.13	0.13	0.32	0.32
30	0.5	0.13	0.13	0.32	0.32
25	0.42	0.15	0.15	0.38	0.38

Infiltration Test #2					
Time		Incremental Infiltration Rate			
Elapsed Time (min)	Elapsed Time (hr)	Inner (in/hr)	Annulus (in/hr)	Inner (cm/hr)	Annulus (cm/hr)
Start		0.00	0.00	0.00	0.00
55	0.92	0.95	2.45	2.42	6.23
25	0.42	0.15	2.10	0.38	5.33
60	1	0.50	2.00	1.27	5.08
60	1	0.63	2.00	1.59	5.08
30	0.5	0.13	1.00	0.32	2.54
30	0.5	0.25	1.50	0.64	3.81

Infiltration Test #3					
Time		Incremental Infiltration Rate			
Elapsed Time (min)	Elapsed Time (hr)	Inner (in/hr)	Annulus (in/hr)	Inner (cm/hr)	Annulus (cm/hr)
Start					
45	0.75	0.3	0.2	0.8	0.4
75	1.25	0.2	0.2	0.5	0.5
60	1	0.1	0.1	0.3	0.3
30	0.5	0.1	0.1	0.3	0.3
30	0.5	0.3	0.3	0.6	0.6
45	0.75	0.2	0.2	0.4	0.4
60	1	0.2	0.1	0.5	0.3
30	0.5	0.1	0.1	0.3	0.3
30	0.5	0.4	0.3	1.0	0.6

Since our tests were performed using clean water, the storm water runoff will likely contain materials such as silt, leaves, oil residues, and other matter that may reduce the infiltration characteristics of the soils. As such, the bioswale designer should apply an applicable factor of safety to the results of the infiltration test.

GENERAL COMMENTS

As the project progresses, we address assumptions by incorporating information provided by the design team, if any. Revised project information that reflects actual conditions important to our services is reflected in the final report. The design team should collaborate with Terracon to confirm these assumptions and to prepare the final design plans and specifications. This facilitates the incorporation of our opinions related to implementation of our geotechnical recommendations. Any information conveyed prior to the final report is for informational purposes only and should not be considered or used for decision-making purposes.

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in the final report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our scope of services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third party beneficiaries intended. Any third party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing. This report should not be used after 3 years without written authorization from Terracon.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Number of Borings/CPTs	Boring/CPT Depth (feet) [1]	Location
4 borings	26½ to 51½	Warehouse 1 footprint
4 borings	26½ to 51½	Warehouse 2 footprint
2 borings	31½ and 41½	Office building footprint
2 borings	7 and 21½	Butler building footprint
3 borings	16½ to 21½	Materials bin and pipe laydown areas
12 borings	5	Parking and drive areas
1 CPT[2]	100	Warehouse 1 footprint
1 CPT	100	Warehouse 2 footprint

1. Below ground surface
2. Cone penetration test

Boring/CPT Layout: The boring/CPT layout was performed by Terracon. Coordinates were obtained with a handheld GPS unit (estimated horizontal accuracy of about ±15 feet). If elevations and a more precise boring layout are desired, we recommend borings be surveyed following completion of fieldwork.

Subsurface Exploration Procedures: We advanced the borings with a B-24 truck-mounted drill rig and a CME-75 truck mounted drill rig using continuous flight, solid and hollow stem augers and mud rotary method. Three to four samples were obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. Soil sampling was performed using split-barrel sampling. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon is driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the test depths. The values provided on our boring logs are uncorrected. Additionally, we observed and recorded groundwater levels during drilling and sampling. Per the requirements of the local health department and for safety purposes, all borings were backfilled with grout after their completion.

A Modified California sampler was also used during the field exploration to sample and test the subsurface soils on this project. The sampling procedure results in a distinctive penetration value and the results are reported on the boring logs. The penetration test results and resistance reported for the Modified California sampler are not equivalent to those results that would be obtained by standard penetration testing (SPT) according to ASTM and should not be used as such without interpretation by Terracon.

A significantly greater efficiency is achieved with the automatic hammer compared to the conventional safety hammer operated with a cathead and rope. This higher efficiency has an appreciable effect on the SPT-N value. The effect of the automatic hammers' efficiency has been considered in the interpretation and analysis of the subsurface information for this report.

For the cone penetrometer testing, the CPT hydraulically pushes an instrumented cone through the soil while nearly continuous readings are recorded to a portable computer. The cone is equipped with electronic load cells to measure tip resistance and sleeve resistance and a pressure transducer to measure the generated ambient pore pressure. The face of the cone has an apex angle of 60° and an area of 10 cm^2. Digital Data representing the tip resistance, friction resistance, pore water pressure, and probe inclination angle are recorded about every 2 centimeters while advancing through the ground at a rate between 1½ and 2½ centimeters per second. These measurements are correlated to various soil properties used for geotechnical design. No soil samples are gathered through this subsurface investigation technique. CPT testing was conducted in general accordance with ASTM D5778 "Standard Test Method for Performing Electronic Friction Cone and Piezocone Penetration Testing of Soils."

The sampling depths, penetration distances, and other sampling information were recorded on the field boring logs. The samples were placed in appropriate containers and taken to a Terracon soil laboratory for testing and classification by a geotechnical engineer. Our exploration team prepared field boring logs as part of the drilling operations. These field logs include visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the geotechnical engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

The project engineer reviewed the field data and assigned various laboratory tests to better understand the engineering properties of the various soil strata as necessary for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods are applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass

- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- ASTM D422 Standard Test Method for Particle-Size Analysis of Soils
- ASTM D2166/D2166M Standard Test Method for Unconfined Compressive Strength of Cohesive Soil
- ASTM D2435/D2435M Standard Test Methods for One-Dimensional Consolidation Properties of Soils Using Incremental Loading

The laboratory testing program often includes examination of soil samples by an engineer. Based on the material's texture and plasticity, we describe and classify the soil samples in accordance with the Unified Soil Classification System.

SITE LOCATION AND EXPLORATION PLANS

SITE LOCATION and NEARBY GEOTECHNICAL DATA

Oakport Buildings ■ Oakland, Alameda, California

June 15, 2018 ■ Terracon Project No. ND175105

Terracon GeoReport

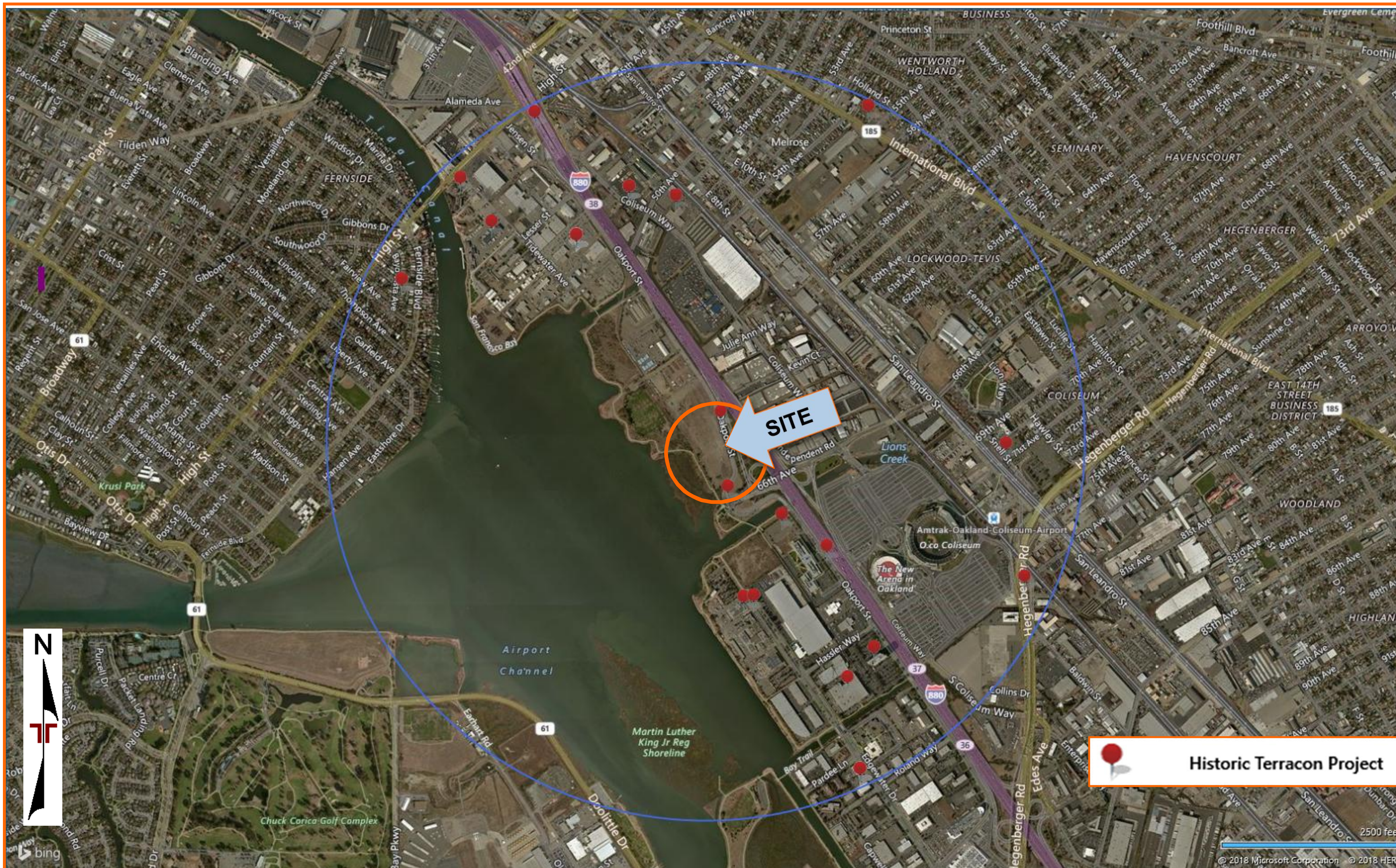


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

EXPLORATION PLAN

Oakport Buildings ■ Oakland, Alameda, California

June 15, 2018 ■ Terracon Project No. ND175105

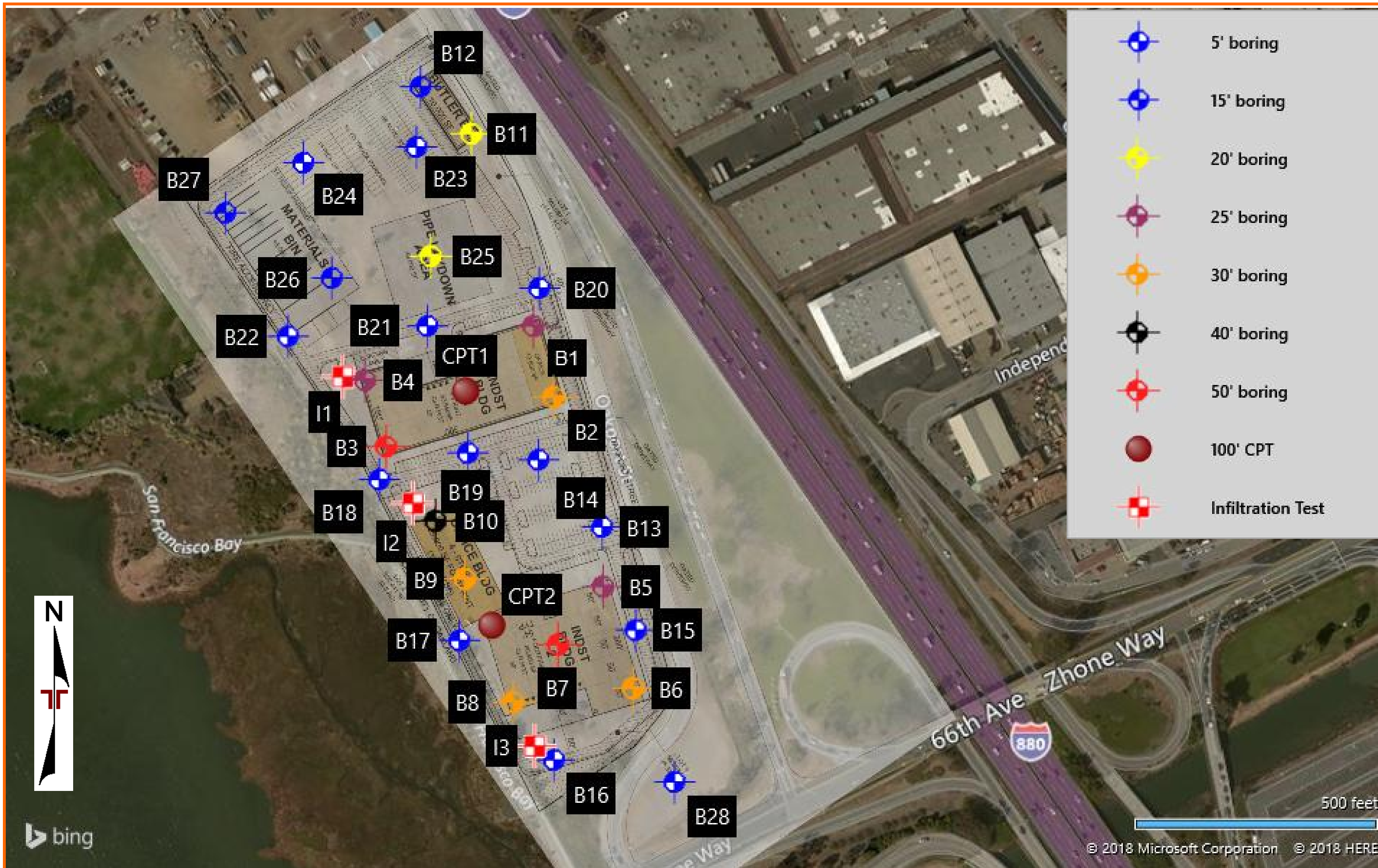


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

EXPLORATION RESULTS

BORING LOG NO. B1

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org
Oakland, CA

SITE: 5801 Oakport Street
Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.756102° Longitude: -122.21134°

GRAPHIC LOG DEPTH	Description	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
6.5	**FILL - CLAYEY SAND (SW-SC)**, trace gravel, fine to medium grained, dark brown, medium dense		▽ ▽		7-14-11		12		24-16-8	18
		5			22-11-13		10			
9.0	**FILL - CLAYEY SAND (SW-SC)**, trace gravel, fine to medium grained, dark brown, medium dense, high organic content				8-10-12 N=22		24			
12.5	**BAY MUD - ELASTIC SILT (MH)**, with clay, fine to medium grained, dark brown to dark gray, soft	10			1-2-1 N=3		36			
18.5	**POORLY GRADED SAND (SP)**, trace silt, fine to medium grained, dark gray, loose	15			3-3-4 N=7		31			
24.0	**SANDY LEAN CLAY (CL)**, trace silt, fine to medium grained, dark gray, medium stiff	20			3-3-4 N=7		23			
26.5	**WELL GRADED SAND WITH GRAVEL (SW)**, trace silt, fine to coarse grained, brown, dense	25			14-20-20 N=40		18			
	Boring Terminated at 26.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

▽ *after 3 hours*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 04-23-2018	Boring Completed: 04-23-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B2

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.7557° Longitude: -122.211196°

DEPTH	Description	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
2.0	**FILL - SANDY LEAN CLAY (CL)**, trace gravel, fine to medium grained, brown, medium stiff to stiff			X	7-10-21		13	100		
5.5	**FILL - WELL GRADED SAND WITH SILT AND GRAVEL (SW-SM)**, trace clay, fine to coarse grained, brown to gray, medium dense	5	▽	X	10-15-8		18	101		
8.0	**FILL - WELL GRADED SAND (SW)**, trace silt, fine to medium grained, dark gray, loose to medium dense		▽	X	13-4-5		42	72		
13.5	**-BAY MUD - ELASTIC SILT (MH)**, with clay, fine grained, dark brown to dark gray, soft	10		X	1-2-1		77	49		
19.0	**SILTY SAND (SM)**, fine grained, dark gray, loose	15		X	3-2-2		83			
24.0	**WELL GRADED SAND WITH GRAVEL (SW)**, fine to coarse grained, dark gray, medium dense	20		X	7-10-24		16			
28.0	**WELL GRADED SAND WITH GRAVEL (SW)**, trace silt, fine to coarse grained, brown, medium dense	25		X	7-13-18		19			
31.5	**WELL GRADED GRAVEL WITH SAND (GW)**, coarse to medium grained, brown, loose to medium dense	30		X	8-10-8		16			

Boring Terminated at 31.5 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

▽ *after 6 hours*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 04-23-2018	Boring Completed: 04-23-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B3

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.755418° Longitude: -122.212395°

DEPTH	Description	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - CLAYEY SAND WITH GRAVEL (SC), trace silt, fine to coarse grained, dark brown, medium dense		While drilling		4-4-15		10	99	30-17-13	42
5.0	**FILL - SANDY LEAN CLAY WITH GRAVEL (CL)**, coarse to medium grained, dark brown, soft to medium stiff, trace organics	5			2-4-3		36	67		
			after one hour		10-1-1 N=2		35			
9.5	**BAY MUD - ELASTIC SILT (MH)**, with clay, dark gray, very soft to soft, trace organics	10			Shelby Tube					
14.5	**POORLY GRADED SAND WITH CLAY (SP-SC)**, trace silt, fine to medium grained, dark brown, loose	15			0-2-4 N=6		36			
		20			0-0-2 N=2		26			
21.0	**SILTY CLAYEY SAND (SC-SM)**, dark brown, very loose to loose	25			4-5-5 N=10		26		25-21-4	44
27.0	**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, fine to coarse grained, dark brown with gray, medium dense	30			7-8-5 N=13		23			
34.0	**SANDY LEAN CLAY (CL)**, trace sand, brown, soft	35			1-1-2 N=3		33		31-19-12	69
		40			1-2-2 N=4		27			
42.5	**LEAN CLAY WITH SAND (CL)**, trace sand, fine grained, brown, medium stiff to stiff	45			3-5-7 N=12		25			
50.5		50			4-8-10 N=18		24			
51.5	**WELL GRADED SAND WITH CLAY (SW-SC)**, trace silt, brown with gray, medium dense									
	Boring Terminated at 51.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

- *While drilling*
- *after one hour*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-27-2018	Boring Completed: 03-27-2018
Drill Rig: CME 75	Driller: Robert Anderson
Project No.: ND175105	

BORING LOG NO. B6

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org
Oakland, CA

SITE: 5801 Oakport Street
Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.754049° Longitude: -122.210626°

DEPTH	Description	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3.5	**FILL - SANDY LEAN CLAY (CL)**, fine to medium grained, dark brown, stiff		▽		8-12-8 N=20		15			
10.0	**FILL - POORLY GRADED SAND WITH CLAY AND GRAVEL (SP)**, fine to medium grained, dark brown, loose to medium dense	5								
15.0	**BAY MUD-ELASTIC SILT (MH)**, fine grained, dark gray, very soft to soft	10			2-1-2 N=3		30			
20.5	**POORLY GRADED SAND WITH CLAY (SP-SC)**, fine to medium grained, dark gray, very loose	15			1-2-2 N=4		19			
25.0	**SILTY CLAY (CL-ML)**, trace sand, fine grained, dark gray, stiff	20			5-6-7 N=13		25			
31.5	**SANDY LEAN CLAY (CL)**, fine to medium grained, brown, medium stiff	25			4-5-6 N=11		22			
		30			1-4-9 N=13		26			

Boring Terminated at 31.5 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 04-27-2018

Boring Completed: 04-27-2018

Drill Rig: B-24

Driller: CG

Project No.: ND175105

BORING LOG NO. B7

PROJECT: Oakport Buildings - Confidential

**CLIENT: SupplyBank.Org
Oakland, CA**

**SITE: 5801 Oakport Street
Oakland, CA**

LOCATION See Exploration Plan

Latitude: 37.754296° Longitude: -122.211163°

DEPTH	GRAPHIC LOG / DESCRIPTION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
5.0	**FILL - WELL GRADED SAND WITH CLAY AND GRAVEL (SW-SC)**, trace silt, fine to coarse grained, dark brown, loose to medium dense				5-5-4		9	88		
					7-15-17		9	94		
11.0	**FILL - CLAYEY SAND (SC)**, trace silt, fine to medium grained, dark brown, very loose to loose	5			2-2-1		18	100		
		10			2-1-2		34	78		
14.0	**BAY MUD - ELASTIC SILT WITH SAND (MH)**, trace clay, fine grained, dark gray, very soft to soft		▽							
17.5	**SILTY SAND (SM)**, trace clay, fine to medium grained, dark gray, loose	15			1-2-3 N=5		47			22
23.0	**WELL GRADED SAND WITH CLAY AND GRAVEL (SW-SC)**, fine to coarse grained, dark gray, very loose	20			3-1-1 N=2		25			15
27.5	**SILTY CLAY (CL-ML)**, trace sand, dark gray, soft to medium stiff	25			2-2-3 N=5		37			
33.0	**SILTY SAND (SM)**, trace clay, fine to medium grained, brown, medium dense	30			7-10-15 N=25		21			43
40.0	**CLAYEY SAND WITH GRAVEL (SC)**, fine to coarse grained, brown, medium dense	35			4-5-8 N=13		25			46
43.0	**WELL GRADED SAND WITH CLAY AND GRAVEL (SW-SC)**, fine to coarse grained, brown, loose	40			3-4-4 N=8		40			
51.5	**SILTY CLAY (CL-ML)**, brown, stiff	45			4-4-5 N=9		27			
		50			6-1-9 N=10		20			73

Boring Terminated at 51.5 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-27-2018	Boring Completed: 03-28-2018
Drill Rig: CME 75	Driller: Robert Anderson
Project No.: ND175105	

BORING LOG NO. B8

PROJECT: Oakport Buildings - Confidential	CLIENT: SupplyBank.Org Oakland, CA
SITE: 5801 Oakport Street Oakland, CA	

LOCATION See Exploration Plan

Latitude: 37.753971° Longitude: -122.211485°

DEPTH	Description	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
10.0	**FILL - SANDY LEAN CLAY WITH GRAVEL (CL)**, fine to coarse grained, dark brown, medium stiff			4-5-5	2.5 (HP)	16		26-15-11	70
15.0	**BAY MUD - ELASTIC SILT (MH)**, fine grained, dark gray, very soft to soft			2-1-2		79			
18.5	**POORLY GRADED SAND WITH CLAY (SP)**, trace silt, fine to medium grained, dark gray, very loose			4-3-2					
20.5	**SILTY CLAY (CL-ML)**, fine to medium grained, dark gray, soft								
27.0	**WELL GRADED SAND (SW)**, fine to medium grained, dark gray, medium dense	▽		4-7-10 N=17		28			
				4-7-9 N=16					
31.5	**CLAYEY SAND (SC)**, fine to medium grained, brown, loose			3-4-5 N=9		22			

Boring Terminated at 31.5 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 04-27-2018	Boring Completed: 04-27-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B9

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org
Oakland, CA

SITE: 5801 Oakport Street
Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.754669° Longitude: -122.211831°

DEPTH	Description	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
5.5	**FILL - WELL GRADED SAND WITH CLAY AND GRAVEL**, trace silt, fine to coarse grained, dark brown, loose				5-6-5		11			
9.5	**FILL - SANDY LEAN CLAY (CL)**, with silt, fine to medium grained, dark brown, soft to medium stiff	5	▽		4-3-5		22	101		
14.0	**SANDY LEAN CLAY (CL)**, fine grained, dark gray to brown, very soft to soft	10			1-1-2 N=3		76		36-20-16	64
19.0	**POORLY GRADED SAND WITH SILT (SP)**, fine to medium grained, dark gray, loose	15			2-2-5 N=7		28			
27.5	**SILTY CLAY (CL-ML)**, trace sand, fine grained, dark bluish gray, medium stiff to stiff	20			4-5-6 N=11		22			
		25			3-4-5 N=9		25			
31.5	**WELL GRADED SAND WITH GRAVEL (SW)**, trace silt, fine to coarse grained, dark gray, loose	30			2-3-2 N=5		30			
	Boring Terminated at 31.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
"4"" Solid Stem Auger"

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 04-27-2018	Boring Completed: 04-27-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B10

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.754997° Longitude: -122.212041°

DEPTH	Description	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - SANDY LEAN CLAY WITH GRAVEL (CL), trace silt, fine to coarse grained, dark brown, soft to medium stiff		▽		2-1-3	2.5 (HP)	20	87	27-14-13	56
					3-4-4	1.5 (HP)	21	84		
5.5	**BAY MUD-ELASTIC SILT (MH)**, with clay, dark gray, very soft to soft	5	▽		2-2-2		29	85		
		10			2-1-1		81	46	67-38-29	99
13.0	**POORLY GRADED SAND WITH CLAY (SP-SC)**, trace silt, fine to medium grained, dark gray, very loose to loose	15			0-1-1 N=2		31			
		20			2-2-3 N=5		42			
25.0	**POORLY GRADED SAND WITH CLAY (SP-SC)**, trace silt, fine to medium grained, brownish gray, medium dense	25			5-7-8 N=15		23			
28.0	**WELL GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, trace silt, fine to coarse grained, dark brown with gray, dense	30			15-23-7 N=30		16			
33.5	**SILTY CLAY (CL-ML)**, brown, medium stiff to stiff	35			2-2-3 N=5		36			
		40			4-5-7 N=12		21			
41.5	***Boring Terminated at 41.5 Feet***									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
8" Hollow Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

▽ *after boring completed*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-27-2018	Boring Completed: 03-27-2018
Drill Rig: CME 75	Driller: Robert Anderson
Project No.: ND175105	

BORING LOG NO. B11

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org
Oakland, CA

SITE: 5801 Oakport Street
Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.757192° Longitude: -122.211785°

DEPTH	Description	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - SANDY LEAN CLAY WITH GRAVEL (CL), fine to coarse grained, dark brown, stiff				4-6-7	2.0 (HP)	17	92		
		5			7-9-13	1.0 (HP)	17	92		
9.5	**BAY MUD-ELASTIC SILT (MH)**, with clay, dark gray, soft	10			3-2-2	0.5 (HP)	48	54		
15.5	**SILTY SAND (SM)**, fine to medium grained, dark gray, loose	15	▽		5-5-4 N=9		31			
21.0	**POORLY GRADED SAND (SP)**, fine to medium grained, brown, loose to medium dense	20			2-7-17 N=24		31			
21.5	***Boring Terminated at 21.5 Feet***									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-26-2018	Boring Completed: 03-26-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B12

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.757459° Longitude: -122.212159°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - SANDY LEAN CLAY WITH GRAVEL (CL), trace silt, fine to coarse grained, dark brown, stiff			X	7-8-15	1.5 (HP)	16			
	3.0			X	8-13-13		12			
	FILL - SANDY LEAN CLAY WITH GRAVEL (CL), trace silt, fine to coarse grained, yellowish brown, stiff to very stiff									
	4.5	5								
	FILL - POORLY GRADED SAND WITH GRAVEL (SP), trace organics, fine to coarse grained, dark brown, stiff to very stiff			X	8-8-50/3"		16			
	7.0									
	Refusal at 7 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 04-23-2018	Boring Completed: 04-23-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B13

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.754964° Longitude: -122.210858°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	2.0 **FILL - SANDY LEAN CLAY WITH GRAVEL (CL)**, trace silt, fine to coarse grained, dark brown, stiff									
	5.0 **FILL - SANDY LEAN CLAY (CL)**, trace silt, fine to medium grained, dark brown, medium stiff				6-6-6	2.5 (HP)	12	96		
	Boring Terminated at 5 Feet	5								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-26-2018	Boring Completed: 03-26-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B14

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.754379° Longitude: -122.210618°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - SANDY LEAN CLAY WITH GRAVEL (CL), trace silt, fine to coarse grained, dark brown, very stiff									
				X	8-19-13 N=32		15			
	5.0	5								
	Boring Terminated at 5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-26-2018	Boring Completed: 03-26-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B15

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org
Oakland, CA

SITE: 5801 Oakport Street
Oakland, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 37.753643° Longitude: -122.211203° DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - SANDY LEAN CLAY WITH GRAVEL (CL), trace silt, fine to coarse grained, dark brown, medium stiff		▽	X	5-4-3 N=7		13			
	5.0	5								
	Boring Terminated at 5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *after 3 hours*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-26-2018	Boring Completed: 03-26-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B16

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 37.754321° Longitude: -122.211881° DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - SANDY LEAN CLAY WITH GRAVEL (CL), trace silt, fine to coarse grained, dark brown, very stiff		▽	X	8-18-8 N=26		18			
	5.0	5								
	Boring Terminated at 5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *after 3 hours*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-26-2018	Boring Completed: 03-26-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ND175105 OAKPORT BUILDINGS.GPJ TERRACON_DATATEMPLATE.GDT 5/30/18

BORING LOG NO. B17

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.755232° Longitude: -122.212454°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - SANDY LEAN CLAY WITH GRAVEL (CL), trace silt, fine to coarse grained, dark brown, stiff to very stiff			X	9-6-9 N=15		18			
	5.0	5								
	Boring Terminated at 5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-26-2018	Boring Completed: 03-26-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B18

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.755344° Longitude: -122.211314°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - WELL GRADED SAND WITH CLAY AND GRAVEL (SW-SC), fine to coarse grained, dark brown, medium dense			X	11-7-7 N=14		19			
	5.0	5								
	Boring Terminated at 5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-26-2018	Boring Completed: 03-26-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B19

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.755383° Longitude: -122.21182°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - SANDY LEAN CLAY WITH GRAVEL (CL), fine to coarse grained, dark brown, medium stiff to stiff			X	5-5-5 N=10		12			
	5.0	5								
	Boring Terminated at 5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-26-2018	Boring Completed: 03-26-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B20

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 37.756318° Longitude: -122.211308° DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - SANDY LEAN CLAY WITH GRAVEL (CL), trace silt, fine to coarse grained, dark brown, hard			X	5-20-18 N=38		18			
	5.0	5								
	Boring Terminated at 5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-26-2018	Boring Completed: 03-26-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B21

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.756104° Longitude: -122.212109°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - WELL GRADED SAND WITH CLAY AND GRAVEL (SW-SC), trace silt, fine to coarse grained, dark brown, medium dense		▽	X	17-7-4 N=11		7			
	5.0	5								
	Boring Terminated at 5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *after 2 hours*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-26-2018	Boring Completed: 03-26-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ND175105 OAKPORT BUILDINGS.GPJ TERRACON_DATATEMPLATE.GDT 5/30/18

BORING LOG NO. B22

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org
Oakland, CA

SITE: 5801 Oakport Street
Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.756045° Longitude: -122.213107°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - SANDY LEAN CLAY WITH GRAVEL (CL), fine to coarse grained, dark brown, stiff									
					5-8-10		17			
	5.0	5								
	Boring Terminated at 5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 04-27-2018	Boring Completed: 04-27-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B23

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.757118° Longitude: -122.212188°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - SANDY LEAN CLAY WITH GRAVEL (CL), fine to coarse grained, dark brown, stiff		▽		8-8-6		16			
	5.0	5								
	Boring Terminated at 5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 04-27-2018	Boring Completed: 04-27-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B24

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org
Oakland, CA

SITE: 5801 Oakport Street
Oakland, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 37.757029° Longitude: -122.212998° DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - SANDY LEAN CLAY WITH GRAVEL (CL), fine to coarse grained, dark brown, soft to medium stiff				3-2-2		11			
	5.0	5								
	Boring Terminated at 5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 04-27-2018	Boring Completed: 04-27-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B25

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org
Oakland, CA

SITE: 5801 Oakport Street
Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.756498° Longitude: -122.212075°

DEPTH	Description	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - SANDY SILTY CLAY WITH GRAVEL (CL-ML), trace silt, fine to coarse grained, dark brown, medium stiff to stiff		▽		4-4-5	1.0 (HP)	19	97	24-17-7	53
6.0		5			7-19-20	1.5 (HP)	22	83		
	FILL - WELL GRADED SAND WITH CLAY AND GRAVEL (SW-SC), fine to coarse grained, dark reddish brown, medium dense				15-10-4		19			
10.0	**BAY MUD-ELASTIC SILT (MH)**, with clay, dark gray, soft	10			2-2-2 N=4		99			
		15			2-2-2 N=4		32			
17.0	**SILTY SAND (SM)**, fine to medium grained, dark gray, medium dense									
		20			4-4-10 N=14		28			
21.5	***Boring Terminated at 21.5 Feet***									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

▽ *after one hour*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-26-2018	Boring Completed: 03-26-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

BORING LOG NO. B26

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.756375° Longitude: -122.212794°

GRAPHIC LOG	DEPTH	DESCRIPTION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	2.5	**FILL - WELL GRADED SAND WITH CLAY AND GRAVEL (SW-SC)**, trace silt, fine to coarse grained, dark brown, loose				6-6-50/3"		17	98		
	7.0	**FILL - SANDY LEAN CLAY WITH GRAVEL (CL)**, trace silt, fine to coarse grained, dark brown, stiff to very stiff	5			3-5-13/3"	2.5 (HP)	19	94		
	9.5	**FILL - WELL GRADED SAND WITH CLAY AND GRAVEL (SW-SC)**, trace silt, fine to coarse grained, dark brown, very dense		▽		32-26-7/3"		29			
	13.5	**BAY MUD-ELASTIC SILT (MH)**, with clay, fine to medium grained, dark gray, very soft	10			1-1-1 N=2		74			
	16.5	**SILTY SAND (SM)**, fine to medium grained, dark gray, loose	15			3-6-6 N=12		19			

Boring Terminated at 16.5 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

Terracon
5075 Commercial Cir Ste E
Concord, CA

Boring Started: 03-26-2018	Boring Completed: 03-26-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL ND175105 OAKPORT BUILDINGS.GPJ TERRACON_DATATEMPLATE.GDT 5/30/18

BORING LOG NO. B27

PROJECT: Oakport Buildings - Confidential

CLIENT: SupplyBank.Org Oakland, CA

SITE: 5801 Oakport Street Oakland, CA

LOCATION See Exploration Plan

Latitude: 37.756744° Longitude: -122.213556°

DEPTH	Material Description	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	FILL - SANDY LEAN CLAY (CL), trace silt, fine to medium grained, dark brown, stiff to very stiff				12-16-15	4.5+ (HP)	12			
		5	▽		4-7-8	1.75 (HP)	19			
7.0	**FILL - SANDY LEAN CLAY WITH GRAVEL (CL)**, trace silt, fine to coarse grained, dark brown, medium stiff				2-4-6		28			
10.0	**BAY MUD - ELASTIC SILT (MH)**, trace organics, fine grained, dark gray, soft	10			2-1-1 N=2		86			
		15			2-2-3		71			
16.5	***Boring Terminated at 16.5 Feet***									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Rope and Cathead

Advancement Method:
4" Solid Stem Auger

Abandonment Method:
Boring backfilled with cement-bentonite grout upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

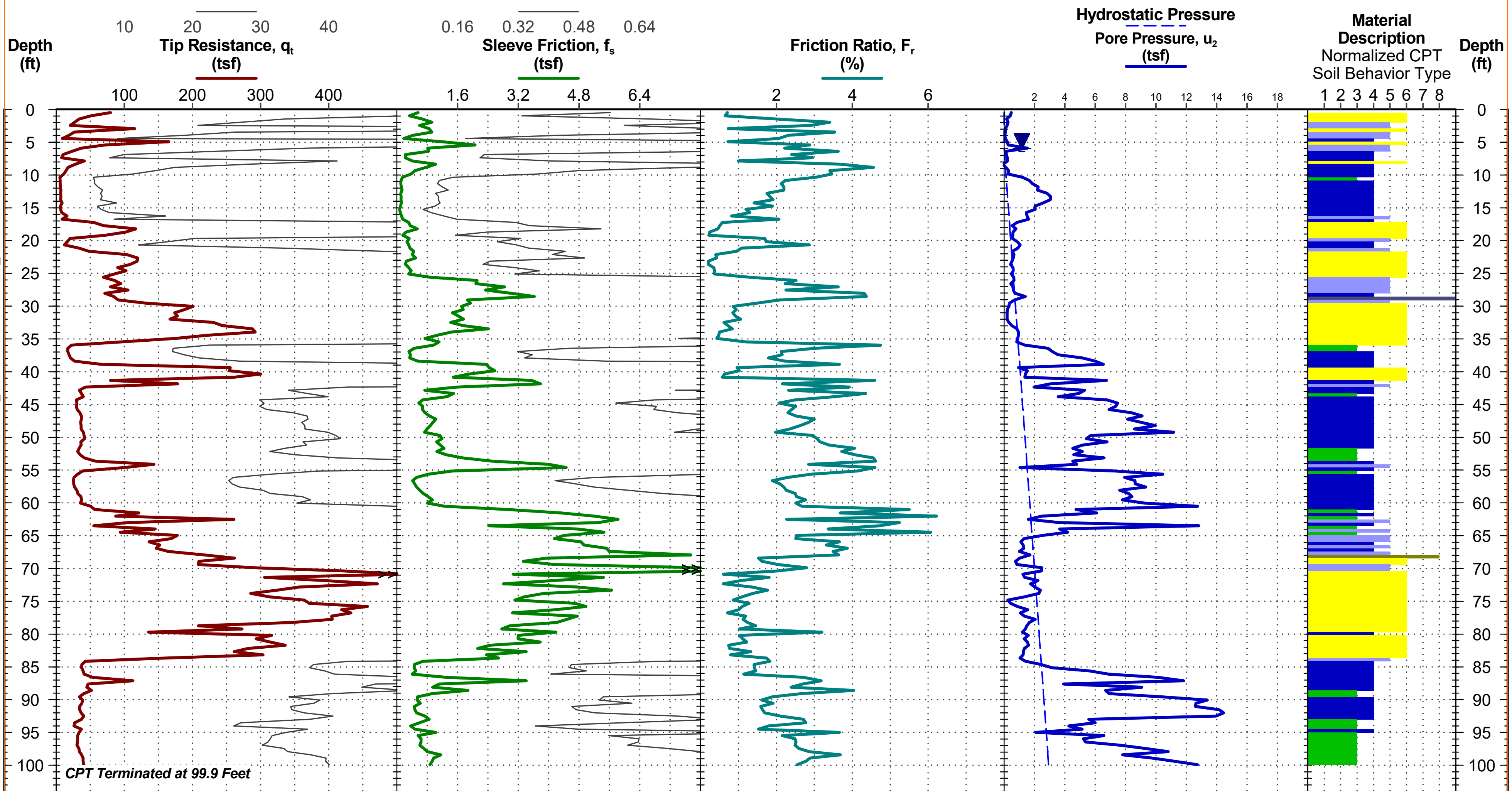
Terracon

5075 Commercial Cir Ste E
Concord, CA

Boring Started: 04-23-2018	Boring Completed: 04-23-2018
Drill Rig: B-24	Driller: CG
Project No.: ND175105	

CPT LOG NO. CPT-1

PROJECT: Oakport Buildings - Confidential	**CLIENT:** SupplyBank.Org Oakland, CA	**TEST LOCATION:** See Exploration Plan
SITE: 5801 Oakport Street Oakland, CA		Latitude: 37.7557359° Longitude: -122.2118357°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

Dead weight of rig used as reaction force.

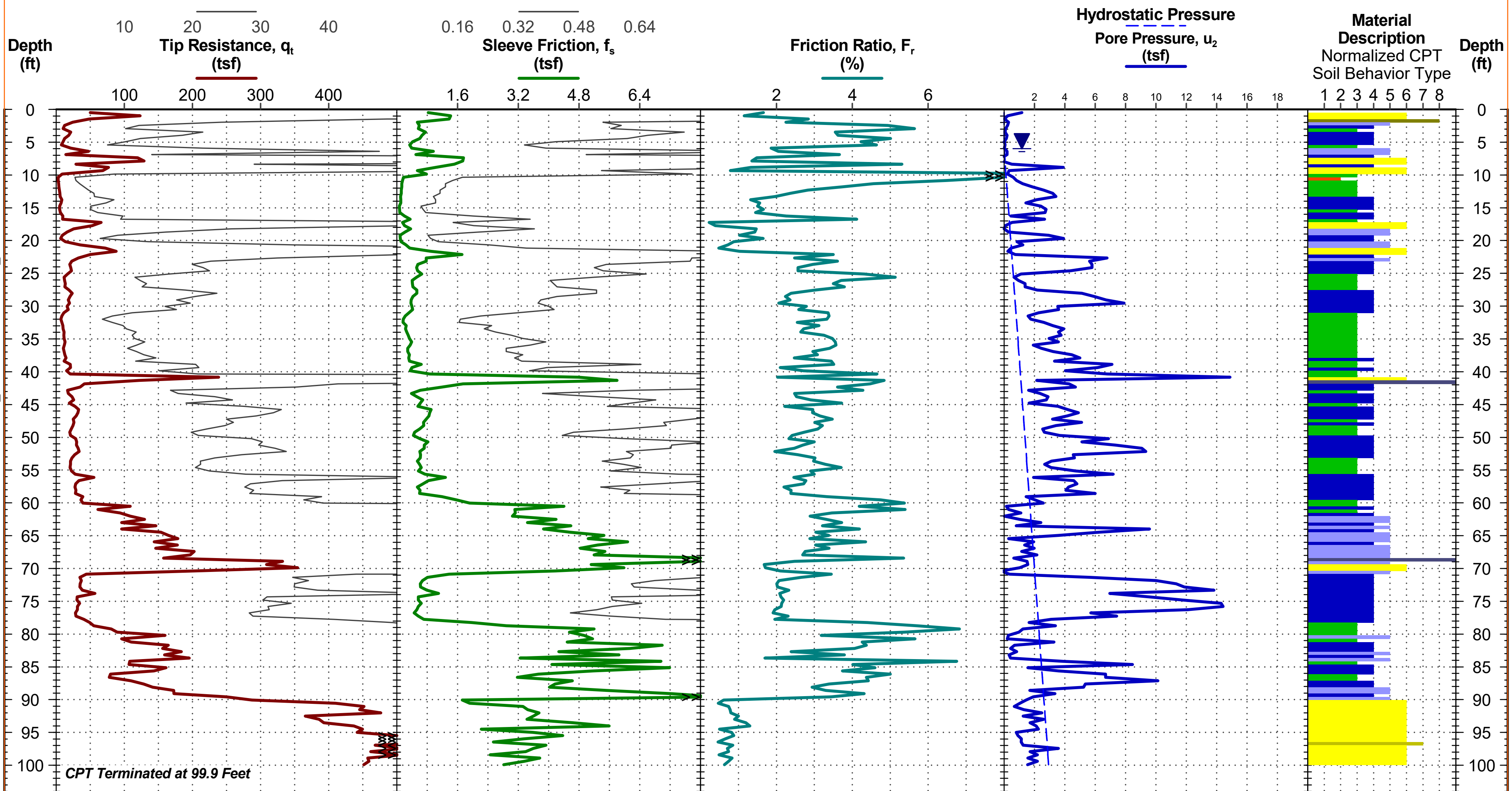
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION 6 ft estimated water depth (used in normalizations and correlations; See Supporting Information)	Notes:	Terracon 5075 Commercial Cir Ste E Concord, CA	CPT Started: 3/28/2018 Rig: CPT Project No.: ND175105	CPT Completed: 3/28/2018 Operator: G

CPT LOG NO. CPT-2

PROJECT: Oakport Buildings - Confidential	**CLIENT:** SupplyBank.Org Oakland, CA	**TEST LOCATION:** See Exploration Plan
SITE: 5801 Oakport Street Oakland, CA		Latitude: 37.75440668° Longitude: -122.2116489°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

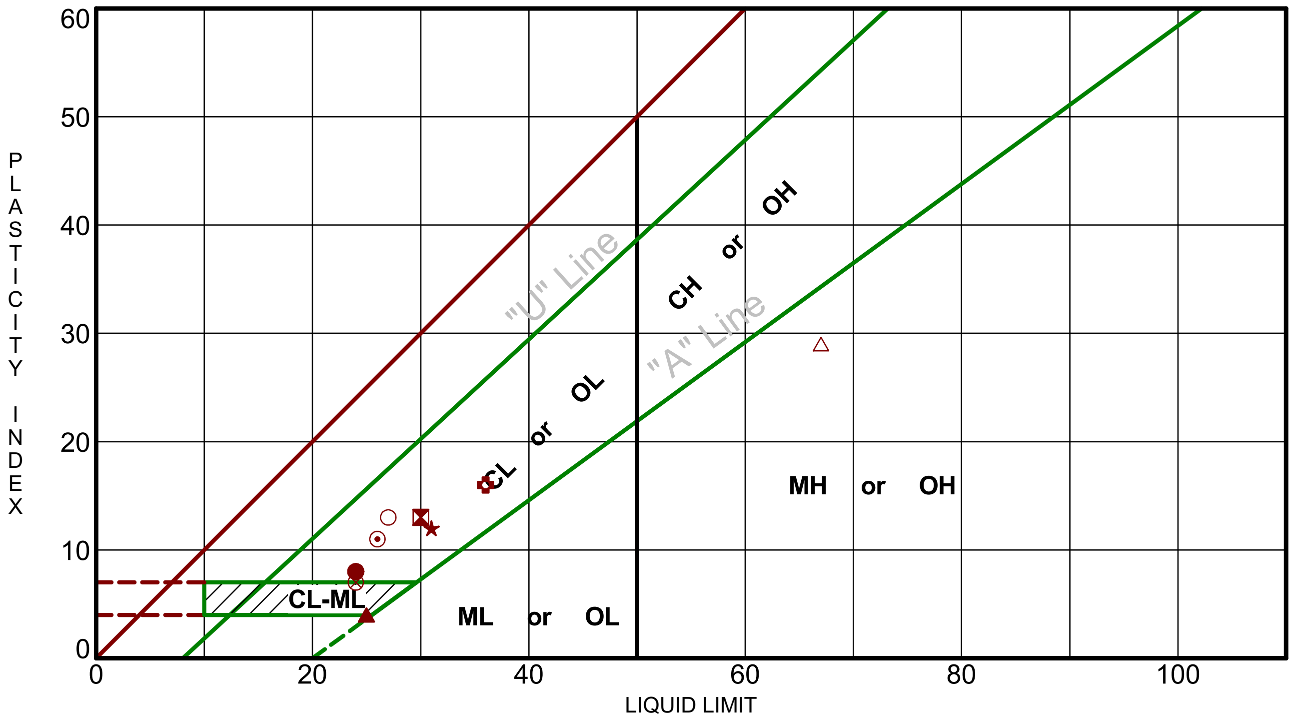
Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION 6 ft estimated water depth (used in normalizations and correlations; See **Supporting Information**)	Notes:	Terracon 5075 Commercial Cir Ste E Concord, CA	CPT Started: 3/28/2018 / CPT Completed: 3/28/2018 Rig: CPT / Operator: G Project No.: ND175105

ATTERBERG LIMITS RESULTS

ASTM D4318



	Boring ID	Depth	LL	PL	PI	Fines	USCS	Description
●	B1	1 - 2.5	24	16	8	18	SC	CLAYEY SAND
⊠	B3	1 - 2.5	30	17	13	42	SC	CLAYEY SAND
▲	B3	25 - 26.5	25	21	4	44	SC-SM	SILTY, CLAYEY SAND
★	B3	35 - 36.5	31	19	12	69	CL	SANDY LEAN CLAY
⊙	B8	2.5 - 4	26	15	11	70	CL	SANDY LEAN CLAY
✿	B9	10 - 11.5	36	20	16	64	CL	SANDY LEAN CLAY
○	B10	1 - 2.5	27	14	13	56	CL	SANDY LEAN CLAY
△	B10	10 - 11.5	67	38	29	99	MH	ELASTIC SILT
⊗	B25	1 - 2.5	24	17	7	53	CL-ML	SANDY SILTY CLAY

PROJECT: Oakport Buildings - Confidential

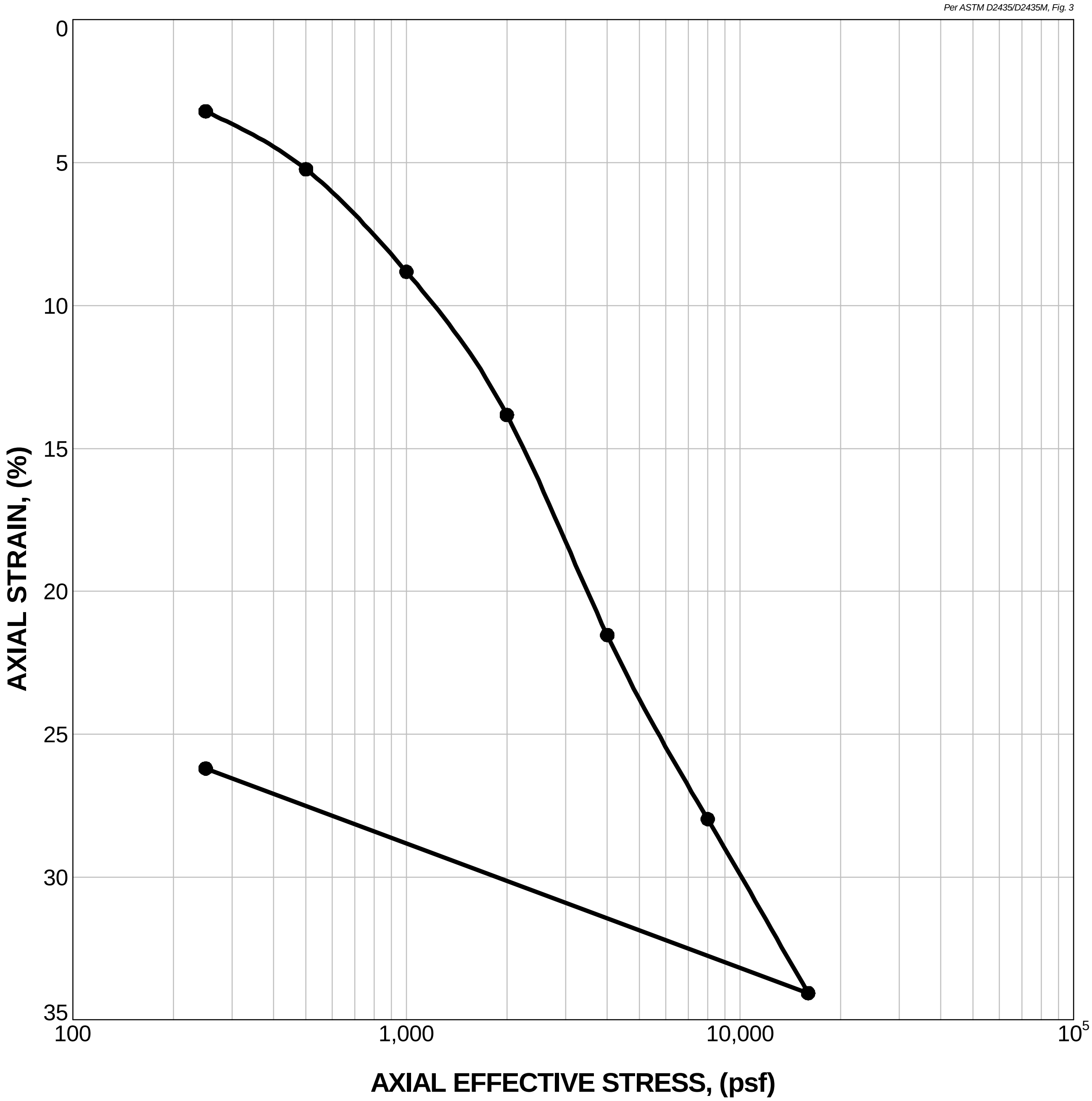
SITE: 5801 Oakport Street
Oakland, CA

Terracon
5075 Commercial Cir Ste E
Concord, CA

PROJECT NUMBER: ND175105

CLIENT: SupplyBank.Org
Oakland, CA

CONSOLIDATION TEST (D2435)



Natural		Initial Dry Density (pcf)	LL	PI	Sp. Gr.	Overburden (psf)	P_c (psf)	C_c (% / log stress)	C_r (% / log stress)	Initial Void Ratio
Saturation	Moisture									
97.5 %	90.9 %	47.6			2.65					

MATERIAL DESCRIPTION	USCS	AASHTO
Bay Mud		

NOTES:

Borehole: B3 Depth: 10 ft Specimen #: 1

PROJECT: Oakport Buildings - Confidential	Terracon 5075 Commercial Cir Ste E Concord, CA	PROJECT NUMBER: ND175105
SITE: 5801 Oakport Street Oakland, CA		CLIENT: SupplyBank.Org Oakland, CA
		EXHIBIT: B-1

CHEMICAL LABORATORY TEST REPORT

Project Number: ND175101
Service Date: 04/06/18
Report Date: 04/15/18
Task:

Terracon
750 Pilot Road, Suite F
Las Vegas, Nevada 89119
(702) 597-9393

Client

Project

Oakport Buildings

Sample Submitted By: Terracon (ND) **Date Received:** 4/4/2018 **Lab No.: 18-0398**

Results of Corrosion Analysis

Sample Number		
Sample Location	B7-1-I	B26-1-I
Sample Depth (ft.)		
pH Analysis, AWWA 4500 H	8.27	8.60
Water Soluble Sulfate (SO4), ASTM C 1580 (mg/kg)	103	135
Sulfides, AWWA 4500-S D, (mg/kg)	Nil	Nil
Chlorides, ASTM D 512, (mg/kg)	233	78
Red-Ox, AWWA 2580, (mV)	+681	+663
Total Salts, AWWA 2540, (mg/kg)	1137	1187
Resistivity, ASTM G 57, (ohm-cm)	1164	2134

Analyzed By: Trisha Campo
Trisha Campo
Chemist

SUPPORTING INFORMATION

UNIFIED SOIL CLASSIFICATION SYSTEM

Oakport Buildings ■ Oakland, Alameda, California

June 15, 2018 ■ Terracon Project No. ND175105

Terracon GeoReport

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]					Soil Classification	
					Group Symbol	Group Name [B]
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	Cu ≥ 4 and 1 ≤ Cc ≤ 3 [E]		GW	Well-graded gravel [F]
			Cu < 4 and/or 1 > Cc > 3 [E]		GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH		GM	Silty gravel [F, G, H]
			Fines classify as CL or CH		GC	Clayey gravel [F, G, H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	Cu ≥ 6 and 1 ≤ Cc ≤ 3 [E]		SW	Well-graded sand [I]
			Cu < 6 and/or 1 > Cc > 3 [E]		SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH		SM	Silty sand [G, H, I]
			Fines classify as CL or CH		SC	Clayey sand [G, H, I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots on or above "A"		CL	Lean clay [K, L, M]
			PI < 4 or plots below "A" line [J]		ML	Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay [K, L, M, N]
			Liquid limit - not dried			Organic silt [K, L, M, O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line		CH	Fat clay [K, L, M]
			PI plots below "A" line		MH	Elastic Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay [K, L, M, P]
			Liquid limit - not dried			Organic silt [K, L, M, Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

[E] $Cu = D_{60}/D_{10}$ $Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

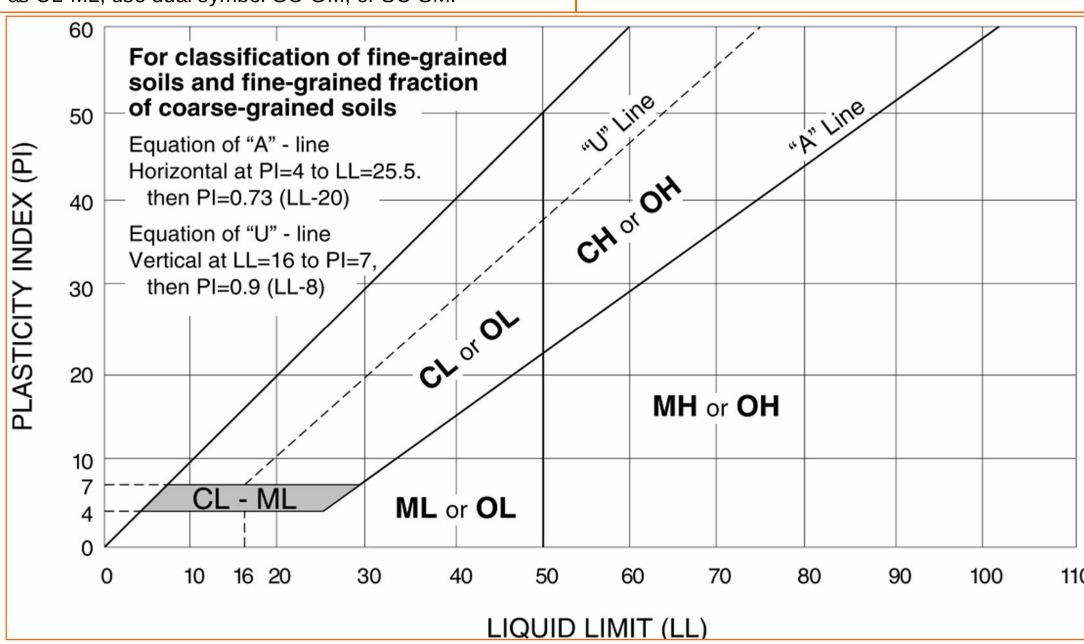
[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.



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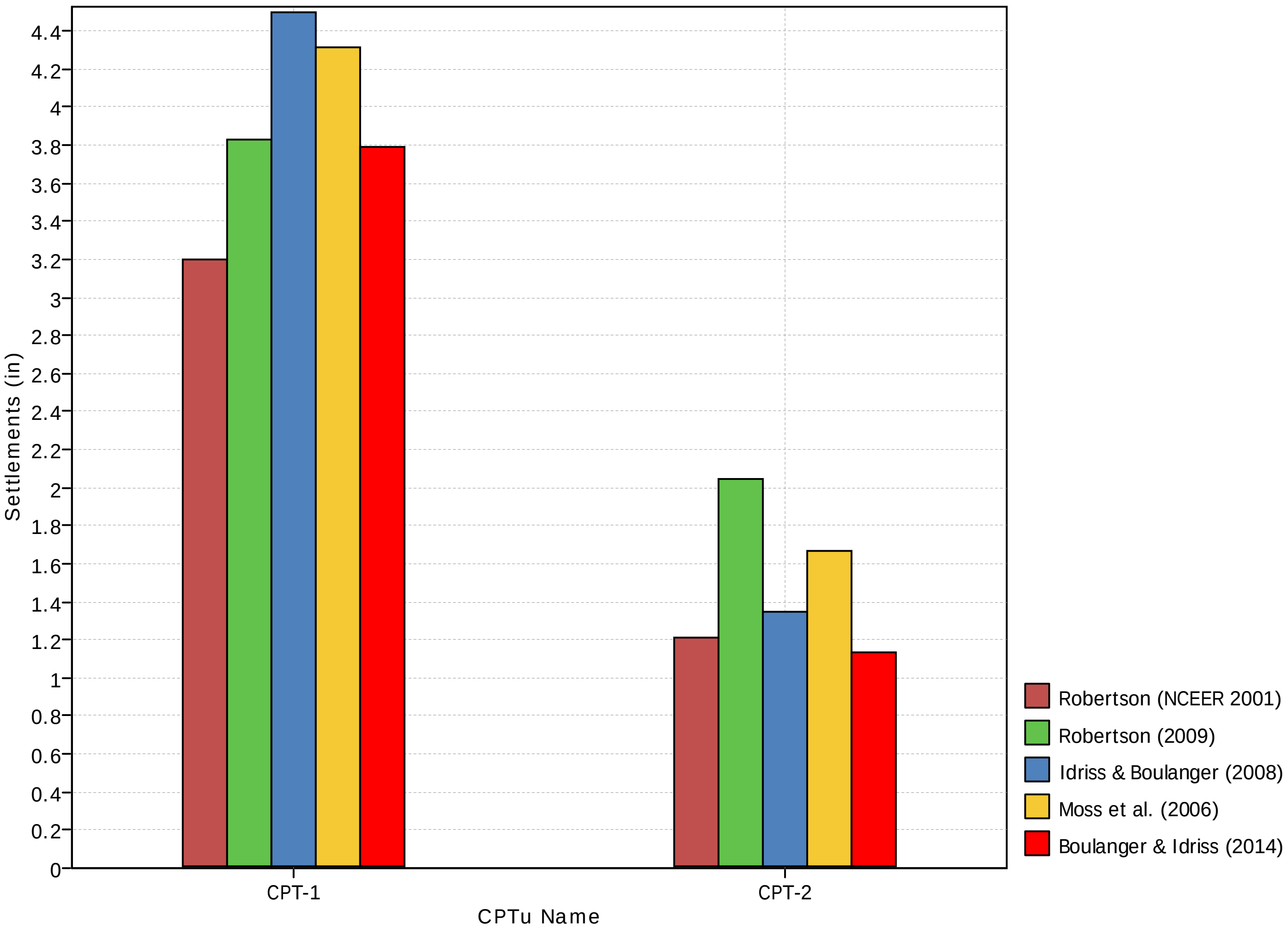
Concord, CA 94520
www.terracon.com

Overall Parametric Assessment Method



:: CPT main liquefaction parameters details ::

CPT Name	Earthquake Mag.	Earthquake Accel.	GWT in situ (ft)	GWT earthq. (ft)
CPT-1	6.76	0.64	3.00	3.00
CPT-2	6.76	0.64	3.00	3.00

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Concord, CA 94520
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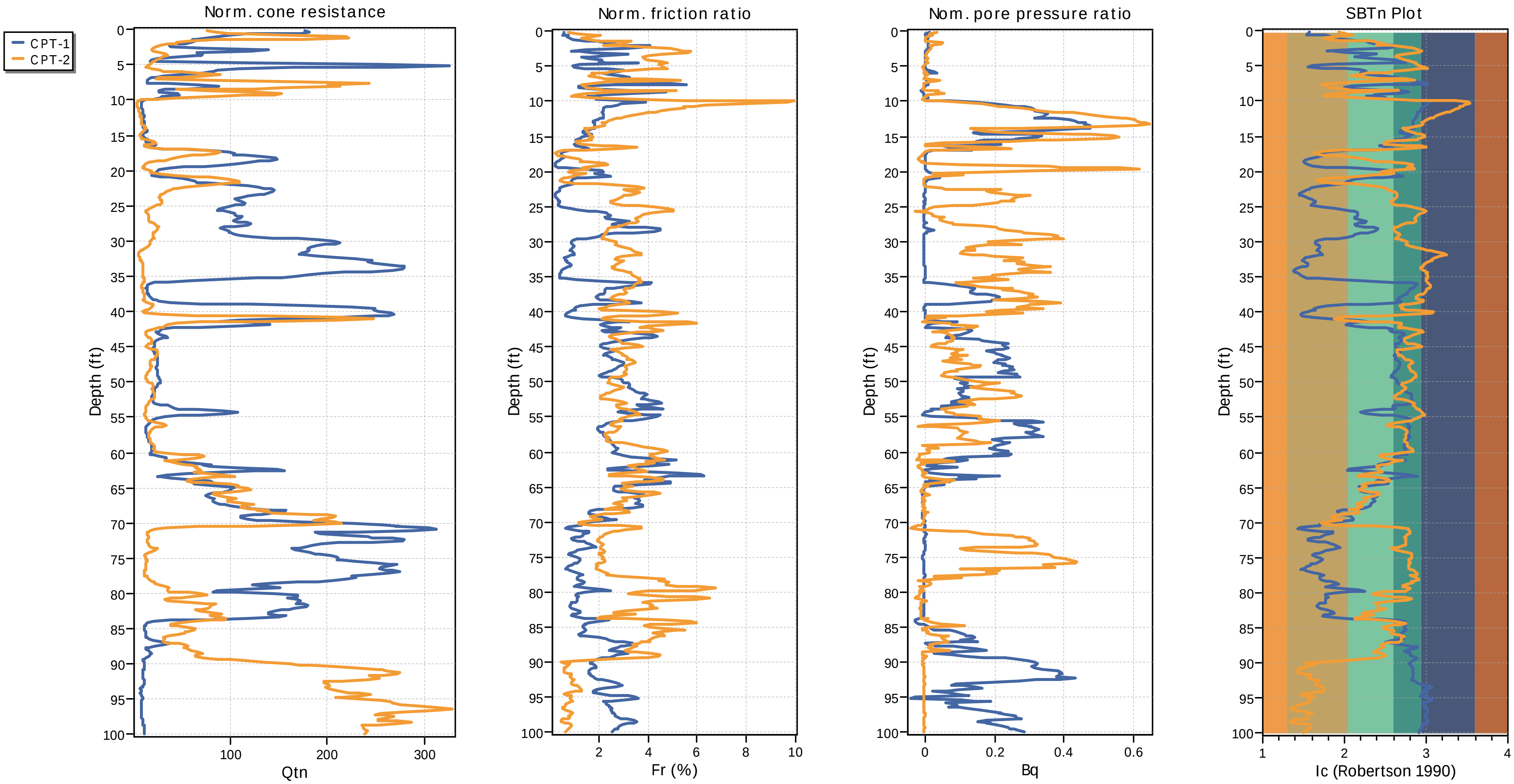
Project: Oakport

Overlay Normalized Plots



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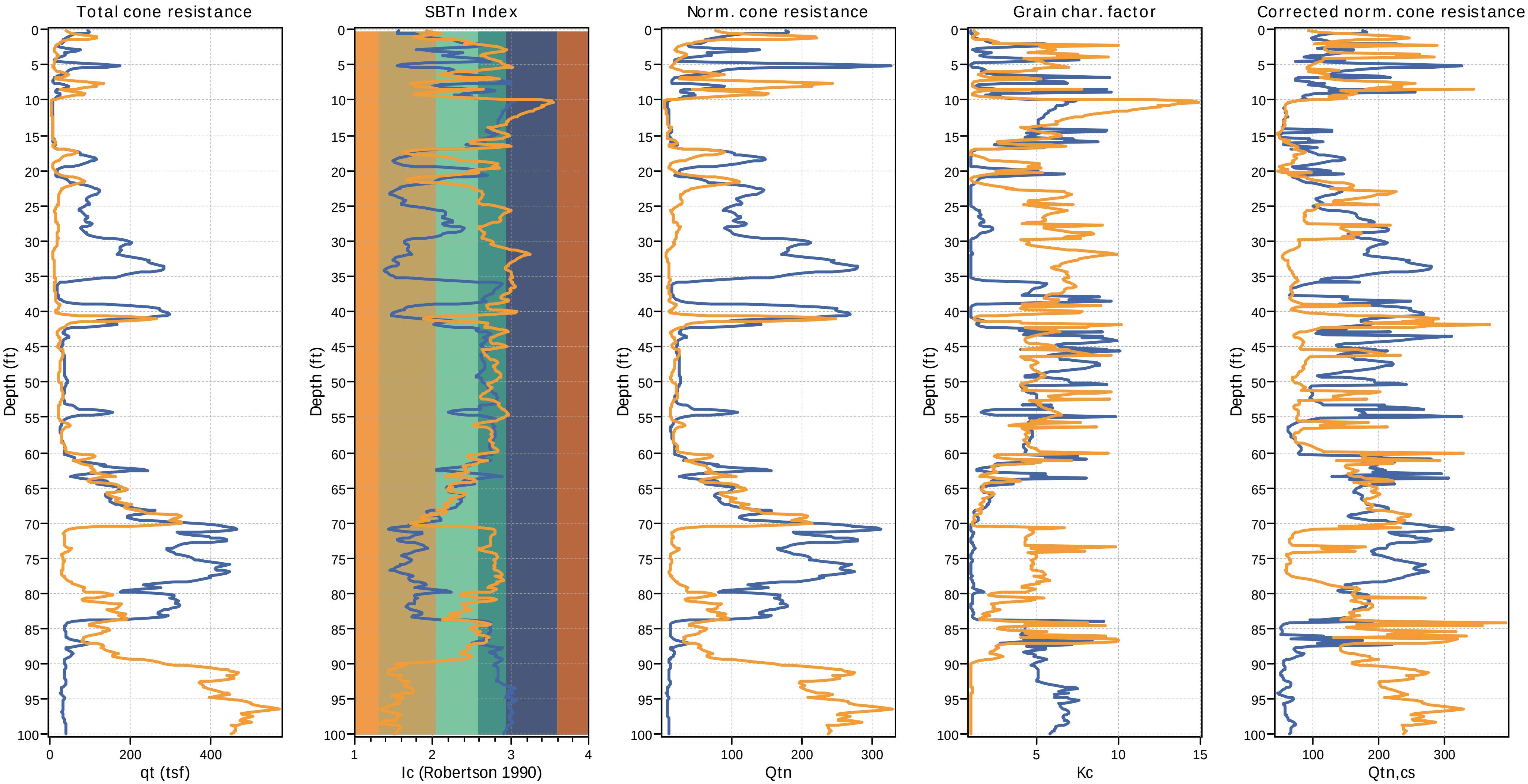
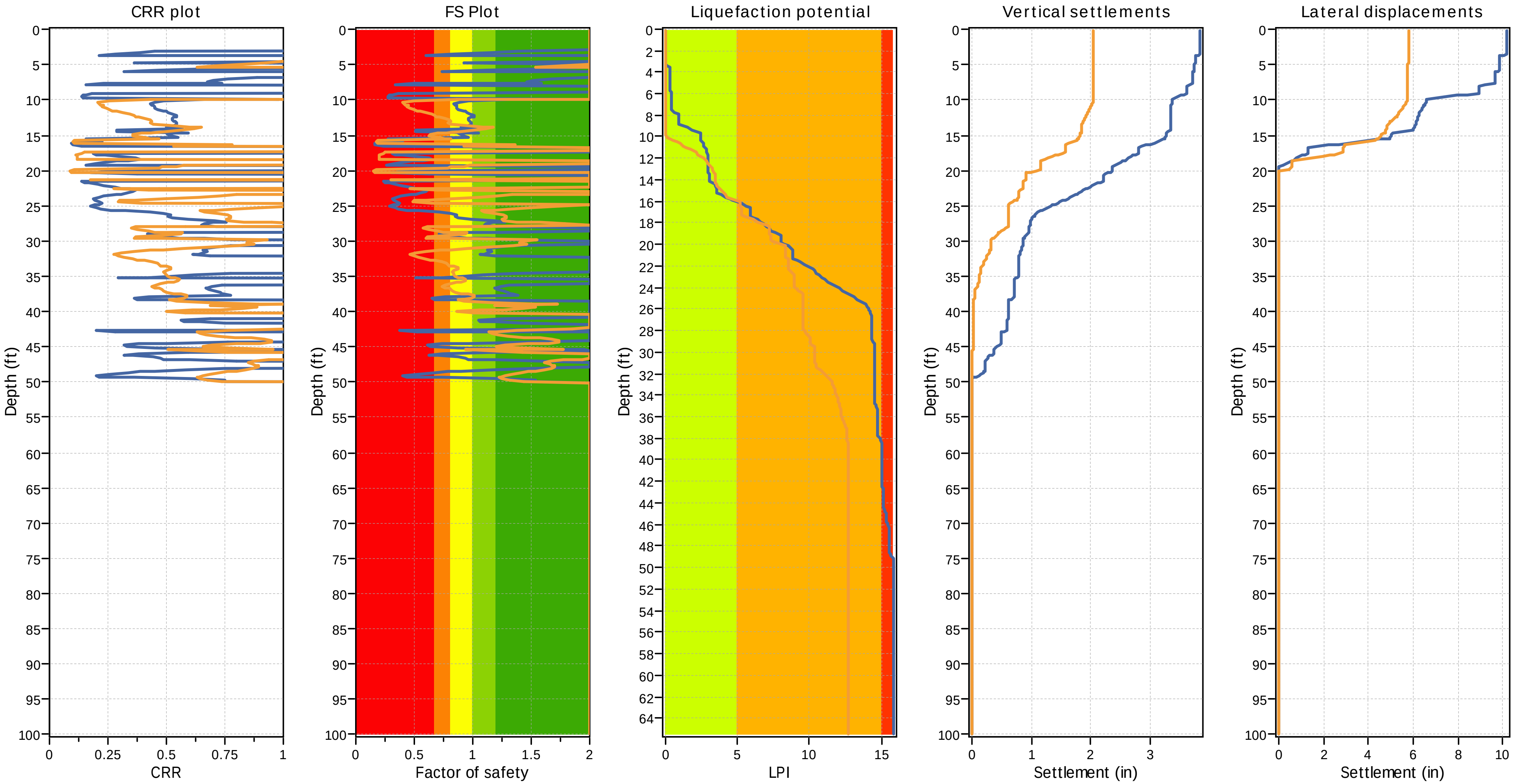
Project: Oakport

Overlay Intermediate Results



Project: Oakport

Overlay Cyclic Liquefaction Plots



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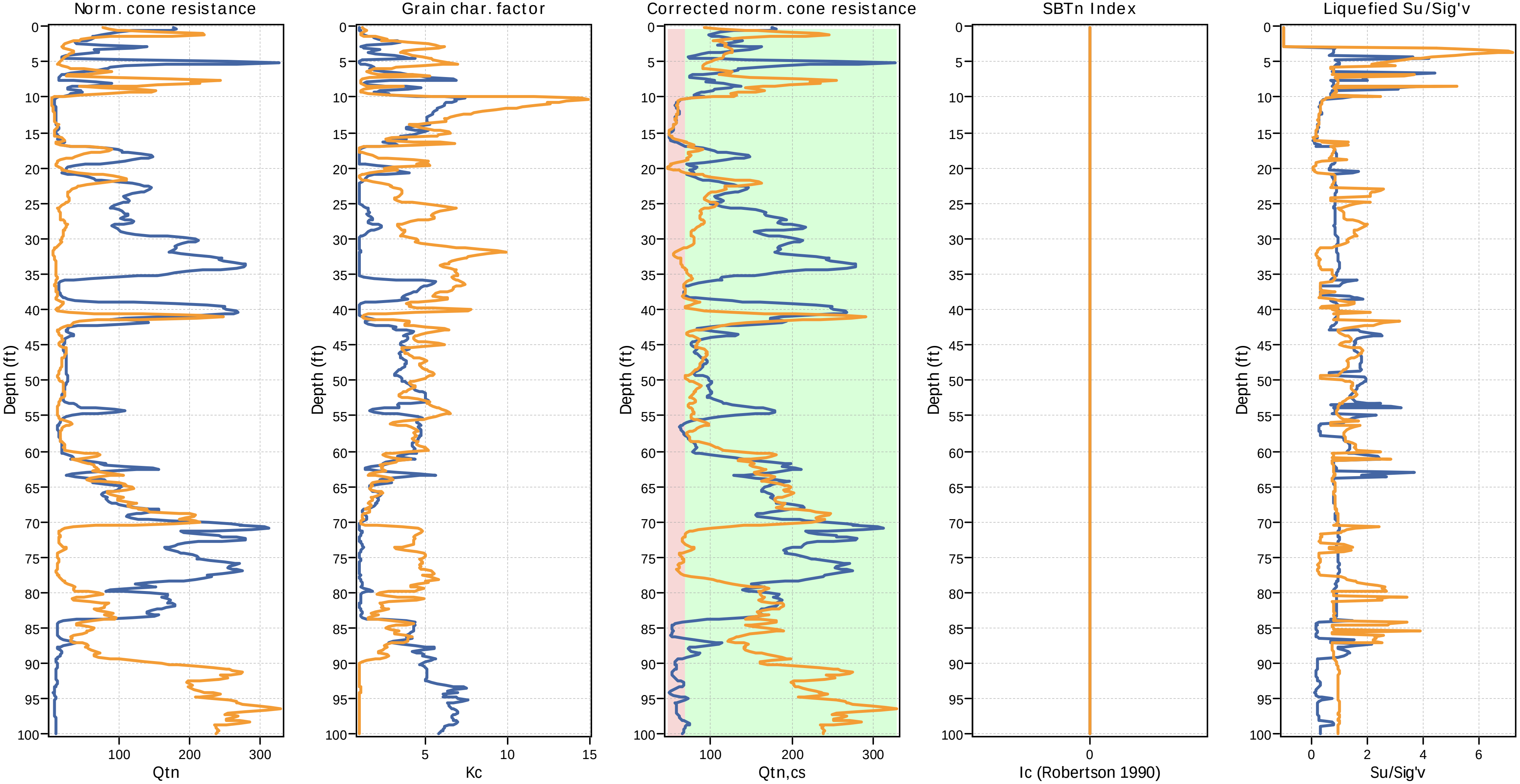
Project: Oakport

Overlay Strength Loss Plots

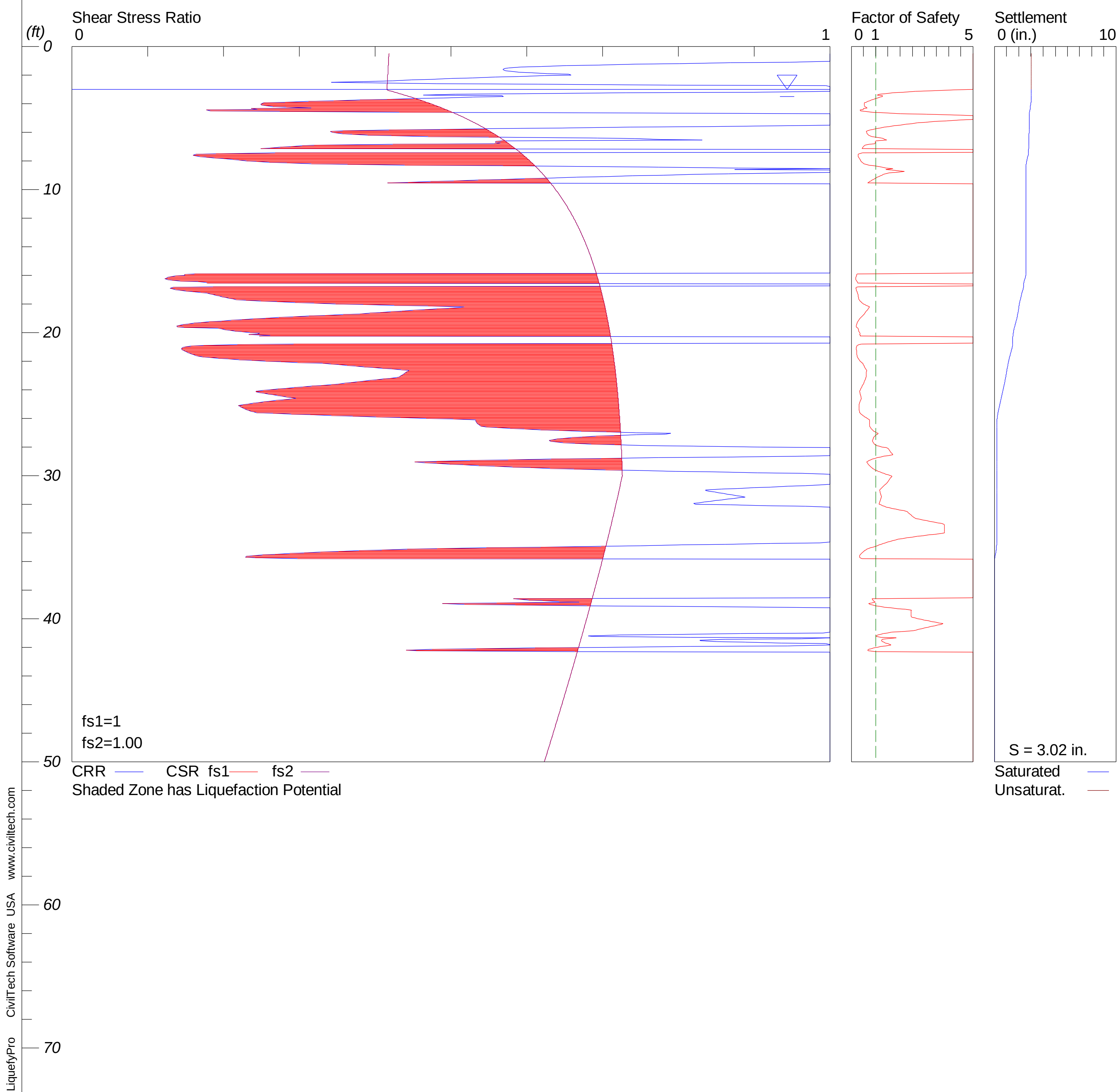


LIQUEFACTION ANALYSIS

Oakport Buildings

Hole No.=CPT-1 Water Depth=3 ft Surface Elev.=8

Magnitude=6.76
Acceleration=0.644g

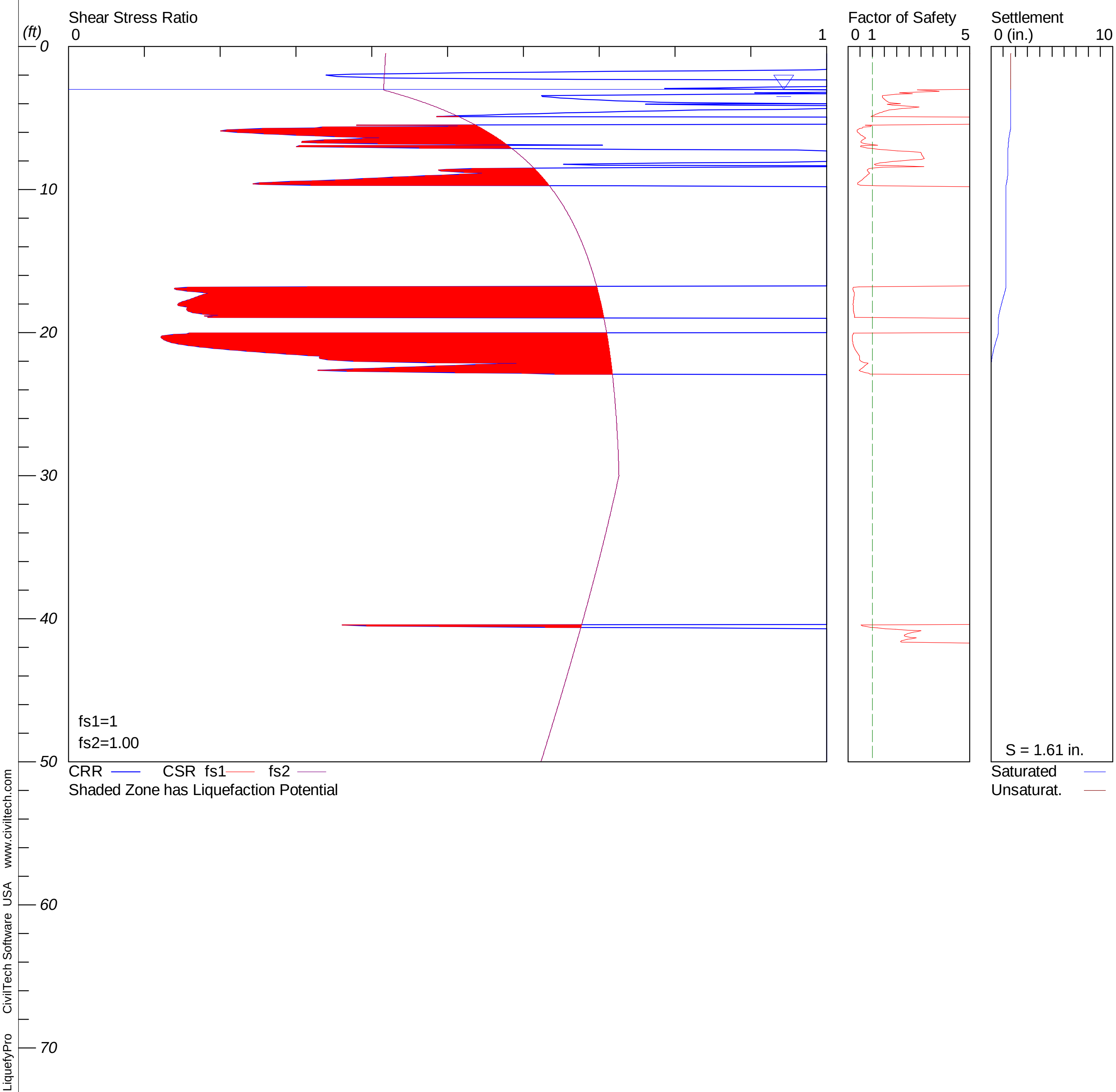


LIQUEFACTION ANALYSIS

Oakport Builldings

Hole No.=CPT-2 Water Depth=3 ft Surface Elev.=8

Magnitude=6.76
Acceleration=0.644g



Design Maps Detailed Report

ASCE 7-10 Standard (37.75546°N, 122.21202°W)

Site Class E – “Soft Clay Soil”, Risk Category I/II/III

Section 11.4.1 — Mapped Acceleration Parameters

Note: Ground motion values provided below are for the direction of maximum horizontal spectral response acceleration. They have been converted from corresponding geometric mean ground motions computed by the USGS by applying factors of 1.1 (to obtain S_S) and 1.3 (to obtain S_1). Maps in the 2010 ASCE-7 Standard are provided for Site Class B. Adjustments for other Site Classes are made, as needed, in Section 11.4.3.

From Figure 22-1 [1]	S_S = 1.856 g
From Figure 22-2 [2]	S_1 = 0.745 g

Section 11.4.2 — Site Class

The authority having jurisdiction (not the USGS), site-specific geotechnical data, and/or the default has classified the site as Site Class E, based on the site soil properties in accordance with Chapter 20.

Table 20.3–1 Site Classification

Site Class	$\bar{v}_S$	$\bar{N}$ or $\bar{N}_{ch}$	$\bar{s}_u$
A. Hard Rock	>5,000 ft/s	N/A	N/A
B. Rock	2,500 to 5,000 ft/s	N/A	N/A
C. Very dense soil and soft rock	1,200 to 2,500 ft/s	>50	>2,000 psf
D. Stiff Soil	600 to 1,200 ft/s	15 to 50	1,000 to 2,000 psf
E. Soft clay soil	<600 ft/s	<15	<1,000 psf
	Any profile with more than 10 ft of soil having the characteristics: • Plasticity index *PI* > 20, • Moisture content $w \geq 40\%$, and • Undrained shear strength $\bar{s}_u$ < 500 psf		
F. Soils requiring site response analysis in accordance with Section 21.1	See Section 20.3.1		

For SI: 1ft/s = 0.3048 m/s 1lb/ft² = 0.0479 kN/m²

Section 11.4.3 — Site Coefficients and Risk–Targeted Maximum Considered Earthquake (MCE_R) Spectral Response Acceleration Parameters

Table 11.4–1: Site Coefficient F_a

Site Class	Mapped MCE_R Spectral Response Acceleration Parameter at Short Period				
	$S_S \le 0.25$	$S_S = 0.50$	$S_S = 0.75$	$S_S = 1.00$	$S_S \ge 1.25$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
E	2.5	1.7	1.2	0.9	0.9
F	See Section 11.4.7 of ASCE 7				

Note: Use straight–line interpolation for intermediate values of S_S

For Site Class = E and S_S = 1.856 g, F_a = 0.900

Table 11.4–2: Site Coefficient F_v

Site Class	Mapped MCE_R Spectral Response Acceleration Parameter at 1–s Period				
	$S_1 \le 0.10$	$S_1 = 0.20$	$S_1 = 0.30$	$S_1 = 0.40$	$S_1 \ge 0.50$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.7	1.6	1.5	1.4	1.3
D	2.4	2.0	1.8	1.6	1.5
E	3.5	3.2	2.8	2.4	2.4
F	See Section 11.4.7 of ASCE 7				

Note: Use straight–line interpolation for intermediate values of S_1

For Site Class = E and S_1 = 0.745 g, F_v = 2.400

Equation (11.4–1):	$S_{MS} = F_aS_S = 0.900 \times 1.856 = 1.670$ g
Equation (11.4–2):	$S_{M1} = F_vS_1 = 2.400 \times 0.745 = 1.788$ g

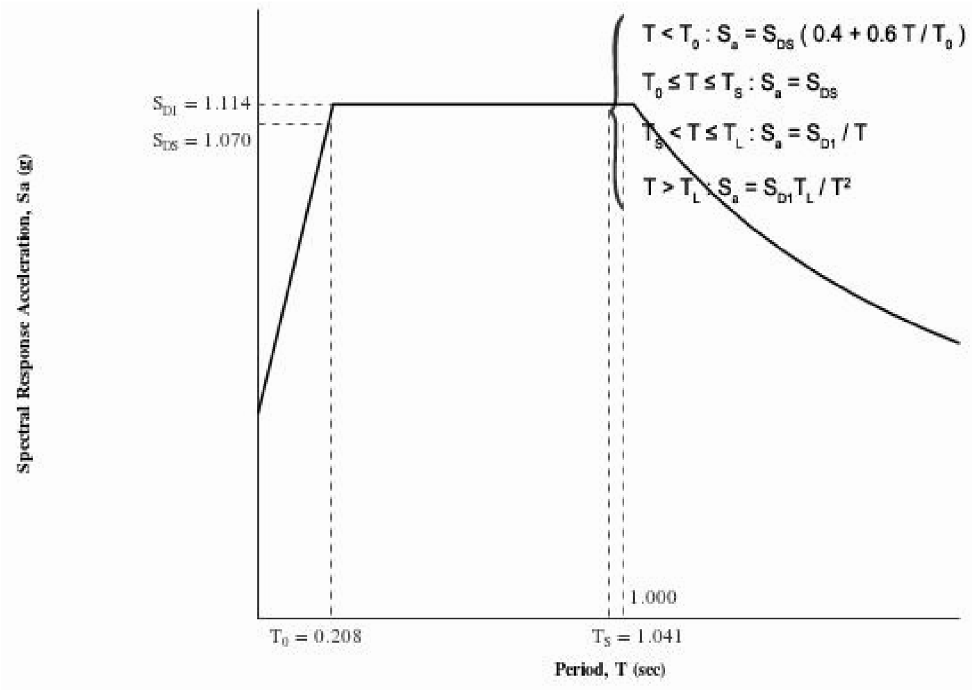
Section 11.4.4 — Design Spectral Acceleration Parameters

Equation (11.4–3):	$S_{DS} = ⅔\, S_{MS} = ⅔ \times 1.670 = 1.114$ g
Equation (11.4–4):	$S_{D1} = ⅔\, S_{M1} = ⅔ \times 1.788 = 1.192$ g

Section 11.4.5 — Design Response Spectrum

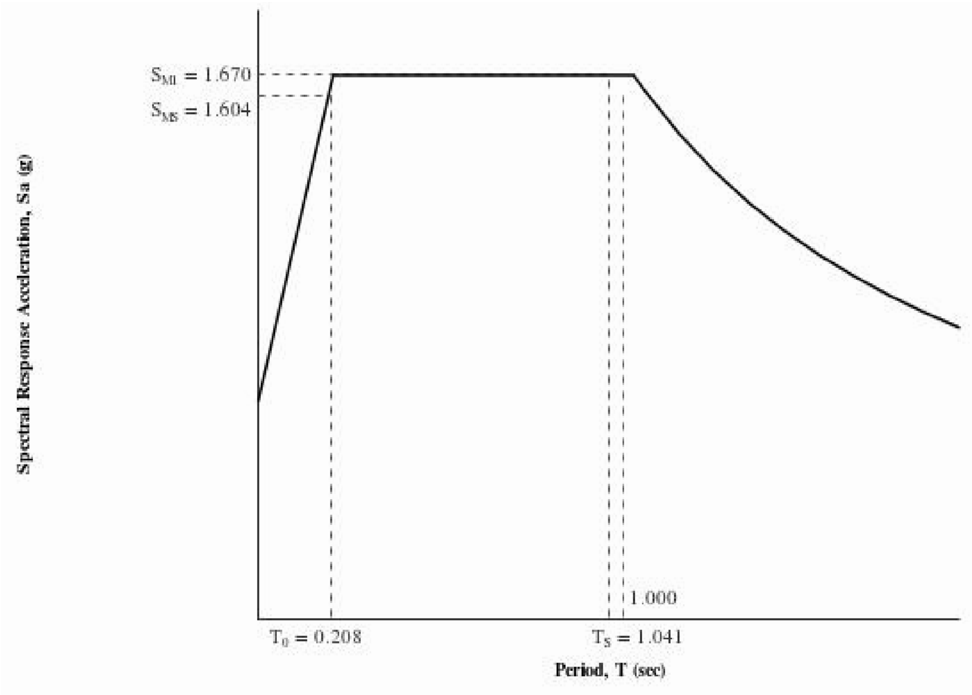
From Figure 22-12 [3]	T_L = 8 seconds

Figure 11.4–1: Design Response Spectrum



Section 11.4.6 — Risk-Targeted Maximum Considered Earthquake (MCE_R) Response Spectrum

The MCE_R Response Spectrum is determined by multiplying the design response spectrum above by 1.5.



Section 11.8.3 — Additional Geotechnical Investigation Report Requirements for Seismic Design Categories D through F

From Figure 22-7 [4] PGA = 0.715

Equation (11.8–1): $PGA_M = F_{PGA}PGA = 0.900 \times 0.715 = 0.644$ g

Table 11.8–1: Site Coefficient F_{PGA}

Site Class	Mapped MCE Geometric Mean Peak Ground Acceleration, PGA				
	PGA ≤ 0.10	PGA = 0.20	PGA = 0.30	PGA = 0.40	PGA ≥ 0.50
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
E	2.5	1.7	1.2	0.9	0.9
F	See Section 11.4.7 of ASCE 7				

Note: Use straight–line interpolation for intermediate values of PGA

For Site Class = E and PGA = 0.715 g, F_{PGA} = 0.900

Section 21.2.1.1 — Method 1 (from Chapter 21 – Site-Specific Ground Motion Procedures for Seismic Design)

From Figure 22-17 [5] C_{RS} = 1.033

From Figure 22-18 [6] C_{R1} = 1.008

Section 11.6 — Seismic Design Category

Table 11.6-1 Seismic Design Category Based on Short Period Response Acceleration Parameter

VALUE OF S_{DS}	RISK CATEGORY		
	I or II	III	IV
$S_{DS} < 0.167g$	A	A	A
$0.167g \leq S_{DS} < 0.33g$	B	B	C
$0.33g \leq S_{DS} < 0.50g$	C	C	D
$0.50g \leq S_{DS}$	D	D	D

For Risk Category = I and S_{DS} = 1.114 g, Seismic Design Category = D

Table 11.6-2 Seismic Design Category Based on 1-S Period Response Acceleration Parameter

VALUE OF S_{D1}	RISK CATEGORY		
	I or II	III	IV
$S_{D1} < 0.067g$	A	A	A
$0.067g \leq S_{D1} < 0.133g$	B	B	C
$0.133g \leq S_{D1} < 0.20g$	C	C	D
$0.20g \leq S_{D1}$	D	D	D

For Risk Category = I and S_{D1} = 1.192 g, Seismic Design Category = D

Note: When S_1 is greater than or equal to 0.75g, the Seismic Design Category is E for buildings in Risk Categories I, II, and III, and F for those in Risk Category IV, irrespective of the above.

Seismic Design Category ≡ "the more severe design category in accordance with Table 11.6-1 or 11.6-2" = D

Note: See Section 11.6 for alternative approaches to calculating Seismic Design Category.

References

1. *Figure 22-1*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-1.pdf
2. *Figure 22-2*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-2.pdf
3. *Figure 22-12*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-12.pdf
4. *Figure 22-7*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-7.pdf
5. *Figure 22-17*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-17.pdf
6. *Figure 22-18*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-18.pdf

Appendix M

ECAP Consistency Checklist

SupplyBank.org., May 2023

CITY OF OAKLAND

CITY OF OAKLAND
Equitable Climate Action Plan Consistency Checklist

250 Frank H. Ogawa Plaza, Suite 2114, Oakland, CA 94612-2031
Zoning Information: 510-238-3911
https://www.oaklandca.gov/topics/planning

The purpose of this Equitable Climate Action Plan Consistency Review Checklist is to determine, for purposes of compliance with the California Environmental Quality Act (CEQA), whether a development project complies with the City of Oakland Equitable Climate Action Plan (ECAP) and the City of Oakland's greenhouse gas (GHG) emissions reduction targets. CEQA Guidelines require the analysis of GHG emissions and potential climate change impacts from new development.

- If a development project completes this Checklist and can qualitatively demonstrate compliance with the Checklist items as part of the project's design, or alternatively, demonstrate to the City's satisfaction why the item is not applicable, then the project will be considered in compliance with the City's CEQA GHG Threshold of Significance.
- If a development project cannot meet all of the Checklist items, the project will alternatively need to demonstrate consistency with the ECAP by complying with the City of Oakland GHG Reduction Plan Condition of Approval.
- If the project cannot demonstrate consistency with the ECAP in either of those two ways, the City will consider the project to have a significant effect on the environment related to GHG emissions.

Application Submittal Requirements

1. The ECAP Consistency Checklist applies to all development projects needing a CEQA GHG emissions analysis, including a specific plan consistency analysis.
2. If required, the ECAP Consistency Review Checklist must be submitted concurrently with the City of Oakland Basic Application.

Application Information

Applicant's Name/Company: Benito Delgado-Olson / K to College DBA SupplyBank.org.

Property Address: 5601 Oakport Street

Assessor's Parcel Number: **41-3904-1-5, 41-3903-2-7 and 41-3903-2-8**

Phone Number: (510) 967-8978-

E-mail: Benito@supplybank.org

Checklist Item (Check the appropriate box and provide explanation for your answer).			
Transportation & Land Use			
1. Is the proposed project substantially consistent with the City's over-all goals for land use and urban form, and/or taking advantage of allowable density and/or floor area ratio (FAR) standards in the City's General Plan? (TLU1)	**Yes**	**No**	**N/A**
	Yes		
Please explain how the proposed project is substantially consistent with the City's General Plan with respect to density and FAR standards, land use, and urban form. The Project would develop a currently vacant and underutilized site for non-profit commercial (SupplyBank.org) and institutional (EBMUD) uses, consistent with the Project site's Business Mix General Plan land use designation. Pursuant to applicable zoning, the maximum non-residential FAR for the site is 4.0, whereas the Project seeks approval of a development at an FAR of only 0.46 within the Development Area. While this development intensity does not maximize the zoning allowance, it is fully consistent with zoning, and the lower FAR results in less intrusion on the adjacent marsh habitat.			
2. For developments in "Transit Accessible Areas" as defined in the Planning Code, would the project provide: i) less than half the maximum allowable parking, ii) the minimum allowable parking, or iii) take advantage of available parking reductions? (TLU1)	**Yes**	**No**	**N/A**
			N/A
Please explain how the proposed project meets this action item. The Project site is not located within a "Transit Accessible Area" as defined in the Planning Code. The Project site is not within one-half (1/2) mile of a BART Station, a BRT Station, or a designated rapid bus line. The Project is located about one mile from the Coliseum BART Station. The nearest bus stop to the Project site is on 66th Avenue at Coliseum Way, about 0.4 mile east of the Project site. This bus stop is served by AC Transit Line 98, which operates with 20-minute headways during the peak commute periods on weekdays.			
3. For projects including structured parking, would the structured parking be designed for future adaptation to other uses? (Examples include, but are not limited to: the use of speed ramps instead of sloped floors.). (TLU1)	**Yes**	**No**	**N/A**
			N/A
Please explain how the proposed project meets this action item. The Project does not propose to construct any structured parking at the site.			
4. For projects that ***are*** subject to a Transportation Demand Management Program, would the project include transit passes for employees and/or residents? (TLU1)	**Yes**	**No**	**N/A**
	Yes		
Please explain how the proposed project meets this action item. The Project's future tenants will be provided with free or reduced cost transit passes for employees to increase transit mode share. Additionally, the Project will include a privately funded shuttle that will loop between the Project's Office building and the Coliseum BART station, enabling full integration with local transit agencies (e.g. BART, AC Transit and Amtrak). Passes for the shuttle will be offered to individuals employed by SupplyBank.org, EBMUD, or any tenant of the Project, as well as visitors, free of charge during normal hours of operation.			

	Yes	No	N/A
5. For projects that are ***not*** subject to a Transportation Demand Management Program, would the project incorporate one or more of the optional Transportation Demand Management measures that reduce dependency on single-occupancy vehicles? (Examples include but are not limited to transit passes or subsidies to employees and/or residents; carpooling; vanpooling; or shuttle programs; on-site carshare program; guaranteed ride home programs) (TLU1 & TLU8)			N/A

Please explain how the proposed project meets this action item.

The Project is subject to a Transportation Demand Management Program (see Required SCA's below)

	Yes	No	N/A
6. Does the project comply with the Plug-In Electric Vehicle (PEV) Charging Infrastructure requirements (Chapter 15.04 of the Oakland Municipal Code), if applicable? (TLU2 & TLU-5)	Yes		

Please explain how the proposed project meets this action item.

The Project will comply with PEV Charging Infrastructure requirements of the Oakland Municipal Code, and the required EV chargers will be provided as part of the Project.

	Yes	No	N/A
7. Would the project reduce or prevent the direct displacement of residents and essential businesses? (For residential projects, would the project comply with SB 330, if applicable? For projects that demolish an existing commercial space, would the project include comparable square footage of neighborhood serving commercial floor space.) (TLU3)	Yes		

Please explain how the proposed project meets this action item.

The Project's proposed Development Area is a vacant site with no internal improvements. Occasionally, EBMUD permits this site to be used for seasonal outdoor use and temporary overflow parking, but generally it remains vacant most of the time. The Project's proposed development within the Development Area would not directly or indirectly displace residents or essential businesses.

The Northerly Area of the Project site is actively used by EBMUD as the site of the Oakport Wet Weather Treatment Facility (Oakport WWF) and construction materials storage. Development of the Project includes relocation of certain of these EBMUD construction materials storage uses, but would not directly or indirectly displace residents or essential businesses.

	Yes	No	N/A
8. Would the project prioritize sidewalk and curb space consistent with the City's adopted Bike and Pedestrian Plans? (The project should not prevent the City's Bike and Pedestrian Plans from being implemented. For example, do not install a garage entrance where a planned bike path would be unless otherwise infeasible due to Planning Code requirements, limited frontage or other constraints.) (TLU7)	Yes		

Please explain how the proposed project meets this action item.

The Project will prioritize bike and pedestrian conveyance in support of the City of Oakland's Bike and Pedestrian Plans. The Project's shuttle between the Project and the Coliseum BART station will provide a reliable option to access the Bay Trail directly from the shuttle stop at the Project. Bike storage lockers and on-site bicycle maintenance station(s) are planned as part of the development and the interface between the Project and the Bay Trail.

Buildings

	Yes	No	N/A
9. Does the project not create any new natural gas connections/hook-ups? (B1 & B2)	Yes		

Please explain how the proposed project meets this action item.

The Project is proposed with all electric power, and no new natural gas connections or hook-ups are proposed.

	Yes	No	N/A
10. Does the project comply with the City of Oakland Green Building Ordinance (Chapter 18.02 of the Oakland Municipal Code), if applicable? (B4)	Yes		

Please explain how the proposed project meets this action item.

The Project will meet the energy performance and other standards of the City's Green Building Ordinance

	Yes	No	N/A
11. For retrofits of City-owned or City-controlled buildings: Would the project be all-electric, eliminate gas infrastructure from the building, and integrate energy storage wherever technically feasible and appropriate? (B5)			N/A

Please explain how the proposed project meets this action item.

The Project is not a retrofit of City-owned or City-controlled buildings.

Material Consumption & Waste			
12. Would the project reduce demolition waste from construction and renovation and facilitate material reuse in compliance with the Construction Demolition Ordinance (Chapter 15.34 of the Oakland Municipal Code)? (MCW6)	**Yes**	**No**	**N/A**
	Yes		
Please explain how the proposed project meets this action item. The Project will comply with the Construction Demolition Ordinance by requiring the Project contractor to reduce demolition waste and facilitates material reuse as required.			

City Leadership			
13. For City projects: Have opportunities to eliminate/minimize fossil fuel dependency been analyzed in project design and construction? (CL2)	**Yes**	**No**	**N/A**
			N/A
Please explain how the proposed project meets this action item. The Project is not a City project, it is a private commercial development project with additional improvements for a private utility service (EBMUD)			

Adaptation			
14. For new projects in the Designated Very High Wildfire Severity Zone: Would the project incorporate wildfire safety requirements such creation of defensible space around the house, pruning, clearing and removal of vegetation, replacement of fire resistant plants, as required in the Vegetation Management Plan? (A4)	**Yes**	**No**	**N/A**
			N/A
Please explain how the proposed project meets this action item. The Project site is well outside of any areas classified as a Very High Fire Hazard Severity Zone, which are identified throughout the East Bay Hills and more than 3 miles east of the Project site			

Carbon Removal			
15. Would the project replace a greater number of trees than will be removed in compliance with the Tree Preservation Ordinance (Chapter 12.36 of the Oakland Municipal Code) and Planning Code if applicable and feasible given competing site constraints? (CR-2)	**Yes**	**No**	**N/A**
	Yes		
Please explain how the proposed project meets this action item. Based on the Tree Survey conducted for the Project, the Development Area includes six existing trees that are proposed to be removed; 1 eucalyptus, 2 date palms and 3 olive trees. All of the other vegetation along the Project site's westerly boundary (adjacent to Damon Marsh) would remain. Other than the eucalyptus tree, removal of the other 5 olive and date palm trees require approval of a Tree Removal Permit, but none of these trees are native trees that would require replacement plantings. However, the Project's proposed Landscape Plan includes 58 new trees along Oakport Street frontage, internal parking lot planting islands, and additional trees along the Project's westerly boundary near Damon Marsh. The			
16. Does the project comply with the Creek Protection, Stormwater Management and Discharge Control Ordinance (Chapter 13.16 of the Oakland Municipal Code), as applicable? (CR-3)	**Yes**	**No**	**N/A**
	Yes		
Please explain how the proposed project meets this action item. A Creek Protection Plan will be prepared for City approval, to be submitted to the City at the time of site improvement applications. The Project will implement the Creek Protection Plan and will 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 Oakland Estuary waterway.			

I understand that answering ***yes*** to all of these questions, means that the project ***is in compliance with*** the City's Energy and Climate Action Plan as adopted on to July 28, 2020 and requires that staff apply the Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist Condition of Approval as adopted by the Planning Commission on December 16, 2020 and all Checklist items must be incorporated into the project

I understand that answering ***no*** to any of these questions, means that the project ***is not in compliance*** with the City's Energy and Climate Action Plan as adopted on to July 28, 2020 and requires that staff apply the Greenhouse Gas (GHG) Reduction Plan Condition of Approval as adopted by the Planning Commission on December 16, 2020 which will require that the applicant prepare a quantitative GHG analysis and GHG Reduction Plan for staff's review and approval. The GHG Reduction Plan and all GHG Reduction measures shall be incorporated into the project and implemented during construction and after construction for the life of the project.

DocuSigned by:

Benito Delgado-Olson

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Name and Signature of Preparer

5/25/2023

Date

Appendix N

<u>Phase I Environmental Site Assessment</u>

Terracon Consultants, Inc., May 2, 2018

Phase I Environmental Site Assessment

Approximately 16.4-Acre Parcel

5601 and 5801 Oakport Street

Oakland, Alameda County, California

May 2, 2018

Terracon Project No. ND177017

Prepared for:
SupplyBank.Org
Oakland, California

Prepared by:
Terracon Consultants, Inc.
Sacramento, California

May 2, 2018

SupplyBank.Org
7730 Pardee Lane
Oakland, CA 94621

Attn: Mr. Benito Delgado-Olson
P: (510) 569-5862
E: benito@supplybank.org

Re: Phase I Environmental Site Assessment
Approximately 16.4-Acre Parcel
5601 and 5801 Oakport Street
Oakland, Alameda County, California
Terracon Project No. ND177017

Dear Mr. Delgado-Olson:

Terracon Consultants, Inc. (Terracon) is pleased to submit the enclosed Phase I Environmental Site Assessment (ESA) report for the above-referenced site. This assessment was performed in accordance with Terracon Proposal No. PND177017 dated September 26, 2017.

We appreciate the opportunity to be of service to you on this project. In addition to Phase I services, our professionals provide geotechnical, environmental, construction materials, and facilities services on a wide variety of projects locally, regionally and nationally. For more detailed information on all of Terracon's services please visit our website at www.terracon.com. If there are any questions regarding this report or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,
Terracon Consultants, Inc.

DRAFT	DRAFT	DRAFT
Daniel P. Stringer Staff Engineer	Kristin A. Stout Project Manager	Carl A. Parten Principal

Attachments

TABLE OF CONTENTS

APPENDICES

EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment (ESA) was performed in accordance with Terracon Proposal No. PND177017 dated September 26, 2017, and was conducted consistent with the procedures included in ASTM E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The ESA was conducted under the supervision or responsible charge of Kristin Stout, Environmental Professional. Daniel P. Stringer performed the site reconnaissance on March 30, 2018.

Findings and Opinions

A summary of findings is provided below. It should be recognized that details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

Site Description and Use

The site is located at 5801 Oakport Street (Assessor's Parcel Number [APN] 41-3904-1-5) and the southern portion of 5601 Oakport Street (APN 41-3903-2-8) Oakland, Alameda County, California and consists of approximately 16.4 acres of primarily vacant land with an asphalt-paved area on the northeastern portion of the site. During the site reconnaissance, the northern portion of the site was observed operating as East Bay Municipal Utility District (EBMUD) backfill storage yard and a pipe distributer. Other site features include a gated construction area, barbed wire fencing along the northern and eastern boundaries, and an asphalt-paved area.

Historical Information

Based on a review of the historical information, the site consisted of undeveloped marshland from as early as 1897 through 1949, receiving fill dirt from as early as 1958 to at least 1963. Since approximately 1968 the site has remained as undeveloped land with a traveling carnival using the land occasionally for business, while the northern portion of the site was utilized as a pipe supply storage yard. Adjoining properties were primarily undeveloped marshland from at least 1987 through the late 1940's with commercial development in the late 1950s through present.

The fill dirt represents a REC to the site.

Previous Reports

EBMUD provided Terracon with a report titled Oakport Groundwater Storage Pilot Project, Volume 1 – Technical Memorandum No. 3, Phase 2 Field Investigation Report dated June 1999. This report was prepared to assess the hydrogeologic and technical feasibility for groundwater storage at the site and adjoining property to the north. Thirteen groundwater wells were installed as a part of the project and nine groundwater monitoring wells were reportedly located on the site at the time of the investigation. According to Mr. Kevin Minn, representative of EBMUD, only three groundwater monitoring wells remain on the northwestern corner of the site:

- S2-MWS1 screened at a depth of 50-80 feet bgs (shallow aquifer)
- S2-MWS2 screened at a depth of 140-180 feet bgs (middle aquifer)
- S2-MWD1 screened at a depth of 480-550 feet bgs (deep aquifer)

The groundwater samples collected from the monitoring wells were analyzed for pesticides and polychlorinated biphenyls (PCBs) by EPA Method 608, aromatic hydrocarbons by EPA Method 610, volatile organic compounds (VOCs) by EPA Method 624, semivolatile organic compounds (SVOCS) by EPA Method 625, general minerals, and metals. Former monitoring wells S2-TW-1 and S2-MWM-2 located onsite detected trichloroethane (TCE) reportedly at concentrations ranging from 47 micrograms per liter (µg/L) to 66 µg/L, which is above the San Francisco Bay Regional Water Quality Control Board (RWQCB) Tier 1 Environmental Screening Levels (ESLs) of 3 µg/L. The monitoring wells were reportedly screened in the middle aquifer zone. The report noted that a source of the TCE had not been identified. The detection of TCE concentrations in groundwater beneath the site represents an REC to the site and potential VEC.

Records Review

Selected federal and state environmental regulatory databases as well as responses from state and local regulatory agencies were reviewed. The site (address 5601 Oakport) was identified in the database report.

Oakport Materials / EBMUD Oakport Storage / Giacomazzi / Oakport Storage Center (5601 Oakport Street)

EBMUD – Oakport Wet Weather Facility (5597 Oakport Street)

The listed facilities include the northern portion of the site and adjoining property to the north. The facilities and a portion of the site are listed on the Statewide Environmental Evaluation and Planning System Underground Storage Tank (SWEEPS UST), Historic UST (HIST UST), California Facility Inventory (CA FID UST), RCRA – Small Quantity Generators (RCRA-SQG), the Aboveground Storage Tank (AST), Leaking UST (LUST), Alameda County Contaminated Sites (Alameda County CS), California Hazardous Materials Incident Report System (CHMIRS), and the Hazardous Waste & Substance Site List (HIST CORTESE) databases. Based on a review of Alameda County Department of Environmental Health (ACDEH) records, the addresses of 5597, 5601, and 5779 Oakport Road are associated with the EBMUD property; therefore, are discussed together. Based on a review of the RCRA-SQG database listing, the site is registered as a small quantity hazardous waste generator on February 27, 2004 with no reported violations. Hazardous waste streams generated by the site are reported under the RCRA-SQG database as ignitable wastes, corrosive wastes, and lead. The CHMIRS listings are related to the wet weather station located approximately 975 feet north of the site. Based on a review of the SWEEPS UST and CA FID UST database listings, the facility reportedly operated a 7,700-gallon leaded gasoline UST and one 2,000-gallon diesel UST. Two 10,000-gallon, one 1,000-gallon, and one 20-gallon USTs are listed as having stored product.

Based on records provided by the ACDEH the northern adjoining property had one 8,000-gallon unleaded gasoline UST (also reported in the files as 7,500-gallon and 7,700-gallon), one 2,000-gallon diesel UST, and one 1,000-gallon UST contents unknown. Per the ACDEH records, these USTs are located approximately 975 feet north of the site. These tanks were removed in 1988 and issued closure in 1996. During tank removal, groundwater was reported at depths of approximately 4.26 to 8.74 feet bgs and flowing easterly. Due to the case closure status and distance from the site, these USTs are not considered a REC to the site.

One 10,000-gallon diesel UST and one 10,000-gallon gasoline UST was removed in June 1987 and according to the map provided in the ACDEH records, the UST was located south of an unidentified building. According to electronic correspondence with Mr. Minn, these former USTs were located approximately 415 feet northwest of the site. Case closure documentation was not found. Additionally, Mr. Minn also indicated that two ASTs are located 400 feet northwest of the site. Based on the reported distance of the database listings to the site, the facilities located at 5601 and 5597 Oakport Street do not appear to represent a REC to the site.

Oakport Center (5885 Oakport Street)
The above listed facility, western adjoining property and topographically down-gradient relative to the site, is listed on the AST database. The facility reportedly operated a 2,500-gallon AST under the owner name of EBMUD. Based on the facility's absence of hazardous release incidents and topographic down-gradient position relative to the site, the Oakport Center facility does not represent a REC to the site.

The remaining facilities listed in the database report do not appear to represent RECs to the site at this time, based upon regulatory status, apparent topographic gradient, and/or distance from the site.

Site Reconnaissance
During the site reconnaissance, an approximately 12 cubic yard pile of scrap wood debris, minor amounts of trash, a slurry disposal area, approximately 410 cubic yards of fill piles, an asphalt pile, a large demolition debris pile, two shallow muddy ponds, two standpipes (with three nested monitoring wells), and were observed. The slurry disposal area, monitoring wells and undocumented stockpile represent a REC to the site.

Adjoining Properties
The properties to the adjoining north of the site consist of a EBMUD backfill storage yard and steel storage containers, and an unmarked pipe distributer (5799 Oakport Street). The properties to the adjoining east of the site consist of Oakport Street, followed by Interstate 880, followed by Colombo (580 Julie Ann Way), vacant land (6195 Coliseum Way), unidentified building (6201 Coliseum Way), and East Bay Glass (515 Independent Road). The properties to the adjoining

south of the site consist of Oakport Street, followed by an empty flat gravel lot. The properties to the adjoining west of the site consist of a bike trail to San Leandro Bay, a dirt and gravel storage yard, and a sport field.

Significant Data Gaps

Significant data gaps were not identified.

Conclusions

We have performed a Phase I ESA consistent with the procedures included in ASTM Practice E 1527-13 at 5601 and 5801 Oakport Street, Oakland, Alameda County, California, the site. The following RECs or Controlled RECs (CREC) were identified in connection with the site:

- **Artificial Fill On-Site**: The unknown source of the artificial fill onsite represents an REC to the site.
- **Undocumented Soil and Debris Stockpiles**: The unknown source of the soil stockpiles represents an REC to the site.
- **Slurry Disposal Area**: The practice of dumping slurry from unknown saw cut areas of asphalt and concrete represent an REC to the site.
- **TCE in Groundwater:** The detected concentrations of TCE in groundwater beneath the site represents an REC and potential VEC to the site.

Recommendations

Based on the scope of services, limitations, and conclusions of this assessment, Terracon recommends additional investigation to evaluate potential impacts from the identified RECs and significant data gaps.

1.0 INTRODUCTION

1.1 Site Description

Site Name	Approximately 16.4-Acre Parcel
Site Location/Address	Assessor's Parcel Number [APN] 41-3903-2-8 and the southern portion of 5601 Oakport Street (APN 41-3904-1-5), Oakland, Alameda County, California
Land Area	Approximately 16.4-acres.
Site Improvements	The majority of the site is undeveloped land. The remaining areas of the site consist of a pipe supply storage yard and a gated construction area occupied by East Bay Municipal Utility District (EBMUD), an asphalt-paved area, a gravel walkway, and barbed wire fencing.
Anticipated Future Site Use	Redevelopment for commercial use.
Purpose of the ESA	Acquiring the site.

The location of the site is depicted on Exhibit 1 of Appendix A, which was reproduced from a portion of the USGS 7.5-minute series topographic map. The site and adjoining properties are depicted on the Site Diagram, which is included as Exhibit 2 of Appendix A. Acronyms and terms used in this report are described in Appendix F.

1.2 Scope of Services

This Phase I ESA was performed in accordance with Terracon Proposal No. PND177017 dated September 26, 2017, and was conducted consistent with the procedures included in ASTM E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of this ESA was to assist the client in developing information to identify RECs in connection with the site as reflected by the scope of this report. This purpose was undertaken through user-provided information, a regulatory database review, historical and physical records review, interviews, including local government inquiries, as applicable, and a visual noninvasive reconnaissance of the site and adjoining properties. Limitations, ASTM deviations, and significant data gaps (if identified) are noted in the applicable sections of the report.

ASTM E1527-13 contains a new definition of "migrate/migration," which refers to "the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface." By including this explicit reference to migration in ASTM E1527-13, the Standard clarifies that the potential for vapor migration should be addressed as part of a Phase I ESA. This Phase I ESA has considered vapor migration in evaluation of RECs associated with the site.

1.3 Standard of Care

This ESA was performed in accordance with generally accepted practices of this profession, undertaken in similar studies at the same time and in the same geographical area. We have endeavored to meet this standard of care, but may be limited by conditions encountered during performance, a client-driven scope of work, or inability to review information not received by the report date. Where appropriate, these limitations are discussed in the text of the report, and an evaluation of their significance with respect to our findings has been conducted.

Phase I ESAs, such as the one performed at this site, are of limited scope, are noninvasive, and cannot eliminate the potential that hazardous, toxic, or petroleum substances are present or have been released at the site beyond what is identified by the limited scope of this ESA. In conducting the limited scope of services described herein, certain sources of information and public records were not reviewed. It should be recognized that environmental concerns may be documented in public records that were not reviewed. No ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs. No warranties, express or implied, are intended or made. The limitations herein must be considered when the user of this report formulates opinions as to risks associated with the site or otherwise uses the report for any other purpose. These risks may be further evaluated – but not eliminated – through additional research or assessment. We will, upon request, advise you of additional research or assessment options that may be available and associated costs.

1.4 Additional Scope Limitations, ASTM Deviations and Data Gaps

Based upon the agreed-on scope of services, this ESA did not include subsurface or other invasive assessments, vapor intrusion assessments or indoor air quality assessments (i.e. evaluation of the presence of vapors within a building structure), business environmental risk evaluations, or other services not particularly identified and discussed herein. Credentials of the company (Statement of Qualifications) have not been included in this report but are available upon request. Pertinent documents are referred to in the text of this report, and a separate reference section has not been included. Reasonable attempts were made to obtain information within the scope and time constraints set forth by the client; however, in some instances, information requested is not, or was not, received by the issuance date of the report. Information obtained for this ESA was received from several sources that we believe to be reliable; nonetheless, the authenticity or reliability of these sources cannot and is not warranted hereunder. This ESA was further limited by the following:

An evaluation of the significance of limitations and missing information with respect to our findings has been conducted, and where appropriate, significant data gaps are identified and discussed in the text of the report. However, it should be recognized that an evaluation of significant data gaps is based on the information available at the time of report issuance, and an evaluation of information received after the report issuance date may result in an alteration of our conclusions, recommendations, or opinions. We have no obligation to provide information obtained or discovered by us after the issuance date of the report, or to perform any additional services, regardless of whether the information would affect any conclusions, recommendations, or opinions in the report. This disclaimer specifically applies to any information that has not been provided by the client.

This report represents our service to you as of the report date and constitutes our final document; its text may not be altered after final issuance. Findings in this report are based upon the site's current utilization, information derived from the most recent reconnaissance and from other activities described herein; such information is subject to change. Certain indicators of the presence of hazardous substances or petroleum products may have been latent, inaccessible, unobservable, or not present during the most recent reconnaissance and may subsequently become observable (such as after site renovation or development). Further, these services are not to be construed as legal interpretation or advice.

1.5 Reliance

This ESA report is prepared for the exclusive use and reliance of SupplyBank.Org. Use or reliance by any other party is prohibited without the written authorization of SupplyBank.Org and Terracon Consultants, Inc. (Terracon).

Reliance on the ESA by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the proposal, ESA report, and Terracon's Agreement for Services. The limitation of liability defined in the Agreement for Services is the aggregate limit of Terracon's liability to the client and all relying parties.

Continued viability of this report is subject to ASTM E1527-13 Sections 4.6 and 4.8. If the ESA will be used by a different user (third party) than the user for whom the ESA was originally prepared, the third party must also satisfy the user's responsibilities in Section 6 of ASTM E1527-13.

1.6 Client Provided Information

Prior to the site visit, Ms. Chris Emmons, Supply Bank, client's representative, was asked to provide the following user questionnaire information as described in ASTM E1527-13 Section 6.

Client Questionnaire Responses

Client Questionnaire Item	Client Did Not Respond	Client's Response	
		Yes	No
Specialized Knowledge or Experience that is material to a REC in connection with the site.			X

Client Questionnaire Item	Client Did Not Respond	Client's Response	
		Yes	No
Actual Knowledge of Environmental Liens or Activity Use Limitations (AULs) that may encumber the site.			X
Actual Knowledge of a Lower Purchase Price because contamination is known or believed to be present at the site.			X
Commonly Known or Reasonably Ascertainable Information that is material to a REC in connection with the site.			X
Obvious Indicators of Contamination at the site.			X

Terracon's consideration of the client provided information did not identify RECs. A copy of the questionnaire is included in Appendix C.

2.0 PHYSICAL SETTING

Physical Setting Information		Source
Topography		
Site Elevation	Approximately 10 feet above sea level.	USGS Topographic Map, Oakland East and San Leandro, California, dated 1993 and 1997 (Appendix A)
Topographic Gradient	Gently sloping to the west to southwest	
Closest Surface Water	San Leandro Bay, located approximately 450 feet west to southwest of the site.	
Soil Characteristics		
Soil Type	Urban land	Alameda County, CA USDA-NRCS Web Soil Survey issued October 3, 2017
Description	Variable soils within the first approximately 5 feet below ground surface (bgs). Does not meet the requirements for hydric soil classification.	
Geology/Hydrogeology		
Formation	Quaternary (Qoa)	California Department of Conservation, Geologic Map of California, dated 2012
Description	Alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated. Mostly nonmarine, but includes marine deposits near the coast.	

Physical Setting Information		Source
Estimated Depth to First Occurrence of Groundwater	Approximately 3 to 5 feet bgs, measured in groundwater monitoring wells located approximately 400 feet east of the site.	GeoTracker, LUST Case No. T0600102109, 580 Julie Ann Way, Case Closure Summary, prepared by Alameda County Environmental Health, dated April 6, 2006
*Hydrogeologic Gradient	Not known - may be inferred to be parallel to topographic gradient (primarily to the west to southwest).	

* The groundwater flow direction and the depth to shallow, unconfined groundwater, if present, would likely vary depending upon seasonal variations in rainfall and other hydrogeological features. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the site cannot be directly ascertained.

3.0 HISTORICAL USE INFORMATION

Terracon reviewed the following historical sources to develop a history of the previous uses of the site and surrounding area, in order to help identify RECs associated with past uses. Copies of selected historical documents are included in Appendix C.

3.1 Historical Topographic Maps, Aerial Photographs, Sanborn Maps

Readily available historical USGS topographic maps, selected historical aerial photographs (at approximately 10 to 15 year intervals) and historical fire insurance maps produced by the Sanborn Map Company were reviewed to evaluate land development and obtain information concerning the history of development on and near the site. Reviewed historical topographic maps, aerial photographs and Sanborn maps are summarized below.

Historical fire insurance maps produced by the Sanborn Map Company were requested from EDR to evaluate past uses and relevant characteristics of the site and surrounding properties. Based upon inquiries to the above-listed Sanborn provider, Sanborn maps were not available for the site.

- Topographic map:
  - Concord, California, published in **1897** and **1915** (1:62,500)
  - Hayward, California, published in **1915** (1:62,500)
  - Haywards, California, published in **1899** and **1915** (1:62,500)
  - Oakland East, California, published in **1947**, **1949**, **1959**, **1968**, **1973**, **1980**, **1997**, and **2012** (1:24,000)
  - San Leandro, California, published in **1947**, **1948**, **1959**, **1968**, **1973**, **1980**, **1996**, and **2012** (1:24,000)
- Aerial photograph:
  - USGS, **1946**, **1958**, **1963**, **1968**, and **1974**, 1”=500’
  - USGS/DOQQ, **1993**, 1”=500’
  - USDA, **1939**, **1982**, and **1998**, 1”=500’
  - USDA/NAIP, **2005**, **2010**, and **2014**, 1”=500’

Historical Maps and Aerial Photographs

Direction	Description
Site	Undeveloped land with marshes and distributaries (1897-1949); undeveloped marsh land with the eastern portion of the site receiving fill dirt (1958); undeveloped land with dirt road and additional fill dirt (1963); undeveloped land (1968-1980); undeveloped land with dirt roads (1982); storage of materials in the northeastern portion, remaining parcel appears vacant (1993-1997); storage of materials near the northern boundary and a traveling carnival (2005); vacant land with storage of materials near the northern boundary (2010-2012); developed with small structures on the northern boundary and a traveling carnival (2014).
North	Undeveloped land with marshes and distributaries (1897-1949); undeveloped land followed by developed land with commercial structures and a freeway (1958-1968); undeveloped land followed by freeway and developed land with additional commercial structures (1968-1982); developed land with small unknown structures (1993-1998); developed land with additional structures (2005-2014).
East	Undeveloped marshland followed by apparent racetrack (1897-1946); undeveloped land followed by power transmission line and railroad, racetrack no longer present (1947-1949); developed with freeway, followed by multiple commercial buildings (1958-1963); developed with additional roads, commercial buildings, and freeway onramps (1973); developed with additional commercial buildings and landscaping (1974-2014).
South	Undeveloped marshland with a river (1897-1915); Undeveloped marshland with a river followed by a coastal road (1939-1958); road removed (1959); river repositioned (1963); developed with multiple roads (1968-2014).
West	Undeveloped marshland followed by San Leandro Bay (1897-1963); additional road followed by undeveloped marshland and San Leandro Bay (1968-1974); additional single track railroad next to the road (1980); additional road between marshland and the bay (1982); developed with recreational field (1993-2014).

The apparent filling activities across portions of the site represents an REC.

3.2 Historical City Directories

The Haines Company, Inc., R. L. Polk & Co., Pacific Bell, and EDR Digital Archive city directories used in this study were made available through EDR (selected years reviewed: 1920 to 2014) and were reviewed at approximate five-year intervals, if readily available. Street listings were not available prior to 1955. The proposed address for the site is 5601 Oakport Street. The current street address for the northern portion of the site was identified as 5601 Oakport Street.

Historical City Directories

Direction	Description
Site	**5601 Oakport Street** – *Charles L. Campanella Wrecking Co. (1955)*; no listing (1956-1986); Dan Caputo Construction Co. (1991); no listing (1992-2010); East Bay Municipal Utility District Wastewater (2014). **5801 Oakport Street** – No listing (1955-2014).
North	**5601 Oakport Street** – *Charles L. Campanella Wrecking Co. (1955)*; no listing (1956-1986); Dan Caputo Construction Co. (1991); no listing (1992-2010); East Bay Municipal Utility District Wastewater (2014).
East	**500 Independent Road** – Schwartz & Lindheim Inc. (1980); no listing (1982-1984); Schwartz & Lindheim Inc (1986-1992); no listing (1993); Schwartz & Lindheim Inc. (1996-2000); no listing (2002); Meadows Corporation (2006); W & K Trading Group, Ye Ying Guang (2010); Tre Dep Tuoi, Auto Parts Xpress (2014). **535 Julie Ann Way** – No listing (1955-1967); Lindal Cedar Homes of California Inc., (1970); Lindal Cedar Homes, Bishop Cedar Homes (1975); no listing (1976-2014). **541 Julie Ann Way** – No listing (1955-2006); Six Robblees Inc. (2010-2014). **563 Julie Ann Way** – No listing (1955-1965); Pecks Inc. Duplicating Graphic Art Products (1967); no listing (1970-2014).
South	**5885 Oakport Street** – No listing (1955-1956); Giacomazzi Bros Transportation Co. (1962); no listing (1965); Giacomazzi Bros Transportation Co. (1967-1970); no listing (1973); Giacomazzi Transportation Bros Co. (1975); no listing (1976-2014).
West	None – San Leandro Bay.

The address of 5601 Oakport Street is associated with the northern portion of the site and the adjoining property to the north.

The above italicized property, Charles L. Campanella Wrecking Co., was identified in the city directories at 5601 Oakport Street in 1955. However, a wrecking yard or Oakport Street was not depicted in the aerial photographs or topographic maps, therefore, this address appears to be an error. The identified wrecking yard does not represent a REC to the site.

The underlined facilities are identified in the environmental regulatory database and discussed further in Section 4.1.

3.3 Site Ownership

Based on information obtained from the Alameda County Assessor's records, the current site owner is listed as East Bay Municipal Utility District. Previous owners were not reported.

3.4 Title Search

At the direction of the client, a title search was not included as part of the scope of services. Unless notified otherwise, we assume that the client is evaluating this information outside the scope of this report.

3.5 Environmental Liens and Activity and Use Limitations

The EDR regulatory database report included a review of both Federal and State Engineering Control (EC) and Institutional Control (IC) databases. Based on a review of the database report, the site was not listed on the EC or IC databases. Please note that in addition to these federal and state listings, AULs can be recorded at the county and municipal level that may not be listed in the regulatory database report. Environmental lien and activity and use limitation records recorded against the site were not provided by the client. At the direction of the client, performance of a review of these records was not included as part of the scope of services and unless notified otherwise, we assume that the client is evaluating this information outside the scope of this report.

3.6 Interviews Regarding Current and Historical Site Uses

The following individuals were interviewed regarding the current and historical use of the site.

Interviews

Interviewer	Name / Phone #	Title	Date
Kristin Stout	Ken Minn / (510) 287-0668	Employee / EBMUD	April 11, 2018 April 12, 2018 April 16, 2018 April 25, 2018

Terracon interviewed Mr. Minn, an employee with EBMUD, following the site reconnaissance via telephone and electronic correspondence. Mr. Minn provided Terracon with information in regards to monitoring wells observed onsite (refer to Section 3.7). In addition, Mr. Minn stated there were not any aboveground storage tanks (ASTs), underground storage tanks (USTs), septic tanks, drinking water wells, or dumping on the site. Mr. Minn indicated that the slurry area is a mixture of concrete, asphalt, and water that is generated when the EBMUD crews saw cut streets and sidewalks and vacuum up the slurry materials, then that material is disposed of in this area. Mr. Minn also provided information on the former USTs and present day ASTs located at 5601 Oakport Road and this information is summarized in Section 4.1. Mr. Minn was not aware of any environmental concerns associated with the site or surrounding properties.

3.7 Prior Report Review

Mr. Minn provided Terracon with a report titled Oakport Groundwater Storage Pilot Project, Volume 1 – Technical Memorandum No. 3, Phase 2 Field Investigation Report dated June 1999.

This report was prepared to assess the hydrogeologic and technical feasibility for groundwater storage at the site and adjoining property to the north. Thirteen groundwater wells were installed as a part of the project and nine groundwater monitoring wells were located on the site. According to Mr. Minn, only three groundwater monitoring wells remain onsite:

- S2-MWS1 screened at a depth of 50-80 feet bgs (shallow aquifer)
- S2-MWS2 screened at a depth of 140-180 feet bgs (middle aquifer)
- S2-MWD1 screened at a depth of 480-550 feet bgs (deep aquifer)

The groundwater samples collected from the monitoring wells were analyzed for pesticides and polychlorinated biphenyls (PCBs) by EPA Method 608, aromatic hydrocarbons by EPA Method 610, volatile organic compounds (VOCs) by EPA Method 624, semivolatile organic compounds (SVOCS) by EPA Method 625, general minerals, and metals. Former monitoring wells S2-TW-1 and S2-MWM-2 located onsite detected trichloroethane (TCE) reportedly at concentrations ranging from 47 micrograms per liter (µg/L) to 66 µg/L, which is above the ESL of 3 µg/L for TCE. The monitoring wells were reportedly screened in the middle aquifer zone. The report noted that a source of the TCE had not been identified. The on-site monitoring wells and the detection of TCE concentrations in groundwater beneath site represents an REC to the site and potential VEC.

4.0 RECORDS REVIEW

Regulatory database information was provided by EDR, a contract information services company. The purpose of the records review was to identify RECs in connection with the site. Information in this section is subject to the accuracy of the data provided by the information services company and the date at which the information is updated. The scope herein did not include confirmation of facilities listed as "unmappable" by regulatory databases.

In some of the following subsections, the words up-gradient, cross-gradient and down-gradient refer to the topographic gradient in relation to the site. As stated previously, the groundwater flow direction and the depth to shallow groundwater, if present, would likely vary depending upon seasonal variations in rainfall and the depth to the soil/bedrock interface. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the site cannot be directly ascertained.

4.1 Federal and State/Tribal Databases

Listed below are the facility listings identified on federal and state/tribal databases within the ASTM-required search distances from the approximate site boundaries. Database definition, descriptions, and the database search report are included in Appendix D.

Federal Databases

Database	Description	Distance (miles)	Listings
CERCLIS	Comprehensive Environmental Response, Compensation, & Liability Information System	0.5	0
CERCLIS / NFRAP	Comprehensive Environmental Response, Compensation, & Liability Information System/No Further Remedial Action Planned	0.5	3
ERNS	Emergency Response Notification System	Site	0
IC / EC	Institutional Control/Engineering Control	Site	0
NPL	National Priorities List	1.0	0
NPL (Delisted)	National Priorities Delisted List	0.5	0
RCRA CORRACTS/ TSD	RCRA Corrective Action Activity	1.0	2
RCRA Generators	Resource Conservation and Recovery Act	Site and adjoining properties	3
RCRA Non-CORRACTS/ TSD	RCRA Non-Corrective Action Activity	0.5	0

State/Tribal Databases

Database	Description	Distance (miles)	Listings
Alameda County CS	Alameda County Contaminated Sites	0.5	29
AST	Aboveground Storage Tanks	0.25	5
CA BOND EXP. PLAN	Bond Expenditure Plan	1.0	4
CA FID UST	Facility Inventory Database	0.25	6
CALSITES	CalSites Database	1.0	5
CALSITES (AWP)	Active Annual Workplan Sites	1.0	0
Cortese	"Cortese" Hazardous Waste & Substances Site List	0.5	1
DEED	Deed Restriction Listing	0.5	1
ENVIROSTOR	EnviroStor Database	1.0	21
HIST UST	Hazardous Substance Storage Container Database	0.25	8
LUST	Leaking Underground Storage Tanks	0.5	26
RESPONSE	State Response Sites	1.0	5
SLIC	Statewide SLIC Cases (GEOTRACKER)	0.5	9
SWEEPS UST	SWEEPS UST Listing	0.25	6

Database	Description	Distance (miles)	Listings
SWF/LF	Solid Waste Facilities/Landfills	0.5	4
US BROWNFIELDS	A Listing of Brownfields Sites	0.5	1
UST	Underground Storage Tank Facilities	Site and adjoining properties	0
VCP	Voluntary Cleanup Program	0.5	0

In addition to the above ASTM-required listings, Terracon reviewed other federal, state, local, and proprietary databases provided by the database firm. A list of the additional reviewed databases is included in the regulatory database report included in Appendix D.

The following table summarizes the site-specific information provided by the database and/or gathered by this office for identified facilities. Facilities are listed in order of proximity to the site. Additional discussion for selected facilities follows the summary table.

Listed Facilities

<table>
<tr><th>Facility Name And Location</th><th>Estimated Distance / Direction/Gradient</th><th>Database Listings</th><th>Is a REC, CREC, or HREC to the Site</th></tr>
<tr><td>Oakport Materials Storage Yard
5601 Oakport Street</td><td rowspan="4">Northern Portion of the Site and Adjoining Northern Property</td><td>SWEEPS UST, HIST UST, CA FID UST</td><td rowspan="4">No, discussed below</td></tr>
<tr><td>EBMUD Oakport Storage Center
5601 Oakport Street</td><td>RCRA-SQG</td></tr>
<tr><td>Oakport (Giacomazzi)
5601 Oakport Street</td><td>HIST UST</td></tr>
<tr><td>Oakport Storage Center
5601 Oakport Street</td><td>AST</td></tr>
<tr><td>EBMUD – Oakport Wet Weather Facility
5597 Oakport Street</td><td></td><td>AST, LUST, Alameda County CS, CHMIRS, HIST CORTESE</td><td>No, discussed below</td></tr>
<tr><td>Oakport Center
5885 Oakport Street</td><td>Adjoining / West / Down-gradient</td><td>AST</td><td>No, discussed below</td></tr>
<tr><td>IBC-NCMFG-Oakland
580 Julie Ann Way</td><td rowspan="2">Approximately 420 feet / East / Up-gradient</td><td>AST</td><td rowspan="2">No, discussed below</td></tr>
<tr><td>Colombo Baking Company
580 Julie Ann Way</td><td>HIST UST, LUST, Alameda County CS, SWEEPS UST, CA FID UST, EMI, HIST CORTESE, WDS</td></tr>
</table>

Facility Name And Location	Estimated Distance / Direction/Gradient	Database Listings	Is a REC, CREC, or HREC to the Site
United Plastics Corporation 513 Independent Road	Approximately 475 feet / East / Up-gradient	RCRA-SQG, FINDS, ECHO	No, discussed below
Wells-Stack 515 Independent Road	Approximately 475 feet / East / Up-gradient	EDR Hist Cleaner	No, discussed below

Oakport Materials / EBMUD Oakport Storage / Giacomazzi / Oakport Storage Center (5601 Oakport Street)
EBMUD – Oakport Wet Weather Facility (5597 Oakport Street)

The listed facilities include the northern portion of the site and adjoining property to the north. The facilities and a portion of the site are listed on the Statewide Environmental Evaluation and Planning System Underground Storage Tank (SWEEPS UST), Historic UST (HIST UST), California Facility Inventory (CA FID UST), RCRA – Small Quantity Generators (RCRA-SQG), the Aboveground Storage Tank (AST), Leaking UST (LUST), Alameda County Contaminated Sites (Alameda County CS), California Hazardous Materials Incident Report System (CHMIRS), and the Hazardous Waste & Substance Site List (HIST CORTESE) databases. Based on a review of Alameda County Department of Environmental Health (ACDEH) records, the addresses of 5597, 5601, and 5779 Oakport Road are associated with the EBMUD property; therefore, are discussed together. Based on a review of the RCRA-SQG database listing, the site is registered as a small quantity hazardous waste generator on February 27, 2004 with no reported violations. Hazardous waste streams generated by the site are reported under the RCRA-SQG database as ignitable wastes, corrosive wastes, and lead. The CHMIRS listings are related to the wet weather station located approximately 975 feet north of the site. Based on a review of the SWEEPS UST and CA FID UST database listings, the facility reportedly had a 7,700-gallon leaded gasoline UST and one 2,000-gallon diesel UST. Two 10,000-gallon, one 1,000-gallon, and one 20-gallon USTs are listed as having stored product. Refer to the information below further discussing these USTs.

Based on records provided by the ACDEH the northern adjoining property operated one 8,000-gallon unleaded gasoline UST (also reported in the files as 7,500-gallon and 7,700-gallon), one 2,000-gallon diesel UST, and one 1,000-gallon UST contents unknown. Per the ACDEH records, these USTs are located approximately 975 feet north of the site. These tanks were removed in 1988 and issued closure in 1996. During tank removal, groundwater was reported at depths of approximately 4.26 to 8.74 feet bgs and flowing easterly. Due to the case closure status and distance from the site, these USTs are not considered a REC to the site.

One 10,000-gallon diesel UST and one 10,000-gallon gasoline UST was removed in June 1987 and according to the map provided in the ACDEH records, the UST was located south of an unidentified building. According to electronic correspondence with Mr. Minn, these former USTs were located approximately 415 feet northwest of the site. Case closure documentation was not found. Additionally, Mr. Minn also indicated that two ASTs are located 400 feet northwest of the site. Based on the reported distance of the database listings to the site, the facilities located at 5601 and 5597 Oakport Street do not appear to represent a REC to the site.

Based on the reported distance of the database listings to the site, these facilities do not represent a REC to the site.

Oakport Center (5885 Oakport Street)
Oakport Center is located on the western adjoining property and in a topographically down-gradient position relative to the site. The facility reportedly operated one 2,500-gallon AST under the owner name of EBMUD. Based on the facility's absence of documented release incidents and topographic down-gradient position relative to the site, the Oakport Center facility does not represent a REC to the site.

IBC-NCMFG-Oakland / Colombo Baking Company (580 Julie Ann Way)
The above listed facilities, identified approximately 400 feet north and topographically cross-gradient relative to the site is listed on the AST, LUST, HIST UST, Alameda County CS, SWEEPS UST, CA FID UST, HIST CORTESE, Emissions Inventory Data (EMI), and the Waste Discharge System (WDS) databases. Terracon reviewed the facility on the State Water Resources Control Board's (SWRCB) GeoTracker website regarding the LUST database listing. According to GeoTracker, the facility had a LUST case opened on September 15, 1995. Based on a review of the Case Closure Summary prepared by ACEH, dated April 6, 2006, the facility operated one 8,000-gallon gasoline UST and one 10,000-gallon diesel UST. The USTs were located approximately 500 feet east of the site boundary. The two USTs and associated piping were removed on September 15, 1995. Seven groundwater monitoring wells were installed at the facility. Groundwater flow direction was reported toward the northwest to northeast, cross-gradient relative to the site. The closure document indicates the plume was stable and localized the facility. The ACDEH concluded that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment under the current building configuration. Based on the localization and attenuation of residual soil and groundwater contamination in the vicinity of the former UST's, the ACDEH granted closure for the LUST case on June 6, 2006. Based on the distance of the USTs relative to the site and reported plume boundaries, the IBC-NCMGF-Oakland and Colombo Baking Company facilities do not represent a REC to the site.

United Plastics Corporation (513 Independent Road)
The above listed facility, identified approximately 475 feet east and topographically up-gradient relative to the site, is listed on the RCRA-SQG, Facility Index System/Facility Registry System (FINDS), and Enforcement & Compliance History Information (ECHO) databases. Based on a review of the RCRA-SQG database, the facility was registered as a small quantity hazardous waste generator on September 1, 1996. Violations were not reported for the facility under the RCRA-SQG and ECHO databases. Based on the facility's distance relative to the site, the United Plastics Corporation facility does not represent a REC to the site.

Wells-Stack (515 Independent Road)
The above listed facility, identified approximately 475 feet east and topographically up-gradient relative to the site, is listed on the EDR Exclusive Historical Cleaners (EDR Hist Cleaner) database. The facility is listed operating in 1973 and 1974 as Wells-Stack Inc., a dry-cleaning business. Terracon reviewed the facility on the Department of Toxic Substances Control's (DTSC) Hazardous Waste Tracking System (HWTS) website regarding potential hazardous waste streams generated by the facility. Based on a review of the HWTS database, the facility was not identified. Based on the reported type of operations and absence of waste manifests, the Wells-Stack facility does not represent a REC to the site.

The remaining facilities listed in the database report do not appear to represent RECs to the site at this time based upon regulatory status, apparent topographic gradient, and/or distance from the site.

Unmapped facilities are those that do not contain sufficient address or location information to evaluate the facility listing locations relative to the site. The report listed two facilities in the unmapped section. Determining the location of unmapped facilities is beyond the scope of this assessment; however, none of these facilities were identified as the site or adjacent properties. These facilities are listed in the database report in Appendix D.

4.2 Local Agency Inquiries

Agency Contacted/ Contact Method	Response
Alameda County Department of Environmental Health / email: dehcupafilereview@acgov.org	On March 12, 2018, Terracon received a response from the agency indicating that records were not found for 5801 Oakport Street. On April 3, 2018 Terracon reviewed records at the Department of Environmental Health for adjoining properties. These records are described in Section 4.1
Bay Area Air Quality Management District / online: www.baaqmd.gov	On March 12, 2018, Terracon received a response from the agency indicating records were not found for 5801 Oakport Street. On March 27, 2018, Terracon received records 5601 Oakport Street which were related to air emissions from the EBMUD to the north of the site.
Department of Toxic Substances Control / Email: pubreqact@dtsc.ca.gov	On March 27, 2018, Terracon received a response from the agency indicating records were not found for the site.
City of Oakland Building and Planning Department / online: www.oaklandca.com	On March 30, 2018, Terracon reviewed records for 5601 Oakport Street. Records reviewed were related to the adjoining property to the north. Records were not on file for 5801 Oakport Street.
San Francisco Regional Water Quality Control District / email: mwong@waterboards.ca.gov	On April 4, Terracon received a phone response from the agency indicating records were not found for the site.

5.0 SITE RECONNAISSANCE

5.1 General Site Information

Information contained in this section is based on a visual reconnaissance conducted while walking through the site and the accessible interior areas of structures, if any, located on the site. The site and adjoining properties are depicted on the Site Diagram, which is included in Exhibit 2 of Appendix A. Photo documentation of the site at the time of the visual reconnaissance is provided in Appendix B. Credentials of the individuals planning and conducting the site visit are included in Appendix E.

General Site Information

Site Reconnaissance	
Field Personnel	Daniel P. Stringer
Reconnaissance Date	March 30, 2018
Weather Conditions	Sunny, 65° F
Site Contact/Title	None.
Site Utilities	
Drinking Water	EBMUD
Wastewater	EBMUD
Electric	Pacific Gas & Electric (PG&E)
Natural Gas	PG&E

5.2 Overview of Current Site Occupants

The site is located at Assessor's Parcel Number (APN) 41-3903-2-8 and a portion of 5601 and 5801 Oakport Street in Oakland, Alameda County, California (Assessor's Parcel Number [APN] 41-3904-1-5) and consists of approximately 16.4 acres of primarily vacant land with an asphalt-paved area on the northeastern portion of the site. During the site reconnaissance, the northern portion of the site was observed operating as a backfill storage yard and a pipe distributor occupied by EBMUD. Other site features include a gated construction area, barbed wire fencing along the northern and eastern boundaries, and an asphalt-paved area.

5.3 Overview of Current Site Operations

The majority of the site consists of vacant land, with the northern portion of the site as a backfill storage yard and a pipe distributer associated with EBMUD.

5.4 Site Observations

The following table summarizes site observations and interviews. Affirmative responses (designated by an “X”) are discussed in more detail following the table.

Site Characteristics

Category	Item or Feature	Observed or Identified
Site Operations, Processes, and Equipment	Emergency generators	
	Elevators	
	Air compressors	
	Hydraulic lifts	
	Dry cleaning	
	Photo processing	
	Ventilation hoods and/or incinerators	
	Waste treatment systems and/or water treatment systems	
	Heating and/or cooling systems	
	Paint booths	
	Sub-grade mechanic pits	
	Wash-down areas or carwashes	
	Pesticide/herbicide production or storage	
	Printing operations	
	Metal finishing (e.g., electroplating, chrome plating, galvanizing, etc.)	
	Salvage operations	
	Oil, gas or mineral production	
	Other processes or equipment	
Aboveground Chemical or Waste Storage	Aboveground storage tanks	
	Drums, barrels and/or containers ^{3} 5 gallons	
	MSDS or SDS	

Category	Item or Feature	Observed or Identified
Underground Chemical or Waste Storage, Drainage or Collection Systems	Underground storage tanks or ancillary UST equipment	
	Sumps, cisterns, French drains, catch basins and/or dry wells	
	Grease traps	
	Septic tanks and/or leach fields	
	Oil/water separators, clarifiers, sand traps, triple traps, interceptors	
	Pipeline markers	
	Interior floor drains	
Electrical Transformers/ PCBs	Transformers and/or capacitors	
	Other equipment	
Releases or Potential Releases	Stressed vegetation	
	Stained soil	
	Stained pavement or similar surface	X
	Leachate and/or waste seeps	
	Trash, debris and/or other waste materials	X
	Dumping or disposal areas	
	Construction/demolition debris and/or dumped fill dirt	X
	Surface water discoloration, odor, sheen, and/or free floating product	
	Strong, pungent or noxious odors	
	Exterior pipe discharges and/or other effluent discharges	
Other Notable Site Features	Surface water bodies	X
	Quarries or pits	
	Wastewater lagoons	
	Wells	

Releases or Potential Releases

Stained pavement or similar surface
An area labeled “slurry disposal” was observed in the northwestern corner of the site. According to Mr. Minn, the slurry area is the material generated when they vacuum asphalt and concrete saw cuts. The vacuumed material is then disposed of in this location. This area was observed to be wet. The unknown nature or location of the generated slurry represents an REC to the site.

Trash, debris and/or other waste materials
Scrap wood debris, approximately 12 cubic yards in size, was observed on the western portion of the site. Minor amounts of trash, consisting of typical municipal litter items such as plastic bags,

blankets, bottles, and clothing, were observed next to the scrap wood debris. Due to a lack of odors or hazardous materials observed, the scrap wood debris material does not represent a REC to the site.

Construction/demolition debris and/or dumped fill dirt
During the site reconnaissance, eight fill piles were observed within the construction area in the center of the site. Three of the piles were approximately 120 cubic yards each in size and the remaining five piles were approximately 10 cubic yards each in size. The source of these stockpiles is not known,

An approximately 10 cubic yard pile of dark soil was observed on the northeast portion of the site. The source of this material is not known.

Demolition debris consisting of dirt, pipes, and wood, approximately 125 cubic yards in size, was observed on the northwest portion of the site. Staining or evidence of a release was not observed in connection with the fill dirt and debris. The source of this material is not known.

Based on volume and unknown source area of this debris, these materials represent an REC to the site.

Other Notable Site Features

Surface water bodies
Two approximately 75 square foot (SF) and 25 SF shallow muddy ponds were observed on the southern portion of the site. These appear to be generated from recent storm event. Based on visual observation, oily sheens and hazardous materials were not observed in the vicinity of the shallow ponds; therefore, they are not considered RECs.

Wells
Two steel casing / standpipes were observed during the site reconnaissance. The two features appear to be monitoring wells associated with the Oakport Groundwater Storage Pilot Project. Refer to Section 3.6 for additional information in regards to these wells. The presence of the monitoring wells appear to be part of a groundwater investigation project that included the on-site monitoring wells and the detection of TCE in groundwater above regulatory screening levels represents a REC in connection with the site.

6.0 ADJOINING PROPERTY RECONNAISSANCE

Visual observations of adjoining properties (from site boundaries) are summarized below.

Adjoining Properties

Direction	Description
North	The properties to the adjoining north of the site consist of EBMUD backfill storage yard and steel storage containers (5799 Oakport Street).
East	The properties to the adjoining east of the site consist of Oakport Street, followed by Interstate 880, followed by Colombo (580 Julie Ann Way), vacant land (6195 Coliseum Way), unidentified building (6201 Coliseum Way), and East Bay Glass (515 Independent Road).
South	The properties to the adjoining south of the site consist of Oakport Road, followed by an empty flat gravel lot.
West	The properties to the adjoining west of the site consist of a bike trail to San Leandro Bay, a dirt and gravel storage yard, and a sport field.

RECs were not observed with the adjoining properties.

7.0 ADDITIONAL SERVICES

Per the agreed scope of services specified in the proposal, the additional services were not conducted.

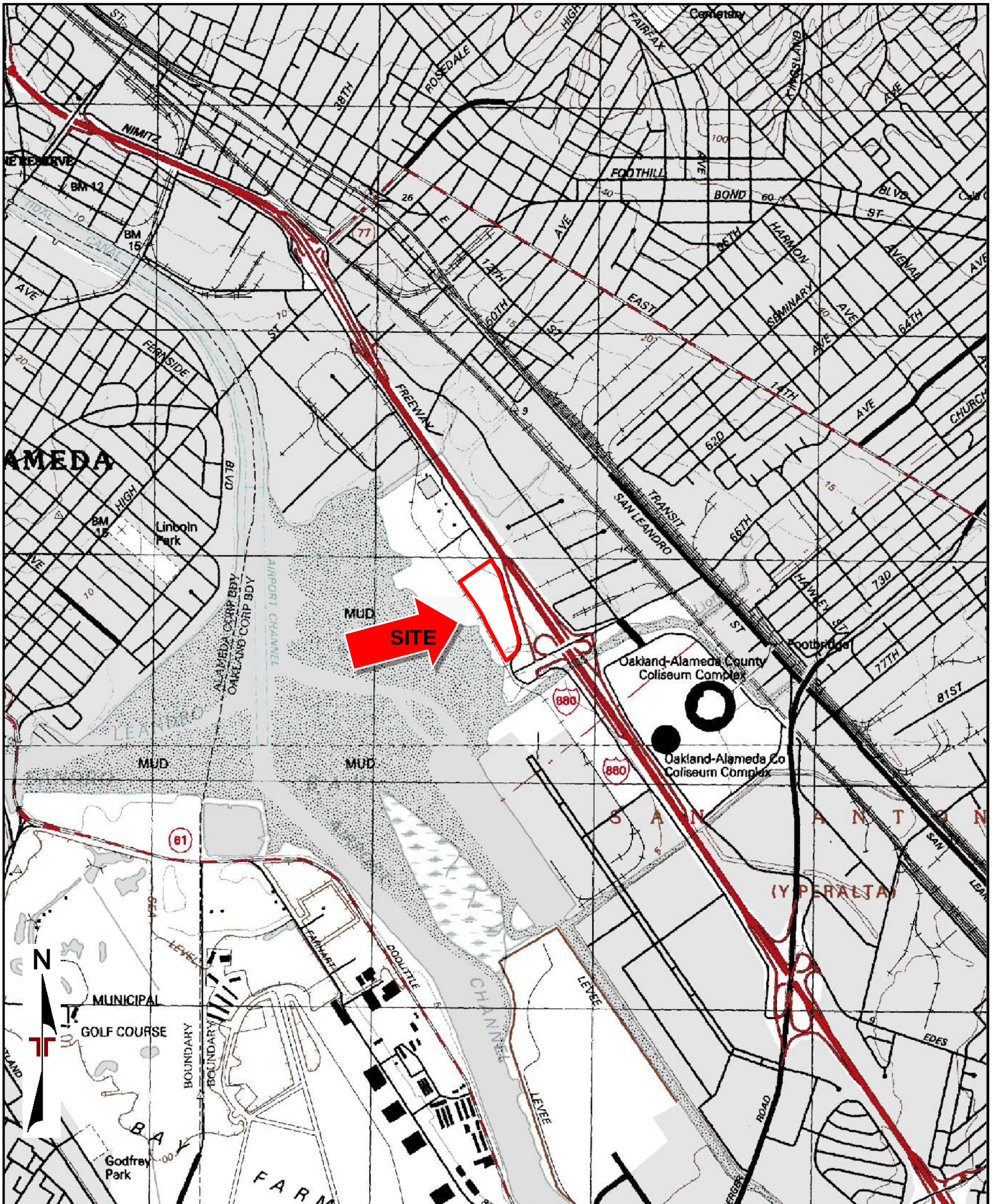
8.0 DECLARATION

I, Kristin Stout, declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR 312; and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the site. I have developed and performed the All Appropriate Inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

DRAFT

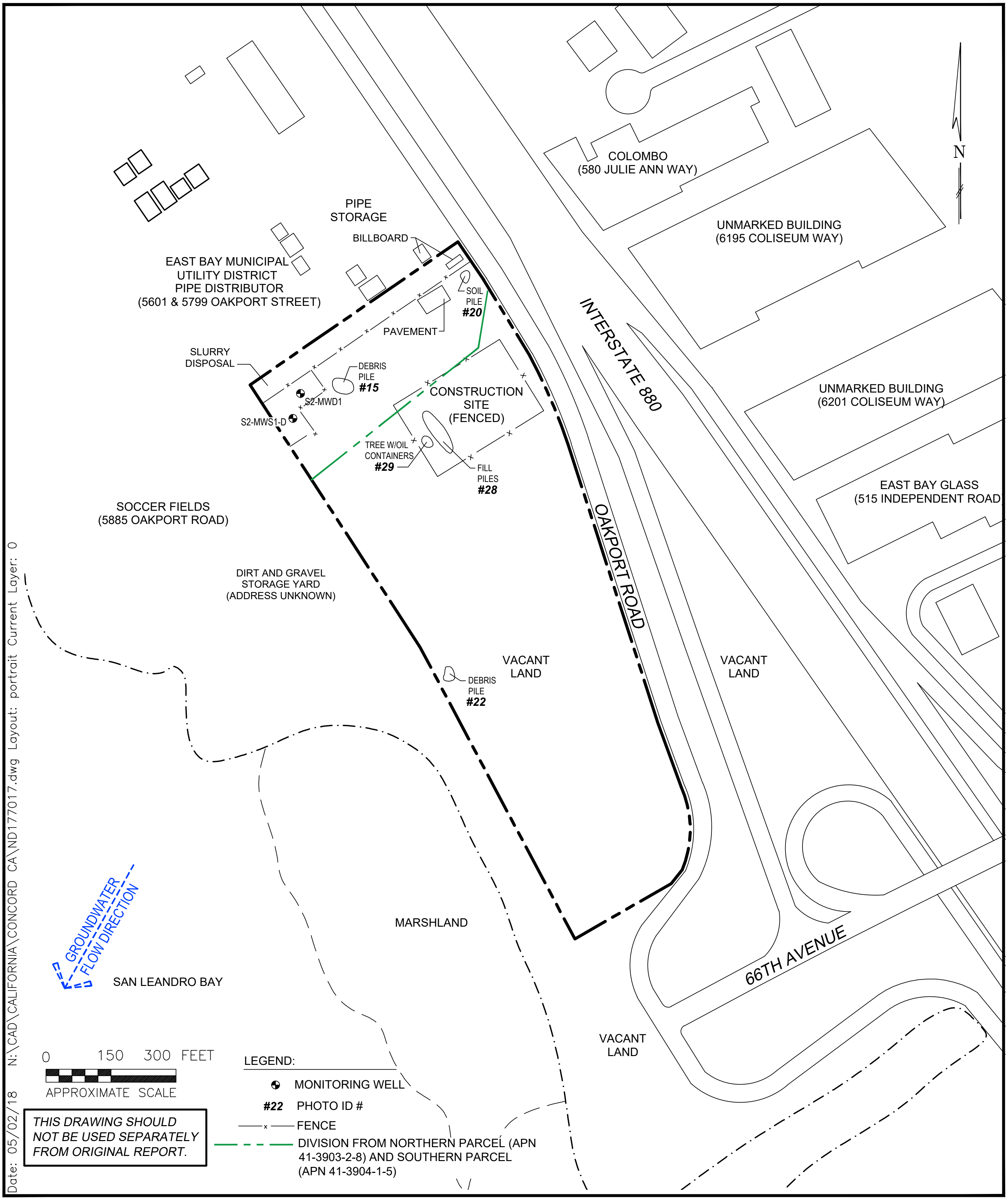
Kristin Stout
Sr. Scientist

APPENDIX A
EXHIBIT 1 – TOPOGRAPHIC MAP
EXHIBIT 2 – SITE DIAGRAM



TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
QUADRANGLES INCLUDE: OAKLAND EAST, CA (1/1/1997) and SAN LEANDRO, CA (1/1/1993).

Project Manager: KS	Project No. ND177017	Terracon 5075 Commercial Cir Ste E Concord, CA 94520-8531	TOPOGRAPHIC MAP	Exhibit
Drawn by: MD	Scale: 1"=2,000'		**APPROXIMATELY 16.4-ACRE PARCEL** 5601 AND 5801 OAKPORT STREET OAKLAND, ALAMEDA COUNTY, CALIFORNIA	1
Checked by: KS	File Name: TOPO			
Approved by: IRN	Date: APRIL 2018			



Project Mngr: MMD	Project No. ND177017		
Drawn By: CDD	Scale: AS SHOWN		
Checked By: MMD	Date:		
Approved By: IRN	05/02/18		

Terracon
Consulting Engineers and Scientists
5075 COMMERCIAL CIRCLE, UNIT 3 CONCORD, CA 74520
PH. (925) 609-7224 FAX. (925) 609-6324

SITE DIAGRAM

OAKPORT VACANT LAND
5601 AND 5801 OAKPORT STREET
OAKLAND, ALAMEDA COUNTY, CALIFORNIA

EXHIBIT
2

APPENDIX B
SITE PHOTOGRAPHS

Photo #1 View of the Southern portion of the site, facing north.

Photo #2 View of the Southern portion of the site, facing south.

Photo #3 View of the northern side of the site, facing north.

Photo #4 View of the northern side of the site, facing east.

Photo #5 View of the northeast corner of the site and adjoining northern property, facing west.

Photo #6 View of the eastern side of the site, facing north.

Photo #7 View of the southern side of the site, facing east.

Photo #8 View of the western side of the site, facing north from the southwest site boundary.

Photo #9 View of the western side of the site, facing north.

Photo #10 View of the western side of the site, facing south from the northwest site boundary.

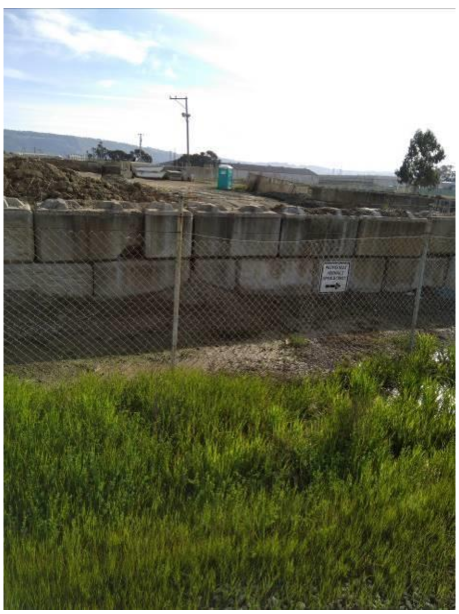


Photo #11 View of the northwest corner of the site, facing East (slurry pit area)..

Photo #12 View of monitoring well located on the northern portion of the site.

Photo #13 View of a monitoring well, located on the northern portion of the site.

Photo #14 View of fenced in area containing the monitoring wells, located on the northern portion of the site.

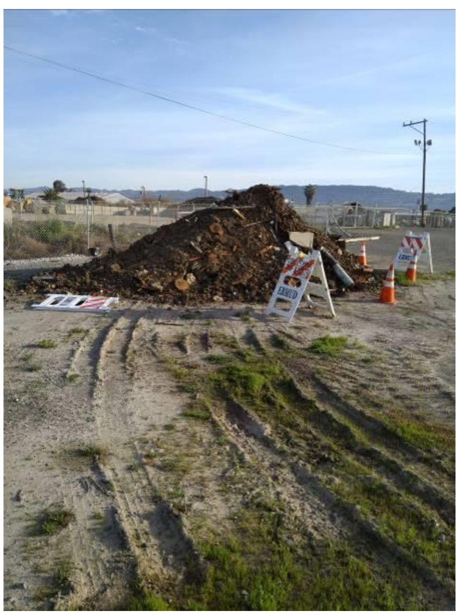


Photo #15 View of construction debris, located on the northern portion of the site.

Photo #16 View of a "Slurry Disposal" pit sign, located on the northern border of the site.

Photo #17 View of the pipe yard, located on the northern portion of the site.

Photo #18 View of paved area and billboard, located on the northern portion of the site.

Photo #19 Additional view of the paved area, located on the northern portion of the site.

Photo #20 View of unidentified pile of fill, located on the northern portion of the site.

Photo #21 View of water connections, located on the northern portion of the site.

Photo #22 View of debris, located on the western portion of the site.

Photo #23 View of construction area fence boundary, located in the center of the site.

Photo #24 View of operations within the construction fence, facing east.

Photo #25 View of operations within the construction fence, facing west.

Photo #26 View of the piles of materials, located within the construction fence.

Photo #27 View of distressed vegetation, located within the construction fence.

Photo #28 View of fill piles, located within the construction fence.

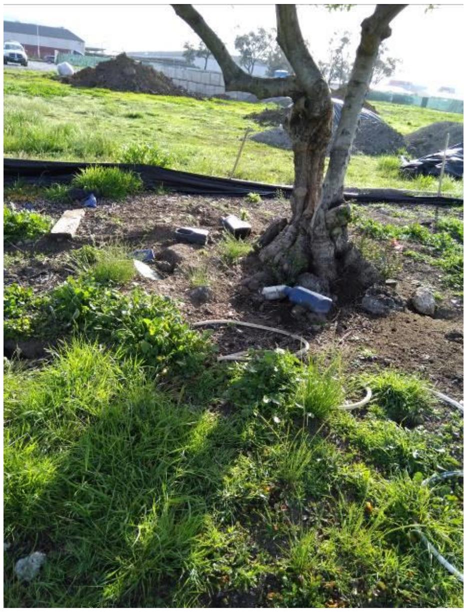


Photo #29 View of empty oil containers, located within the construction fence.

Photo #30 View of the pipe yard, located on the northeast corner of the site.

Photo #31 View of a power distribution meter, located in the pipe yard.

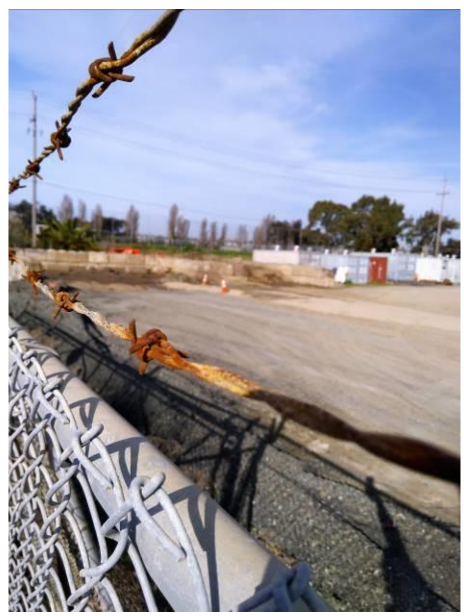


Photo #32 View of fill pits, located on the northwest corner of the site and the adjoining property to the north.

Photo #33 View of additional fill pits, located on the adjoining property to the north.

Photo #34 View of storage containers, located on the adjoining property to the north.

Photo #35 View of Colombo (580 Julie Ann Way), adjoining property to the northeast.

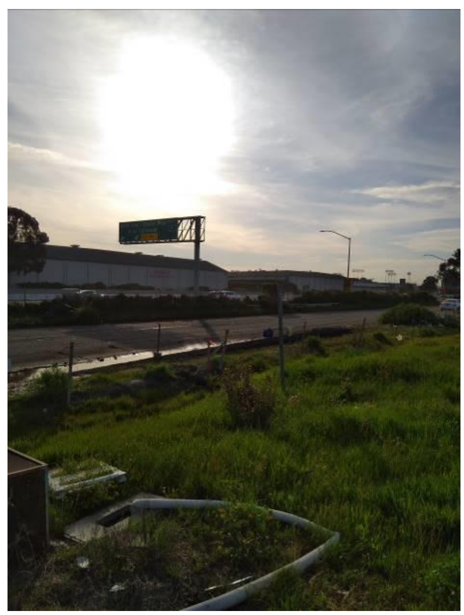


Photo #36 View of commercial buildings, adjoining properties to the east.

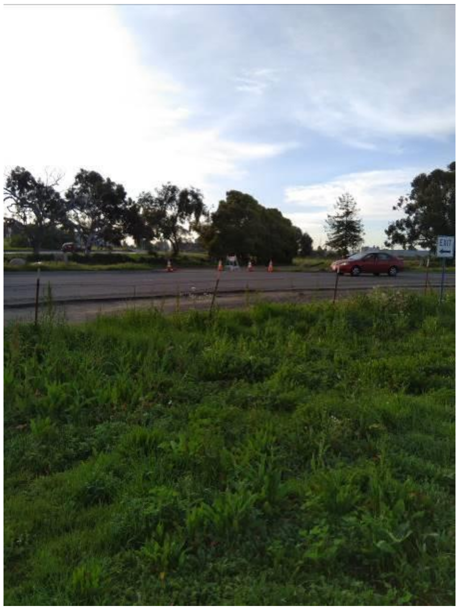


Photo #37 View of vacant lot, adjoining property to the south.

Photo #38 View of Oakport Field (5885 Oakport Road), adjoining property to the west.

Photo #39 View of a bike path followed by San Leandro Bay, adjoining properties to the west.

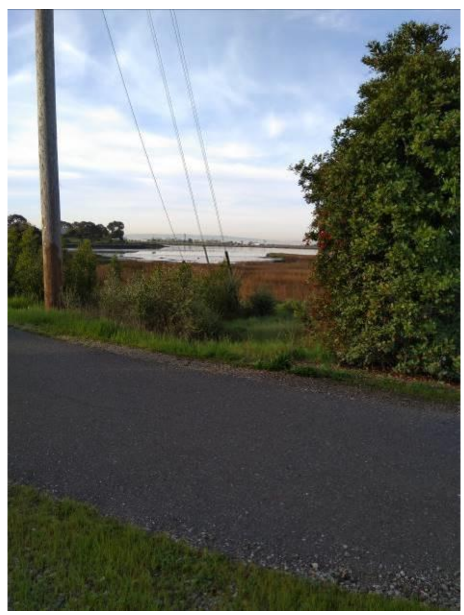


Photo #40 Additional view of a bike path followed by San Leandro Bay, adjoining properties to the west.

APPENDIX C
HISTORICAL DOCUMENTATION AND USER QUESTIONNAIRE

Client/User Required Questionnaire

Terracon

Person Completing Questionnaire	Name: Company: SUPPLYBANK.ORG Phone: 510-378-7184 Email: chris@supplybank.org
Site Name	OAKPORT ST
Site Address	5801 OAKPORT ST OAKLAND CA
Point of Contact for Access	Name: CHRIS EMMONS Company: SUPPLYBANK.ORG Phone: 510-378-7184 Email: chris@supplybank.org
Access Restrictions or Special Site Requirements?	___No X Yes (If yes, please explain) WE NEED TO NOTIFY EBMUD 48 HRS BEFORE YOU ARE ON SITE.
Confidentiality Requirements?	___No X Yes (If yes, please explain) TERRACON SIGNED AN NDA
Current Site Owner	Name: Company: EBMUD Phone: Email:
Current Site Operator	Name: Company: VACANT LAND Phone: Email:
Reasons for ESA (e.g., financing, acquisition, lease, etc.)	FINANCING, LEASE
Anticipated Future Site Use	2 WAREHOUSES + 100,000 SQ' OFFICE BLDG.
Relevant Documents?	Please provide Terracon copies of prior Phase I or II ESAs, Asbestos Surveys, Environmental Permits or Audit documents, Underground Storage Tank documents, Geotechnical Investigations, Site Surveys, Diagrams or Maps, or other relevant reports or documents.

ASTM User Questionnaire

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must respond to the following questions. Failure to provide this information to the environmental professional may result in significant data gaps, which may limit our ability to identify recognized environmental conditions resulting in a determination that "all appropriate inquiry" is not complete. This form represents a type of interview and as such, the user has an obligation to answer all questions in good faith, to the extent of their actual knowledge.

1) Did a search of recorded land title records (or judicial records where appropriate) identify any environmental liens filed or recorded against the property under federal, tribal, state, or local law (40 CFR 312.25)?
X No ___Yes ___Title search not completed (If yes, explain below and send Terracon a copy of the Chain of Title report.)

2) Did a search of recorded land title records (or judicial records where appropriate) identify any activity and use limitations (AULs), such as engineering controls, land use restrictions, or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state, or local law (40 CFR 312.26)?
___No ___Yes ___Title search not completed (If yes, explain below and send Terracon a copy of the Chain of Title report.)

3) Do you have any specialized knowledge or experience related to the site or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the site or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business (40 CFR 312-28)?
X No ___Yes (If yes, explain below)

4) Do you have actual knowledge of a lower purchase price because contamination is known or believed to be present at the site (40 CFR 312.29)?
X No ___Yes ___Not applicable (If yes, explain below)

5) Are you aware of commonly known or reasonably ascertainable information about the site that would help the environmental professional to identify conditions indicative of releases or threatened releases (40 CFR 312.30)?
X No ___Yes (If yes, explain below)

6) Based on your knowledge and experience related to the site, are there any obvious indicators that point to the presence or likely presence of contamination at the site (40 CFR 312.31)?
X No ___Yes (If yes, explain below)

Comments or explanations:

Please return this form with the signed authorization to proceed. Proposal No. PND177017

5801 Oakport Street

5801 Oakport Street

Oakland, CA 94621

Inquiry Number: 5234258.9

March 27, 2018

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

03/27/18

Site Name:	Client Name:
5801 Oakport Street	Terracon
5801 Oakport Street	50 Goldenland Ct., #100
Oakland, CA 94621	Sacramento, CA 95834
EDR Inquiry # 5234258.9	Contact: Megan Davey

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
1998	1"=500'	Flight Date: September 06, 1998	USDA
1993	1"=500'	Acquisition Date: July 10, 1993	USGS/DOQQ
1982	1"=500'	Flight Date: July 05, 1982	USDA
1974	1"=500'	Flight Date: October 14, 1974	USGS
1968	1"=500'	Flight Date: April 22, 1968	USGS
1963	1"=500'	Flight Date: June 24, 1963	USGS
1958	1"=500'	Flight Date: July 25, 1958	USGS
1946	1"=500'	Flight Date: July 26, 1946	USGS
1939	1"=500'	Flight Date: August 02, 1939	USDA

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Aerial Photograph

2014

Project Manager	Project No: ND177017	Terracon 50 Goldenland Ct., #100 Sacramento, CA 95834	2014 AERIAL PHOTOGRAPH	Appendix
Drawn By:	Scale: As Shown		5601 AND 5801 OAKPORT STREET OAKLAND, ALAMEDA COUNTY, CALIFORNIA	C
Checked By:	File Name:			
Approved By:	Date: 2014			

Aerial Photograph 2010

0 Feet 500 1000 2000

Project Manager	Project No: ND177017	Terracon 50 Goldenland Ct., #100 Sacramento, CA 95834	2010 AERIAL PHOTOGRAPH	Appendix
Drawn By:	Scale: As Shown		5601 AND 5801 OAKPORT STREET OAKLAND, ALAMEDA COUNTY, CALIFORNIA	C
Checked By:	File Name:			
Approved By:	Date: 2010			

Aerial Photograph

2005

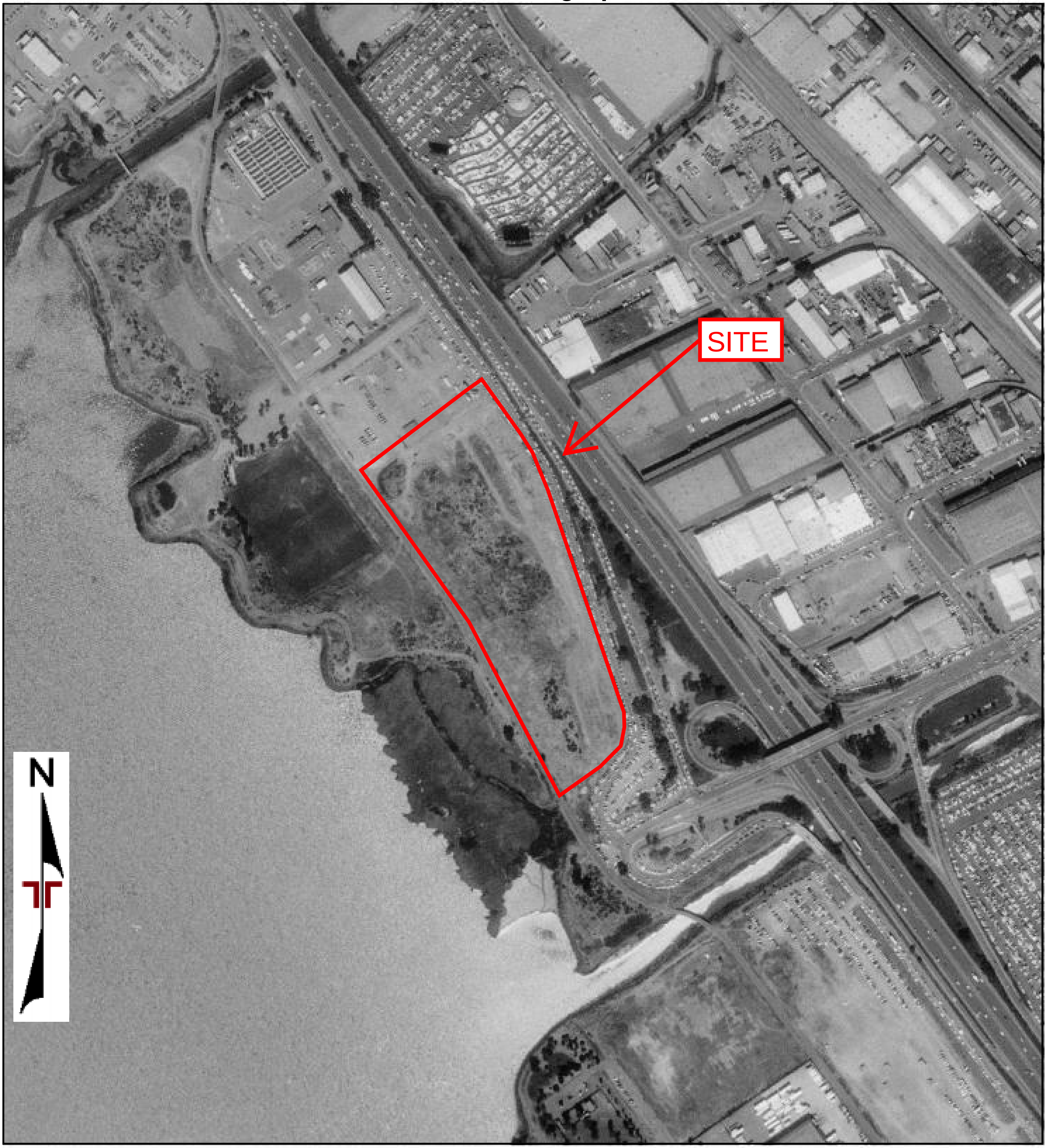
0 Feet 500 1000 2000

Project Manager	Project No: ND177017	Terracon 50 Goldenland Ct., #100 Sacramento, CA 95834	2005 AERIAL PHOTOGRAPH	Appendix
Drawn By:	Scale: As Shown		5601 AND 5801 OAKPORT STREET OAKLAND, ALAMEDA COUNTY, CALIFORNIA	C
Checked By:	File Name:			
Approved By:	Date: 2005			

EDR

Aerial Photograph

1998



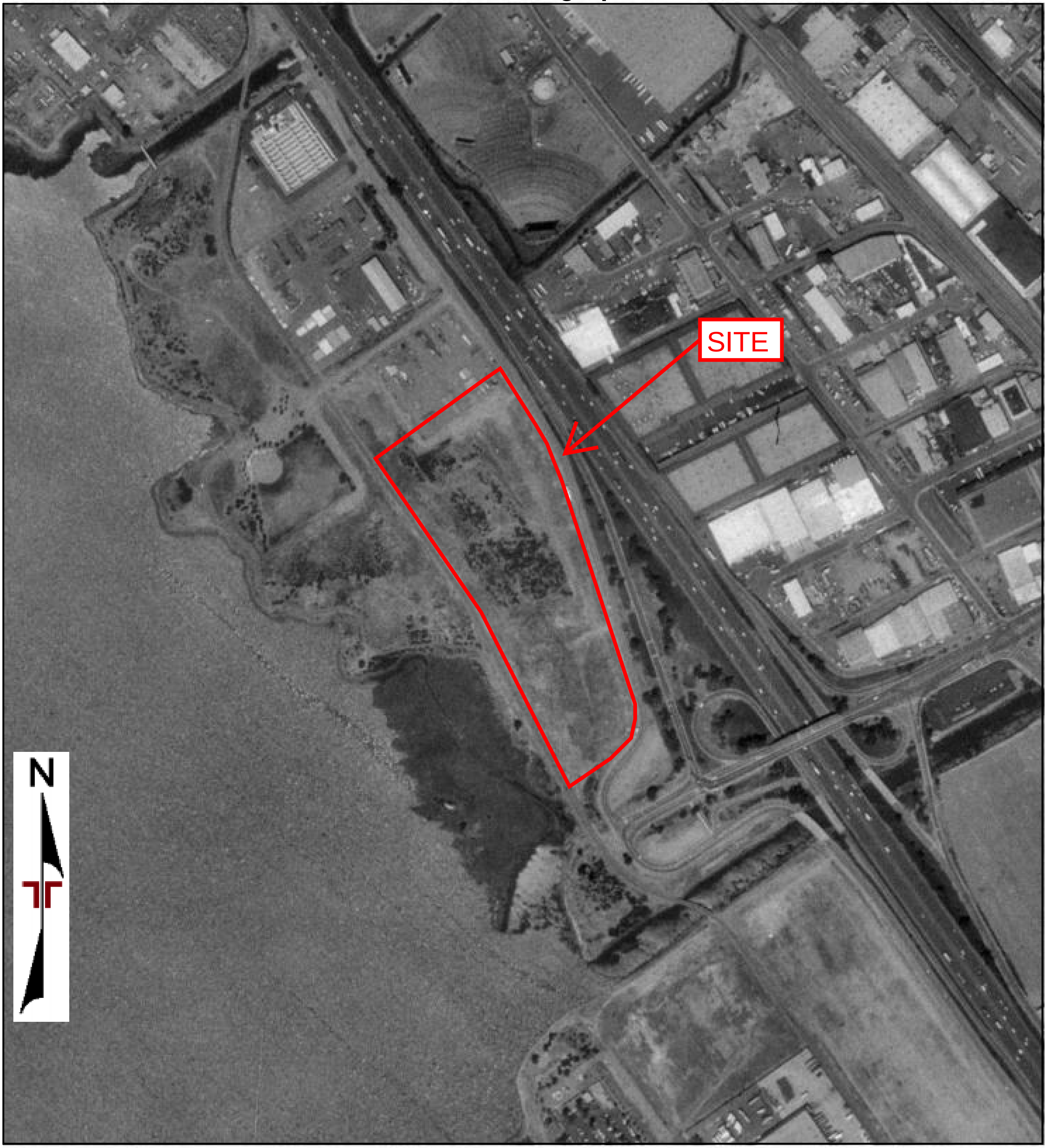
0 Feet 500 1000 2000

Project Manager	Project No: ND177017	Terracon 50 Goldenland Ct., #100 Sacramento, CA 95834	1998 AERIAL PHOTOGRAPH	Appendix
Drawn By:	Scale: As Shown		**OAKPORT VACANT LAND** 5601 AND 5801 OAKPORT STREET OAKLAND, ALAMEDA COUNTY, CALIFORNIA	C
Checked By:	File Name:			
Approved By:	Date: 1998			

EDR

Aerial Photograph

1993



0 Feet 500 1000 2000

Project Manager	Project No: ND177017	Terracon 50 Goldenland Ct., #100 Sacramento, CA 95834	1993 AERIAL PHOTOGRAPH	Appendix
Drawn By:	Scale: As Shown		5601 AND 5801 OAKPORT STREET OAKLAND, ALAMEDA COUNTY, CALIFORNIA	C
Checked By:	File Name:			
Approved By:	Date: 1993			

Aerial Photograph

1982

0 Feet 500 1000 2000

Project Manager	Project No: ND177017	Terracon 50 Goldenland Ct., #100 Sacramento, CA 95834	1982 AERIAL PHOTOGRAPH	Appendix
Drawn By:	Scale: As Shown		5601 AND 5801 OAKPORT STREET OAKLAND, ALAMEDA COUNTY, CALIFORNIA	C
Checked By:	File Name:			
Approved By:	Date: 1982			

Aerial Photograph

1974

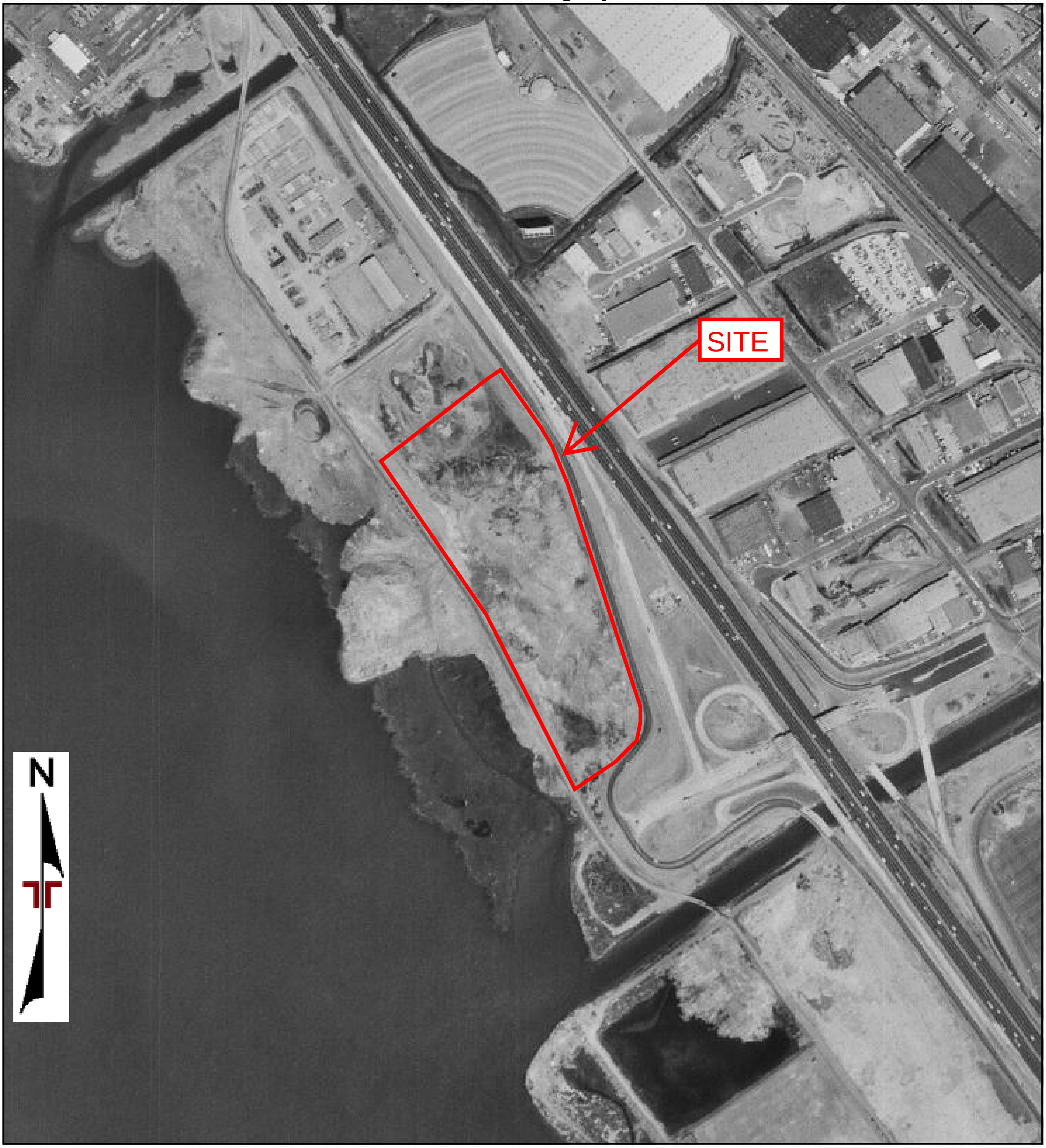
0 Feet 500 1000 2000

Project Manager	Project No: ND177017	Terracon 50 Goldenland Ct., #100 Sacramento, CA 95834	1974 AERIAL PHOTOGRAPH	Appendix
Drawn By:	Scale: As Shown		5601 AND 5801 OAKPORT STREET OAKLAND, ALAMEDA COUNTY, CALIFORNIA	C
Checked By:	File Name:			
Approved By:	Date: 1974			

EDR

Aerial Photograph

1968



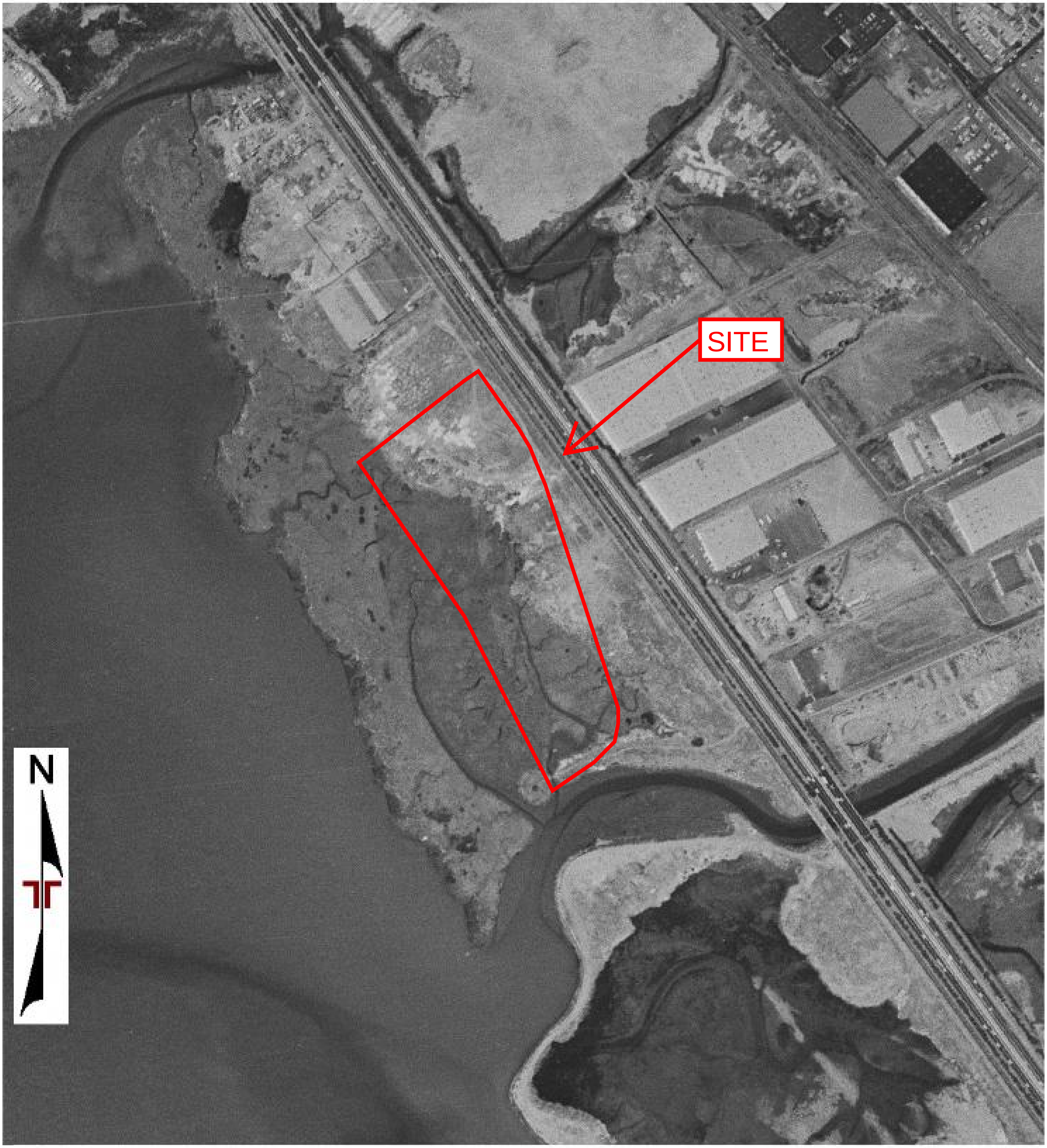
0 Feet 500 1000 2000

Project Manager	Project No: ND177017	Terracon	1968 AERIAL PHOTOGRAPH	Appendix
Drawn By:	Scale: As Shown	50 Goldenland Ct., #100	5601 AND 5801 OAKPORT STREET	C
Checked By:	File Name:	Sacramento, CA 95834	OAKLAND, ALAMEDA COUNTY, CALIFORNIA	
Approved By:	Date: 1968			

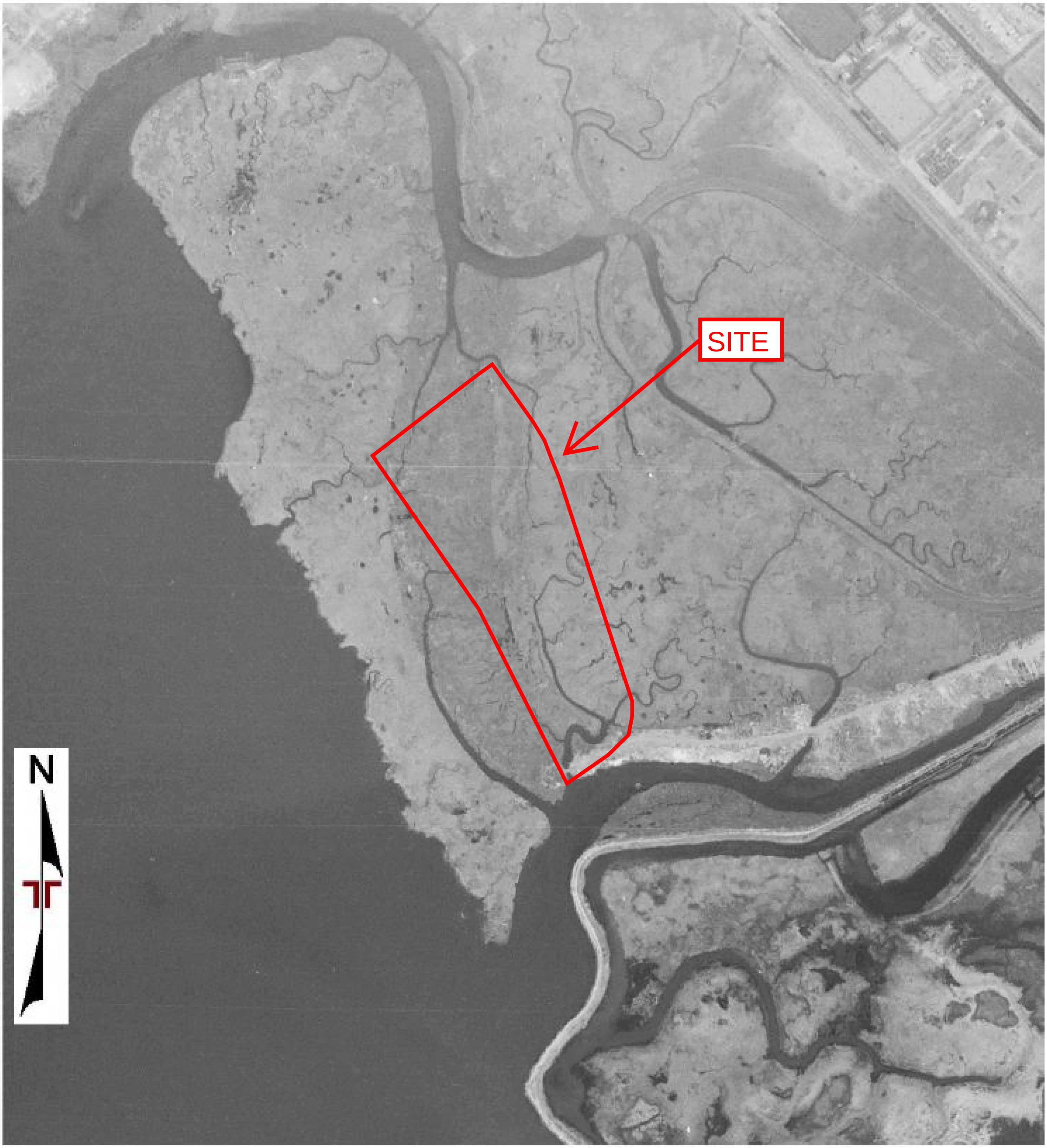
			1963 AERIAL PHOTOGRAPH	
		Terracon	5601 AND 5801 OAKPORT STREET OAKLAND, ALAMEDA COUNTY, CALIFORNIA	
	1963			

EDR

1958

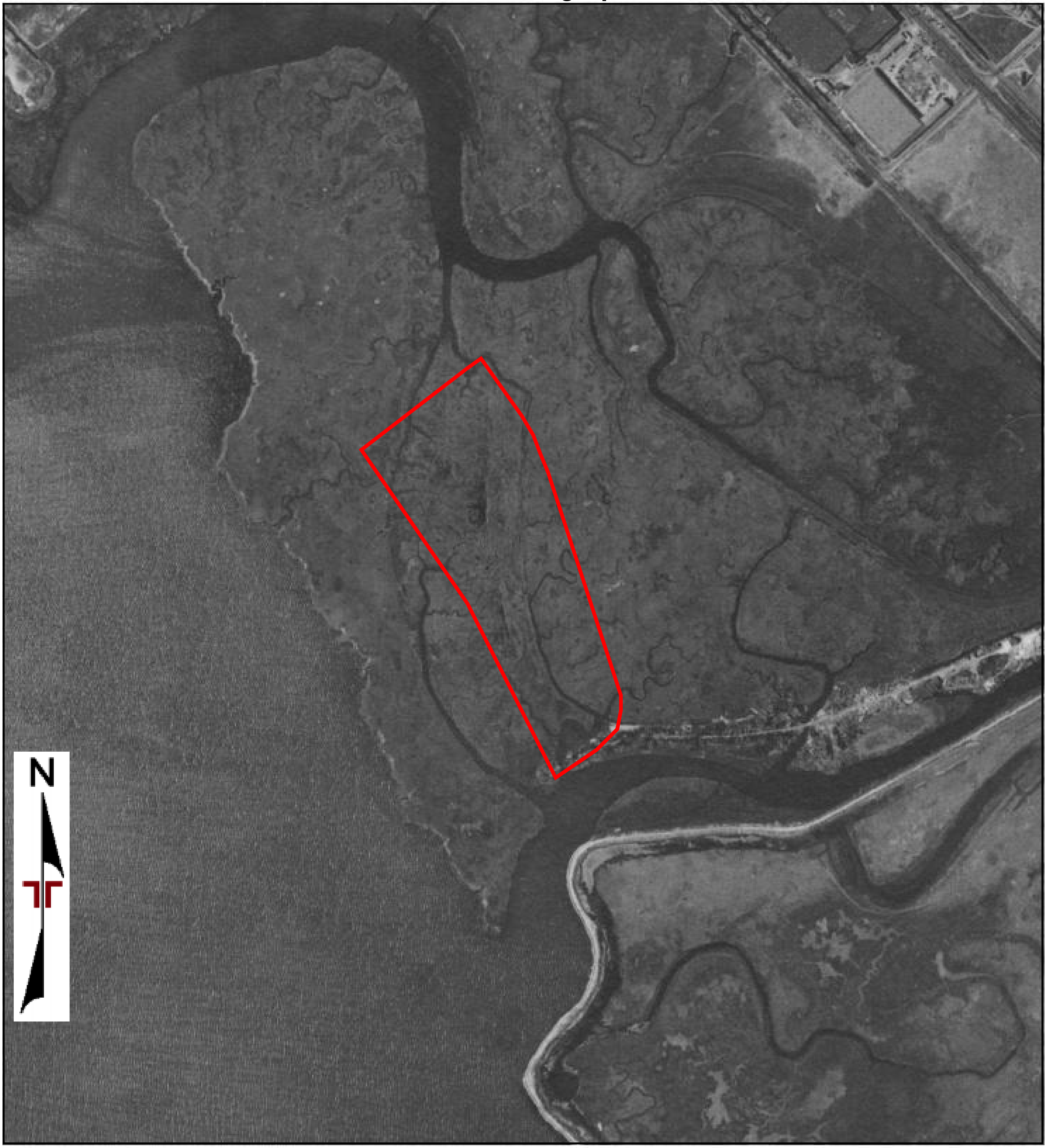


			1958 AERIAL PHOTOGRAPH	
		Terracon	5601 AND 5801 OAKPORT STREET OAKLAND, ALAMEDA COUNTY, CALIFORNIA	
	1958			



			1946 AERIAL PHOTOGRAPH	
		Terracon	5601 AND 5801 OAKPORT STREET OAKLAND, ALAMEDA COUNTY, CALIFORNIA	
	1946			

Aerial Photograph 1939



0 Feet 500 1000 2000

Project Manager	Project No: ND177017	Terracon 50 Goldenland Ct., #100 Sacramento, CA 95834	1939 AERIAL PHOTOGRAPH	Appendix
Drawn By:	Scale: As Shown		5601 AND 5801 OAKPORT STREET OAKLAND, ALAMEDA COUNTY, CALIFORNIA	C
Checked By:	File Name:			
Approved By:	Date: 1939			

Appendix O

Phase II Environmental Site Investigation of a 14-acre Portion of the Property Located at 5801 Oakport Street in Oakland, California

Terraphase Engineering Inc., February 1, 2019

February 1, 2019

Mr. Benito Delgado-Olson
SupplyBank.org, Executive Director
7730 Pardee Lane
Oakland, CA 94621

sent via email to Benito@supplybank.org

Subject: Summary of Phase II Environmental Site Investigation of a 14-acre Portion of the Property Located at 5801 Oakport Street in Oakland, California

Dear Mr. Delgado-Olson:

Terraphase Engineering Inc. (Terraphase) has prepared this report detailing the results of our Phase II Environmental Site Investigation for the 14-acre portion of the properties located at 5801 and 5601 Oakport Street in Oakland, California which is planned for inclusion in the development project proposed by SupplyBank.org ("the Site"). This letter report includes a brief background of the Site, an overview of scope of the work, presentation of results, and conclusions developed.

1.0 Background

The Site consists of approximately 14 acres of vacant land, including an asphalt-paved area on the northeastern portion. The northern portion of the Site is currently used by the East Bay Municipal Utilities District (EBMUD) for backfill and pipe storage. The Site is located within an industrial area and former underground storage tank (UST) sites have been identified in the vicinity. In the Phase I Environmental Site Assessment (Phase I ESA), TerraCon Consultants, Inc. identified that the Site received fill from unknown locations in the late 1950s or early 1960s to fill in the previous undeveloped marshlands.

The TerraCon Phase I ESA identified the following recognized environmental concerns (RECs):

- Artificial fill brought on-site in the late 1950s or early 1960s from unknown sources.
- Undocumented soil and construction debris stockpiles located throughout the Site.
- Slurry disposal area located on the northern border of the Site.
- Trichloroethene (TCE) in Groundwater – In 1999, EBMUD conducted a groundwater storage pilot test, which included the installation of 13 groundwater monitoring wells at the Site. As part of this study, elevated concentrations of TCE were detected in two wells screened in the middle aquifer zone (260 feet to 350 feet below ground surface). Three of these 13 groundwater monitoring wells still remain on-site.

Although not specifically identified in the Phase I ESA, the Former Echco Sales Co. (Echco), an active remediation site under the oversight of the San Francisco Bay Regional Water Quality Control Board

(RWQCB), is located at 6161 Coliseum Way, Oakland, California, approximately 800 feet east of the Site. The Echco property is associated with tetrachloroethene (PCE) discharges which have impacted soil, and shallow and intermediate groundwater zones. Current documentation available on the RWQCB publicly available database indicate that additional investigation is planned to more completely define the extent of contaminants associated with former operations at the Echco property. Chlorinated volatile organic compounds (VOCs) have been detected on the Echco property at concentrations up to four orders of magnitude higher than current Environmental Screening Levels (ESLs) established by the RWQCB for commercial properties.

2.0 Soil and Groundwater Sampling Activities

On December 6, 2018, Terraphase collected soil and groundwater samples at the Site to better understand subsurface conditions. A total of seven soil borings were advanced using a hand auger (Figure 1). A total of 14 soil samples were collected and submitted for laboratory analysis, with two samples collected at discrete depths from each soil boring [1 foot and 3 feet below ground surface (bgs)]. Deeper soil samples (5 feet bgs) were collected from four of the borings and submitted to the laboratory but placed on hold for contingent analyses if needed. Grab groundwater samples were also collected from four of the seven soil borings.

2.1 Pre-Field Work

Terraphase performed the following pre-field activities in support of the Investigation:

- *Health and Safety Plan (HASP)*: Terraphase prepared a site-specific HASP to include the field activities included in the investigation.
- *Underground Service Alert and Private Utility Location:* Terraphase conducted a pre-marking of the Site for utility clearance purposes. Following the markout, Terraphase notified Underground Service Alert of Northern California (USA) more than 48-hours prior to drilling and sampling activities. In addition, Terraphase accompanied a private utility locator (Subdynamic) to the Site to pre-scan each drilling location.
- *Permitting:* Terraphase obtained a boring permit from the Alameda County Public Works Agency (Attachment 1).

2.2 Sampling Methods

2.2.1 Soil Logging and Soil Sampling

Soil borings were advanced with a 3.25-inch diameter hand auger and the soil was placed on visqueen sheeting adjacent to the borehole. Boring locations from which a groundwater sample was also collected were drilled to a depth just below the first encountered groundwater level. Boring locations are shown on Figure 1.

Soil encountered in each borehole was logged using the Unified Soil Classification System (USCS) as a guide, and for relative moisture content, odor, and other observable characteristics, under the direction of a California Registered Professional Geologist using the visual-manual procedures of ASTM Standard D2488-09a for guidance.

Soil samples were collected from the borings at depths of 1 foot and 3 feet bgs at each sample point, and from 5 feet bgs in the event that groundwater was not encountered at that depth (SB-1, SB-2, SB-3, SB-7). Soil samples were collected from each of the borings and placed in EPA-approved containers provided by ESC Lab Sciences, including TerraCore samplers for samples undergoing VOC analysis. All samples were labeled, logged onto chain-of-custody (COC) forms, and placed in chilled coolers to be collected by a laboratory courier under COC protocols. Samples collected at 5 feet bgs were placed on hold with the laboratory.

The 1 foot and 3 feet bgs samples were analyzed for metals (USEPA Method 6010), polychlorinated biphenyls (PCBs), total petroleum hydrocarbons in the diesel range (TPH-d), total petroleum hydrocarbons in the gasoline range (TPH-g), total petroleum hydrocarbons in the motor oil range (TPH-mo), asbestos, and volatile organic compounds (VOCs; USEPA Method 8260).

2.2.2 Grab Groundwater Sampling

Borings were advanced through near-surface unsaturated materials, into the shallowest water (encountered at approximately 5 feet bgs), to a total depth of approximately 5.5 feet bgs. Temporary wells were constructed in each boring using pre-cleaned PVC casing. Grab groundwater samples were collected from four of the seven soil borings (Figure 1). A grab sample was collected from each temporary casing using tubing and an peristaltic pump provided by the drillers. Groundwater samples were properly labeled, placed in EPA-approved containers provided by ESC Laboratory, logged onto COC forms and placed in chilled coolers to be collected by a courier under chain-of-custody protocols. Groundwater samples were analyzed for metals (USEPA Method 6010), TPH-g (USEPA Method 8260), and VOCs (USEPA Method 8260).

2.3 Completion Activities

All drill cuttings and equipment decontamination rinse water were stored onsite in sealed drums pending analysis and disposal. Upon completion of all sampling activities, the borings were backfilled to ground surface using neat cement grout, under the supervision of the Alameda County Public Works Agency inspector.

2.4 Results

2.4.1 Soil Analytical Results

Analytical results from the soil samples are presented in Table 1A (compared to generic health-based screening levels) and Table 1B (compared to waste characterization criteria). The data were compared to the following generic health-based screening levels and waste characterization criteria:

- RWQCB Commercial/Industrial Shallow Soil Exposure Environmental Screening Levels (ESLs)[1];
- RWQCB Construction Worker Soil ESLs[2];

[1] https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html.
[2] https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html.

- Department of Toxic Substances Control (DTSC) Recommended Screening Levels for Commercial/Industrial Soil (DTSC-SLs)[3]; and
- California and Federal hazardous waste toxicity criteria [(Soluble Threshold Limit Concentration (STLC), Total Threshold Limit Concentration (TTLC), and Toxicity Characteristic Leaching Procedure (TCLP)]. [4]

2.4.1.1 Human Health Risk-Based Screening Evaluation

Soil data were compared against generic human health risk-based screening levels that are relevant to the exposure scenarios anticipated at the Site based up current and reasonably anticipated future land use. The presence of concentrations higher than screening levels, does not necessarily mean that an unacceptable risk exists (or could exist in the future). Conservative risk-based screening levels are used help guide site investigations by segregating characterization data that indicate a higher potential for health significance from those that indicate a low potential. Generally, at sites where chemical concentrations are equal to or below relevant screening levels, no further action or study is warranted. In the end, determinations regarding the need for risk management are based upon the results of risk assessments that account for and quantify potential risks associated with receptor exposure to site-related chemicals.

As shown on Table 1A, arsenic was detected above the screening levels in each of the fourteen soil samples collected. Soil in California commonly contains naturally occurring arsenic at concentrations significantly higher than the conservative generic risk-based screening levels. To better reflect the background conditions for arsenic specifically, a regional background concentration of 11 milligrams per kilogram (mg/kg) was selected as the most applicable comparison criteria.[5] The maximum concentration of arsenic in soil at the Site was 8.7 mg/kg. This concentration is below the regional background concentration. As a result, site-related arsenic concentrations in soil would not pose an unacceptable risk to receptors at the Site.

As shown on Table 1A, nickel was detected above the ESL of 86 milligrams per kilogram (mg/kg) for construction worker exposure to soil in SB-1-3.0 (100 mg/kg). Construction worker exposure would involve contact with soil across the Site over their exposure period. Assuming that all of the nickel is site-related, a conservative estimate of the nickel soil concentration to which potential future construction workers could be exposed to is 62 mg/kg[6]. This concentration is below the conservative screening level of 86 mg/kg. Therefore, construction worker exposure to soil would not be expected to result in unacceptable risk.

Lead was also detected in SB-1-3.0 above the DTSC-SL, Commercial/Industrial ESL, and Construction Worker Soil ESL (320 mg/kg, 320 mg/kg, and 160 mg/kg, respectively) at a concentration of 380 mg/kg.

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[3] https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-Tables-June-2018.xlsx.
[4] California Title 22, Section 66261.24.
[5] Duverge, Dylan Jacques. 2011. “Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region” December. Available online at https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/ESL/2011_Arsenic_Background_Duverge.pdf
[6] Upper-confidence limit (UCL) on the mean calculated using ProUCL v. 5.1 and all soil sampling results.

Given the proximity of the Site to Interstate 880, lead is suspected to be aerially deposited from the operation of motor vehicles with leaded gasoline and not site-related. Assuming that all of the lead is site-related, a conservative estimate of the lead soil concentration to which potential future commercial/industrial workers could be exposed to is 305 mg/kg[7]. This concentration is below the conservative screening level of 320 mg/kg for commercial/industrial workers. Therefore, commercial/industrial worker exposure to lead in soil would not be expected to result in unacceptable risk. Similarly, a conservative estimate of the lead soil concentration to which potential future construction workers could be exposed to is 120 mg/kg[8]. This concentration is below the conservative screening level of 190 mg/kg for construction workers. Therefore, construction worker exposure to lead in soil would not be expected to result in an unacceptable risk.

Although low concentrations of PCBs, TPH-d, TPH-mo, and VOCs in soil were detected, none of the concentrations observed were greater than conservative generic screening levels. TPH-g and asbestos were not detected in the soil samples above the laboratory reporting limits.

2.4.1.2 Waste Criteria Screening

As shown on Table 1B, concentrations of chromium (total) in eight of the 14 samples exceeded the 10 times the STLC (50 mg/kg) screening criterion. Concentrations of total lead in seven of the 14 samples exceeded the 10 times the STLC (50 mg/kg) screening criterion and in one sample exceeded the 20 times the TCLP concentration (100 mg/kg) screening criterion. Concentrations of total mercury in one of the 14 samples exceeded the 10 times the STLC (2 mg/kg) screening criterion.

2.4.2 Groundwater Analytical Results

Analytical results from the groundwater samples are presented on Table 2. Groundwater results were compared to the following generic conservative screening levels:

- RWQCB Groundwater Odor Nuisance Non-Drinking Water ESLs[9];
- RWQCB Groundwater Gross Contamination ESLs[10];
- RWQCB Commercial/Industrial Groundwater Vapor Intrusion Human Health Risk Levels for Shallow Groundwater[11]; and
- The California State Water Resources Control Board, Division of Drinking Water's Maximum Contaminant Levels (MCLs).[12]

The Site is located within the Santa Clara Valley Groundwater Basin in the East Bay Plain (RWQCB 2007). Drinking water within the Site area is provided a municipal source (East Bay Municipal Utilities District).

[7] Upper-confidence limit (UCL) on the mean calculated using ProUCL v. 5.1 and the maximum soil concentration from each sampling location.
[8] Upper-confidence limit (UCL) on the mean calculated using ProUCL v. 5.1 and all soil sampling results.
[9] https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html.
[10] https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html.
[11] https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html.
[12] https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/mclreview/mcls_dlrs_phgs.xls

Given the municipal drinking water source and the proximity to the bay, groundwater is not an anticipated source of drinking water.[13] The primary purpose of the groundwater evaluation was to assess the potential for vapor intrusion from shallow groundwater given the presence of chlorinated VOC cleanup sites in the Site vicinity.

As shown on Table 2, chlorinated VOCs were not detected above reporting limits. Based on comparison of the groundwater data to vapor intrusion screening levels, the groundwater would not pose an unacceptable vapor intrusion risk to receptors at the Site.

Arsenic was detected at a concentration of 0.016 micrograms per liter (ug/L) in one temporary well, above the MCL of 0.01 ug/L. Dichloromethane was detected in each of the four groundwater samples at concentrations of 17 and 18 ug/L, above the MCL of 5 ug/L. TPH-mo and TPH-d detected in each of the four groundwater samples above the MCLs of 410 ug/L and 200 ug/L, respectively.[14] The MCLs are used as a screening level when setting cleanup goals for groundwater designated for use as a domestic or municipal supply. As discussed above, the shallow aquifer in this area would not be expected to be a source of drinking water, and therefore, the exceedance of the MCLs is not considered to be significant.

Other metals and TPH-g were not detected above laboratory reporting limits in the samples for which these constituents were analyzed.

3.0 Conclusions

Terraphase conducted a site investigation consisting of installation of soil borings and temporary groundwater wells, collection of soil and grab groundwater samples, laboratory analysis of collected samples, and evaluation of analytical data. This investigation was performed to evaluate the environmental condition of the Site, specifically:

- Evaluation of fill materials in the upper five feet which may remain onsite (commercial/industrial user exposure), excavated (construction worker exposure) and off-hauled during re-development (waste characterization).
- Evaluation of potential for vapor intrusion based on the proximity of the Site to active chlorinated VOC cleanup sites.

Soil sample analytical data were compared to generic health-based screening levels and waste characterization criteria. Based on comparison to generic health-based screening levels, soil would not pose an unacceptable risk to receptors at the Site. Based on the concentrations of chromium, lead, and

[13] The Alameda County Health Department Case Closure Summary for the Columbo Bakery site (580 Julie Ann Way, Oakland, California) located approximately 400 feet upgradient indicates that total dissolved solids (TDS) were detected at a concentration of 43,000 parts per million in the shallow groundwater at the Site. Per State Water Resources Control Board Resolution No. 88-63 (Sources of Drinking Water Policy), groundwater containing TDS exceeding 3,000 milligrams per liter (3,000 ppm) is not considered to be suitable for municipal or domestic water supply. As such, the shallow groundwater at the Site would not be considered to be a source of drinking water.

[14] The RWQCB does not identify TPH-mo ESLs due to negligible solubility. Instead, the RWQCB recommends comparison to the hydrocarbon oxidation products ESLs.

mercury detected above the hazardous waste screening criteria, Terraphase recommends further evaluation of site soil if redevelopment will result in excavation and off-side disposal.

Groundwater sample analytical data were compared to generic health-based screening levels. Groundwater samples included detections of arsenic, dichloromethane, TPH-d, and TPH-mo above MCLs. MCLs are screening levels specific to drinking water. Groundwater at the Site is not considered to be a suitable source of groundwater, and therefore, exceedances of the MCLs are not considered to be significant. Based on comparison of the groundwater data to vapor intrusion screening levels, the groundwater would not pose an unacceptable vapor intrusion risk to receptors at the Site.

4.0 Closing

If you have any questions, please don't hesitate to contact us at (510) 645-1850. We appreciate the opportunity to work with you on this assignment.

Sincerely,

For Terraphase Engineering Inc.

William Carson, PE
President/Principal Engineer

Alice Hale Price, PE
Senior Associate Engineer

Tables

1 Soil Analytical Results Summary
- A Soil Analytical Results Summary – Compared to Health-Based Screening Levels
- B Soil Analytical Results Summary – Compared to Hazardous Waste Screening Criteria

2 Groundwater Analytical Results Summary

Figures

1 Site Layout and Sample Locations

Attachments

1 Boring Permit
2 Laboratory Analytical Reports

References

California Department of Toxic Substances Control, Human and Ecological Risk Office (HERO). 2018. Human Health Risk Assessment (HHRA) Note Number: 3, DTSC Modified Screening Levels (DTSC-SLs). June.

California State Water Resources Control Board. 1988. Resolution No. 88-63: Sources of Drinking Water Policy.

Duvergé, Dylan Jacques. 2011. Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region. December. https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/ESL/2011_Arsenic_Background_Duverge.pdf

San Francisco Bay Regional Water Quality Control Board (RWQCB). 2007. San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan). January 18.

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United States Environmental Protection Agency. 2018. Regional Screening Levels. November.

Table 1A

Soil Analytical Results Summary – Compared to Health-Based Screening Levels

Summary of Phase II Environmental Site Investigation

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	Location	Units	DTSC-SLs	USEPA RSLs	SFRWQCB ESLs	SFRWQCB ESLs	SFRWQCB ESLs	SFRWQCB ESLs	SB-1		SB-2		SB-3		SB-4		SB-5		SB-6		SB-7	
	Sample Depth (ft)		Commercial/	Commercial/	Commercial/	Commercial/	Construction Worker	Construction Worker	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3
	Field ID		Industrial Soil	Industrial Soil	Industrial Shallow Soil	Industrial Shallow Soil	Soil -Cancer Risk	Soil -	SB-1-1.0	SB-1-3.0	SB-2-1.0	SB-2-3.0	SB-3-1.0	SB-3-3.0	SB-4-1.0	SB-4-3.0	SB-5-1.0	SB-5-3.0	SB-6-1.0	SB-6-3.0	SB-7-1.0	SB-7-3.0
	Sample Date				- Cancer Risk	- Non-Cancer Risk		Non-Cancer Risk	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018
	SDG								305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654
Metals	Antimony	mg/kg		47		164		50	<1.9	<2.0	<1.8	<2.0	<2.0	<2.0	<2.0	<1.9	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9
	Arsenic[1]	mg/kg	0.36	3	0.31	3.63	2	0.98	5.2	8.7	4.9	6.9	7.7	5.2	2.9	4.7	5.7	5.1	5.3	1.8	4.9	6.3
	Barium	mg/kg		22000		217000		3000	170	400	200	110	280	140	54	150	140	60	85	30	93	110
	Beryllium	mg/kg	210	230	6900	232	180	27	0.43	0.92	0.45	0.38	0.49	0.46	0.31	0.5	0.35	0.56	0.36	0.29	0.34	0.45
	Cadmium	mg/kg		98	4000	1150	110	51	0.49	4.9	0.42	<0.25	0.47	0.45	0.41	0.29	0.53	0.42	0.34	0.36	0.75	0.49
	Chromium (III+VI)	mg/kg							50	46	39	53	63	42	34	50	36	64	43	53	50	61
	Cobalt	mg/kg		35	1900	347	49	28	11	22	10	6.6	11	9.4	6	11	8.9	7.9	11	12	12	7.5
	Copper	mg/kg		4700		46700		14000	56	180	28	21	22	17	37	22	36	20	55	38	51	35
	Lead	mg/kg	320	800	380	320	2700	160	95	380	73	16	40	8.4	66	21	54	16	12	14	58	66
	Mercury	mg/kg	4.4	4.6		187		44	<0.018	1.2	0.097	0.054	0.097	0.065	0.29	0.13	0.18	0.13	0.27	0.13	2.2	0.044
	Molybdenum	mg/kg		580		5840		1800	0.36	2.3	0.44	0.65	0.26	0.37	<0.25	<0.24	<0.26	<0.26	<0.27	<0.25	<0.24	0.89
	Nickel	mg/kg	3100	2200	64000	11100	1700	86	57	100	49	29	77	66	27	62	42	53	44	38	37	50
	Selenium	mg/kg		580		5840		1700	<1.9	<2.0	<1.8	<2.0	<2.0	<2.0	<2.0	<1.9	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9
	Silver	mg/kg	1500	580		5840		1800	<0.24	0.31	<0.23	<0.25	<0.25	<0.26	<0.25	<0.24	<0.26	<0.26	<0.27	<0.25	<0.24	<0.24
	Thallium	mg/kg		1.2		11.7		3.5	<0.49	<0.56	<0.46	<0.50	<0.51	<0.52	<0.49	<0.48	<0.52	<0.52	<0.54	<0.50	<0.48	<0.48
	Vanadium	mg/kg	1000	580		5830		470	44	37	37	43	38	34	28	42	39	50	56	69	57	51
	Zinc	mg/kg		35000		350000		110000	150	710	98	46	100	45	76	60	82	71	53	44	130	110
PCBs	Aroclor 1016	mg/kg		5.1					<0.014	-	<0.013	-	<0.012	-	<0.013	-	<0.034	-	<0.033	-	<0.012	-
	Aroclor 1221	mg/kg		0.83					<0.027	-	<0.027	-	<0.024	-	<0.026	-	<0.068	-	<0.067	-	<0.024	-
	Aroclor 1232	mg/kg		0.72					<0.014	-	<0.013	-	<0.012	-	<0.013	-	<0.034	-	<0.033	-	<0.012	-
	Aroclor 1242	mg/kg		0.95					<0.014	-	<0.013	-	<0.012	-	<0.013	-	<0.034	-	<0.033	-	<0.012	-
	Aroclor 1248	mg/kg		0.95					<0.014	-	<0.013	-	<0.012	-	<0.013	-	<0.034	-	<0.033	-	<0.012	-
	Aroclor 1254	mg/kg		0.97					<0.014	-	<0.013	-	<0.012	-	0.068	-	<0.034	-	<0.033	-	0.033	-
	Aroclor 1260	mg/kg		0.99					<0.014	-	<0.013	-	<0.012	-	0.24	-	<0.034	-	<0.033	-	0.026	-
	Total PCBs	mg/kg		0.94	0.94		5.5		0	-	0	-	0	-	0.308	-	0	-	0	-	0.059	-
TPH	TPH as Diesel	mg/kg				1220		1100	29Y	100Y	22Y	3.9Y	3.6Y	1.2Y	11Y	7.7Y	44Y	9.6Y	77Y	41Y	21Y	11Y
	TPH as Gasoline	mg/kg				2000		1800	-	<0.21	-	<0.14	-	<0.21	-	<0.14	-	<0.20	-	<0.15	-	<0.17
	TPH as Motor Oil	mg/kg				180000		54000	350	720	240	16	37	9	160	100	660	120	1100	340	130	68
VOCs	1,1,1,2-tetrachloroethane	mg/kg	8.8	8.8	8.9	35000	190	11000	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,1,1-trichloroethane	mg/kg	7200	3600		7270		7200	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,1,2,2-tetrachloroethane	mg/kg	2.7	2.7	2.7	23400	49	7100	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,1,2-trichloroethane	mg/kg		0.63	5.1	6.35	110	6.3	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,1-dichloroethane	mg/kg	16	16	16	234000	370	71000	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,1-dichloroethene	mg/kg		100		353		350	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,1-dichloropropene	mg/kg							-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2,3-trichlorobenzene	mg/kg	300	93					-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2,3-trichloropropane	mg/kg	0.021	0.11	0.11	20.7	0.83	20	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2,4-trichlorobenzene	mg/kg		26	110	262	850	240	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2,4-trimethylbenzene	mg/kg		180					-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2-dibromo-3-chloropropane	mg/kg		0.064	0.059	25.6	1.1	20	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2-dibromoethane	mg/kg	0.16	0.16	0.16	30.4	3.3	30	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2-dichlorobenzene	mg/kg		930		9420		7800	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2-dichloroethane	mg/kg		2	2.1	139	45	130	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2-dichloropropane	mg/kg		6.6	4.4	66	99	66	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,3,5-trimethylbenzene	mg/kg		150					-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,3-dichlorobenzene	mg/kg							-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,3-dichloropropane	mg/kg	2200	2300					-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,4-dichlorobenzene	mg/kg		11	12	25500	280	15000	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	2,2-dichloropropane	mg/kg							-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	2-chlorotoluene	mg/kg	2500	2300					-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	2-hexanone	mg/kg		130					-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
	4-chlorotoluene	mg/kg	2300	2300					-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	4-Methyl-2-pentanone	mg/kg		14000		141000		140000	-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
	Acetone	mg/kg		67000		672000		270000	-	0.028	-	0.019	-	0.03	-	<0.017	-	<0.021	-	0.032	-	<0.015
	Benzene	mg/kg	1.4	5.1	1.4	46.6	33	45	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	Bromobenzene	mg/kg		180					-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	Bromochloromethane	mg/kg		63					-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	Bromodichloromethane	mg/kg	1.3	1.3	1.3	23400	28	7100	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	Bromoform	mg/kg	86	86	80	23400	1200	7100	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	Bromomethane	mg/kg		3		30.3		29	-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
	Carbon disulfide	mg/kg		350					-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	Carbon tetrachloride	mg/kg	0.43	2.9	0.44	253	10	220	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	Chlorobenzene	mg/kg		130		1320		1200	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	Chlorodibromomethane	mg/kg	4.1	39	39	23400	290	7100	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	Chloroethane	mg/kg		5700		58600		59000	-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074

Table 1A

Soil Analytical Results Summary – Compared to Health-Based Screening Levels

Summary of Phase II Environmental Site Investigation

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Location / Sample Depth (ft) / Field ID / Sample Date / SDG	Units	DTSC-SLs Commercial/ Industrial Soil	USEPA RSLs Commercial/ Industrial Soil	SFRWQCB ESLs Commercial/ Industrial Shallow Soil - Cancer Risk	SFRWQCB ESLs Commercial/ Industrial Shallow Soil - Non-Cancer Risk	SFRWQCB ESLs Construction Worker Soil -Cancer Risk	SFRWQCB ESLs Construction Worker Soil - Non-Cancer Risk
Chloroform	mg/kg		1.4	1.4	1040	34	860
Chloromethane	mg/kg		46		475		470
cis-1,2-dichloroethene	mg/kg	84	230		84.9		78
cis-1,3-dichloropropene	mg/kg						
Dibromomethane	mg/kg		9.9				
Dichlorodifluoromethane	mg/kg		37				
Dichloromethane	mg/kg	24	320	25	2520	490	1400
Ethylbenzene	mg/kg		25	26	20800	540	15000
Freon 113	mg/kg		2800				
Hexachlorobutadiene	mg/kg	5.3	5.3	5.3	1170	100	350
Isopropylbenzene	mg/kg		990				
Methyl Ethyl Ketone	mg/kg		19000		196000		120000
Methyl Tertiary Butyl Ether	mg/kg		210	210	65600	4100	65000
Naphthalene	mg/kg		17	17	585	400	500
n-butylbenzene	mg/kg	18000	5800				
n-propylbenzene	mg/kg		2400				
p-isopropyltoluene	mg/kg						
sec-butylbenzene	mg/kg	12000	12000				
Styrene	mg/kg		3500		32500		25000
tert-Butylbenzene	mg/kg	12000	12000				
Tetrachloroethene	mg/kg	2.7	39	2.7	395	33	350
Toluene	mg/kg	5300	4700		5330		4700
trans-1,2-dichloroethene	mg/kg	600	2300		604		570
trans-1,3-dichloropropene	mg/kg						
Trichloroethene	mg/kg		1.9	6.1	18.9	130	18
Trichlorofluoromethane	mg/kg	5400	35000				
Vinyl acetate	mg/kg		380				
Vinyl chloride	mg/kg	0.15	1.7	0.15	376	3.4	300
Xylene (m & p)	mg/kg						
Xylene (o)	mg/kg		280				

Location	SB-1		SB-2		SB-3		SB-4		SB-5		SB-6		SB-7	
Sample Depth (ft)	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3
Field ID	SB-1-1.0	SB-1-3.0	SB-2-1.0	SB-2-3.0	SB-3-1.0	SB-3-3.0	SB-4-1.0	SB-4-3.0	SB-5-1.0	SB-5-3.0	SB-6-1.0	SB-6-3.0	SB-7-1.0	SB-7-3.0
Sample Date	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018
SDG	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654
Chloroform	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Chloromethane	-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
cis-1,2-dichloroethene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
cis-1,3-dichloropropene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Dibromomethane	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Dichlorodifluoromethane	-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
Dichloromethane	-	<0.027	-	<0.014	-	<0.021	-	<0.017	-	<0.021	-	<0.017	-	<0.015
Ethylbenzene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Freon 113	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Hexachlorobutadiene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Isopropylbenzene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Methyl Ethyl Ketone	-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
Methyl Tertiary Butyl Ether	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Naphthalene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
n-butylbenzene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
n-propylbenzene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
p-isopropyltoluene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
sec-butylbenzene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Styrene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
tert-Butylbenzene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Tetrachloroethene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Toluene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
trans-1,2-dichloroethene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
trans-1,3-dichloropropene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Trichloroethene	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Trichlorofluoromethane	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Vinyl acetate	-	<0.068	-	<0.036	-	<0.054	-	<0.041	-	<0.052	-	<0.043	-	<0.037
Vinyl chloride	-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
Xylene (m & p)	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Xylene (o)	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037

Notes:
Detected concentrations are bold-faced
mg/kg= milligrams per kilogram
- = Not analyzed
< = analyte not detected above laboratory reporting limit
J = estimated below laboratory reporting limit
[1] To better reflect the background conditions for arsenic specifically, a regional background concentration of 11 milligrams per kilogram (mg/kg) was selected as the most applicable comparison criteria (Duverge 2011).

Citations:
DTSC SLs = California Department of Toxic Substances Control, Human and Ecological Risk Office (HERO). 2018. Human Health Risk Assessment (HHRA) Note Number: 3, DTSC Modified Screening Levels (DTSC-SLs). June.
SFRWQCB ESLs = San Francisco Bay Regional Water Quality Control Board (RWQCB). 2019. Environmental Screening Levels. January 24.
USEPA RSLs = United States Environmental Protection Agency. 2018. Regional Screening Levels. November. (TR=1E-06, HQ=0.1)

Table 1B

Soil Analytical Results Summary – Compared to Hazardous Waste Screening Criteria

Summary of Phase II Environmental Site Investigation

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	Location	Units	STLCx10	TCLPx20	TTLC	SB-1		SB-2		SB-3		SB-4		SB-5		SB-6		SB-7	
	Sample Depth (ft)					0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3
	Field ID					SB-1-1.0	SB-1-3.0	SB-2-1.0	SB-2-3.0	SB-3-1.0	SB-3-3.0	SB-4-1.0	SB-4-3.0	SB-5-1.0	SB-5-3.0	SB-6-1.0	SB-6-3.0	SB-7-1.0	SB-7-3.0
	Sample Date					12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018
	SDG					305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654
Metals	Antimony	mg/kg	150		500	<1.9	<2.0	<1.8	<2.0	<2.0	<2.0	<2.0	<1.9	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9
	Arsenic	mg/kg	50	100	500	5.2	8.7	4.9	6.9	7.7	5.2	2.9	4.7	5.7	5.1	5.3	1.8	4.9	6.3
	Barium	mg/kg	1000	2000	10000	170	400	200	110	280	140	54	150	140	60	85	30	93	110
	Beryllium	mg/kg	7.5		75	0.43	0.92	0.45	0.38	0.49	0.46	0.31	0.5	0.35	0.56	0.36	0.29	0.34	0.45
	Cadmium	mg/kg	10	20	100	0.49	4.9	0.42	<0.25	0.47	0.45	0.41	0.29	0.53	0.42	0.34	0.36	0.75	0.49
	Chromium (III+VI)	mg/kg	50	100	2500	50	46	39	53	63	42	34	50	36	64	43	53	50	61
	Cobalt	mg/kg	800		8000	11	22	10	6.6	11	9.4	6	11	8.9	7.9	11	12	12	7.5
	Copper	mg/kg	250		2500	56	180	28	21	22	17	37	22	36	20	55	38	51	35
	Lead	mg/kg	50	100	1000	95	380	73	16	40	8.4	66	21	54	16	12	14	58	66
	Mercury	mg/kg	2	4	20	<0.018	1.2	0.097	0.054	0.097	0.065	0.29	0.13	0.18	0.13	0.27	0.13	2.2	0.044
	Molybdenum	mg/kg	3500		3500	0.36	2.3	0.44	0.65	0.26	0.37	<0.25	<0.24	<0.26	<0.26	<0.27	<0.25	<0.24	0.89
	Nickel	mg/kg	200		2000	57	100	49	29	77	66	27	62	42	53	44	38	37	50
	Selenium	mg/kg	10	20	100	<1.9	<2.0	<1.8	<2.0	<2.0	<2.0	<2.0	<1.9	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9
	Silver	mg/kg	50	100	500	<0.24	0.31	<0.23	<0.25	<0.25	<0.26	<0.25	<0.24	<0.26	<0.26	<0.27	<0.25	<0.24	<0.24
	Thallium	mg/kg	70		700	<0.49	<0.56	<0.46	<0.50	<0.51	<0.52	<0.49	<0.48	<0.52	<0.52	<0.54	<0.50	<0.48	<0.48
	Vanadium	mg/kg	240		2400	44	37	37	43	38	34	28	42	39	50	56	69	57	51
	Zinc	mg/kg	2500		5000	150	710	98	46	100	45	76	60	82	71	53	44	130	110
PCBs	Aroclor 1016	mg/kg				<0.014	-	<0.013	-	<0.012	-	<0.013	-	<0.034	-	<0.033	-	<0.012	-
	Aroclor 1221	mg/kg				<0.027	-	<0.027	-	<0.024	-	<0.026	-	<0.068	-	<0.067	-	<0.024	-
	Aroclor 1232	mg/kg				<0.014	-	<0.013	-	<0.012	-	<0.013	-	<0.034	-	<0.033	-	<0.012	-
	Aroclor 1242	mg/kg				<0.014	-	<0.013	-	<0.012	-	<0.013	-	<0.034	-	<0.033	-	<0.012	-
	Aroclor 1248	mg/kg				<0.014	-	<0.013	-	<0.012	-	<0.013	-	<0.034	-	<0.033	-	<0.012	-
	Aroclor 1254	mg/kg				<0.014	-	<0.013	-	<0.012	-	0.068	-	<0.034	-	<0.033	-	0.033	-
	Aroclor 1260	mg/kg				<0.014	-	<0.013	-	<0.012	-	0.24	-	<0.034	-	<0.033	-	0.026	-
	Total PCBs	mg/kg	50		50	<0.027		<0.027		<0.024		0.31		<0.068		<0.067		0.059	
TPH	TPH as Diesel	mg/kg				29Y	100Y	22Y	3.9Y	3.6Y	1.2Y	11Y	7.7Y	44Y	9.6Y	77Y	41Y	21Y	11Y
	TPH as Gasoline	mg/kg				-	<0.21	-	<0.14	-	<0.21	-	<0.14	-	<0.20	-	<0.15	-	<0.17
	TPH as Motor Oil	mg/kg				350	720	240	16	37	9	160	100	660	120	1100	340	130	68
VOCs	1,1,1,2-tetrachloroethane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,1,1-trichloroethane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,1,2,2-tetrachloroethane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,1,2-trichloroethane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,1-dichloroethane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,1-dichloroethene	mg/kg		14		-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,1-dichloropropene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2,3-trichlorobenzene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2,3-trichloropropane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2,4-trichlorobenzene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2,4-trimethylbenzene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2-dibromo-3-chloropropane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2-dibromoethane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2-dichlorobenzene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2-dichloroethane	mg/kg		10		-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,2-dichloropropane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,3,5-trimethylbenzene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,3-dichlorobenzene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,3-dichloropropane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	1,4-dichlorobenzene	mg/kg		150		-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	2,2-dichloropropane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	2-chlorotoluene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	2-hexanone	mg/kg				-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
	4-chlorotoluene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
	4-Methyl-2-pentanone	mg/kg				-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
	Acetone	mg/kg				-	0.028	-	0.019	-	0.03	-	<0.017	-	<0.021	-	0.032	-	<0.015
	Benzene	mg/kg		10		-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037

Table 1B

Soil Analytical Results Summary – Compared to Hazardous Waste Screening Criteria

Summary of Phase II Environmental Site Investigation

SupplyBank.Org

Location	Units	STLCx10	TCLPx20	TTLC	SB-1		SB-2		SB-3		SB-4		SB-5		SB-6		SB-7	
Sample Depth (ft)					0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3	0.5-1	2.5-3
Field ID					SB-1-1.0	SB-1-3.0	SB-2-1.0	SB-2-3.0	SB-3-1.0	SB-3-3.0	SB-4-1.0	SB-4-3.0	SB-5-1.0	SB-5-3.0	SB-6-1.0	SB-6-3.0	SB-7-1.0	SB-7-3.0
Sample Date					12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018	12/6/2018
SDG					305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654	305654
Bromobenzene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Bromochloromethane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Bromodichloromethane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Bromoform	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Bromomethane	mg/kg				-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
Carbon disulfide	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Carbon tetrachloride	mg/kg		10		-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Chlorobenzene	mg/kg		2000		-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Chlorodibromomethane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Chloroethane	mg/kg				-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
Chloroform	mg/kg		120		-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Chloromethane	mg/kg				-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
cis-1,2-dichloroethene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
cis-1,3-dichloropropene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Dibromomethane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Dichlorodifluoromethane	mg/kg				-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
Dichloromethane	mg/kg				-	<0.027	-	<0.014	-	<0.021	-	<0.017	-	<0.021	-	<0.017	-	<0.015
Ethylbenzene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Freon 113	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Hexachlorobutadiene	mg/kg		10		-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Isopropylbenzene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Methyl Ethyl Ketone	mg/kg		4000		-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
Methyl Tertiary Butyl Ether	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Naphthalene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
n-butylbenzene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
n-propylbenzene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
p-isopropyltoluene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
sec-butylbenzene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Styrene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
tert-Butylbenzene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Tetrachloroethene	mg/kg		14		-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Toluene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
trans-1,2-dichloroethene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
trans-1,3-dichloropropene	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Trichloroethene	mg/kg	2040	10	2040	-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Trichlorofluoromethane	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Vinyl acetate	mg/kg				-	<0.068	-	<0.036	-	<0.054	-	<0.041	-	<0.052	-	<0.043	-	<0.037
Vinyl chloride	mg/kg		4	10	-	<0.014	-	<0.0071	-	<0.011	-	<0.0083	-	<0.01	-	<0.0086	-	<0.0074
Xylene (m & p)	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037
Xylene (o)	mg/kg				-	<0.0068	-	<0.0036	-	<0.0054	-	<0.0041	-	<0.0052	-	<0.0043	-	<0.0037

Notes:
Detected concentrations are **bold-faced**
mg/kg= milligrams per kilogram
- = Not analyzed
< = analyte not detected above laboratory reporting limit
J = estimated below laboratory reporting limit
TCLP = Toxicity Characteristic Leaching Procedure
STLC = Soluble Threshold Limit Concentration
TTLC = Total Threshold Limit Concentration

Table 2
Groundwater Analytical Results Summary
Summary of Phase II Environmental Site Investigation
SupplyBank.Org

	Location	Units	SFRWQCB Groundwater Gross Contamination ESLs	Groundwater Human Health MCL	Groundwater Vapor Intrusion Risk ESL - Commercial Industrial - Cancer	Groundwater Vapor Intrusion Risk ESL - Commercial Industrial - Non-Cancer	Groundwater Non-Drinking Water Resource Nuisance/Odor ESL	SB-2	SB-4	SB-5	SB-7
	Sample Date							12/6/2018	12/6/2018	12/6/2018	12/6/2018
	Field ID							SB-2-GW	SB-4-GW	SB-5-GW	SB-7-GW
	SDG							305638	305638	305638	305638
Metals	Antimony (Filtered)	mg/L	50	0.006				<0.01	<0.01	<0.01	<0.01
	Arsenic (Filtered)	mg/L	50	0.01				<0.01	<0.01	**0.016**	<0.01
	Barium (Filtered)	mg/L	50	1				**0.053**	**0.2**	**0.049**	**0.053**
	Beryllium (Filtered)	mg/L	50	0.004				<0.002	<0.002	<0.002	<0.002
	Cadmium (Filtered)	mg/L	50	0.005				<0.005	<0.005	<0.005	<0.005
	Chromium (III+VI) (Filtered)	mg/L	50	0.05				**0.0054**	<0.005	<0.005	<0.005
	Cobalt (Filtered)	mg/L	50	0.006				<0.005	<0.005	<0.005	<0.005
	Copper (Filtered)	mg/L	50	1				<0.005	**0.011**	**0.016**	**0.0072**
	Lead (Filtered)	mg/L	50	0.015				<0.005	<0.005	<0.005	<0.005
	Mercury (Filtered)	mg/L	0.03	0.002		0.00038		<0.0002	<0.0002	<0.0002	<0.0002
	Molybdenum (Filtered)	mg/L	50	0.1				<0.005	<0.005	**0.011**	**0.011**
	Nickel (Filtered)	mg/L	50	0.1				<0.005	**0.0059**	**0.0085**	**0.006**
	Selenium (Filtered)	mg/L	50	0.05				<0.01	<0.01	<0.01	<0.01
	Silver (Filtered)	mg/L	50	0.1				<0.005	<0.005	<0.005	<0.005
	Thallium (Filtered)	mg/L	50	0.002				<0.01	<0.01	<0.01	<0.01
	Vanadium (Filtered)	mg/L	50					<0.005	<0.005	**0.034**	**0.0059**
	Zinc (Filtered)	mg/L	50	5				<0.02	<0.02	**0.091**	<0.02
TPH	TPH as Diesel	µg/L	2500	200			5000	**360**	**310**	**200**	**200**
	TPH as Gasoline	µg/L	50000	760			5000	<50	<50	<50	<50
	TPH as Motor Oil[1]	µg/L	50000	410			5000	**1300**	**630**	**550**	**520**
VOCs	1,1,1,2-tetrachloroethane	µg/L	50000	0.57	17			<0.5	<0.5	<0.5	<0.5
	1,1,1-trichloroethane	µg/L	50000	200		6300	500000	<0.5	<0.5	<0.5	<0.5
	1,1,2,2-tetrachloroethane	µg/L	50000	1	14		5000	<0.5	<0.5	<0.5	<0.5
	1,1,2-trichloroethane	µg/L	50000	5	23	26		<0.5	<0.5	<0.5	<0.5
	1,1-dichloroethane	µg/L	50000	5	33			<0.5	<0.5	<0.5	<0.5
	1,1-dichloroethene	µg/L	50000	6		280	15000	<0.5	<0.5	<0.5	<0.5
	1,1-dichloropropene	µg/L						<0.5	<0.5	<0.5	<0.5
	1,2,3-trichlorobenzene	µg/L						<0.5	<0.5	<0.5	<0.5
	1,2,3-trichloropropane	µg/L	50000	0.005		94		<0.5	<0.5	<0.5	<0.5
	1,2,4-trichlorobenzene	µg/L	25000	5		150	30000	<0.5	<0.5	<0.5	<0.5
	1,2,4-trimethylbenzene	µg/L						<0.5	<0.5	<0.5	<0.5
	1,2-dibromo-3-chloropropane	µg/L	50000	0.2	0.34	150	100	<0.5	<0.5	<0.5	<0.5
	1,2-dibromoethane	µg/L	50000	0.05	0.76	130		<0.5	<0.5	<0.5	<0.5
	1,2-dichlorobenzene	µg/L	50000	100		11000	100	<0.5	<0.5	<0.5	<0.5
	1,2-dichloroethane	µg/L	50000	0.5	9.8	640	200000	<0.5	<0.5	<0.5	<0.5
	1,2-dichloropropane	µg/L	50000	5	10	150	100	<0.5	<0.5	<0.5	<0.5
	1,3,5-trimethylbenzene	µg/L						<0.5	<0.5	<0.5	<0.5
	1,4-Dichloro-2-butene	µg/L						<5	<5	<5	<5
	1,3-dichlorobenzene	µg/L	50000	600				<0.5	<0.5	<0.5	<0.5
	1,3-dichloropropane	µg/L						<0.5	<0.5	<0.5	<0.5

Table 2
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SupplyBank.Org

Location	Units	SFRWQCB Groundwater Gross Contamination ESLs	Groundwater Human Health MCL	Groundwater Vapor Intrusion Risk ESL - Commercial Industrial - Cancer	Groundwater Vapor Intrusion Risk ESL - Commercial Industrial - Non-Cancer	Groundwater Non-Drinking Water Resource Nuisance/Odor ESL	SB-2	SB-4	SB-5	SB-7
Sample Date							12/6/2018	12/6/2018	12/6/2018	12/6/2018
Field ID							SB-2-GW	SB-4-GW	SB-5-GW	SB-7-GW
SDG							305638	305638	305638	305638
1,4-dichlorobenzene	µg/L	41000	5	11	35000	110	<0.5	<0.5	<0.5	<0.5
2,2-dichloropropane	µg/L						<0.5	<0.5	<0.5	<0.5
2-chlorotoluene	µg/L						<0.5	<0.5	<0.5	<0.5
4-chlorotoluene	µg/L						<0.5	<0.5	<0.5	<0.5
4-Methyl-2-pentanone	µg/L	50000	120		2300000	13000	<5	<5	<5	<5
Acetone	µg/L	50000	14000		97000000	200000	<10	**18**	**18**	**15**
Allyl chloride	mg/L						<0.0005	<0.0005	<0.0005	<0.0005
Benzene	µg/L	50000	1	1.8	57	20000	<0.5	<0.5	<0.5	<0.5
Bromobenzene	µg/L						<1	<1	<1	<1
Bromochloromethane	µg/L						<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	µg/L	50000	80	3.8			<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	50000	80	510		5100	<0.5	<0.5	<0.5	<0.5
Bromomethane	µg/L	50000	7.5		73		<1	<1	<1	<1
Carbon tetrachloride	µg/L	50000	0.5	0.27	160	5200	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	µg/L	50000	70		1700	500	<0.5	<0.5	<0.5	<0.5
Chlorodibromomethane	µg/L	50000	80				<0.5	<0.5	<0.5	<0.5
Chloroethane	µg/L	50000	21000		97000	160	<0.5	<0.5	<0.5	<0.5
Chloroform	µg/L	50000	80	3.6	2900	24000	<0.5	<0.5	<0.5	<0.5
Chloromethane	µg/L	50000	190		1100		<0.5	<0.5	<0.5	<0.5
cis-1,2-dichloroethene	µg/L	50000	6		210		<0.5	<0.5	<0.5	<0.5
cis-1,3-dichloropropene	µg/L						<0.5	<0.5	<0.5	<0.5
cis-1,4-Dichloro-2-butene	µg/L						<5	<5	<5	<5
Dibromomethane	µg/L						<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	µg/L						<0.5	<0.5	<0.5	<0.5
Dichloromethane	µg/L	50000	5	94	13000	91000	**18**	**17**	**18**	**18**
Ethylbenzene	µg/L	50000	30	15	14000	300	<0.5	<0.5	<0.5	<0.5
Freon 113	µg/L						<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	µg/L	1600	0.14	1.3		60	<1	<1	<1	<1
Isopropylbenzene	µg/L						<0.5	<0.5	<0.5	<0.5
Methyl Ethyl Ketone	µg/L	50000	5600		9500000	84000	<5	**9.2**	<5	<5
Methyl Tertiary Butyl Ether	µg/L	50000	5	2000	550000	1800	<0.5	<0.5	<0.5	<0.5
Naphthalene	µg/L	16000	0.17	20	730	210	<0.5	<0.5	<0.5	<0.5
n-butylbenzene	µg/L						<0.5	<0.5	<0.5	<0.5
n-propylbenzene	µg/L						<0.5	<0.5	<0.5	<0.5
p-isopropyltoluene	µg/L						<0.5	<0.5	<0.5	<0.5
sec-butylbenzene	µg/L						<0.5	<0.5	<0.5	<0.5
Styrene	µg/L	50000	10		36000	110	<0.5	<0.5	<0.5	<0.5
tert-Butylbenzene	µg/L						<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	µg/L	50000	5	2.8	240	3000	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	50000	40		4900	400	<0.5	<0.5	<0.5	<0.5

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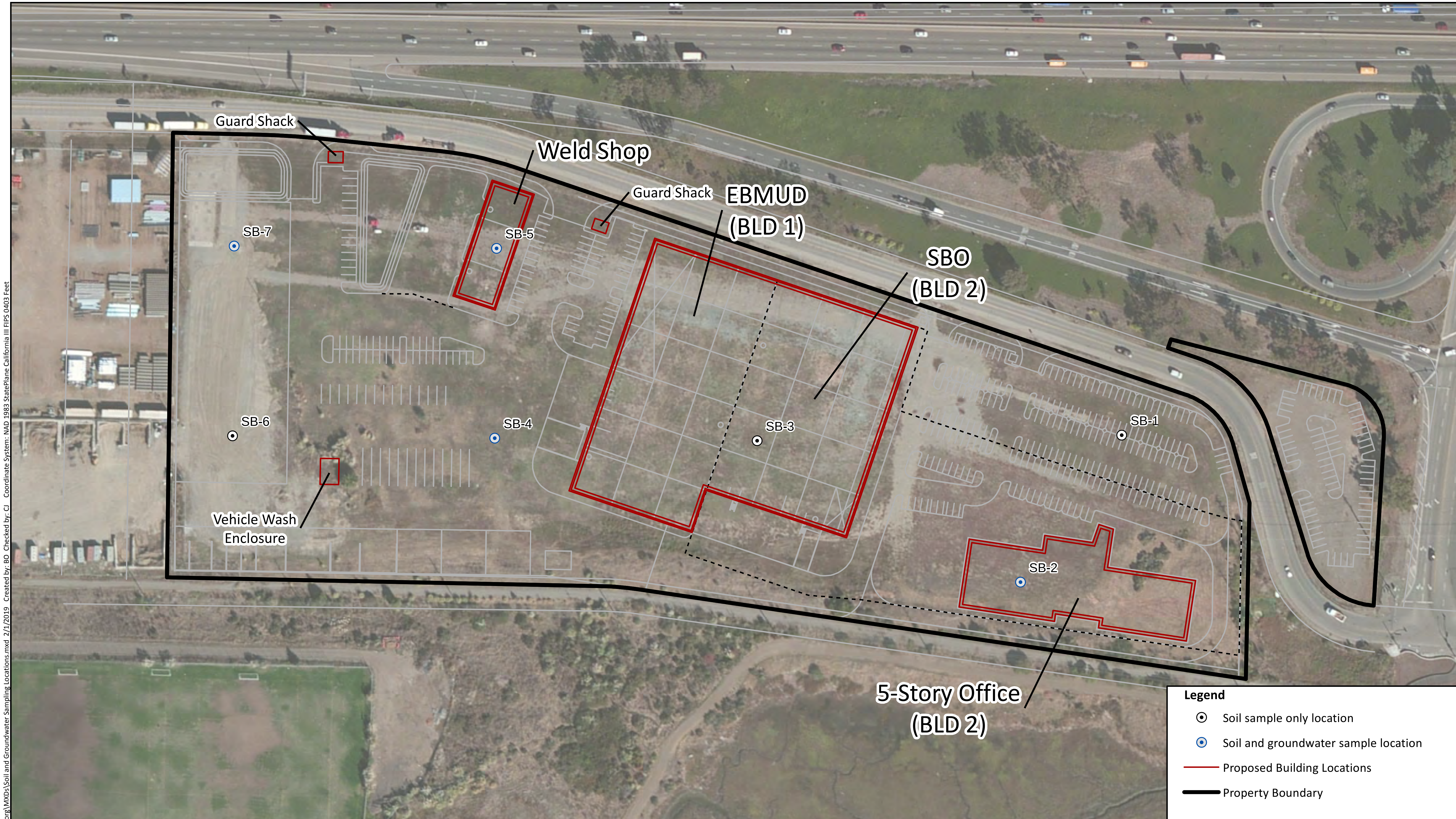
	Location	Units	SFRWQCB Groundwater Gross Contamination ESLs	Groundwater Human Health MCL	Groundwater Vapor Intrusion Risk ESL - Commercial Industrial - Cancer	Groundwater Vapor Intrusion Risk ESL - Commercial Industrial - Non-Cancer	Groundwater Non-Drinking Water Resource Nuisance/Odor ESL	SB-2	SB-4	SB-5	SB-7
	Sample Date							12/6/2018	12/6/2018	12/6/2018	12/6/2018
	Field ID							SB-2-GW	SB-4-GW	SB-5-GW	SB-7-GW
	SDG							305638	305638	305638	305638
	trans-1,2-dichloroethene	µg/L	50000	10		920	2600	<0.5	<0.5	<0.5	<0.5
	trans-1,3-dichloropropene	µg/L						<0.5	<0.5	<0.5	<0.5
	Trichloroethene	µg/L	50000	5	7.5	22	100000	<0.5	<0.5	<0.5	<0.5
	Trichlorofluoromethane	µg/L						<0.5	<0.5	<0.5	<0.5
	Vinyl chloride	µg/L	50000	0.5	0.14	400	34000	<0.5	<0.5	<0.5	<0.5
	Xylene (m & p)	µg/L						<0.5	<0.5	<0.5	<0.5
	Xylene (o)	µg/L						<0.5	<0.5	<0.5	<0.5
	Xylene Total	µg/L	50000	20		1600	5300	<0.5	<0.5	<0.5	<0.5

Notes:
Detected concentrations are **bold-faced**
MCL = Maximum Contaminant Level
µg/L= micrograms per Liter
mg/L= milligrams per Liter
< = analyte not detected above laboratory reporting limit
[1] The RWQCB does not identify TPH-mo ESLs due to negligible solubility. Instead, the RWQCB recommends comparison to the hydrocarbon oxidation products ESLs.

Citations:
SFRWQCB ESLs = San Francisco Bay Regional Water Quality Control Board (RWQCB). 2019. Environmental Screening Levels. January 24.



Notes: Aerial imagery source: DigitalGlobe 8/2018

SAFETY FIRST	CLIENT: SupplyBank.org		**Soil and Groundwater Sampling Locations**
terraphase engineering	PROJECT: Phase II Investigation 5801 Oakport St, Oakland, CA		
	PROJECT NUMBER: 0285.001.002		**FIGURE 1**

File: K:\GIS\Prj\0285 - SupplyBank.org\MXDs\Soil and Groundwater Sampling Locations.mxd 2/1/2019 Created by: BO Checked by: CJ Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 11/26/2018 By jamesy

Permit Numbers: W2018-1037
Permits Valid from 12/07/2018 to 12/07/2018

Application Id: 1541805227456
City of Project Site: Oakland
Site Location: 5801 Oakport St, Oakland, CA 94621, USA
Project Start Date: 11/29/2018
Completion Date: 11/29/2018
Assigned Inspector: Contact Eneyew Amberber at (510) 670-5759 or eneyew@acpwa.org
Extension Start Date: 12/07/2018
Extension End Date: 12/07/2018
Extension Count: 1
Extended By: eneyew2

Applicant: Terraphase Engineering, Inc. - Ethan Levy
1404 Franklin Street, Suite 600, Oakland, CA 94612
Phone: 510-427-0040

Property Owner: -- SupplyBank.org
7730 Pardee Lane, Oakland, CA 94621
Phone: --

Client: -- SupplyBank.org
7730 Pardee Lane, Oakland, CA 94621
Phone: --

Contact: Chris Jones
Phone: 907-290-8855 x48
Cell: --

	Total Due:	$265.00
Receipt Number: WR2018-0650	**Total Amount Paid:**	$265.00
Payer Name : Terra Phase	Paid By: MC	**PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Environmental/Monitorinig Study - 7 Boreholes
Driller: Confluence Environmental - Lic #: 913194 - Method: Hand **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2018-1037	11/26/2018	02/27/2019	7	4.00 in.	7.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

6. Electronic Reporting Regulations (Chapter 30, Division 3 of Title 23 & Division 3 of Title 27, CCR) require electronic submission of any report or data required by a regulatory agency from a cleanup site. Submission dates are set by a Regional Water Board or by a regulatory agency. Once a report/data is successfully uploaded, as required, you have met the reporting requirement (i.e. the compliance measure for electronic submittals is the actual upload itself). The upload date should be on or prior to the regulatory due date.

7. NOTE:
Under California laws, the owner/operator are responsible for reporting the contamination to the governmental regulatory agencies under Section 25295(a). The owner/operator is liable for civil penalties under Section 25299(a)(4) and criminal penalties under Section 25299(d) for failure to report a leak. The owner/operator is liable for civil penalties under Section 25299(b)(4) for knowing failure to ensure compliance with the law by the operator. These penalty provisions do not apply to a potential buyer.

8. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

9. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

ENTHALPY

ANALYTICAL

Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 305654
ANALYTICAL REPORT

Terraphase Engineering 1404 Franklin Street Oakland, CA 94612	Project : 0285.001.002 Location : SupplyBank Level : II

Sample ID	Lab ID
SB-1-1.0	305654-001
SB-1-3.0	305654-002
SB-1-5.0	305654-003
SB-2-1.0	305654-004
SB-2-3.0	305654-005
SB-2-5.0	305654-006
SB-3-1.0	305654-007
SB-3-3.0	305654-008
SB-3-5.0	305654-009
SB-4-1.0	305654-010
SB-4-3.0	305654-011
SB-5-1.0	305654-012
SB-5-3.0	305654-013
SB-6-1.0	305654-014
SB-6-3.0	305654-015
SB-7-1.0	305654-016
SB-7-3.0	305654-017
SB-7-5.0	305654-018
SB-6-5.0	305654-019

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Tracy Babjar   Date: 12/21/2018

Tracy Babjar
Project Manager
tracy.babjar@enthalpy.com
(510) 204-2226 Ext 13107

CA ELAP# 2896, NELAP# 4044-001

ENTHALPY ANALYTICAL

CASE NARRATIVE

Laboratory number:	**305654**
Client:	**Terraphase Engineering**
Project:	**0285.001.002**
Location:	**SupplyBank**
Request Date:	**12/07/18**
Samples Received:	**12/06/18**

This data package contains sample and QC results for fourteen soil samples, requested for the above referenced project on 12/07/18. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):
Enthalpy Analytical (Orange) in Orange, CA performed the analysis (not NELAP certified). Please see the Enthalpy Analytical (Orange) case narrative. High response was observed for gasoline C7-C12 in the CCV analyzed 12/20/18 16:23; affected data was qualified with "b". High response was observed for gasoline C7-C12 in the CCV analyzed 12/20/18 23:55; affected data was qualified with "b". High response was observed for gasoline C7-C12 in the CCV analyzed 12/21/18 07:26; affected data was qualified with "b".

TPH-Extractables by GC (EPA 8015B):
Matrix spikes QC957812,QC957813 (batch 266035) were not reported because the parent sample required a dilution that would have diluted out the spikes. Many samples were diluted due to the dark and viscous nature of the sample extracts. No other analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):
Enthalpy Analytical (Orange) in Orange, CA performed the analysis (not NELAP certified). Please see the Enthalpy Analytical (Orange) case narrative. Matrix spikes were not performed for this analysis in batch 266305 because of clock limitations; 5030 rushes were added to a 5035 batch. SB-1-3.0 (lab # 305654-002) was not diluted; the low sample weight is due to 5035 packaging.

PCBs (EPA 8082):
All samples underwent sulfuric acid cleanup using EPA Method 3665A. All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. A number of samples were diluted due to the color of the sample extracts. No other analytical problems were encountered.

Metals (EPA 6010B and EPA 7471A):
Low recoveries were observed for lead, antimony, and zinc in the MS/MSD of SB-1-1.0 (lab # 305654-001); the BS/BSD were within limits, and the associated RPDs were within limits. High recovery was observed for copper in the MSD of SB-1-1.0 (lab # 305654-001); the BS/BSD were within limits, and the associated RPD was within limits. No other analytical problems were encountered.

ENTHALPY ANALYTICAL

CASE NARRATIVE

Laboratory number:	**305654**
Client:	**Terraphase Engineering**
Project:	**0285.001.002**
Location:	**SupplyBank**
Request Date:	**12/07/18**
Samples Received:	**12/06/18**

Asbestos PLM (EPA 600/R-93-116):
Forensic Analytical in Hayward, CA performed the analysis (not NELAP certified). Please see the Forensic Analytical case narrative.

CHAIN OF CUSTODY

ENTHALPY ANALYTICAL
Formerly Curtis & Tompkins Labs

2323 Fifth Street
Berkeley, CA 94710

Phone (510) 486-0900
Fax (510) 486-0532

C&T LOGIN # 305654

Page 1 of 2

Chain of Custody # ______

Project No: 0285-001. 002

Project Name: Supply Bank

Project P. O. No:

EDD Format: Report Level ☒ II ☐ III ☐ IV

Turnaround Time: ☐ RUSH ______ ☒ Standard

Sampler: Ethan L

Report To: Alice.Hale.Price@terraphase.com

Company: Terraphase Eng Inc

Telephone: 510 645-1850

Email: Alice Hale Price

Lab No.	Sample ID.	Date Collected	Time Collected	Water	Solid	# of Containers	HCl	H2SO4	HNO3	NaOH	None	Asbestos	TPHd/mo	PCBs	Metals T22	TPHg	VOCs	HOLD
1	SB-1-1.0	12/6/18	1035		X	2						X	X	X	X			
2	SB-1-3.0	↓	1100		X	7							X		X	X	X	
3	SB-1-5.0		1110		X	7												X
4	SB-2-1.0		1245		X	2						X	X	X	X			
5	SB-2-3.0		1250		X	7							X		X	X	X	
6	SB-2-5.0		1305		X	7												X
7	SB-3-1.0		840		X	2						X	X	X	X			
8	SB-3-3.0		842		X	7							X		X	X	X	
9	SB-3-5.0		910		X	7												X
10	SB-4-1.0		1120		X	2						X	X	X	X			
11	SB-4-3.0		1135		X	7							X		X	X	X	
12	SB-5-1.0		955		X	2						X	X	X	X			
13	SB-5-3.0	↓	1005		X	7							X		X	X	X	

Notes:

SAMPLE RECEIPT
☐ Intact
☐ Cold
☒ On Ice
☐ Ambient

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
Ethan L [signature]	12/6/18	17:30	[signature]	12/6/18	17:30

CHAIN OF CUSTODY

ENTHALPY ANALYTICAL
Formerly Curtis & Tompkins Labs
2323 Fifth Street
Berkeley, CA 94710
Phone (510) 486-0900
Fax (510) 486-0532

Page 2 of 2

C&T LOGIN # 355654

Chain of Custody #

Project No: 0285.001.002

Project Name: SupplyBank

Project P. O. No:

EDD Format: Report Level ☒ II ☐ III ☐ IV

Turnaround Time: ☐ RUSH ☒ Standard

Sampler: Ethan L

Report To: Alice.Hale.Price@terraphase.com

Company: Terraphase Eng Inc

Telephone: 510 645 1850

Email: Alice.Hale.Price@terraphase.com

Lab No.	Sample ID.	Date Collected	Time Collected	Water	Solid	# of Containers	HCl	H2SO4	HNO3	NaOH	None	Asbestos	TPH d/mo	PCBs	Metals T22	TPHg	VOCs	HOLD
14	SB-6-1.0	12/6/18	1410		X	2						X	X	X	X			
15	SB-6-3.0		1430		X	7							X		X	X	X	
16	SB-7-1.0		1335		X	2						X	X	X	X			
17	SB-7-3.0		1340		X	7							X		X	X	X	
18	SB-7-5.0		1355		X	7												X

Notes:

SAMPLE RECEIPT
☐ Intact
☐ Cold
☒ On Ice
☐ Ambient

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
[signature]	12/6/18	17:30	[signature]	12/6/18	17:30

SAMPLE RECEIPT CHECKLIST

ENTHALPY ANALYTICAL

Section 1: Login # 305654 Client: Terraphase
Date Received: 12/6/18 Project: ______

Section 2: Samples received in a cooler? ☑ Yes, how many? 2 ☐ No (skip Section 3 below)
If no cooler Sample Temp (°C): ______ using IR Gun # ☐ A, or ☐ B
☐ Samples received on ice directly from the field. Cooling process had begun
If in cooler: Date Opened 12/6/18 By (print) AC (sign) AC
Shipping info (if applicable) ______
Are custody seals present? ☑ No, or ☐ Yes. If yes, where? ☐ on cooler, ☐ on samples, ☐ on package
☐ Date: ______ How many ______ ☐ Signature, ☐ Initials, ☐ None
Were custody seals intact upon arrival? ☐ Yes ☐ No ☑ N/A

Section 3: *Important*: Notify PM if temperature exceeds 6°C or arrive frozen.
Packing in cooler: (if other, describe) ______
☑ Bubble Wrap, ☐ Foam blocks, ☐ Bags, ☐ None, ☐ Cloth material, ☐ Cardboard, ☐ Styrofoam, ☐ Paper towels
☐ Samples received on ice directly from the field. Cooling process had begun
Type of ice used: ☑ Wet, ☐ Blue/Gel, ☐ None Temperature blank(s) included? ☐ Yes, ☑ No
Temperature measured using ☐ Thermometer ID: ______, or IR Gun # ☑ A ☐ B
Cooler Temp (°C): #1: 1.6, #2: 4.0, #3: ______, #4: ______, #5: ______, #6: ______, #7: ______

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	✓		
Were Method 5035 sampling containers present?	✓		
If YES, what time were they transferred to freezer? 12/6/18 12:39			
Did all bottles arrive unbroken/unopened?	X		
Are there any missing / extra samples?	X		
Are samples in the appropriate containers for indicated tests?	X		
Are sample labels present, in good condition and complete?	✓		
Does the container count match the COC?		X	
Do the sample labels agree with custody papers?	PD ~~X~~	X	
Was sufficient amount of sample sent for tests requested?	X		
Did you change the hold time in LIMS for unpreserved VOAs?			X
Did you change the hold time in LIMS for preserved terracores?	X		
Are bubbles > 6mm absent in VOA samples?			X
Was the client contacted concerning this sample delivery?		X	
If YES, who was called? ______ By ______ Date: ______			

Section 5:	YES	NO	N/A
Are the samples appropriately preserved? (If N/A, skip the rest of section 5)			X
Did you check preservatives for all bottles for each sample?			
Did you document your preservative check?			

pH strip lot# ______, pH strip lot# ______, pH strip lot# ______
Preservative added:
☐ H2SO4 lot# ______ added to samples ______ on/at ______
☐ HCL lot# ______ added to samples ______ on/at ______
☐ HNO3 lot# ______ added to samples ______ on/at ______
☐ NaOH lot# ______ added to samples ______ on/at ______

Section 6:
Explanations/Comments: – Sample 9 container count does not match COC, missing 6 containers.
– Lab received sample "SB-6-5.0" with 7 containers, not listed on COC

Date Logged in 12/7/18 By (print) AC (sign) AC
Date Labeled 12/7/18 By (print) PD (sign) PD

Detections Summary for 305654

Results for any subcontracted analyses are not included in this summary.

Client : Terraphase Engineering
Project : 0285.001.002
Location : SupplyBank

Client Sample ID : SB-1-1.0 Laboratory Sample ID : 305654-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	29	Y	10	mg/Kg	As Recd	10.00	EPA 8015B	EPA 3550C
Motor Oil C24-C36	350		50	mg/Kg	As Recd	10.00	EPA 8015B	EPA 3550C
Arsenic	5.2		1.5	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	170		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.43		0.097	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.49		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	50		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	11		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	56		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	95		0.97	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Molybdenum	0.36		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	57		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	44		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	150		0.97	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-1-3.0 Laboratory Sample ID : 305654-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	100	Y	10	mg/Kg	As Recd	10.00	EPA 8015B	EPA 3550C
Motor Oil C24-C36	720		50	mg/Kg	As Recd	10.00	EPA 8015B	EPA 3550C
Acetone	28		27	ug/Kg	As Recd	1.354	EPA 8260B	EPA 5035
Arsenic	8.7		1.5	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	400		0.28	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.92		0.11	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	4.9		0.28	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	46		0.28	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	22		0.28	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	180		0.28	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	380		1.0	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	1.2		0.16	mg/Kg	As Recd	10.00	EPA 7471A	METHOD
Molybdenum	2.3		0.28	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	100		0.28	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Silver	0.31		0.28	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	37		0.28	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	710		110	mg/Kg	As Recd	100.0	EPA 6010B	EPA 3050B

ENTHALPY ANALYTICAL

Client Sample ID : SB-2-1.0 Laboratory Sample ID : 305654-004

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	22	Y	10	mg/Kg	As Recd	10.00	EPA 8015B	EPA 3550C
Motor Oil C24-C36	240		50	mg/Kg	As Recd	10.00	EPA 8015B	EPA 3550C
Arsenic	4.9		1.4	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	200		0.23	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.45		0.092	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.42		0.23	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	39		0.23	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	10		0.23	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	28		0.23	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	73		0.92	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.097		0.015	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.44		0.23	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	49		0.23	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	37		0.23	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	98		0.92	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-2-3.0 Laboratory Sample ID : 305654-005

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	3.9	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550C
Motor Oil C24-C36	16		5.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550C
Acetone	19		14	ug/Kg	As Recd	0.7123	EPA 8260B	EPA 5035
Arsenic	6.9		1.5	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	110		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.38		0.099	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	53		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	6.6		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	21		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	16		0.99	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.054		0.017	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.65		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	29		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	43		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	46		0.99	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-3-1.0 Laboratory Sample ID : 305654-007

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	3.6	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550C
Motor Oil C24-C36	37		5.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550C
Arsenic	7.7		1.5	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	280		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.49		0.10	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.47		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	63		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	11		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	22		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	40		1.0	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.097		0.018	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.26		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	77		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	38		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	100		1.0	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-3-3.0 Laboratory Sample ID : 305654-008

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	1.2	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550C
Motor Oil C24-C36	9.0		5.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550C
Acetone	30		21	ug/Kg	As Recd	1.073	EPA 8260B	EPA 5035
Arsenic	5.2		1.5	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	140		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.46		0.10	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.45		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	42		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	9.4		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	17		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	8.4		1.0	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.065		0.016	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.37		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	66		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	34		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	45		1.0	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

ENTHALPY ANALYTICAL

Client Sample ID : SB-4-1.0 Laboratory Sample ID : 305654-010

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	11	Y	5.0	mg/Kg	As Recd	5.000	EPA 8015B	EPA 3550C
Motor Oil C24-C36	160		25	mg/Kg	As Recd	5.000	EPA 8015B	EPA 3550C
Aroclor-1254	68		13	ug/Kg	As Recd	2.000	EPA 8082	EPA 3546
Aroclor-1260	240		13	ug/Kg	As Recd	2.000	EPA 8082	EPA 3546
Arsenic	2.9		1.5	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	54		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.31		0.098	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.41		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	34		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	6.0		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	37		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	66		0.98	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.29		0.017	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Nickel	27		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	28		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	76		0.98	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-4-3.0 Laboratory Sample ID : 305654-011

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	7.7	Y	5.0	mg/Kg	As Recd	5.000	EPA 8015B	EPA 3550C
Motor Oil C24-C36	100		25	mg/Kg	As Recd	5.000	EPA 8015B	EPA 3550C
Arsenic	4.7		1.4	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	150		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.50		0.095	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.29		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	50		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	11		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	22		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	21		0.95	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.13		0.018	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Nickel	62		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	42		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	60		0.95	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-5-1.0 Laboratory Sample ID : 305654-012

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	44	Y	20	mg/Kg	As Recd	20.00	EPA 8015B	EPA 3550C
Motor Oil C24-C36	660		100	mg/Kg	As Recd	20.00	EPA 8015B	EPA 3550C
Arsenic	5.7		1.5	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	140		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.35		0.10	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.53		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	36		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	8.9		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	36		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	54		1.0	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.18		0.017	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Nickel	42		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	39		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	82		1.0	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-5-3.0 Laboratory Sample ID : 305654-013

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	9.6	Y	5.0	mg/Kg	As Recd	5.000	EPA 8015B	EPA 3550C
Motor Oil C24-C36	120		25	mg/Kg	As Recd	5.000	EPA 8015B	EPA 3550C
Arsenic	5.1		1.5	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	60		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.56		0.10	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.42		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	64		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	7.9		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	20		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	16		1.0	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.13		0.016	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Nickel	53		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	50		0.26	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	71		1.0	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-6-1.0 Laboratory Sample ID : 305654-014

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	77	Y	10	mg/Kg	As Recd	10.00	EPA 8015B	EPA 3550C
Motor Oil C24-C36	1,100		50	mg/Kg	As Recd	10.00	EPA 8015B	EPA 3550C
Arsenic	5.3		1.5	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	85		0.27	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.36		0.11	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.34		0.27	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	43		0.27	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	11		0.27	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	55		0.27	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	12		1.0	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.27		0.017	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Nickel	44		0.27	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	56		0.27	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	53		1.1	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-6-3.0 Laboratory Sample ID : 305654-015

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	41	Y	5.0	mg/Kg	As Recd	5.000	EPA 8015B	EPA 3550C
Motor Oil C24-C36	340		25	mg/Kg	As Recd	5.000	EPA 8015B	EPA 3550C
Acetone	32		17	ug/Kg	As Recd	0.8576	EPA 8260B	EPA 5035
Arsenic	1.8		1.5	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	30		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.29		0.099	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.36		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	53		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	12		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	38		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	14		0.99	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.13		0.018	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Nickel	38		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	69		0.25	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	44		0.99	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-7-1.0 Laboratory Sample ID : 305654-016

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	21	Y	5.0	mg/Kg	As Recd	5.000	EPA 8015B	EPA 3550C
Motor Oil C24-C36	130		25	mg/Kg	As Recd	5.000	EPA 8015B	EPA 3550C
Aroclor-1254	33		12	ug/Kg	As Recd	1.000	EPA 8082	EPA 3546
Aroclor-1260	26		12	ug/Kg	As Recd	1.000	EPA 8082	EPA 3546
Arsenic	4.9		1.4	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	93		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.34		0.096	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.75		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	50		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	12		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	51		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	58		0.96	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	2.2		0.16	mg/Kg	As Recd	10.00	EPA 7471A	METHOD
Nickel	37		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	57		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	130		0.96	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-7-3.0 Laboratory Sample ID : 305654-017

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	11	Y	2.0	mg/Kg	As Recd	2.000	EPA 8015B	EPA 3550C
Motor Oil C24-C36	68		10	mg/Kg	As Recd	2.000	EPA 8015B	EPA 3550C
Arsenic	6.3		1.4	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	110		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.45		0.095	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.49		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	61		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	7.5		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	35		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	66		0.95	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.044		0.017	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.89		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	50		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	51		0.24	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	110		0.95	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Y = Sample exhibits chromatographic pattern which does not resemble standard

ENTHALPY ANALYTICAL

Gasoline by GC/FID (5035 Prep)

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	266327
Units:	mg/Kg	Sampled:	12/06/18
Basis:	as received	Received:	12/06/18
Diln Fac:	1.000	Analyzed:	12/20/18

Field ID: SB-1-3.0 Lab ID: 305654-002
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	0.21

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	118	64-134

Field ID: SB-2-3.0 Lab ID: 305654-005
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	0.14

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	123	64-134

Field ID: SB-3-3.0 Lab ID: 305654-008
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	0.21

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	119	64-134

Field ID: SB-4-3.0 Lab ID: 305654-011
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	0.14

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	122	64-134

Field ID: SB-5-3.0 Lab ID: 305654-013
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	0.20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	123	64-134

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Gasoline by GC/FID (5035 Prep)

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	266327
Units:	mg/Kg	Sampled:	12/06/18
Basis:	as received	Received:	12/06/18
Diln Fac:	1.000	Analyzed:	12/20/18

Field ID: SB-6-3.0 Lab ID: 305654-015
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	0.15

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	121	64-134

Field ID: SB-7-3.0 Lab ID: 305654-017
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	0.17

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	121	64-134

Type: BLANK Lab ID: QC959013

Analyte	Result	RL
Gasoline C7-C12	ND	0.20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	93	64-134

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Batch QC Report

Gasoline by GC/FID (5035 Prep)

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	266327
Units:	mg/Kg	Analyzed:	12/20/18
Diln Fac:	1.000		

Type: BS Lab ID: QC959014

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.085	109	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	89	64-134

Type: BSD Lab ID: QC959015

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1.000	1.080 b	108	80-120	0	20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	88	64-134

b= See narrative
RPD= Relative Percent Difference

ENTHALPY ANALYTICAL

Batch QC Report

Gasoline by GC/FID (5035 Prep)			
Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5030B
Project#:	0285.001.002	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	305927-001	Batch#:	266327
Matrix:	Soil	Sampled:	12/18/18
Units:	mg/Kg	Received:	12/18/18
Basis:	as received	Analyzed:	12/21/18

Type: MS Lab ID: QC959031

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<0.2952	10.87	11.66 b	107	46-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	120	64-134

Type: MSD Lab ID: QC959032

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.31	10.52 b	102	46-120	5	33

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	116	64-134

b= See narrative
RPD= Relative Percent Difference

ENTHALPY ANALYTICAL

Total Extractable Hydrocarbons

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3550C
Project#:	0285.001.002	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18
Basis:	as received	Prepared:	12/10/18
Batch#:	266035	Analyzed:	12/11/18

Field ID: SB-1-1.0 Lab ID: 305654-001
Type: SAMPLE Diln Fac: 10.00

Analyte	Result	RL
Diesel C10-C24	29 Y	10
Motor Oil C24-C36	350	50

Surrogate	%REC	Limits
o-Terphenyl	DO	59-130

Field ID: SB-1-3.0 Lab ID: 305654-002
Type: SAMPLE Diln Fac: 10.00

Analyte	Result	RL
Diesel C10-C24	100 Y	10
Motor Oil C24-C36	720	50

Surrogate	%REC	Limits
o-Terphenyl	DO	59-130

Field ID: SB-2-1.0 Lab ID: 305654-004
Type: SAMPLE Diln Fac: 10.00

Analyte	Result	RL
Diesel C10-C24	22 Y	10
Motor Oil C24-C36	240	50

Surrogate	%REC	Limits
o-Terphenyl	DO	59-130

Field ID: SB-2-3.0 Lab ID: 305654-005
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	3.9 Y	1.0
Motor Oil C24-C36	16	5.0

Surrogate	%REC	Limits
o-Terphenyl	110	59-130

Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Total Extractable Hydrocarbons

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3550C
Project#:	0285.001.002	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18
Basis:	as received	Prepared:	12/10/18
Batch#:	266035	Analyzed:	12/11/18

Field ID: SB-3-1.0 Lab ID: 305654-007
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	3.6 Y	1.0
Motor Oil C24-C36	37	5.0

Surrogate	%REC	Limits
o-Terphenyl	101	59-130

Field ID: SB-3-3.0 Lab ID: 305654-008
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	1.2 Y	1.0
Motor Oil C24-C36	9.0	5.0

Surrogate	%REC	Limits
o-Terphenyl	91	59-130

Field ID: SB-4-1.0 Lab ID: 305654-010
Type: SAMPLE Diln Fac: 5.000

Analyte	Result	RL
Diesel C10-C24	11 Y	5.0
Motor Oil C24-C36	160	25

Surrogate	%REC	Limits
o-Terphenyl	DO	59-130

Field ID: SB-4-3.0 Lab ID: 305654-011
Type: SAMPLE Diln Fac: 5.000

Analyte	Result	RL
Diesel C10-C24	7.7 Y	5.0
Motor Oil C24-C36	100	25

Surrogate	%REC	Limits
o-Terphenyl	DO	59-130

Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Total Extractable Hydrocarbons

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3550C
Project#:	0285.001.002	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18
Basis:	as received	Prepared:	12/10/18
Batch#:	266035	Analyzed:	12/11/18

Field ID:	SB-5-1.0	Lab ID:	305654-012
Type:	SAMPLE	Diln Fac:	20.00

Analyte	Result	RL
Diesel C10-C24	44 Y	20
Motor Oil C24-C36	660	100

Surrogate	%REC	Limits
o-Terphenyl	DO	59-130

Field ID:	SB-5-3.0	Lab ID:	305654-013
Type:	SAMPLE	Diln Fac:	5.000

Analyte	Result	RL
Diesel C10-C24	9.6 Y	5.0
Motor Oil C24-C36	120	25

Surrogate	%REC	Limits
o-Terphenyl	DO	59-130

Field ID:	SB-6-1.0	Lab ID:	305654-014
Type:	SAMPLE	Diln Fac:	10.00

Analyte	Result	RL
Diesel C10-C24	77 Y	10
Motor Oil C24-C36	1,100	50

Surrogate	%REC	Limits
o-Terphenyl	DO	59-130

Field ID:	SB-6-3.0	Lab ID:	305654-015
Type:	SAMPLE	Diln Fac:	5.000

Analyte	Result	RL
Diesel C10-C24	41 Y	5.0
Motor Oil C24-C36	340	25

Surrogate	%REC	Limits
o-Terphenyl	DO	59-130

Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Total Extractable Hydrocarbons

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3550C
Project#:	0285.001.002	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18
Basis:	as received	Prepared:	12/10/18
Batch#:	266035	Analyzed:	12/11/18

Field ID:	SB-7-1.0	Lab ID:	305654-016
Type:	SAMPLE	Diln Fac:	5.000

Analyte	Result	RL
Diesel C10-C24	21 Y	5.0
Motor Oil C24-C36	130	25

Surrogate	%REC	Limits
o-Terphenyl	DO	59-130

Field ID:	SB-7-3.0	Lab ID:	305654-017
Type:	SAMPLE	Diln Fac:	2.000

Analyte	Result	RL
Diesel C10-C24	11 Y	2.0
Motor Oil C24-C36	68	10

Surrogate	%REC	Limits
o-Terphenyl	97	59-130

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC957810		

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
o-Terphenyl	101	59-130

Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

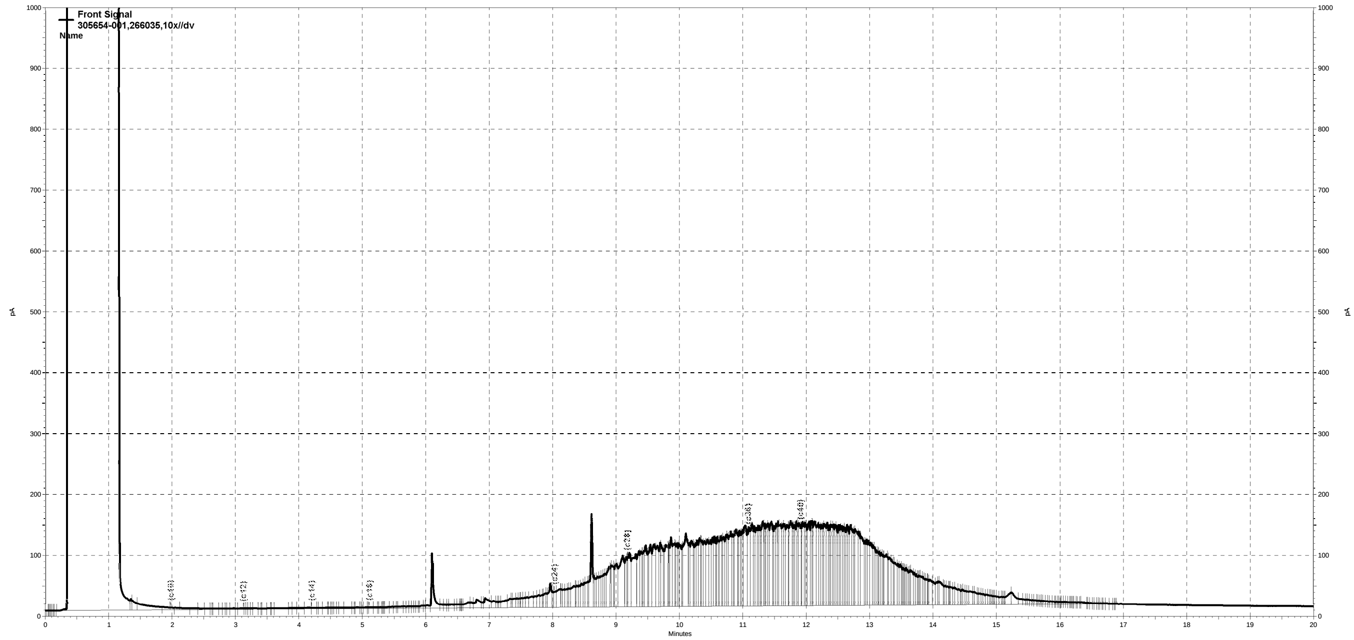
Batch QC Report

Total Extractable Hydrocarbons

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3550C
Project#:	0285.001.002	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC957811	Batch#:	266035
Matrix:	Soil	Prepared:	12/10/18
Units:	mg/Kg	Analyzed:	12/11/18

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	50.00	55.26	111	56-137

Surrogate	%REC	Limits
o-Terphenyl	107	59-130



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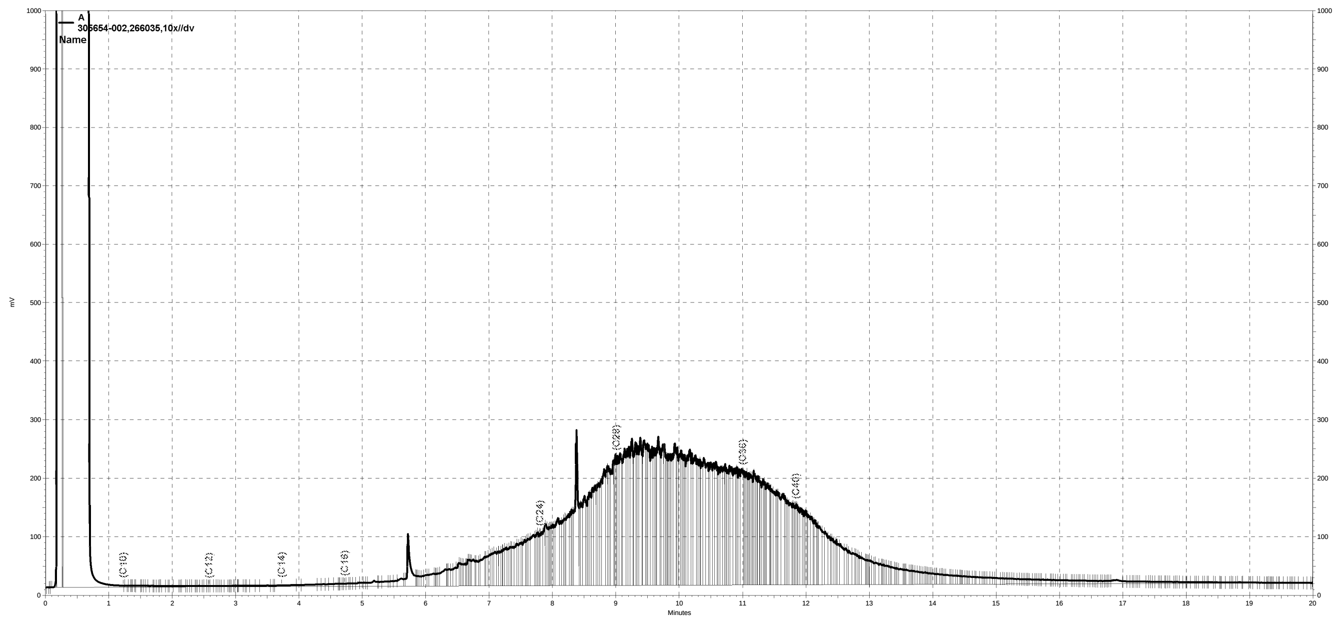

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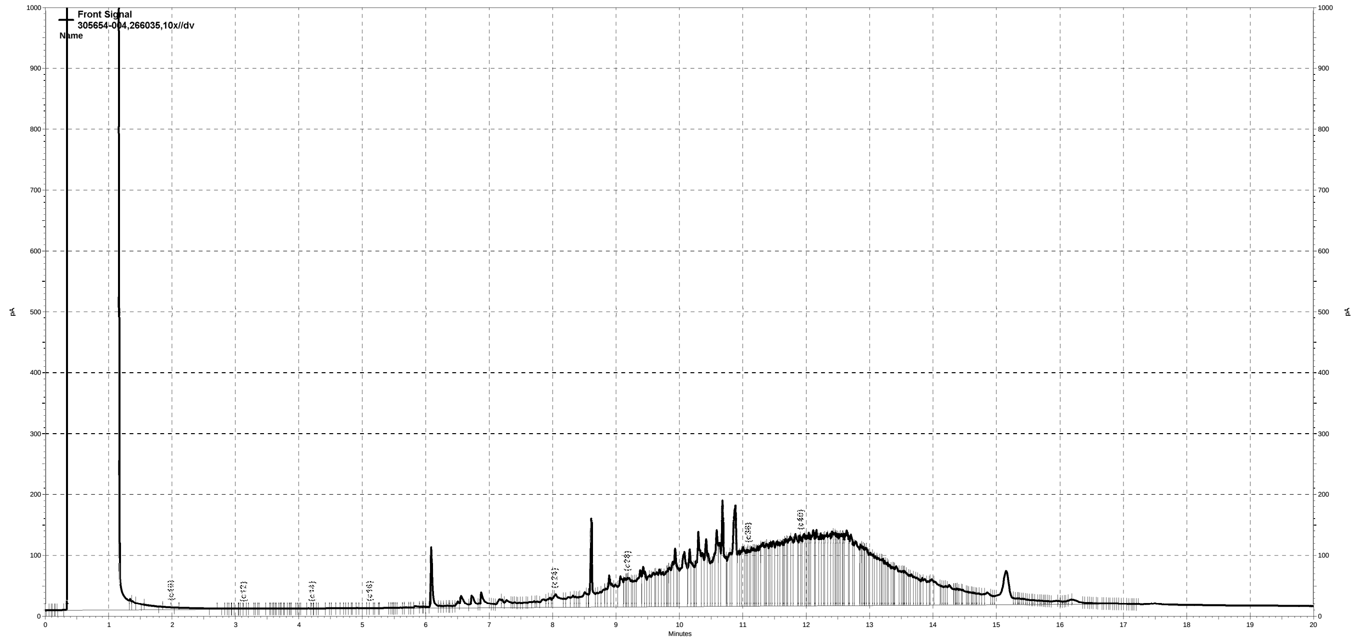

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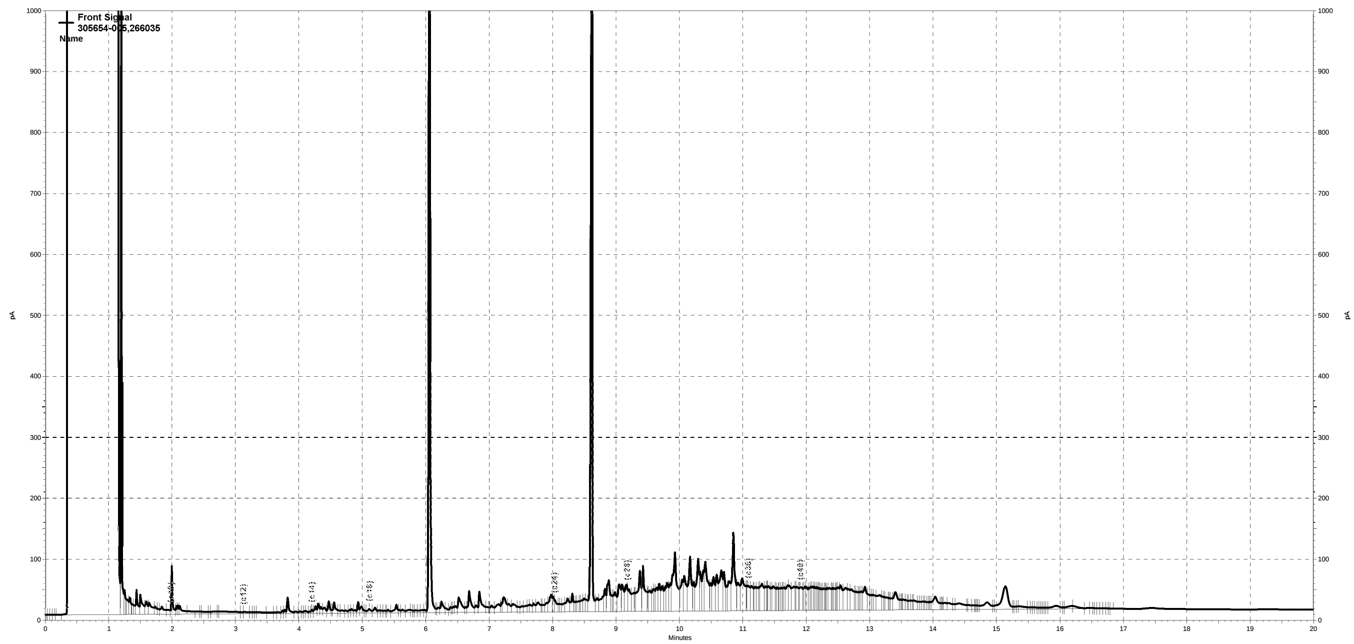

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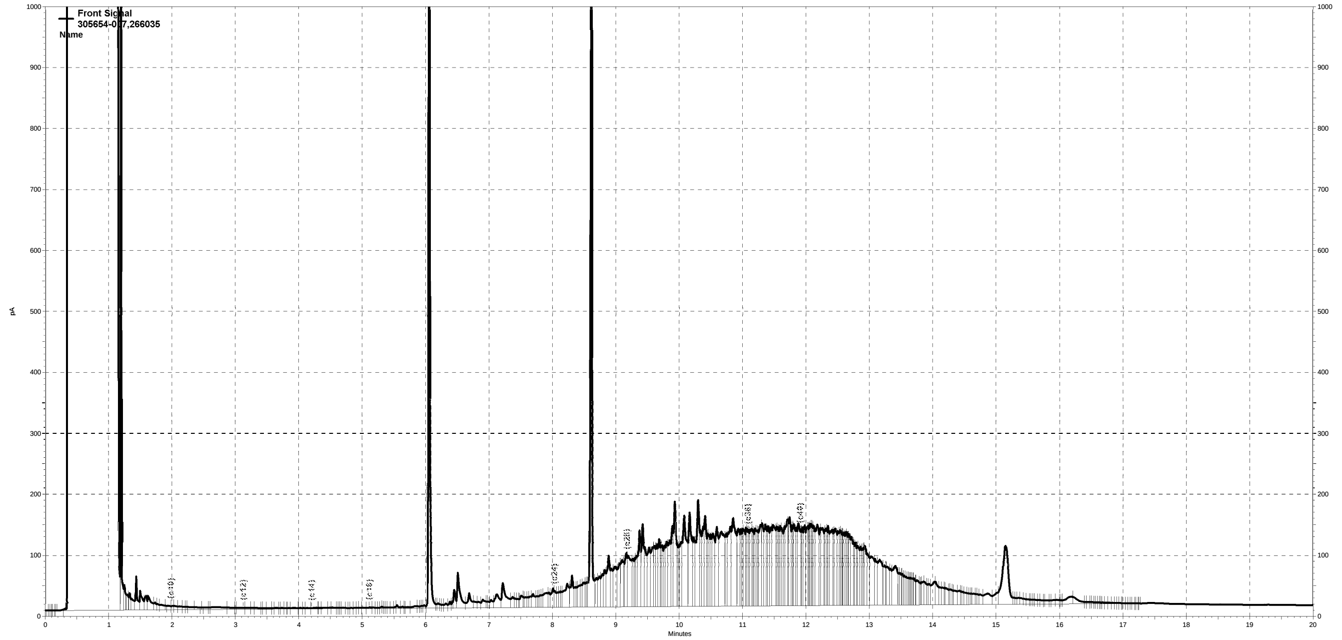

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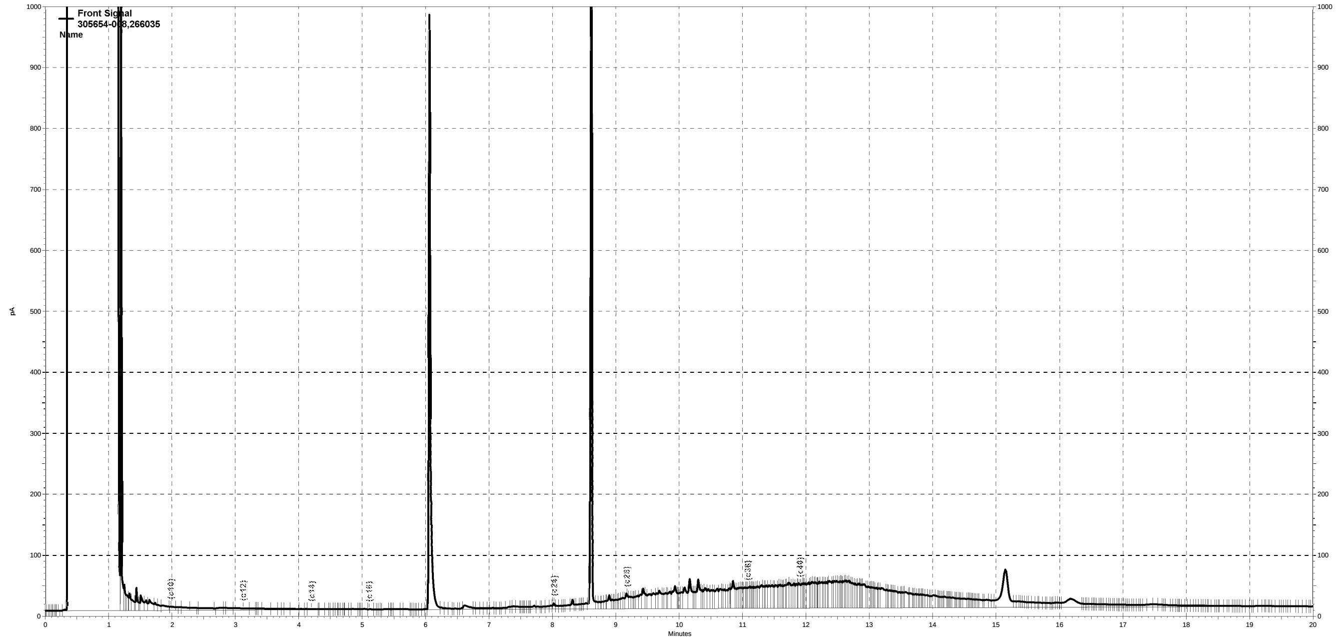

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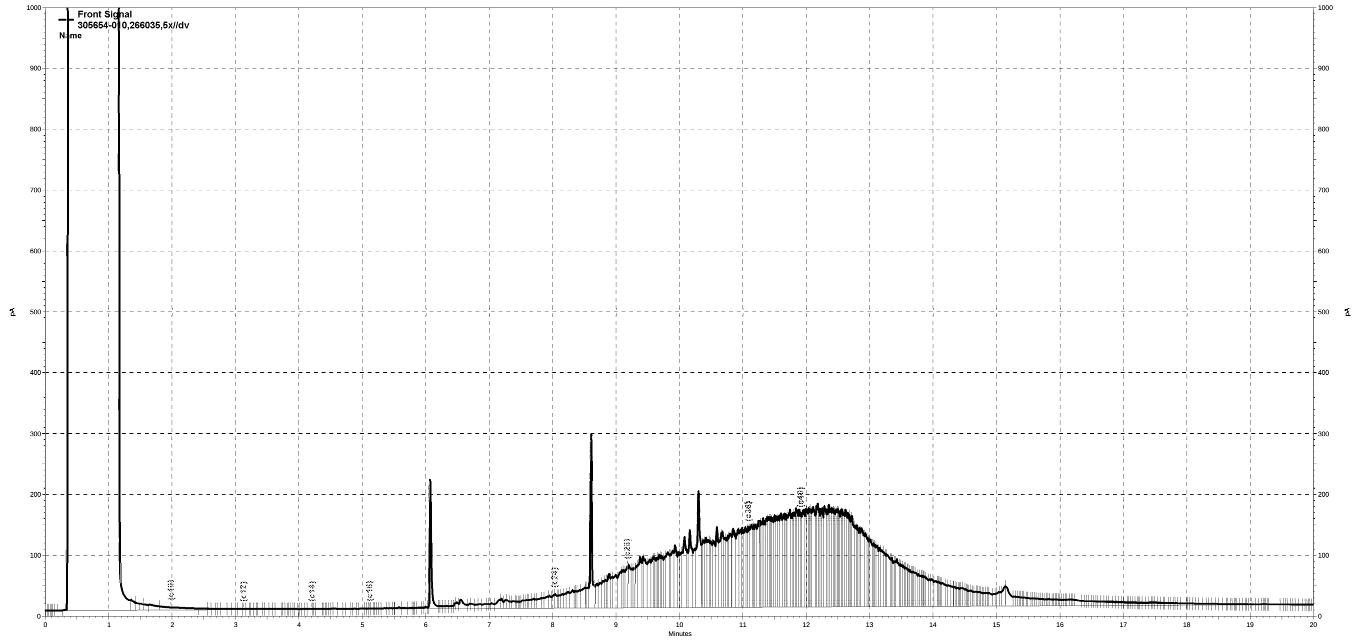

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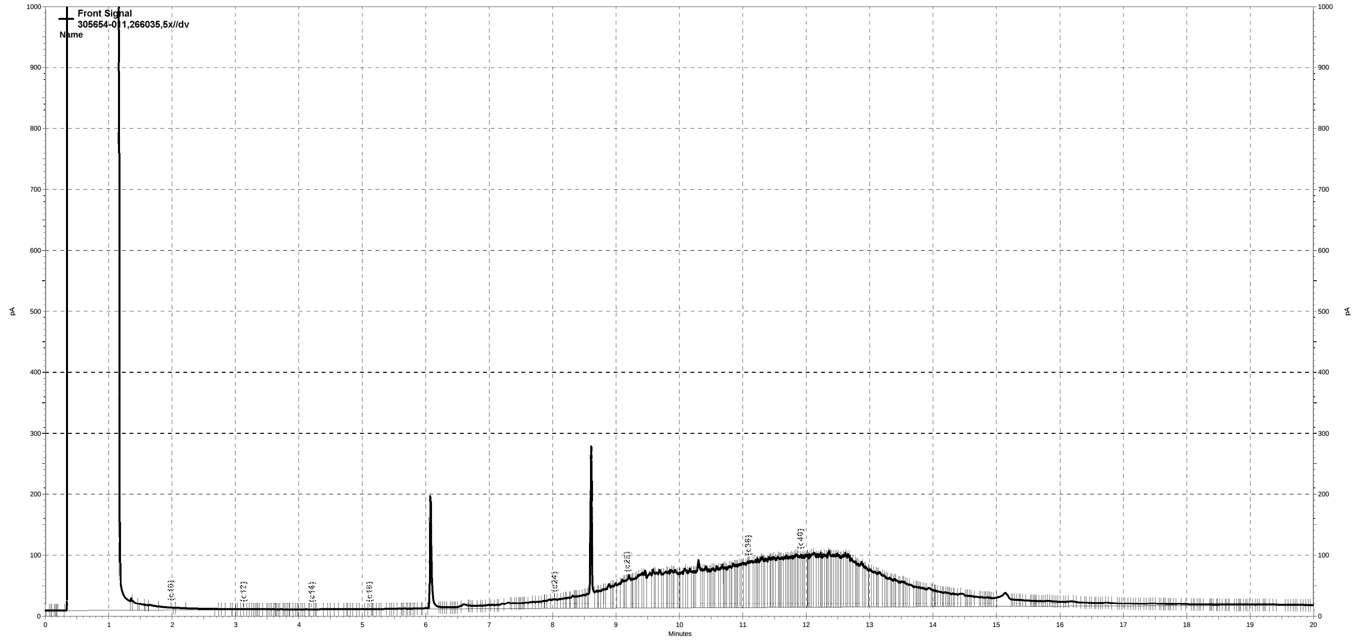

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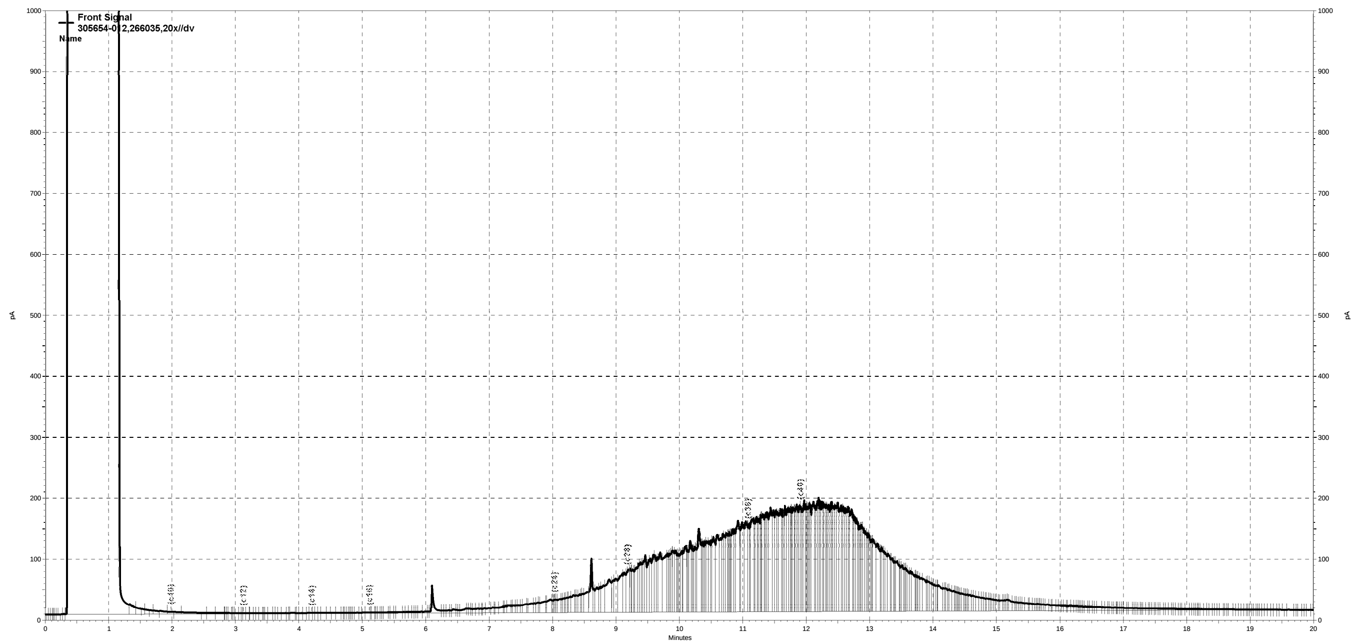

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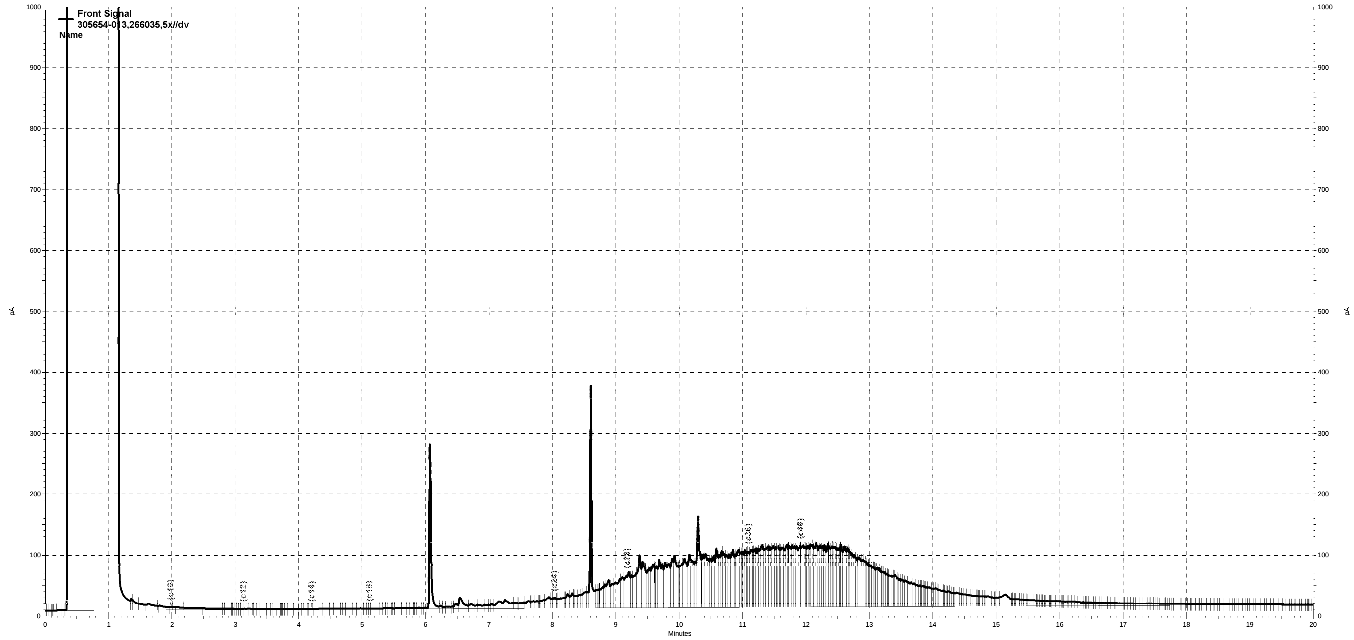

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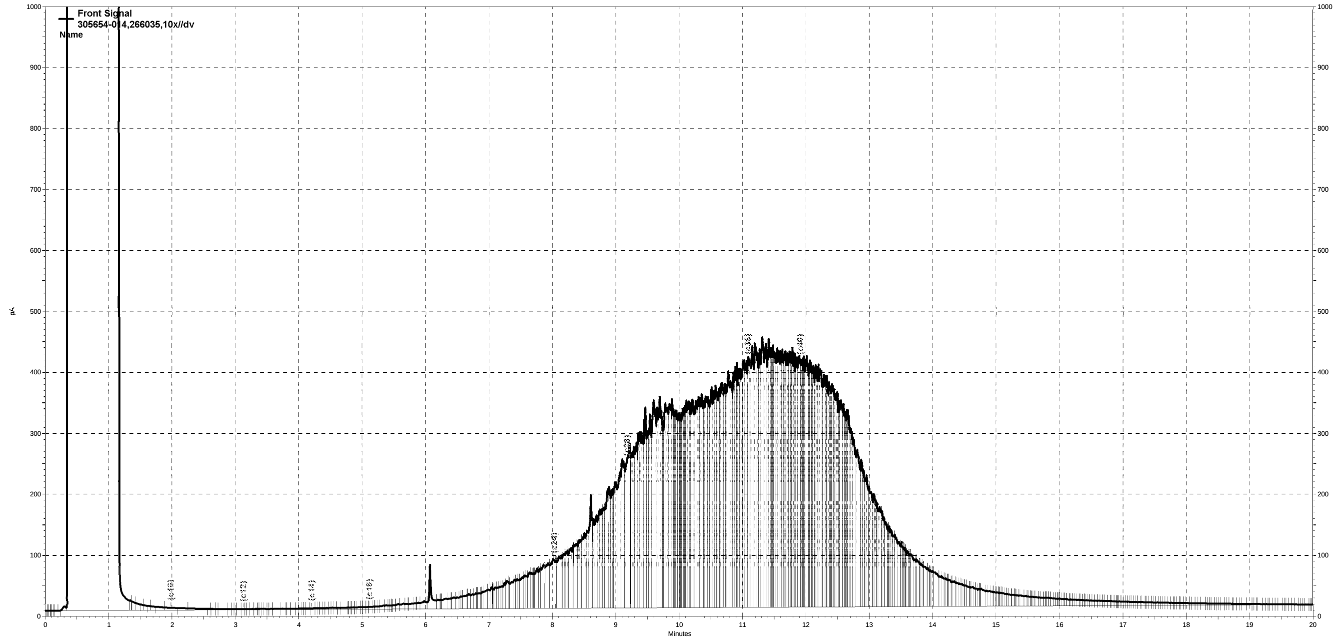

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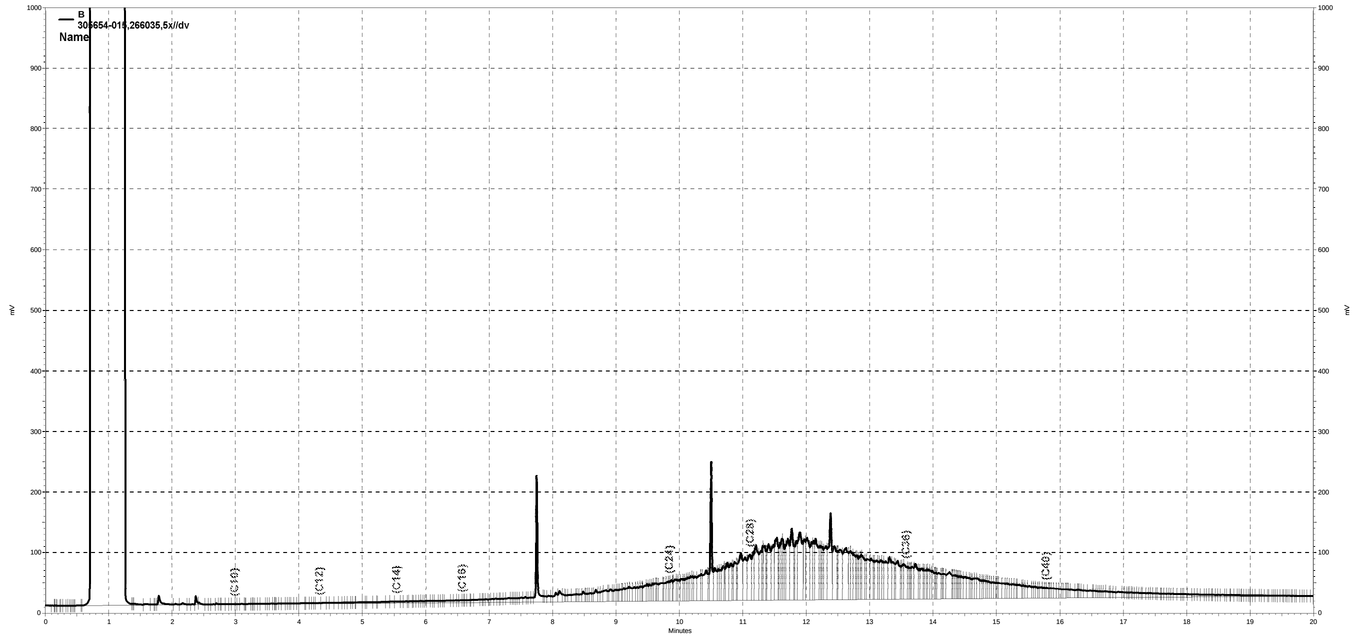

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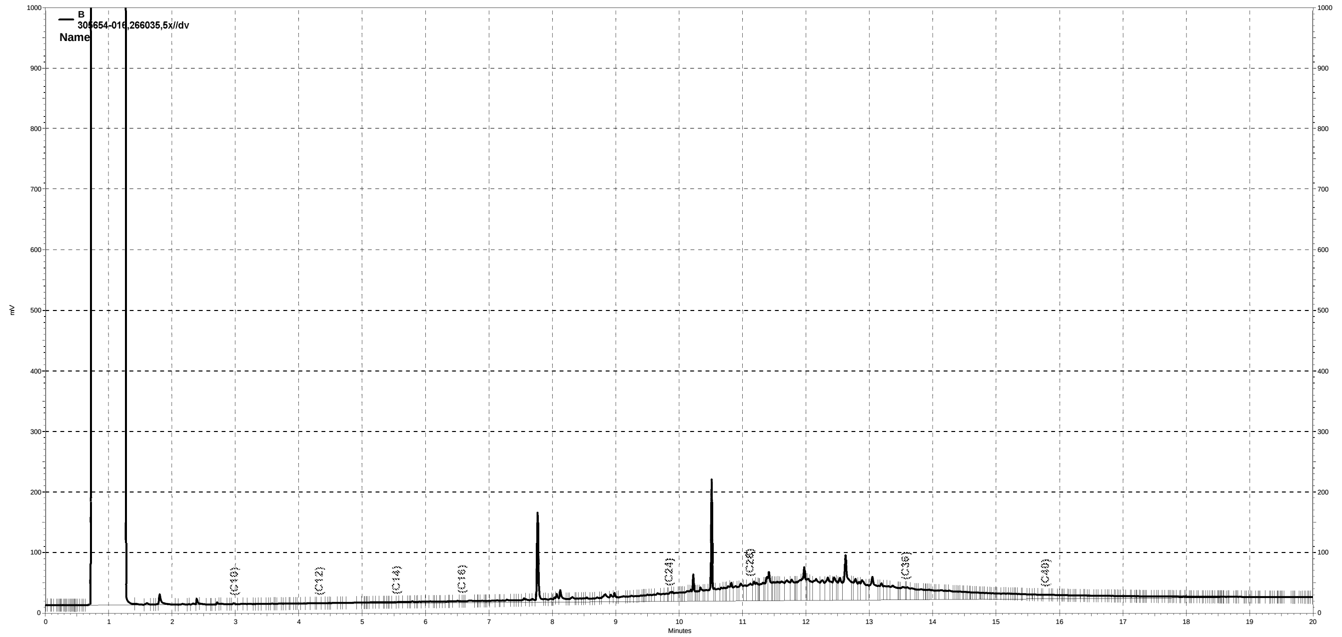

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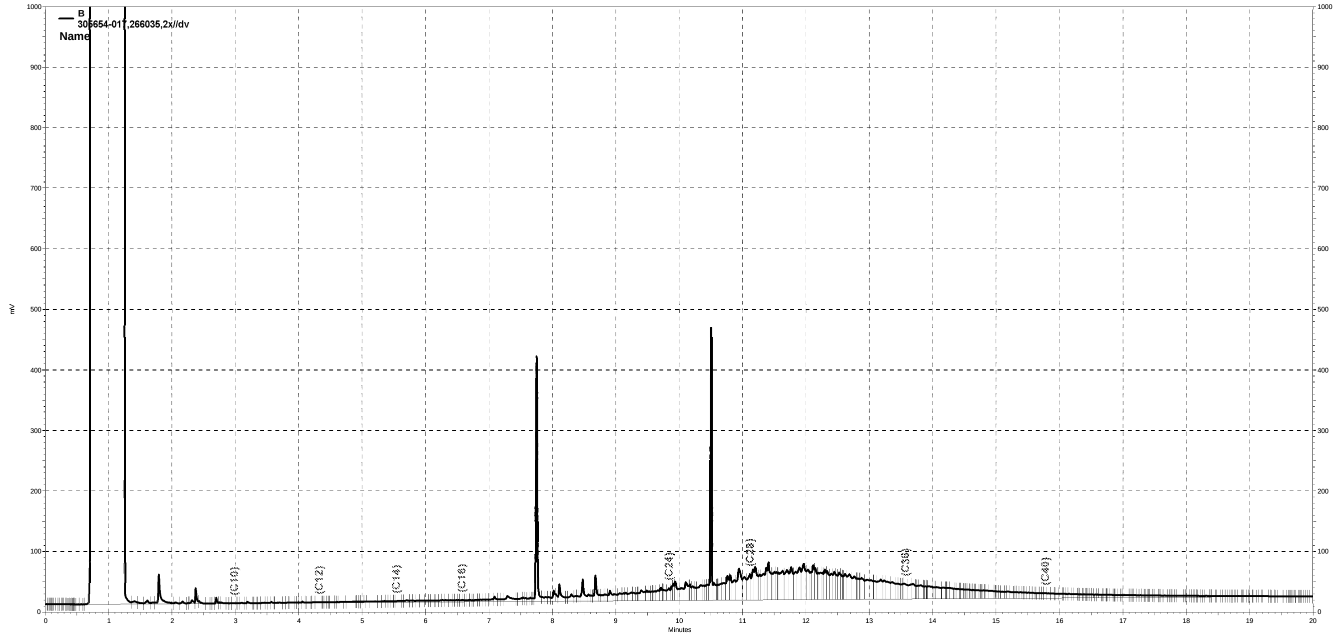

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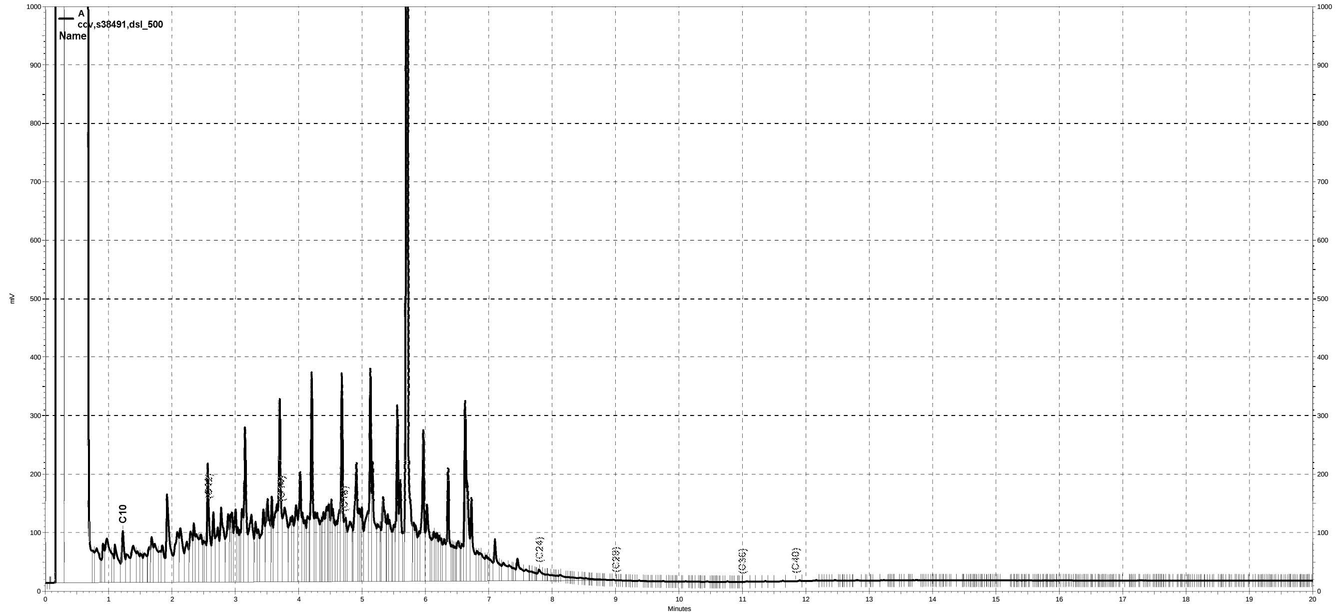

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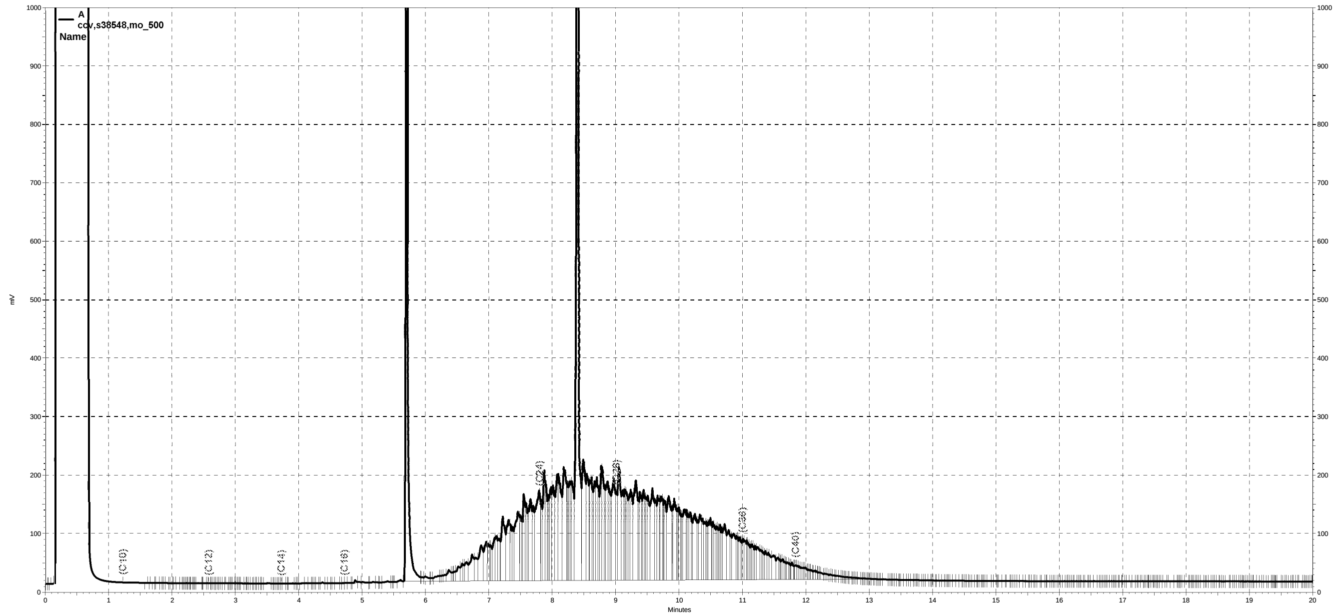

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ENTHALPY ANALYTICAL

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Field ID:	SB-1-3.0	Diln Fac:	1.354
Lab ID:	305654-002	Batch#:	266305
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received	Analyzed:	12/19/18

Analyte	Result	RL
Freon 12	ND	14
Chloromethane	ND	14
Vinyl Chloride	ND	14
Bromomethane	ND	14
Chloroethane	ND	14
Trichlorofluoromethane	ND	6.8
Acetone	28	27
Freon 113	ND	6.8
1,1-Dichloroethene	ND	6.8
Methylene Chloride	ND	27
Carbon Disulfide	ND	6.8
MTBE	ND	6.8
trans-1,2-Dichloroethene	ND	6.8
Vinyl Acetate	ND	68
1,1-Dichloroethane	ND	6.8
2-Butanone	ND	14
cis-1,2-Dichloroethene	ND	6.8
2,2-Dichloropropane	ND	6.8
Chloroform	ND	6.8
Bromochloromethane	ND	6.8
1,1,1-Trichloroethane	ND	6.8
1,1-Dichloropropene	ND	6.8
Carbon Tetrachloride	ND	6.8
1,2-Dichloroethane	ND	6.8
Benzene	ND	6.8
Trichloroethene	ND	6.8
1,2-Dichloropropane	ND	6.8
Bromodichloromethane	ND	6.8
Dibromomethane	ND	6.8
4-Methyl-2-Pentanone	ND	14
cis-1,3-Dichloropropene	ND	6.8
Toluene	ND	6.8
trans-1,3-Dichloropropene	ND	6.8
1,1,2-Trichloroethane	ND	6.8
2-Hexanone	ND	14
1,3-Dichloropropane	ND	6.8
Tetrachloroethene	ND	6.8

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Field ID:	SB-1-3.0	Diln Fac:	1.354
Lab ID:	305654-002	Batch#:	266305
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received	Analyzed:	12/19/18

Analyte	Result	RL
Dibromochloromethane	ND	6.8
1,2-Dibromoethane	ND	6.8
Chlorobenzene	ND	6.8
1,1,1,2-Tetrachloroethane	ND	6.8
Ethylbenzene	ND	6.8
m,p-Xylenes	ND	6.8
o-Xylene	ND	6.8
Styrene	ND	6.8
Bromoform	ND	6.8
Isopropylbenzene	ND	6.8
1,1,2,2-Tetrachloroethane	ND	6.8
1,2,3-Trichloropropane	ND	6.8
Propylbenzene	ND	6.8
Bromobenzene	ND	6.8
1,3,5-Trimethylbenzene	ND	6.8
2-Chlorotoluene	ND	6.8
4-Chlorotoluene	ND	6.8
tert-Butylbenzene	ND	6.8
1,2,4-Trimethylbenzene	ND	6.8
sec-Butylbenzene	ND	6.8
para-Isopropyl Toluene	ND	6.8
1,3-Dichlorobenzene	ND	6.8
1,4-Dichlorobenzene	ND	6.8
n-Butylbenzene	ND	6.8
1,2-Dichlorobenzene	ND	6.8
1,2-Dibromo-3-Chloropropane	ND	6.8
1,2,4-Trichlorobenzene	ND	6.8
Hexachlorobutadiene	ND	6.8
Naphthalene	ND	6.8
1,2,3-Trichlorobenzene	ND	6.8

Surrogate	%REC	Limits
Dibromofluoromethane	105	79-127
1,2-Dichloroethane-d4	110	73-139
Toluene-d8	103	80-120
Bromofluorobenzene	104	80-127

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Field ID:	SB-2-3.0	Diln Fac:	0.7123
Lab ID:	305654-005	Batch#:	266305
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received	Analyzed:	12/19/18

Analyte	Result	RL
Freon 12	ND	7.1
Chloromethane	ND	7.1
Vinyl Chloride	ND	7.1
Bromomethane	ND	7.1
Chloroethane	ND	7.1
Trichlorofluoromethane	ND	3.6
Acetone	19	14
Freon 113	ND	3.6
1,1-Dichloroethene	ND	3.6
Methylene Chloride	ND	14
Carbon Disulfide	ND	3.6
MTBE	ND	3.6
trans-1,2-Dichloroethene	ND	3.6
Vinyl Acetate	ND	36
1,1-Dichloroethane	ND	3.6
2-Butanone	ND	7.1
cis-1,2-Dichloroethene	ND	3.6
2,2-Dichloropropane	ND	3.6
Chloroform	ND	3.6
Bromochloromethane	ND	3.6
1,1,1-Trichloroethane	ND	3.6
1,1-Dichloropropene	ND	3.6
Carbon Tetrachloride	ND	3.6
1,2-Dichloroethane	ND	3.6
Benzene	ND	3.6
Trichloroethene	ND	3.6
1,2-Dichloropropane	ND	3.6
Bromodichloromethane	ND	3.6
Dibromomethane	ND	3.6
4-Methyl-2-Pentanone	ND	7.1
cis-1,3-Dichloropropene	ND	3.6
Toluene	ND	3.6
trans-1,3-Dichloropropene	ND	3.6
1,1,2-Trichloroethane	ND	3.6
2-Hexanone	ND	7.1
1,3-Dichloropropane	ND	3.6
Tetrachloroethene	ND	3.6

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Field ID:	SB-2-3.0	Diln Fac:	0.7123
Lab ID:	305654-005	Batch#:	266305
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received	Analyzed:	12/19/18

Analyte	Result	RL
Dibromochloromethane	ND	3.6
1,2-Dibromoethane	ND	3.6
Chlorobenzene	ND	3.6
1,1,1,2-Tetrachloroethane	ND	3.6
Ethylbenzene	ND	3.6
m,p-Xylenes	ND	3.6
o-Xylene	ND	3.6
Styrene	ND	3.6
Bromoform	ND	3.6
Isopropylbenzene	ND	3.6
1,1,2,2-Tetrachloroethane	ND	3.6
1,2,3-Trichloropropane	ND	3.6
Propylbenzene	ND	3.6
Bromobenzene	ND	3.6
1,3,5-Trimethylbenzene	ND	3.6
2-Chlorotoluene	ND	3.6
4-Chlorotoluene	ND	3.6
tert-Butylbenzene	ND	3.6
1,2,4-Trimethylbenzene	ND	3.6
sec-Butylbenzene	ND	3.6
para-Isopropyl Toluene	ND	3.6
1,3-Dichlorobenzene	ND	3.6
1,4-Dichlorobenzene	ND	3.6
n-Butylbenzene	ND	3.6
1,2-Dichlorobenzene	ND	3.6
1,2-Dibromo-3-Chloropropane	ND	3.6
1,2,4-Trichlorobenzene	ND	3.6
Hexachlorobutadiene	ND	3.6
Naphthalene	ND	3.6
1,2,3-Trichlorobenzene	ND	3.6

Surrogate	%REC	Limits
Dibromofluoromethane	107	79-127
1,2-Dichloroethane-d4	113	73-139
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-127

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Field ID:	SB-3-3.0	Diln Fac:	1.073
Lab ID:	305654-008	Batch#:	266305
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received	Analyzed:	12/19/18

Analyte	Result	RL
Freon 12	ND	11
Chloromethane	ND	11
Vinyl Chloride	ND	11
Bromomethane	ND	11
Chloroethane	ND	11
Trichlorofluoromethane	ND	5.4
Acetone	30	21
Freon 113	ND	5.4
1,1-Dichloroethene	ND	5.4
Methylene Chloride	ND	21
Carbon Disulfide	ND	5.4
MTBE	ND	5.4
trans-1,2-Dichloroethene	ND	5.4
Vinyl Acetate	ND	54
1,1-Dichloroethane	ND	5.4
2-Butanone	ND	11
cis-1,2-Dichloroethene	ND	5.4
2,2-Dichloropropane	ND	5.4
Chloroform	ND	5.4
Bromochloromethane	ND	5.4
1,1,1-Trichloroethane	ND	5.4
1,1-Dichloropropene	ND	5.4
Carbon Tetrachloride	ND	5.4
1,2-Dichloroethane	ND	5.4
Benzene	ND	5.4
Trichloroethene	ND	5.4
1,2-Dichloropropane	ND	5.4
Bromodichloromethane	ND	5.4
Dibromomethane	ND	5.4
4-Methyl-2-Pentanone	ND	11
cis-1,3-Dichloropropene	ND	5.4
Toluene	ND	5.4
trans-1,3-Dichloropropene	ND	5.4
1,1,2-Trichloroethane	ND	5.4
2-Hexanone	ND	11
1,3-Dichloropropane	ND	5.4
Tetrachloroethene	ND	5.4

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Field ID:	SB-3-3.0	Diln Fac:	1.073
Lab ID:	305654-008	Batch#:	266305
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received	Analyzed:	12/19/18

Analyte	Result	RL
Dibromochloromethane	ND	5.4
1,2-Dibromoethane	ND	5.4
Chlorobenzene	ND	5.4
1,1,1,2-Tetrachloroethane	ND	5.4
Ethylbenzene	ND	5.4
m,p-Xylenes	ND	5.4
o-Xylene	ND	5.4
Styrene	ND	5.4
Bromoform	ND	5.4
Isopropylbenzene	ND	5.4
1,1,2,2-Tetrachloroethane	ND	5.4
1,2,3-Trichloropropane	ND	5.4
Propylbenzene	ND	5.4
Bromobenzene	ND	5.4
1,3,5-Trimethylbenzene	ND	5.4
2-Chlorotoluene	ND	5.4
4-Chlorotoluene	ND	5.4
tert-Butylbenzene	ND	5.4
1,2,4-Trimethylbenzene	ND	5.4
sec-Butylbenzene	ND	5.4
para-Isopropyl Toluene	ND	5.4
1,3-Dichlorobenzene	ND	5.4
1,4-Dichlorobenzene	ND	5.4
n-Butylbenzene	ND	5.4
1,2-Dichlorobenzene	ND	5.4
1,2-Dibromo-3-Chloropropane	ND	5.4
1,2,4-Trichlorobenzene	ND	5.4
Hexachlorobutadiene	ND	5.4
Naphthalene	ND	5.4
1,2,3-Trichlorobenzene	ND	5.4

Surrogate	%REC	Limits
Dibromofluoromethane	107	79-127
1,2-Dichloroethane-d4	112	73-139
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-127

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Field ID:	SB-4-3.0	Diln Fac:	0.8278
Lab ID:	305654-011	Batch#:	266305
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received	Analyzed:	12/20/18

Analyte	Result	RL
Freon 12	ND	8.3
Chloromethane	ND	8.3
Vinyl Chloride	ND	8.3
Bromomethane	ND	8.3
Chloroethane	ND	8.3
Trichlorofluoromethane	ND	4.1
Acetone	ND	17
Freon 113	ND	4.1
1,1-Dichloroethene	ND	4.1
Methylene Chloride	ND	17
Carbon Disulfide	ND	4.1
MTBE	ND	4.1
trans-1,2-Dichloroethene	ND	4.1
Vinyl Acetate	ND	41
1,1-Dichloroethane	ND	4.1
2-Butanone	ND	8.3
cis-1,2-Dichloroethene	ND	4.1
2,2-Dichloropropane	ND	4.1
Chloroform	ND	4.1
Bromochloromethane	ND	4.1
1,1,1-Trichloroethane	ND	4.1
1,1-Dichloropropene	ND	4.1
Carbon Tetrachloride	ND	4.1
1,2-Dichloroethane	ND	4.1
Benzene	ND	4.1
Trichloroethene	ND	4.1
1,2-Dichloropropane	ND	4.1
Bromodichloromethane	ND	4.1
Dibromomethane	ND	4.1
4-Methyl-2-Pentanone	ND	8.3
cis-1,3-Dichloropropene	ND	4.1
Toluene	ND	4.1
trans-1,3-Dichloropropene	ND	4.1
1,1,2-Trichloroethane	ND	4.1
2-Hexanone	ND	8.3
1,3-Dichloropropane	ND	4.1
Tetrachloroethene	ND	4.1

ND= Not Detected
RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Field ID:	SB-4-3.0	Diln Fac:	0.8278
Lab ID:	305654-011	Batch#:	266305
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received	Analyzed:	12/20/18

Analyte	Result	RL
Dibromochloromethane	ND	4.1
1,2-Dibromoethane	ND	4.1
Chlorobenzene	ND	4.1
1,1,1,2-Tetrachloroethane	ND	4.1
Ethylbenzene	ND	4.1
m,p-Xylenes	ND	4.1
o-Xylene	ND	4.1
Styrene	ND	4.1
Bromoform	ND	4.1
Isopropylbenzene	ND	4.1
1,1,2,2-Tetrachloroethane	ND	4.1
1,2,3-Trichloropropane	ND	4.1
Propylbenzene	ND	4.1
Bromobenzene	ND	4.1
1,3,5-Trimethylbenzene	ND	4.1
2-Chlorotoluene	ND	4.1
4-Chlorotoluene	ND	4.1
tert-Butylbenzene	ND	4.1
1,2,4-Trimethylbenzene	ND	4.1
sec-Butylbenzene	ND	4.1
para-Isopropyl Toluene	ND	4.1
1,3-Dichlorobenzene	ND	4.1
1,4-Dichlorobenzene	ND	4.1
n-Butylbenzene	ND	4.1
1,2-Dichlorobenzene	ND	4.1
1,2-Dibromo-3-Chloropropane	ND	4.1
1,2,4-Trichlorobenzene	ND	4.1
Hexachlorobutadiene	ND	4.1
Naphthalene	ND	4.1
1,2,3-Trichlorobenzene	ND	4.1

Surrogate	%REC	Limits
Dibromofluoromethane	106	79-127
1,2-Dichloroethane-d4	112	73-139
Toluene-d8	103	80-120
Bromofluorobenzene	103	80-127

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Field ID:	SB-5-3.0	Diln Fac:	1.033
Lab ID:	305654-013	Batch#:	266305
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received	Analyzed:	12/20/18

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.2
Acetone	ND	21
Freon 113	ND	5.2
1,1-Dichloroethene	ND	5.2
Methylene Chloride	ND	21
Carbon Disulfide	ND	5.2
MTBE	ND	5.2
trans-1,2-Dichloroethene	ND	5.2
Vinyl Acetate	ND	52
1,1-Dichloroethane	ND	5.2
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.2
2,2-Dichloropropane	ND	5.2
Chloroform	ND	5.2
Bromochloromethane	ND	5.2
1,1,1-Trichloroethane	ND	5.2
1,1-Dichloropropene	ND	5.2
Carbon Tetrachloride	ND	5.2
1,2-Dichloroethane	ND	5.2
Benzene	ND	5.2
Trichloroethene	ND	5.2
1,2-Dichloropropane	ND	5.2
Bromodichloromethane	ND	5.2
Dibromomethane	ND	5.2
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.2
Toluene	ND	5.2
trans-1,3-Dichloropropene	ND	5.2
1,1,2-Trichloroethane	ND	5.2
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.2
Tetrachloroethene	ND	5.2

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Field ID:	SB-5-3.0	Diln Fac:	1.033
Lab ID:	305654-013	Batch#:	266305
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received	Analyzed:	12/20/18

Analyte	Result	RL
Dibromochloromethane	ND	5.2
1,2-Dibromoethane	ND	5.2
Chlorobenzene	ND	5.2
1,1,1,2-Tetrachloroethane	ND	5.2
Ethylbenzene	ND	5.2
m,p-Xylenes	ND	5.2
o-Xylene	ND	5.2
Styrene	ND	5.2
Bromoform	ND	5.2
Isopropylbenzene	ND	5.2
1,1,2,2-Tetrachloroethane	ND	5.2
1,2,3-Trichloropropane	ND	5.2
Propylbenzene	ND	5.2
Bromobenzene	ND	5.2
1,3,5-Trimethylbenzene	ND	5.2
2-Chlorotoluene	ND	5.2
4-Chlorotoluene	ND	5.2
tert-Butylbenzene	ND	5.2
1,2,4-Trimethylbenzene	ND	5.2
sec-Butylbenzene	ND	5.2
para-Isopropyl Toluene	ND	5.2
1,3-Dichlorobenzene	ND	5.2
1,4-Dichlorobenzene	ND	5.2
n-Butylbenzene	ND	5.2
1,2-Dichlorobenzene	ND	5.2
1,2-Dibromo-3-Chloropropane	ND	5.2
1,2,4-Trichlorobenzene	ND	5.2
Hexachlorobutadiene	ND	5.2
Naphthalene	ND	5.2
1,2,3-Trichlorobenzene	ND	5.2

Surrogate	%REC	Limits
Dibromofluoromethane	107	79-127
1,2-Dichloroethane-d4	113	73-139
Toluene-d8	102	80-120
Bromofluorobenzene	104	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Field ID:	SB-6-3.0	Diln Fac:	0.8576
Lab ID:	305654-015	Batch#:	266305
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received	Analyzed:	12/20/18

Analyte	Result	RL
Freon 12	ND	8.6
Chloromethane	ND	8.6
Vinyl Chloride	ND	8.6
Bromomethane	ND	8.6
Chloroethane	ND	8.6
Trichlorofluoromethane	ND	4.3
Acetone	32	17
Freon 113	ND	4.3
1,1-Dichloroethene	ND	4.3
Methylene Chloride	ND	17
Carbon Disulfide	ND	4.3
MTBE	ND	4.3
trans-1,2-Dichloroethene	ND	4.3
Vinyl Acetate	ND	43
1,1-Dichloroethane	ND	4.3
2-Butanone	ND	8.6
cis-1,2-Dichloroethene	ND	4.3
2,2-Dichloropropane	ND	4.3
Chloroform	ND	4.3
Bromochloromethane	ND	4.3
1,1,1-Trichloroethane	ND	4.3
1,1-Dichloropropene	ND	4.3
Carbon Tetrachloride	ND	4.3
1,2-Dichloroethane	ND	4.3
Benzene	ND	4.3
Trichloroethene	ND	4.3
1,2-Dichloropropane	ND	4.3
Bromodichloromethane	ND	4.3
Dibromomethane	ND	4.3
4-Methyl-2-Pentanone	ND	8.6
cis-1,3-Dichloropropene	ND	4.3
Toluene	ND	4.3
trans-1,3-Dichloropropene	ND	4.3
1,1,2-Trichloroethane	ND	4.3
2-Hexanone	ND	8.6
1,3-Dichloropropane	ND	4.3
Tetrachloroethene	ND	4.3

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Field ID:	SB-6-3.0	Diln Fac:	0.8576
Lab ID:	305654-015	Batch#:	266305
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received	Analyzed:	12/20/18

Analyte	Result	RL
Dibromochloromethane	ND	4.3
1,2-Dibromoethane	ND	4.3
Chlorobenzene	ND	4.3
1,1,1,2-Tetrachloroethane	ND	4.3
Ethylbenzene	ND	4.3
m,p-Xylenes	ND	4.3
o-Xylene	ND	4.3
Styrene	ND	4.3
Bromoform	ND	4.3
Isopropylbenzene	ND	4.3
1,1,2,2-Tetrachloroethane	ND	4.3
1,2,3-Trichloropropane	ND	4.3
Propylbenzene	ND	4.3
Bromobenzene	ND	4.3
1,3,5-Trimethylbenzene	ND	4.3
2-Chlorotoluene	ND	4.3
4-Chlorotoluene	ND	4.3
tert-Butylbenzene	ND	4.3
1,2,4-Trimethylbenzene	ND	4.3
sec-Butylbenzene	ND	4.3
para-Isopropyl Toluene	ND	4.3
1,3-Dichlorobenzene	ND	4.3
1,4-Dichlorobenzene	ND	4.3
n-Butylbenzene	ND	4.3
1,2-Dichlorobenzene	ND	4.3
1,2-Dibromo-3-Chloropropane	ND	4.3
1,2,4-Trichlorobenzene	ND	4.3
Hexachlorobutadiene	ND	4.3
Naphthalene	ND	4.3
1,2,3-Trichlorobenzene	ND	4.3

Surrogate	%REC	Limits
Dibromofluoromethane	105	79-127
1,2-Dichloroethane-d4	113	73-139
Toluene-d8	102	80-120
Bromofluorobenzene	104	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Field ID:	SB-7-3.0	Diln Fac:	0.7386
Lab ID:	305654-017	Batch#:	266305
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received	Analyzed:	12/20/18

Analyte	Result	RL
Freon 12	ND	7.4
Chloromethane	ND	7.4
Vinyl Chloride	ND	7.4
Bromomethane	ND	7.4
Chloroethane	ND	7.4
Trichlorofluoromethane	ND	3.7
Acetone	ND	15
Freon 113	ND	3.7
1,1-Dichloroethene	ND	3.7
Methylene Chloride	ND	15
Carbon Disulfide	ND	3.7
MTBE	ND	3.7
trans-1,2-Dichloroethene	ND	3.7
Vinyl Acetate	ND	37
1,1-Dichloroethane	ND	3.7
2-Butanone	ND	7.4
cis-1,2-Dichloroethene	ND	3.7
2,2-Dichloropropane	ND	3.7
Chloroform	ND	3.7
Bromochloromethane	ND	3.7
1,1,1-Trichloroethane	ND	3.7
1,1-Dichloropropene	ND	3.7
Carbon Tetrachloride	ND	3.7
1,2-Dichloroethane	ND	3.7
Benzene	ND	3.7
Trichloroethene	ND	3.7
1,2-Dichloropropane	ND	3.7
Bromodichloromethane	ND	3.7
Dibromomethane	ND	3.7
4-Methyl-2-Pentanone	ND	7.4
cis-1,3-Dichloropropene	ND	3.7
Toluene	ND	3.7
trans-1,3-Dichloropropene	ND	3.7
1,1,2-Trichloroethane	ND	3.7
2-Hexanone	ND	7.4
1,3-Dichloropropane	ND	3.7
Tetrachloroethene	ND	3.7

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Field ID:	SB-7-3.0	Diln Fac:	0.7386
Lab ID:	305654-017	Batch#:	266305
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received	Analyzed:	12/20/18

Analyte	Result	RL
Dibromochloromethane	ND	3.7
1,2-Dibromoethane	ND	3.7
Chlorobenzene	ND	3.7
1,1,1,2-Tetrachloroethane	ND	3.7
Ethylbenzene	ND	3.7
m,p-Xylenes	ND	3.7
o-Xylene	ND	3.7
Styrene	ND	3.7
Bromoform	ND	3.7
Isopropylbenzene	ND	3.7
1,1,2,2-Tetrachloroethane	ND	3.7
1,2,3-Trichloropropane	ND	3.7
Propylbenzene	ND	3.7
Bromobenzene	ND	3.7
1,3,5-Trimethylbenzene	ND	3.7
2-Chlorotoluene	ND	3.7
4-Chlorotoluene	ND	3.7
tert-Butylbenzene	ND	3.7
1,2,4-Trimethylbenzene	ND	3.7
sec-Butylbenzene	ND	3.7
para-Isopropyl Toluene	ND	3.7
1,3-Dichlorobenzene	ND	3.7
1,4-Dichlorobenzene	ND	3.7
n-Butylbenzene	ND	3.7
1,2-Dichlorobenzene	ND	3.7
1,2-Dibromo-3-Chloropropane	ND	3.7
1,2,4-Trichlorobenzene	ND	3.7
Hexachlorobutadiene	ND	3.7
Naphthalene	ND	3.7
1,2,3-Trichlorobenzene	ND	3.7

Surrogate	%REC	Limits
Dibromofluoromethane	107	79-127
1,2-Dichloroethane-d4	115	73-139
Toluene-d8	102	80-120
Bromofluorobenzene	105	80-127

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	266305
Units:	ug/Kg	Analyzed:	12/19/18
Diln Fac:	1.000		

Type: BS   Lab ID: QC958927

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	25.11	100	68-140
Benzene	25.00	25.27	101	74-123
Trichloroethene	25.00	24.74	99	72-125
Toluene	25.00	25.53	102	73-121
Chlorobenzene	25.00	26.22	105	76-123

Surrogate	%REC	Limits
Dibromofluoromethane	110	79-127
1,2-Dichloroethane-d4	105	73-139
Toluene-d8	102	80-120
Bromofluorobenzene	103	80-127

Type: BSD   Lab ID: QC958928

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	24.46	98	68-140	3	25
Benzene	25.00	24.82	99	74-123	2	22
Trichloroethene	25.00	24.15	97	72-125	2	23
Toluene	25.00	24.88	100	73-121	3	22
Chlorobenzene	25.00	25.60	102	76-123	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	110	79-127
1,2-Dichloroethane-d4	105	73-139
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-127

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC958929	Batch#:	266305
Matrix:	Soil	Analyzed:	12/19/18
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 5035
Project#:	0285.001.002	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC958929	Batch#:	266305
Matrix:	Soil	Analyzed:	12/19/18
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	101	79-127
1,2-Dichloroethane-d4	107	73-139
Toluene-d8	101	80-120
Bromofluorobenzene	109	80-127

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3546
Project#:	0285.001.002	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received		

Field ID:	SB-1-1.0	Batch#:	266036
Type:	SAMPLE	Prepared:	12/10/18
Lab ID:	305654-001	Analyzed:	12/10/18
Diln Fac:	2.000		

Analyte	Result	RL
Aroclor-1016	ND	14
Aroclor-1221	ND	27
Aroclor-1232	ND	14
Aroclor-1242	ND	14
Aroclor-1248	ND	14
Aroclor-1254	ND	14
Aroclor-1260	ND	14

Surrogate	%REC	Limits
Decachlorobiphenyl	81	37-170

Field ID:	SB-2-1.0	Batch#:	266036
Type:	SAMPLE	Prepared:	12/10/18
Lab ID:	305654-004	Analyzed:	12/11/18
Diln Fac:	2.000		

Analyte	Result	RL
Aroclor-1016	ND	13
Aroclor-1221	ND	27
Aroclor-1232	ND	13
Aroclor-1242	ND	13
Aroclor-1248	ND	13
Aroclor-1254	ND	13
Aroclor-1260	ND	13

Surrogate	%REC	Limits
Decachlorobiphenyl	71	37-170

Field ID:	SB-3-1.0	Batch#:	266036
Type:	SAMPLE	Prepared:	12/10/18
Lab ID:	305654-007	Analyzed:	12/11/18
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	%REC	Limits
Decachlorobiphenyl	69	37-170

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3546
Project#:	0285.001.002	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received		

Field ID:	SB-4-1.0	Batch#:	266036
Type:	SAMPLE	Prepared:	12/10/18
Lab ID:	305654-010	Analyzed:	12/11/18
Diln Fac:	2.000		

Analyte	Result	RL
Aroclor-1016	ND	13
Aroclor-1221	ND	26
Aroclor-1232	ND	13
Aroclor-1242	ND	13
Aroclor-1248	ND	13
Aroclor-1254	68	13
Aroclor-1260	240	13

Surrogate	%REC	Limits
Decachlorobiphenyl	86	37-170

Field ID:	SB-5-1.0	Batch#:	266168
Type:	SAMPLE	Prepared:	12/14/18
Lab ID:	305654-012	Analyzed:	12/14/18
Diln Fac:	5.000		

Analyte	Result	RL
Aroclor-1016	ND	34
Aroclor-1221	ND	68
Aroclor-1232	ND	34
Aroclor-1242	ND	34
Aroclor-1248	ND	34
Aroclor-1254	ND	34
Aroclor-1260	ND	34

Surrogate	%REC	Limits
Decachlorobiphenyl	84	37-170

Field ID:	SB-6-1.0	Batch#:	266168
Type:	SAMPLE	Prepared:	12/14/18
Lab ID:	305654-014	Analyzed:	12/14/18
Diln Fac:	5.000		

Analyte	Result	RL
Aroclor-1016	ND	33
Aroclor-1221	ND	67
Aroclor-1232	ND	33
Aroclor-1242	ND	33
Aroclor-1248	ND	33
Aroclor-1254	ND	33
Aroclor-1260	ND	33

Surrogate	%REC	Limits
Decachlorobiphenyl	85	37-170

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3546
Project#:	0285.001.002	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	12/06/18
Units:	ug/Kg	Received:	12/06/18
Basis:	as received		

Field ID:	SB-7-1.0	Batch#:	266168
Type:	SAMPLE	Prepared:	12/14/18
Lab ID:	305654-016	Analyzed:	12/15/18
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	33	12
Aroclor-1260	26	12

Surrogate	%REC	Limits
Decachlorobiphenyl	90	37-170

Type:	BLANK	Prepared:	12/10/18
Lab ID:	QC957814	Analyzed:	12/10/18
Diln Fac:	1.000	Cleanup Method:	EPA 3620B
Batch#:	266036		

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	%REC	Limits
Decachlorobiphenyl	93	37-170

Type:	BLANK	Batch#:	266168
Lab ID:	QC958376	Prepared:	12/13/18
Diln Fac:	1.000	Analyzed:	12/14/18

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	%REC	Limits
Decachlorobiphenyl	96	37-170

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3546
Project#:	0285.001.002	Analysis:	EPA 8082
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC957818	Batch#:	266036
Matrix:	Soil	Prepared:	12/10/18
Units:	ug/Kg	Analyzed:	12/10/18

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	125.0	133.1	106	59-160
Aroclor-1260	125.0	112.5	90	59-170

Surrogate	%REC	Limits
Decachlorobiphenyl	84	37-170

ENTHALPY ANALYTICAL

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3546
Project#:	0285.001.002	Analysis:	EPA 8082
Field ID:	SB-1-1.0	Batch#:	266036
MSS Lab ID:	305654-001	Sampled:	12/06/18
Matrix:	Soil	Received:	12/06/18
Units:	ug/Kg	Prepared:	12/10/18
Basis:	as received	Analyzed:	12/10/18
Diln Fac:	2.000		

Type: MS   Lab ID: QC957819

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1016	<9.038	166.1	187.0	113	73-167
Aroclor-1260	<6.584	166.1	174.3	105	57-178

Surrogate	%REC	Limits
Decachlorobiphenyl	99	37-170

Type: MSD   Lab ID: QC957820

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	169.7	147.1	87	73-167	26	40
Aroclor-1260	169.7	132.5	78	57-178	29	41

Surrogate	%REC	Limits
Decachlorobiphenyl	69	37-170

RPD= Relative Percent Difference

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report			
Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3546
Project#:	0285.001.002	Analysis:	EPA 8082
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC958377	Batch#:	266168
Matrix:	Soil	Prepared:	12/14/18
Units:	ug/Kg	Analyzed:	12/14/18

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	125.0	146.1	117	59-160
Aroclor-1260	125.0	156.8	125	59-170

Surrogate	%REC	Limits
Decachlorobiphenyl	135	37-170

ENTHALPY ANALYTICAL

Batch QC Report

Enthalpy Analytical - Berkeley Analytical Report

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3546
Project#:	0285.001.002	Analysis:	EPA 8082
Field ID:	SB-6-1.0	Batch#:	266168
MSS Lab ID:	305654-014	Sampled:	12/06/18
Matrix:	Soil	Received:	12/06/18
Units:	ug/Kg	Prepared:	12/14/18
Basis:	as received	Analyzed:	12/14/18
Diln Fac:	5.000		

Type: MS Lab ID: QC958378

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1016	<18.21	167.4	163.6	98	73-167
Aroclor-1260	<22.84	167.4	174.9	104	57-178

Surrogate	%REC	Limits
Decachlorobiphenyl	81	37-170

Type: MSD Lab ID: QC958379

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	167.8	165.7	99	73-167	1	40
Aroclor-1260	167.8	179.9	107	57-178	3	41

Surrogate	%REC	Limits
Decachlorobiphenyl	87	37-170

RPD= Relative Percent Difference

ENTHALPY ANALYTICAL

California Title 22 Metals

Lab #:	305654	Project#:	0285.001.002
Client:	Terraphase Engineering	Location:	SupplyBank
Field ID:	SB-1-1.0	Basis:	as received
Lab ID:	305654-001	Diln Fac:	1.000
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	1.9	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Arsenic	5.2	1.5	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Barium	170	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Beryllium	0.43	0.097	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cadmium	0.49	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Chromium	50	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cobalt	11	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Copper	56	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Lead	95	0.97	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Mercury	ND	0.018	266141	12/13/18	12/13/18	METHOD	EPA 7471A
Molybdenum	0.36	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Nickel	57	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Selenium	ND	1.9	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Silver	ND	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Thallium	ND	0.49	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Vanadium	44	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Zinc	150	0.97	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

California Title 22 Metals

Lab #:	305654	Project#:	0285.001.002
Client:	Terraphase Engineering	Location:	SupplyBank
Field ID:	SB-1-3.0	Basis:	as received
Lab ID:	305654-002	Sampled:	12/06/18
Matrix:	Soil	Received:	12/06/18
Units:	mg/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	2.0	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Arsenic	8.7	1.5	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Barium	400	0.28	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Beryllium	0.92	0.11	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cadmium	4.9	0.28	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Chromium	46	0.28	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cobalt	22	0.28	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Copper	180	0.28	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Lead	380	1.0	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Mercury	1.2	0.16	10.00	266141	12/13/18	12/13/18	METHOD	EPA 7471A
Molybdenum	2.3	0.28	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Nickel	100	0.28	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Selenium	ND	2.0	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Silver	0.31	0.28	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Thallium	ND	0.56	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Vanadium	37	0.28	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Zinc	710	110	100.0	266074	12/11/18	12/12/18	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

California Title 22 Metals

Lab #:	305654	Project#:	0285.001.002
Client:	Terraphase Engineering	Location:	SupplyBank
Field ID:	SB-2-1.0	Basis:	as received
Lab ID:	305654-004	Diln Fac:	1.000
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	1.8	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Arsenic	4.9	1.4	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Barium	200	0.23	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Beryllium	0.45	0.092	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cadmium	0.42	0.23	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Chromium	39	0.23	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cobalt	10	0.23	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Copper	28	0.23	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Lead	73	0.92	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Mercury	0.097	0.015	266141	12/13/18	12/13/18	METHOD	EPA 7471A
Molybdenum	0.44	0.23	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Nickel	49	0.23	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Selenium	ND	1.8	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Silver	ND	0.23	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Thallium	ND	0.46	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Vanadium	37	0.23	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Zinc	98	0.92	266074	12/11/18	12/12/18	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

California Title 22 Metals

Lab #:	305654	Project#:	0285.001.002
Client:	Terraphase Engineering	Location:	SupplyBank
Field ID:	SB-2-3.0	Basis:	as received
Lab ID:	305654-005	Diln Fac:	1.000
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Arsenic	6.9	1.5	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Barium	110	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Beryllium	0.38	0.099	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cadmium	ND	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Chromium	53	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cobalt	6.6	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Copper	21	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Lead	16	0.99	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Mercury	0.054	0.017	266141	12/13/18	12/13/18	METHOD	EPA 7471A
Molybdenum	0.65	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Nickel	29	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Selenium	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Silver	ND	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Thallium	ND	0.50	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Vanadium	43	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Zinc	46	0.99	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B

ND= Not Detected

RL= Reporting Limit

ENTHALPY ANALYTICAL

California Title 22 Metals

Lab #:	305654	Project#:	0285.001.002
Client:	Terraphase Engineering	Location:	SupplyBank
Field ID:	SB-3-1.0	Basis:	as received
Lab ID:	305654-007	Diln Fac:	1.000
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Arsenic	7.7	1.5	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Barium	280	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Beryllium	0.49	0.10	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cadmium	0.47	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Chromium	63	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cobalt	11	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Copper	22	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Lead	40	1.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Mercury	0.097	0.018	266141	12/13/18	12/13/18	METHOD	EPA 7471A
Molybdenum	0.26	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Nickel	77	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Selenium	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Silver	ND	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Thallium	ND	0.51	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Vanadium	38	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Zinc	100	1.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

California Title 22 Metals

Lab #:	305654	Project#:	0285.001.002
Client:	Terraphase Engineering	Location:	SupplyBank
Field ID:	SB-3-3.0	Basis:	as received
Lab ID:	305654-008	Diln Fac:	1.000
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Arsenic	5.2	1.5	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Barium	140	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Beryllium	0.46	0.10	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cadmium	0.45	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Chromium	42	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cobalt	9.4	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Copper	17	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Lead	8.4	1.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Mercury	0.065	0.016	266141	12/13/18	12/13/18	METHOD	EPA 7471A
Molybdenum	0.37	0.26	266074	12/11/18	12/12/18	EPA 3050B	EPA 6010B
Nickel	66	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Selenium	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Silver	ND	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Thallium	ND	0.52	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Vanadium	34	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Zinc	45	1.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

California Title 22 Metals

Lab #:	305654	Project#:	0285.001.002
Client:	Terraphase Engineering	Location:	SupplyBank
Field ID:	SB-4-1.0	Basis:	as received
Lab ID:	305654-010	Diln Fac:	1.000
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Arsenic	2.9	1.5	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Barium	54	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Beryllium	0.31	0.098	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cadmium	0.41	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Chromium	34	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cobalt	6.0	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Copper	37	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Lead	66	0.98	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Mercury	0.29	0.017	266141	12/13/18	12/13/18	METHOD	EPA 7471A
Molybdenum	ND	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Nickel	27	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Selenium	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Silver	ND	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Thallium	ND	0.49	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Vanadium	28	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Zinc	76	0.98	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

California Title 22 Metals

Lab #:	305654	Project#:	0285.001.002
Client:	Terraphase Engineering	Location:	SupplyBank
Field ID:	SB-4-3.0	Basis:	as received
Lab ID:	305654-011	Diln Fac:	1.000
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	1.9	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Arsenic	4.7	1.4	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Barium	150	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Beryllium	0.50	0.095	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cadmium	0.29	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Chromium	50	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cobalt	11	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Copper	22	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Lead	21	0.95	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Mercury	0.13	0.018	266141	12/13/18	12/13/18	METHOD	EPA 7471A
Molybdenum	ND	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Nickel	62	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Selenium	ND	1.9	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Silver	ND	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Thallium	ND	0.48	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Vanadium	42	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Zinc	60	0.95	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

California Title 22 Metals

Lab #:	305654	Project#:	0285.001.002
Client:	Terraphase Engineering	Location:	SupplyBank
Field ID:	SB-5-1.0	Basis:	as received
Lab ID:	305654-012	Diln Fac:	1.000
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Arsenic	5.7	1.5	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Barium	140	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Beryllium	0.35	0.10	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cadmium	0.53	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Chromium	36	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cobalt	8.9	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Copper	36	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Lead	54	1.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Mercury	0.18	0.017	266141	12/13/18	12/13/18	METHOD	EPA 7471A
Molybdenum	ND	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Nickel	42	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Selenium	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Silver	ND	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Thallium	ND	0.52	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Vanadium	39	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Zinc	82	1.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

California Title 22 Metals

Lab #:	305654	Project#:	0285.001.002
Client:	Terraphase Engineering	Location:	SupplyBank
Field ID:	SB-5-3.0	Basis:	as received
Lab ID:	305654-013	Diln Fac:	1.000
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Arsenic	5.1	1.5	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Barium	60	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Beryllium	0.56	0.10	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cadmium	0.42	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Chromium	64	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cobalt	7.9	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Copper	20	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Lead	16	1.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Mercury	0.13	0.016	266141	12/13/18	12/13/18	METHOD	EPA 7471A
Molybdenum	ND	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Nickel	53	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Selenium	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Silver	ND	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Thallium	ND	0.52	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Vanadium	50	0.26	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Zinc	71	1.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

California Title 22 Metals

Lab #:	305654	Project#:	0285.001.002
Client:	Terraphase Engineering	Location:	SupplyBank
Field ID:	SB-6-1.0	Basis:	as received
Lab ID:	305654-014	Diln Fac:	1.000
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Arsenic	5.3	1.5	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Barium	85	0.27	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Beryllium	0.36	0.11	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cadmium	0.34	0.27	266074	12/11/18	12/12/18	EPA 3050B	EPA 6010B
Chromium	43	0.27	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cobalt	11	0.27	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Copper	55	0.27	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Lead	12	1.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Mercury	0.27	0.017	266141	12/13/18	12/13/18	METHOD	EPA 7471A
Molybdenum	ND	0.27	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Nickel	44	0.27	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Selenium	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Silver	ND	0.27	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Thallium	ND	0.54	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Vanadium	56	0.27	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Zinc	53	1.1	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

California Title 22 Metals

Lab #:	305654	Project#:	0285.001.002
Client:	Terraphase Engineering	Location:	SupplyBank
Field ID:	SB-6-3.0	Basis:	as received
Lab ID:	305654-015	Diln Fac:	1.000
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Arsenic	1.8	1.5	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Barium	30	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Beryllium	0.29	0.099	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cadmium	0.36	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Chromium	53	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cobalt	12	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Copper	38	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Lead	14	0.99	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Mercury	0.13	0.018	266141	12/13/18	12/13/18	METHOD	EPA 7471A
Molybdenum	ND	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Nickel	38	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Selenium	ND	2.0	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Silver	ND	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Thallium	ND	0.50	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Vanadium	69	0.25	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Zinc	44	0.99	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

California Title 22 Metals

Lab #:	305654	Project#:	0285.001.002
Client:	Terraphase Engineering	Location:	SupplyBank
Field ID:	SB-7-1.0	Basis:	as received
Lab ID:	305654-016	Sampled:	12/06/18
Matrix:	Soil	Received:	12/06/18
Units:	mg/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	1.9	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Arsenic	4.9	1.4	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Barium	93	0.24	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Beryllium	0.34	0.096	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cadmium	0.75	0.24	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Chromium	50	0.24	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cobalt	12	0.24	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Copper	51	0.24	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Lead	58	0.96	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Mercury	2.2	0.16	10.00	266141	12/13/18	12/13/18	METHOD	EPA 7471A
Molybdenum	ND	0.24	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Nickel	37	0.24	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Selenium	ND	1.9	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Silver	ND	0.24	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Thallium	ND	0.48	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Vanadium	57	0.24	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Zinc	130	0.96	1.000	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

California Title 22 Metals

Lab #:	305654	Project#:	0285.001.002
Client:	Terraphase Engineering	Location:	SupplyBank
Field ID:	SB-7-3.0	Basis:	as received
Lab ID:	305654-017	Diln Fac:	1.000
Matrix:	Soil	Sampled:	12/06/18
Units:	mg/Kg	Received:	12/06/18

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	1.9	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Arsenic	6.3	1.4	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Barium	110	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Beryllium	0.45	0.095	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cadmium	0.49	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Chromium	61	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Cobalt	7.5	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Copper	35	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Lead	66	0.95	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Mercury	0.044	0.017	266141	12/13/18	12/13/18	METHOD	EPA 7471A
Molybdenum	0.89	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Nickel	50	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Selenium	ND	1.9	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Silver	ND	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Thallium	ND	0.48	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Vanadium	51	0.24	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B
Zinc	110	0.95	266074	12/11/18	12/11/18	EPA 3050B	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Batch QC Report

California Title 22 Metals

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3050B
Project#:	0285.001.002	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC957971	Batch#:	266074
Matrix:	Soil	Prepared:	12/11/18
Units:	mg/Kg	Analyzed:	12/11/18

Analyte	Result	RL
Antimony	ND	1.9
Arsenic	ND	1.4
Barium	ND	0.24
Beryllium	ND	0.096
Cadmium	ND	0.24
Chromium	ND	0.24
Cobalt	ND	0.24
Copper	ND	0.24
Lead	ND	0.96
Molybdenum	ND	0.24
Nickel	ND	0.24
Selenium	ND	1.9
Silver	ND	0.24
Thallium	ND	0.48
Vanadium	ND	0.24
Zinc	ND	0.96

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Batch QC Report

California Title 22 Metals

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3050B
Project#:	0285.001.002	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	266074
Units:	mg/Kg	Prepared:	12/11/18
Diln Fac:	1.000	Analyzed:	12/11/18

Type: BS   Lab ID: QC957972

Analyte	Spiked	Result	%REC	Limits
Antimony	45.87	45.09	98	80-120
Arsenic	45.87	49.72	108	80-120
Barium	45.87	46.60	102	80-120
Beryllium	22.94	23.27	101	80-120
Cadmium	45.87	46.35	101	80-120
Chromium	45.87	48.69	106	80-120
Cobalt	45.87	47.76	104	80-120
Copper	45.87	46.97	102	80-120
Lead	45.87	45.84	100	80-120
Molybdenum	45.87	45.47	99	80-120
Nickel	45.87	47.69	104	80-120
Selenium	45.87	49.03	107	80-120
Silver	4.587	4.218	92	80-120
Thallium	45.87	50.86	111	80-120
Vanadium	45.87	49.86	109	80-120
Zinc	45.87	48.07	105	80-120

Type: BSD   Lab ID: QC957973

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	49.50	46.88	95	80-120	4	20
Arsenic	49.50	52.67	106	80-120	2	20
Barium	49.50	49.55	100	80-120	1	20
Beryllium	24.75	24.38	98	80-120	3	20
Cadmium	49.50	48.32	98	80-120	3	20
Chromium	49.50	50.93	103	80-120	3	20
Cobalt	49.50	49.81	101	80-120	3	20
Copper	49.50	49.09	99	80-120	3	20
Lead	49.50	48.20	97	80-120	3	20
Molybdenum	49.50	47.44	96	80-120	3	20
Nickel	49.50	49.80	101	80-120	3	20
Selenium	49.50	52.08	105	80-120	2	20
Silver	4.950	4.440	90	80-120	3	20
Thallium	49.50	53.91	109	80-120	2	20
Vanadium	49.50	52.18	105	80-120	3	20
Zinc	49.50	50.65	102	80-120	2	20

RPD= Relative Percent Difference

ENTHALPY ANALYTICAL

Batch QC Report

California Title 22 Metals

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3050B
Project#:	0285.001.002	Analysis:	EPA 6010B
Field ID:	SB-1-1.0	Batch#:	266074
MSS Lab ID:	305654-001	Sampled:	12/06/18
Matrix:	Soil	Received:	12/06/18
Units:	mg/Kg	Prepared:	12/11/18
Basis:	as received	Analyzed:	12/11/18
Diln Fac:	1.000		

Type: MS   Lab ID: QC957974

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	<0.1278	50.51	14.10	28 *	75-120
Arsenic	5.202	50.51	60.78	110	80-124
Barium	174.7	50.51	228.7	107	75-125
Beryllium	0.4250	25.25	25.77	100	80-120
Cadmium	0.4854	50.51	53.39	105	80-120
Chromium	49.61	50.51	108.0	116	75-125
Cobalt	11.03	50.51	59.20	95	75-120
Copper	55.92	50.51	101.0	89	77-125
Lead	95.10	50.51	151.2	111	75-125
Molybdenum	0.3622	50.51	44.51	87	75-120
Nickel	56.59	50.51	103.9	94	75-125
Selenium	<0.2181	50.51	53.30	106	75-121
Silver	<0.04854	5.051	4.780	95	75-120
Thallium	<0.1462	50.51	49.17	97	75-120
Vanadium	43.95	50.51	98.68	108	75-125
Zinc	146.8	50.51	196.3	98	75-125

Type: MSD   Lab ID: QC957975

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	52.08	14.64	28 *	75-120	1	20
Arsenic	52.08	58.95	103	80-124	6	20
Barium	52.08	221.7	90	75-125	4	20
Beryllium	26.04	25.42	96	80-120	4	20
Cadmium	52.08	52.24	99	80-120	5	20
Chromium	52.08	102.9	102	75-125	6	20
Cobalt	52.08	59.30	93	75-120	2	20
Copper	52.08	122.6	128 *	77-125	18	20
Lead	52.08	129.2	66 *	75-125	17	20
Molybdenum	52.08	43.44	83	75-120	5	20
Nickel	52.08	103.5	90	75-125	2	20
Selenium	52.08	52.11	100	75-121	5	20
Silver	5.208	4.696	90	75-120	5	20
Thallium	52.08	48.83	94	75-120	4	20
Vanadium	52.08	95.94	100	75-125	4	20
Zinc	52.08	179.6	63 *	75-125	10	20

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

ENTHALPY ANALYTICAL

Batch QC Report

California Title 22 Metals

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	METHOD
Project#:	0285.001.002	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	266141
Lab ID:	QC958264	Prepared:	12/13/18
Matrix:	Soil	Analyzed:	12/13/18
Units:	mg/Kg		

Result	RL
ND	0.017

ND= Not Detected
RL= Reporting Limit

Batch QC Report

California Title 22 Metals

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	METHOD
Project#:	0285.001.002	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	266141
Matrix:	Soil	Prepared:	12/13/18
Units:	mg/Kg	Analyzed:	12/13/18
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC958265	0.1613	0.1472	91	80-120		
BSD	QC958266	0.1667	0.1679	101	80-120	10	20

RPD= Relative Percent Difference

ENTHALPY ANALYTICAL

Batch QC Report

California Title 22 Metals

Lab #:	305654	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	METHOD
Project#:	0285.001.002	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	266141
MSS Lab ID:	305669-001	Sampled:	12/06/18
Matrix:	Soil	Received:	12/06/18
Units:	mg/Kg	Prepared:	12/13/18
Basis:	as received	Analyzed:	12/13/18

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC958267	0.04247	0.1639	0.1983	95	80-120		
MSD	QC958268		0.1639	0.1871	88	80-120	6	20

RPD= Relative Percent Difference

Laboratory Job Number 305654

Subcontracted Products

Forensic Analytical

Forensic Analytical LABORATORIES

Final Report

Bulk Asbestos Analysis

(EPA Method 40CFR, Part 763, Appendix E to Subpart E and EPA 600/R-93-116, Visual Area Estimation)

Enthalpy Analytical LLC
Tracy Babjar
2323 5th Street

Berkeley, CA 94710

Client ID: 1137
Report Number: B270242
Date Received: 12/10/18
Date Analyzed: 12/17/18
Date Printed: 12/17/18
First Reported: 12/17/18

Job ID/Site: 305654 - SupplyBank

Date(s) Collected: 12/06/2018

FALI Job ID: 1137
Total Samples Submitted: 7
Total Samples Analyzed: 7

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
SB-1-1.0	12106249						
Layer: Brown Soil			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
SB-2-1.0	12106250						
Layer: Brown Soil			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
SB-3-1.0	12106251						
Layer: Brown Soil			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
SB-4-1.0	12106252						
Layer: Brown Soil			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
SB-5-1.0	12106253						
Layer: Brown Soil			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
SB-6-1.0	12106254						
Layer: Brown Soil			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
SB-7-1.0	12106255						
Layer: Brown Soil			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer

Tad Thrower

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

ENTHALPY

ANALYTICAL

Enthalpy Analytical

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 305638
ANALYTICAL REPORT

Terraphase Engineering	Project : 0285.001.002
1404 Franklin Street	Location : SupplyBank
Oakland, CA 94612	Level : II

Sample ID	Lab ID
SB-2-GW	305638-001
SB-4-GW	305638-002
SB-7-GW	305638-003
SB-5-GW	305638-004

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Tracy Babjar   Date: 12/26/2018

Tracy Babjar
Project Manager
tracy.babjar@enthalpy.com
(510) 204-2226 Ext 13107

CA ELAP# 2896, NELAP# 4044-001

ENTHALPY ANALYTICAL

CASE NARRATIVE

Laboratory number:	**305638**
Client:	**Terraphase Engineering**
Project:	**0285.001.002**
Location:	**SupplyBank**
Request Date:	**12/06/18**
Samples Received:	**12/06/18**

This data package contains sample and QC results for four water samples, requested for the above referenced project on 12/06/18. The samples were received cold and intact.

TPH-Extractables by GC (EPA 8015B):
No analytical problems were encountered.

Metals (EPA 6010B and EPA 7470A):
Low recoveries were observed for mercury in the MS/MSD for batch 266064; the parent sample was not a project sample, and the associated RPD was within limits. No other analytical problems were encountered.

Volatile Organics (EPA 8260):
Enthalpy Analytical (Orange) in Orange, CA performed the analysis (not NELAP certified). Please see the Enthalpy Analytical (Orange) case narrative.

(EPA 8015B):
Enthalpy Analytical (Orange) in Orange, CA performed the analysis (not NELAP certified). Please see the Enthalpy Analytical (Orange) case narrative.

CHAIN OF CUSTODY

ENTHALPY ANALYTICAL
Formerly Curtis & Tompkins Labs

2323 Fifth Street
Berkeley, CA 94710

Phone (510) 486-0900
Fax (510) 486-0532

Page 1 of 1

Chain of Custody # ______

C&T LOGIN # 305688

Project No: 0285.001.002

Project Name: SupplyBank

Project P. O. No:

EDD Format: Report Level ☒ II ☐ III ☐ IV

Turnaround Time: ☐ RUSH ______ ☒ Standard

Sampler: Ethan Levy

Report To: Alice Hale Price

Company: Terraphase

Telephone: 510 645 - 1850

Email: Alice.Hale.Price@terraphase.com

Lab No.	Sample ID.	SAMPLING: Date Collected	SAMPLING: Time Collected	MATRIX: Water	MATRIX: Solid	MATRIX	MATRIX	# of Containers	CHEMICAL PRESERVATIVE: HCl	H2SO4	HNO3	NaOH	None	ANALYTICAL REQUEST: TPH d/mo/g	~~TPH~~ EL 12/6/18 Diss. Metals*	VOCs
	SB-2-GW	12/6/18	1505	X				7	X				X	X	X	X
	SB-4-GW	↓	1605	X				7	X				X	X	X	X
	SB-7-GW	↓	1545	X				7	X				X	X	X	X
	SB-5-GW	↓	1530	X				7	X				X	X	X	X

Notes:
*lab to filter

SAMPLE RECEIPT
☐ Intact
☐ Cold
☒ On Ice
☐ Ambient

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
[signature]	12/6/18	17:30	[signature]	12/6/18	17:30

SAMPLE RECEIPT CHECKLIST

ENTHALPY

Section 1: Login # 305638 Client: Terraphase
Date Received: 12/6/18 Project: Supplybank

Section 2: Samples received in a cooler? ☑ Yes, how many? 2 ☐ No (**skip Section 3 below**)
If no cooler Sample Temp (°C): ________ using IR Gun # ☐ A, or ☐ B
☐ Samples received on ice directly from the field. Cooling process had begun
If in cooler: Date Opened 12/6/18 By (print) AC (sign) [signature]
Shipping info (if applicable) ________
Are custody seals present? ☑ No, or ☐ Yes. If yes, where? ☐ on cooler, ☐ on samples, ☐ on package
☐ Date: ________ How many ________ ☐ Signature, ☐ Initials, ☐ None
Were custody seals intact upon arrival? ☐ Yes ☐ No ☑ N/A

Section 3: *Important*: Notify PM if temperature exceeds 6°C or arrive frozen.
Packing in cooler: (if other, describe) ________
☑ Bubble Wrap, ☐ Foam blocks, ☐ Bags, ☐ None, ☐ Cloth material, ☐ Cardboard, ☐ Styrofoam, ☐ Paper towels
☐ Samples received on ice directly from the field. Cooling process had begun
Type of ice used: ☑ Wet, ☐ Blue/Gel, ☐ None Temperature blank(s) included? ☐ Yes, ☑ No
Temperature measured using ☐ Thermometer ID: ________, or IR Gun # ☑ A ☐ B
Cooler Temp (°C): #1: 1.6, #2: 4.0, #3: ____, #4: ____, #5: ____, #6: ____, #7: ____

Section 4:	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable	✓		
Were Method 5035 sampling containers present?		✓	
If YES, what time were they transferred to freezer? ________			
Did all bottles arrive unbroken/unopened?	✓		
Are there any missing / extra samples?		✓	
Are samples in the appropriate containers for indicated tests?	✓		
Are sample labels present, in good condition and complete?	✓		
Does the container count match the COC?	✓		
Do the sample labels agree with custody papers?	✓		
Was sufficient amount of sample sent for tests requested?	✓		
Did you change the hold time in LIMS for unpreserved VOAs?			✓
Did you change the hold time in LIMS for preserved terracores?			✓
Are bubbles > 6mm absent in VOA samples?			✓
Was the client contacted concerning this sample delivery?		✓	
If YES, who was called? ________ By ________ Date: ________			

Section 5:	YES	NO	N/A
Are the samples appropriately preserved? (If N/A, skip the rest of section 5)			✓
Did you check preservatives for all bottles for each sample?			
Did you document your preservative check?			

pH strip lot# ________, pH strip lot# ________, pH strip lot# ________
Preservative added:
☐ H2SO4 lot# ________ added to samples ________ on/at ________
☐ HCL lot# ________ added to samples ________ on/at ________
☐ HNO3 lot# ________ added to samples ________ on/at ________
☐ NaOH lot# ________ added to samples ________ on/at ________

Section 6:
Explanations/Comments: ________

Date Logged in 12/6/18 **By (print)** AC **(sign)** [signature]
Date Labeled 12-7-18 **By (print)** SH **(sign)** [signature]

ENTHALPY ANALYTICAL

Total Extractable Hydrocarbons

Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3520C
Project#:	0285.001.002	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	12/06/18
Units:	ug/L	Received:	12/06/18
Diln Fac:	1.000	Prepared:	12/11/18
Batch#:	266082	Analyzed:	12/12/18

Field ID: SB-2-GW Lab ID: 305638-001
Type: SAMPLE

Analyte	Result	RL
Diesel C10-C24	360 Y	48
Motor Oil C24-C36	1,300	290

Surrogate	%REC	Limits
o-Terphenyl	86	58-123

Field ID: SB-4-GW Lab ID: 305638-002
Type: SAMPLE

Analyte	Result	RL
Diesel C10-C24	310 Y	48
Motor Oil C24-C36	630	290

Surrogate	%REC	Limits
o-Terphenyl	91	58-123

Field ID: SB-7-GW Lab ID: 305638-003
Type: SAMPLE

Analyte	Result	RL
Diesel C10-C24	200 Y	48
Motor Oil C24-C36	520	290

Surrogate	%REC	Limits
o-Terphenyl	89	58-123

Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Total Extractable Hydrocarbons

Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3520C
Project#:	0285.001.002	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	12/06/18
Units:	ug/L	Received:	12/06/18
Diln Fac:	1.000	Prepared:	12/11/18
Batch#:	266082	Analyzed:	12/12/18

Field ID: SB-5-GW　　Lab ID: 305638-004
Type: SAMPLE

Analyte	Result	RL
Diesel C10-C24	200 Y	48
Motor Oil C24-C36	550	290

Surrogate	%REC	Limits
o-Terphenyl	81	58-123

Type: BLANK　　Lab ID: QC958003

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	106	58-123

Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3520C
Project#:	0285.001.002	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC958004	Batch#:	266082
Matrix:	Water	Prepared:	12/11/18
Units:	ug/L	Analyzed:	12/12/18

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,273	91	56-120

Surrogate	%REC	Limits
o-Terphenyl	94	58-123

ENTHALPY ANALYTICAL

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	EPA 3520C
Project#:	0285.001.002	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	266082
MSS Lab ID:	305627-014	Sampled:	12/04/18
Matrix:	Water	Received:	12/05/18
Units:	ug/L	Prepared:	12/11/18
Diln Fac:	1.000	Analyzed:	12/12/18

Type: MS   Lab ID: QC958005

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	38.74	2,404	2,488	102	53-124

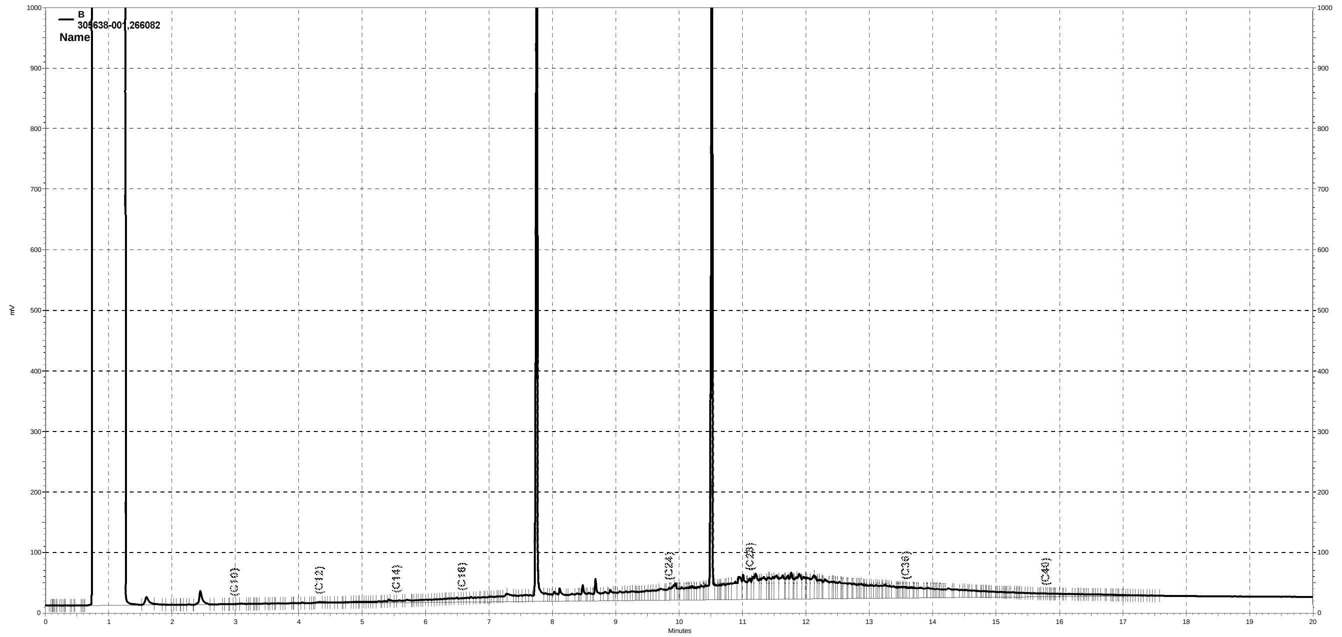
Surrogate	%REC	Limits
o-Terphenyl	102	58-123

Type: MSD   Lab ID: QC958006

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,404	2,436	100	53-124	2	40

Surrogate	%REC	Limits
o-Terphenyl	101	58-123

RPD= Relative Percent Difference



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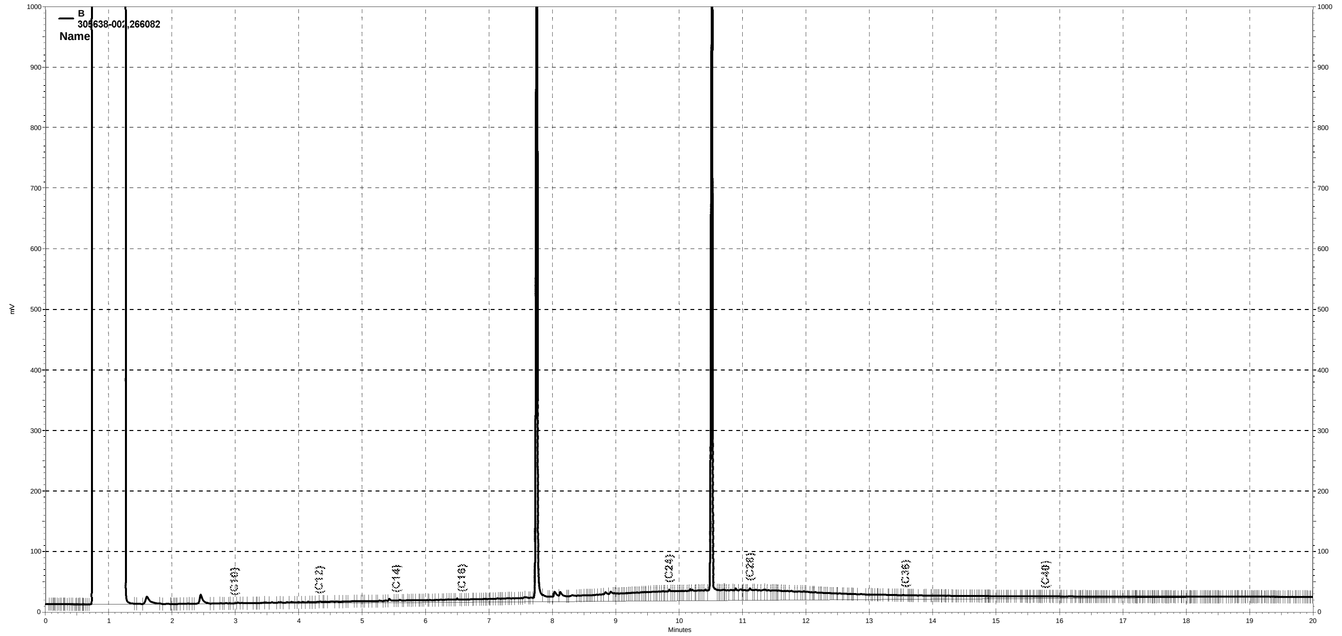

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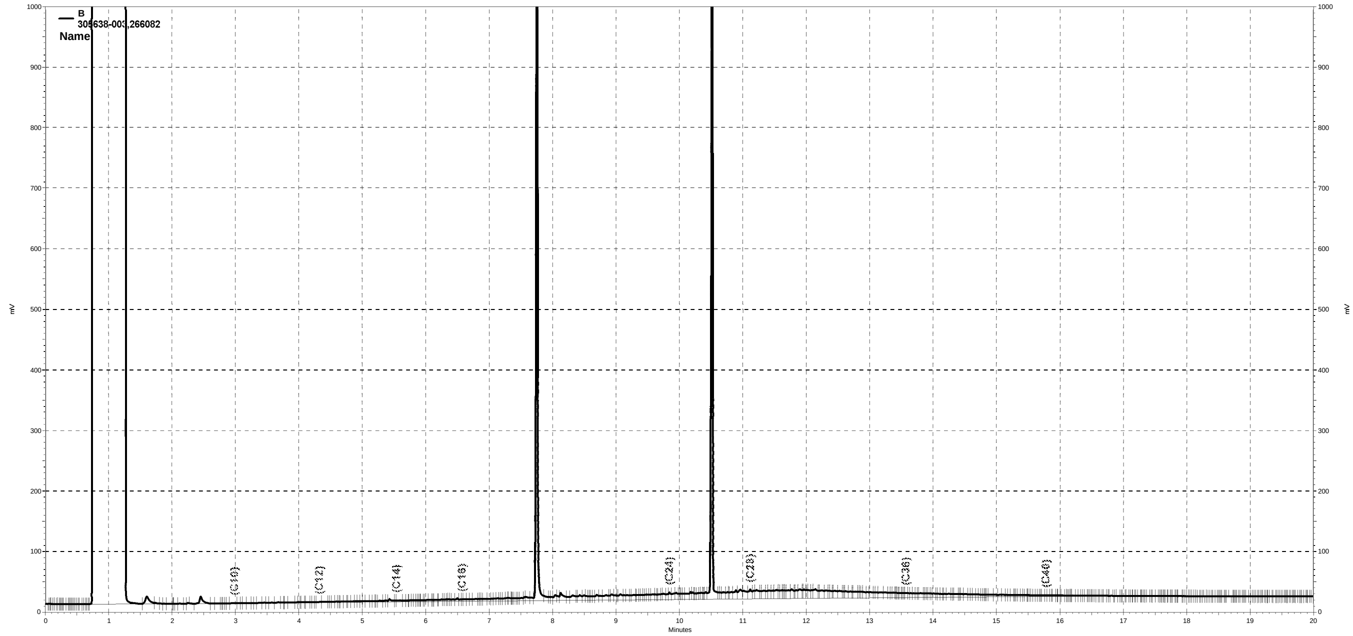

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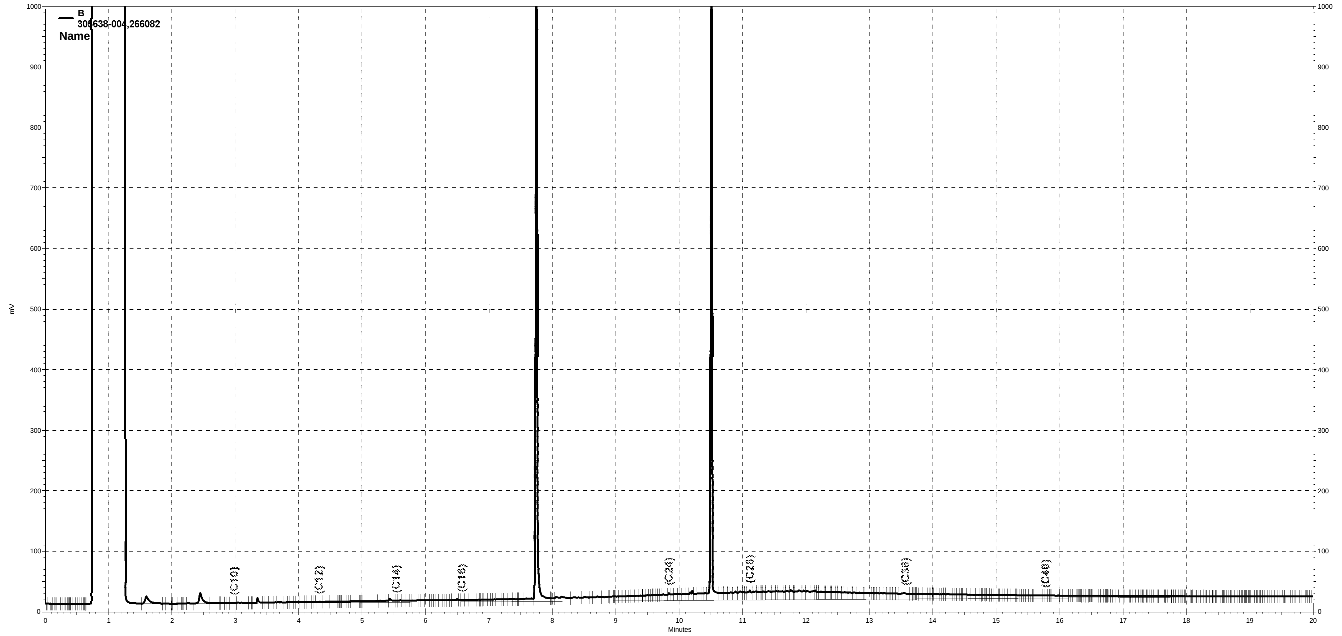

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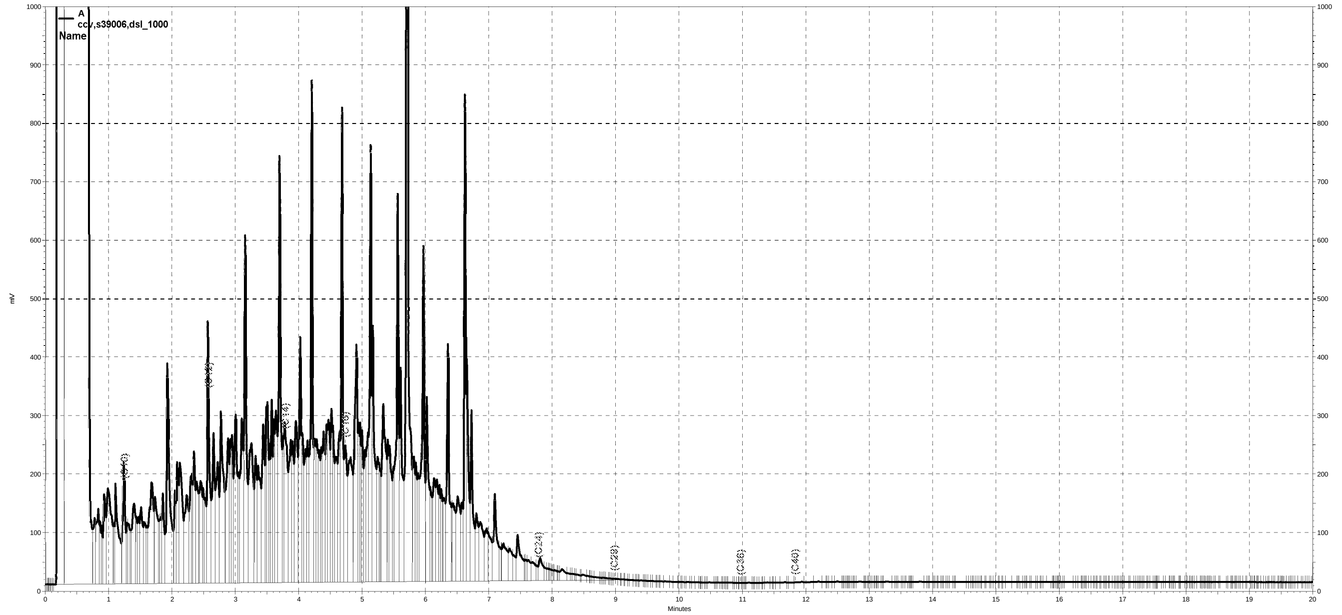

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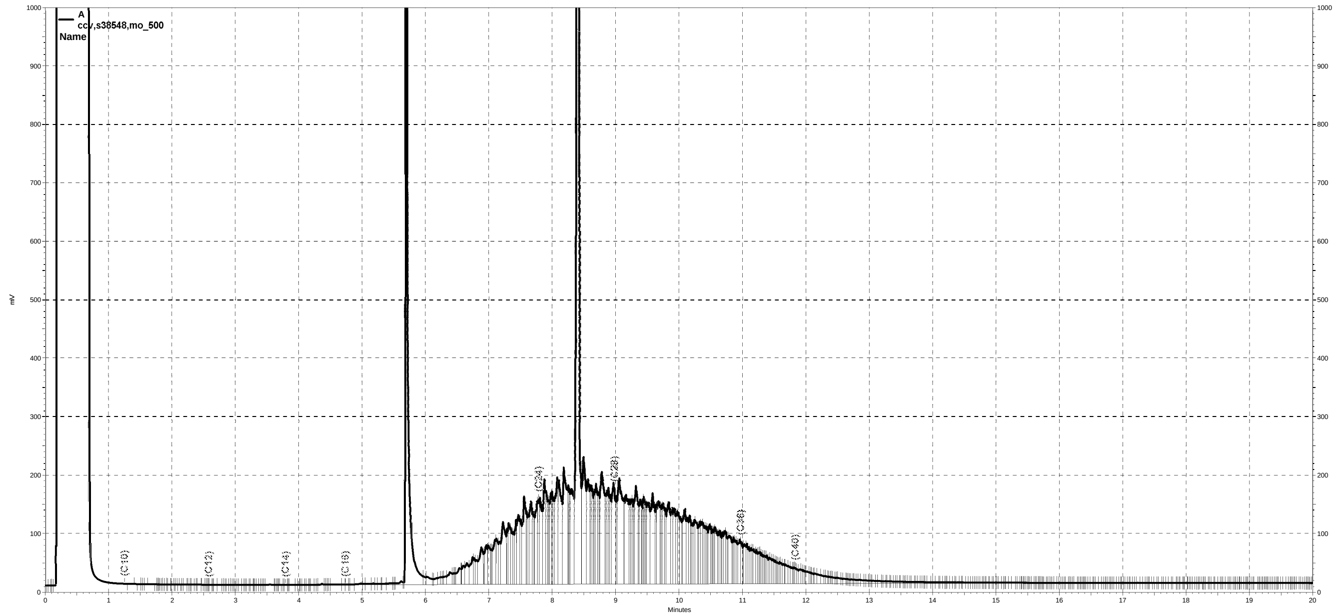

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ENTHALPY ANALYTICAL

Dissolved California Title 22 Metals

Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	METHOD
Project#:	0285.001.002		
Field ID:	SB-2-GW	Diln Fac:	1.000
Lab ID:	305638-001	Sampled:	12/06/18
Matrix:	Filtrate	Received:	12/06/18
Units:	ug/L		

Analyte	Result	RL	Batch#	Prepared	Analyzed	Analysis
Antimony	ND	10	266033	12/10/18	12/10/18	EPA 6010B
Arsenic	ND	10	266033	12/10/18	12/10/18	EPA 6010B
Barium	53	5.0	266033	12/10/18	12/10/18	EPA 6010B
Beryllium	ND	2.0	266033	12/10/18	12/10/18	EPA 6010B
Cadmium	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Chromium	5.4	5.0	266033	12/10/18	12/10/18	EPA 6010B
Cobalt	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Copper	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Lead	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Mercury	ND	0.20	266064	12/11/18	12/11/18	EPA 7470A
Molybdenum	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Nickel	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Selenium	ND	10	266033	12/10/18	12/11/18	EPA 6010B
Silver	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Thallium	ND	10	266033	12/10/18	12/11/18	EPA 6010B
Vanadium	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Zinc	ND	20	266033	12/10/18	12/10/18	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Dissolved California Title 22 Metals

Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	METHOD
Project#:	0285.001.002		
Field ID:	SB-4-GW	Diln Fac:	1.000
Lab ID:	305638-002	Sampled:	12/06/18
Matrix:	Filtrate	Received:	12/06/18
Units:	ug/L		

Analyte	Result	RL	Batch#	Prepared	Analyzed	Analysis
Antimony	ND	10	266033	12/10/18	12/10/18	EPA 6010B
Arsenic	ND	10	266033	12/10/18	12/10/18	EPA 6010B
Barium	200	5.0	266033	12/10/18	12/10/18	EPA 6010B
Beryllium	ND	2.0	266033	12/10/18	12/10/18	EPA 6010B
Cadmium	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Chromium	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Cobalt	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Copper	11	5.0	266033	12/10/18	12/10/18	EPA 6010B
Lead	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Mercury	ND	0.20	266064	12/11/18	12/11/18	EPA 7470A
Molybdenum	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Nickel	5.9	5.0	266033	12/10/18	12/10/18	EPA 6010B
Selenium	ND	10	266033	12/10/18	12/11/18	EPA 6010B
Silver	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Thallium	ND	10	266033	12/10/18	12/11/18	EPA 6010B
Vanadium	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Zinc	ND	20	266033	12/10/18	12/10/18	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Dissolved California Title 22 Metals

Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	METHOD
Project#:	0285.001.002		
Field ID:	SB-7-GW	Diln Fac:	1.000
Lab ID:	305638-003	Sampled:	12/06/18
Matrix:	Filtrate	Received:	12/06/18
Units:	ug/L		

Analyte	Result	RL	Batch#	Prepared	Analyzed	Analysis
Antimony	ND	10	266033	12/10/18	12/10/18	EPA 6010B
Arsenic	ND	10	266033	12/10/18	12/10/18	EPA 6010B
Barium	53	5.0	266033	12/10/18	12/10/18	EPA 6010B
Beryllium	ND	2.0	266033	12/10/18	12/10/18	EPA 6010B
Cadmium	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Chromium	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Cobalt	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Copper	7.2	5.0	266033	12/10/18	12/10/18	EPA 6010B
Lead	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Mercury	ND	0.20	266064	12/11/18	12/11/18	EPA 7470A
Molybdenum	11	5.0	266033	12/10/18	12/10/18	EPA 6010B
Nickel	6.0	5.0	266033	12/10/18	12/10/18	EPA 6010B
Selenium	ND	10	266033	12/10/18	12/11/18	EPA 6010B
Silver	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Thallium	ND	10	266033	12/10/18	12/11/18	EPA 6010B
Vanadium	5.9	5.0	266033	12/10/18	12/10/18	EPA 6010B
Zinc	ND	20	266033	12/10/18	12/10/18	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Dissolved California Title 22 Metals

Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	METHOD
Project#:	0285.001.002		
Field ID:	SB-5-GW	Diln Fac:	1.000
Lab ID:	305638-004	Sampled:	12/06/18
Matrix:	Filtrate	Received:	12/06/18
Units:	ug/L		

Analyte	Result	RL	Batch#	Prepared	Analyzed	Analysis
Antimony	ND	10	266033	12/10/18	12/10/18	EPA 6010B
Arsenic	16	10	266033	12/10/18	12/10/18	EPA 6010B
Barium	49	5.0	266033	12/10/18	12/10/18	EPA 6010B
Beryllium	ND	2.0	266033	12/10/18	12/10/18	EPA 6010B
Cadmium	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Chromium	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Cobalt	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Copper	16	5.0	266033	12/10/18	12/10/18	EPA 6010B
Lead	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Mercury	ND	0.20	266064	12/11/18	12/11/18	EPA 7470A
Molybdenum	11	5.0	266033	12/10/18	12/10/18	EPA 6010B
Nickel	8.5	5.0	266033	12/10/18	12/10/18	EPA 6010B
Selenium	ND	10	266033	12/10/18	12/11/18	EPA 6010B
Silver	ND	5.0	266033	12/10/18	12/10/18	EPA 6010B
Thallium	ND	10	266033	12/10/18	12/11/18	EPA 6010B
Vanadium	34	5.0	266033	12/10/18	12/10/18	EPA 6010B
Zinc	91	20	266033	12/10/18	12/10/18	EPA 6010B

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	METHOD
Project#:	0285.001.002	Analysis:	EPA 6010B
Matrix:	Filtrate	Batch#:	266033
Units:	ug/L	Prepared:	12/10/18
Diln Fac:	1.000		

Type: BS Lab ID: QC957802

Analyte	Spiked	Result	%REC	Limits	Analyzed
Antimony	100.0	103.1	103	80-120	12/10/18
Arsenic	100.0	107.3	107	80-120	12/10/18
Barium	100.0	103.5	103	80-120	12/10/18
Beryllium	100.0	102.4	102	80-120	12/10/18
Cadmium	100.0	104.4	104	80-120	12/10/18
Chromium	100.0	104.2	104	80-120	12/10/18
Cobalt	100.0	102.9	103	80-120	12/10/18
Copper	100.0	98.14	98	80-120	12/10/18
Lead	100.0	106.8	107	80-120	12/10/18
Molybdenum	100.0	103.4	103	80-120	12/10/18
Nickel	100.0	104.1	104	80-120	12/10/18
Selenium	100.0	108.2	108	80-120	12/11/18
Silver	100.0	100.1	100	80-120	12/10/18
Thallium	50.00	53.65	107	80-120	12/11/18
Vanadium	100.0	102.5	102	80-120	12/10/18
Zinc	100.0	110.2	110	80-120	12/10/18

Type: BSD Lab ID: QC957803

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
Antimony	100.0	101.7	102	80-120	1	20	12/10/18
Arsenic	100.0	104.6	105	80-120	3	20	12/10/18
Barium	100.0	100.8	101	80-120	3	20	12/10/18
Beryllium	100.0	98.82	99	80-120	4	20	12/10/18
Cadmium	100.0	102.3	102	80-120	2	20	12/10/18
Chromium	100.0	101.7	102	80-120	2	20	12/10/18
Cobalt	100.0	100.3	100	80-120	2	20	12/10/18
Copper	100.0	95.76	96	80-120	2	20	12/10/18
Lead	100.0	102.9	103	80-120	4	20	12/10/18
Molybdenum	100.0	100.6	101	80-120	3	20	12/10/18
Nickel	100.0	101.8	102	80-120	2	20	12/10/18
Selenium	100.0	108.6	109	80-120	0	20	12/11/18
Silver	100.0	97.72	98	80-120	2	20	12/10/18
Thallium	50.00	53.05	106	80-120	1	20	12/11/18
Vanadium	100.0	99.91	100	80-120	3	20	12/10/18
Zinc	100.0	107.6	108	80-120	2	26	12/10/18

RPD= Relative Percent Difference

ENTHALPY ANALYTICAL

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	METHOD
Project#:	0285.001.002	Analysis:	EPA 6010B
Field ID:	SB-2-GW	Batch#:	266033
MSS Lab ID:	305638-001	Sampled:	12/06/18
Matrix:	Filtrate	Received:	12/06/18
Units:	ug/L	Prepared:	12/10/18
Diln Fac:	1.000		

Type: MS Lab ID: QC957804

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analyzed
Antimony	<2.034	100.0	106.1	106	75-125	12/10/18
Arsenic	2.826	100.0	113.4	111	75-125	12/10/18
Barium	53.39	100.0	147.1	94	75-125	12/10/18
Beryllium	<0.2680	100.0	103.1	103	75-125	12/10/18
Cadmium	<0.3487	100.0	106.1	106	75-125	12/10/18
Chromium	5.381	100.0	110.7	105	75-125	12/10/18
Cobalt	<0.4075	100.0	103.4	103	75-125	12/10/18
Copper	3.187	100.0	103.6	100	75-125	12/10/18
Lead	<1.358	100.0	107.0	107	75-125	12/10/18
Molybdenum	3.682	100.0	109.6	106	75-125	12/10/18
Nickel	1.638	100.0	105.8	104	75-125	12/10/18
Selenium	<2.368	100.0	110.3	110	75-125	12/11/18
Silver	<0.3994	100.0	100.7	101	75-125	12/10/18
Thallium	<3.000	50.00	52.22	104	75-125	12/11/18
Vanadium	2.703	100.0	106.1	103	75-125	12/10/18
Zinc	<1.415	100.0	110.3	110	75-125	12/10/18

Type: MSD Lab ID: QC957805

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
Antimony	100.0	109.5	109	75-125	3	20	12/10/18
Arsenic	100.0	116.1	113	75-125	2	20	12/10/18
Barium	100.0	148.1	95	75-125	1	20	12/10/18
Beryllium	100.0	105.6	106	75-125	2	20	12/10/18
Cadmium	100.0	107.0	107	75-125	1	20	12/10/18
Chromium	100.0	111.8	106	75-125	1	20	12/10/18
Cobalt	100.0	104.6	105	75-125	1	20	12/10/18
Copper	100.0	104.4	101	75-125	1	20	12/10/18
Lead	100.0	106.0	106	75-125	1	20	12/10/18
Molybdenum	100.0	111.7	108	75-125	2	20	12/10/18
Nickel	100.0	106.9	105	75-125	1	20	12/10/18
Selenium	100.0	113.6	114	75-125	3	20	12/11/18
Silver	100.0	102.1	102	75-125	1	20	12/10/18
Thallium	50.00	52.08	104	75-125	0	20	12/11/18
Vanadium	100.0	106.8	104	75-125	1	20	12/10/18
Zinc	100.0	110.6	111	75-125	0	20	12/10/18

RPD= Relative Percent Difference

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	METHOD
Project#:	0285.001.002	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC957807	Batch#:	266033
Matrix:	Filtrate	Prepared:	12/10/18
Units:	ug/L		

Analyte	Result	RL	Analyzed
Antimony	ND	10	12/10/18
Arsenic	ND	10	12/10/18
Barium	ND	5.0	12/10/18
Beryllium	ND	2.0	12/10/18
Cadmium	ND	5.0	12/10/18
Chromium	ND	5.0	12/10/18
Cobalt	ND	5.0	12/10/18
Copper	ND	5.0	12/10/18
Lead	ND	5.0	12/10/18
Molybdenum	ND	5.0	12/10/18
Nickel	ND	5.0	12/10/18
Selenium	ND	10	12/11/18
Silver	ND	5.0	12/10/18
Thallium	ND	10	12/11/18
Vanadium	ND	5.0	12/10/18
Zinc	ND	20	12/10/18

ND= Not Detected
RL= Reporting Limit

ENTHALPY ANALYTICAL

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	METHOD
Project#:	0285.001.002	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	266064
Matrix:	Water	Prepared:	12/11/18
Units:	ug/L	Analyzed:	12/11/18
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC957932	2.000	1.996	100	80-120		
BSD	QC957933	2.000	1.959	98	80-120	2	24

RPD= Relative Percent Difference

ENTHALPY ANALYTICAL

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	METHOD
Project#:	0285.001.002	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	266064
Field ID:	ZZZZZZZZZZ	Sampled:	12/07/18
MSS Lab ID:	305677-001	Received:	12/07/18
Matrix:	Water	Prepared:	12/11/18
Units:	ug/L	Analyzed:	12/11/18
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC957934	<0.04000	2.000	1.247	62 *	64-120		
MSD	QC957935		2.000	1.220	61 *	64-120	2	30

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Batch QC Report

Dissolved California Title 22 Metals			
Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	METHOD
Project#:	0285.001.002	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	266064
Lab ID:	QC957936	Prepared:	12/11/18
Matrix:	Filtrate	Analyzed:	12/11/18
Units:	ug/L		

Result	RL
ND	0.20

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Dissolved California Title 22 Metals			
Lab #:	305638	Location:	SupplyBank
Client:	Terraphase Engineering	Prep:	METHOD
Project#:	0285.001.002	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	266064
Lab ID:	QC957937	Prepared:	12/11/18
Matrix:	Filtrate	Analyzed:	12/11/18
Units:	ug/L		

Result	**RL**
ND	0.20

ND= Not Detected
RL= Reporting Limit

Laboratory Job Number 305638

Subcontracted Products

Enthalpy Analytical (Orange)

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Client:	Enthalpy - Berkeley	Lab Request:	410004
Address:	2323 Fifth Street	Report Date:	12/26/2018
	Berkeley, CA 94710	Date Received:	12/15/2018
		Client ID:	15279
Attn:	Tracy Babjar		
Comments:	Project Number: 305638 Site: SupplyBank		

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID
410004-001	SB-2-GW
410004-002	SB-4-GW
410004-003	SB-7-GW
410004-004	SB-5-GW

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Report Review performed by: Lisa Nguyen, PM

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 60 days from date received.

Matrix:	Water	Client:	Enthalpy - Berkeley	Collector:	Client
Sampled:	12/06/2018 15:05	Site:			
Sample #:	**410004-001**	Client Sample #:	SB-2-GW	Sample Type:	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015B *NELAC*	Prep Method: EPA 5030B						QCBatchID: QC1198776		
TPH Gasoline	ND	1	16	50	ug/L		12/17/18	EW	
Surrogate	*% Recovery*		*Limits*		*Notes*				
4-Bromofluorobenzene (SUR)	*113*		*60-140*						
Method: EPA 8260B *NELAC*	Prep Method: EPA 5030B						QCBatchID: QC1198939		
1,1,1,2-Tetrachloroethane	ND	1	0.122	0.5	ug/L		12/16/18	LZ	
1,1,1-Trichloroethane	ND	1	0.063	0.5	ug/L		12/16/18	LZ	
1,1,2,2-Tetrachloroethane	ND	1	0.063	0.5	ug/L		12/16/18	LZ	
1,1,2-Trichloroethane	ND	1	0.045	0.5	ug/L		12/16/18	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	0.119	0.5	ug/L		12/16/18	LZ	
1,1-Dichloroethane	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
1,1-Dichloroethene	ND	1	0.13	0.5	ug/L		12/16/18	LZ	
1,1-Dichloropropene	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
1,2,3-Trichlorobenzene	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
1,2,3-Trichloropropane	ND	1	0.073	0.5	ug/L		12/16/18	LZ	
1,2,4-Trichlorobenzene	ND	1	0.068	0.5	ug/L		12/16/18	LZ	
1,2,4-Trimethylbenzene	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
1,2-Dibromo-3-chloropropane	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
1,2-Dibromoethane	ND	1	0.043	0.5	ug/L		12/16/18	LZ	
1,2-Dichlorobenzene	ND	1	0.051	0.5	ug/L		12/16/18	LZ	
1,2-Dichloroethane	ND	1	0.066	0.5	ug/L		12/16/18	LZ	
1,2-Dichloropropane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
1,3,5-Trimethylbenzene	ND	1	0.097	0.5	ug/L		12/16/18	LZ	
1,3-Dichlorobenzene	ND	1	0.052	0.5	ug/L		12/16/18	LZ	
1,3-Dichloropropane	ND	1	0.068	0.5	ug/L		12/16/18	LZ	
1,4-Dichlorobenzene	ND	1	0.12	0.5	ug/L		12/16/18	LZ	
2,2-Dichloropropane	ND	1	0.11	0.5	ug/L		12/16/18	LZ	
2-Butanone (MEK)	ND	1	0.3	5	ug/L		12/16/18	LZ	
2-Chlorotoluene	ND	1	0.079	0.5	ug/L		12/16/18	LZ	
4-Chlorotoluene	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
4-Isopropyltoluene	ND	1	0.091	0.5	ug/L		12/16/18	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	0.16	5	ug/L		12/16/18	LZ	
Acetone	ND	1	0.2	10	ug/L		12/16/18	LZ	
Allyl Chloride	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
Benzene	ND	1	0.071	0.5	ug/L		12/16/18	LZ	
Bromobenzene	ND	1	0.073	1	ug/L		12/16/18	LZ	
Bromochloromethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Bromodichloromethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Bromoform	ND	1	0.053	0.5	ug/L		12/16/18	LZ	
Bromomethane	ND	1	0.13	1	ug/L		12/16/18	LZ	
Carbon Tetrachloride	ND	1	0.045	0.5	ug/L		12/16/18	LZ	
Chlorobenzene	ND	1	0.075	0.5	ug/L		12/16/18	LZ	
Chlorodibromomethane	ND	1	0.045	0.5	ug/L		12/16/18	LZ	
Chloroethane	ND	1	0.4	0.5	ug/L		12/16/18	LZ	
Chloroform	ND	1	0.044	0.5	ug/L		12/16/18	LZ	
Chloromethane	ND	1	0.055	0.5	ug/L		12/16/18	LZ	
cis-1,2-Dichloroethene	ND	1	0.055	0.5	ug/L		12/16/18	LZ	
cis-1,3-dichloropropene	ND	1	0.061	0.5	ug/L		12/16/18	LZ	
cis-1,4-dichloro-2-butene	ND	1	0.075	5	ug/L		12/16/18	LZ	
Dibromomethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Dichlorodifluoromethane	ND	1	0.062	0.5	ug/L		12/16/18	LZ	
Ethylbenzene	ND	1	0.091	0.5	ug/L		12/16/18	LZ	
Hexachlorobutadiene	ND	1	0.073	1	ug/L		12/16/18	LZ	
Isopropylbenzene	ND	1	0.089	0.5	ug/L		12/16/18	LZ	

Matrix:	Water	Client:	Enthalpy - Berkeley	Collector:	Client
Sampled:	12/06/2018 15:05	Site:			
Sample #:	**410004-001**	Client Sample #:	SB-2-GW	Sample Type:	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
m and p-Xylene	ND	1	0.17	0.5	ug/L		12/16/18	LZ	
Methylene chloride	**18**	1	0.15	0.5	ug/L		12/16/18	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	0.068	0.5	ug/L		12/16/18	LZ	
Naphthalene	ND	1	0.061	0.5	ug/L		12/16/18	LZ	
N-butylbenzene	ND	1	0.094	0.5	ug/L		12/16/18	LZ	
N-propylbenzene	ND	1	0.09	0.5	ug/L		12/16/18	LZ	
o-Xylene	ND	1	0.075	0.5	ug/L		12/16/18	LZ	
Sec-butylbenzene	ND	1	0.077	0.5	ug/L		12/16/18	LZ	
Styrene	ND	1	0.088	0.5	ug/L		12/16/18	LZ	
Tert-butylbenzene	ND	1	0.092	0.5	ug/L		12/16/18	LZ	
Tetrachloroethene	ND	1	0.15	0.5	ug/L		12/16/18	LZ	
Toluene	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
trans-1,2-dichloroethene	ND	1	0.17	0.5	ug/L		12/16/18	LZ	
trans-1,3-dichloropropene	ND	1	0.056	0.5	ug/L		12/16/18	LZ	
trans-1,4-dichloro-2-butene	ND	1	0.075	5	ug/L		12/16/18	LZ	
Trichloroethene	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
Trichlorofluoromethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Vinyl Chloride	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
Xylenes (Total)	ND	1	0.25	0.5	ug/L		12/16/18	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*98*	*70-145*	
4-Bromofluorobenzene (SUR)	*97*	*70-145*	
Dibromofluoromethane (SUR)	*102*	*70-145*	
Toluene-d8 (SUR)	*100*	*70-145*	

Matrix: Water	Client: Enthalpy - Berkeley	Collector: Client
Sampled: 12/06/2018 16:05	Site:	
Sample #: **410004-002**	Client Sample #: SB-4-GW	Sample Type:

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015B *NELAC*	Prep Method: EPA 5030B						QCBatchID: QC1198776		
TPH Gasoline	ND	1	16	50	ug/L		12/17/18	EW	

Surrogate	*% Recovery*	*Limits*	*Notes*
4-Bromofluorobenzene (SUR)	*106*	*60-140*	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8260B *NELAC*	Prep Method: EPA 5030B						QCBatchID: QC1198939		
1,1,1,2-Tetrachloroethane	ND	1	0.122	0.5	ug/L		12/16/18	LZ	
1,1,1-Trichloroethane	ND	1	0.063	0.5	ug/L		12/16/18	LZ	
1,1,2,2-Tetrachloroethane	ND	1	0.063	0.5	ug/L		12/16/18	LZ	
1,1,2-Trichloroethane	ND	1	0.045	0.5	ug/L		12/16/18	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	0.119	0.5	ug/L		12/16/18	LZ	
1,1-Dichloroethane	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
1,1-Dichloroethene	ND	1	0.13	0.5	ug/L		12/16/18	LZ	
1,1-Dichloropropene	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
1,2,3-Trichlorobenzene	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
1,2,3-Trichloropropane	ND	1	0.073	0.5	ug/L		12/16/18	LZ	
1,2,4-Trichlorobenzene	ND	1	0.068	0.5	ug/L		12/16/18	LZ	
1,2,4-Trimethylbenzene	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
1,2-Dibromo-3-chloropropane	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
1,2-Dibromoethane	ND	1	0.043	0.5	ug/L		12/16/18	LZ	
1,2-Dichlorobenzene	ND	1	0.051	0.5	ug/L		12/16/18	LZ	
1,2-Dichloroethane	ND	1	0.066	0.5	ug/L		12/16/18	LZ	
1,2-Dichloropropane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
1,3,5-Trimethylbenzene	ND	1	0.097	0.5	ug/L		12/16/18	LZ	
1,3-Dichlorobenzene	ND	1	0.052	0.5	ug/L		12/16/18	LZ	
1,3-Dichloropropane	ND	1	0.068	0.5	ug/L		12/16/18	LZ	
1,4-Dichlorobenzene	ND	1	0.12	0.5	ug/L		12/16/18	LZ	
2,2-Dichloropropane	ND	1	0.11	0.5	ug/L		12/16/18	LZ	
2-Butanone (MEK)	**9.2**	1	0.3	5	ug/L		12/16/18	LZ	
2-Chlorotoluene	ND	1	0.079	0.5	ug/L		12/16/18	LZ	
4-Chlorotoluene	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
4-Isopropyltoluene	ND	1	0.091	0.5	ug/L		12/16/18	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	0.16	5	ug/L		12/16/18	LZ	
Acetone	**18**	1	0.2	10	ug/L		12/16/18	LZ	
Allyl Chloride	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
Benzene	ND	1	0.071	0.5	ug/L		12/16/18	LZ	
Bromobenzene	ND	1	0.073	1	ug/L		12/16/18	LZ	
Bromochloromethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Bromodichloromethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Bromoform	ND	1	0.053	0.5	ug/L		12/16/18	LZ	
Bromomethane	ND	1	0.13	1	ug/L		12/16/18	LZ	
Carbon Tetrachloride	ND	1	0.045	0.5	ug/L		12/16/18	LZ	
Chlorobenzene	ND	1	0.075	0.5	ug/L		12/16/18	LZ	
Chlorodibromomethane	ND	1	0.045	0.5	ug/L		12/16/18	LZ	
Chloroethane	ND	1	0.4	0.5	ug/L		12/16/18	LZ	
Chloroform	ND	1	0.044	0.5	ug/L		12/16/18	LZ	
Chloromethane	ND	1	0.055	0.5	ug/L		12/16/18	LZ	
cis-1,2-Dichloroethene	ND	1	0.055	0.5	ug/L		12/16/18	LZ	
cis-1,3-dichloropropene	ND	1	0.061	0.5	ug/L		12/16/18	LZ	
cis-1,4-dichloro-2-butene	ND	1	0.075	5	ug/L		12/16/18	LZ	
Dibromomethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Dichlorodifluoromethane	ND	1	0.062	0.5	ug/L		12/16/18	LZ	
Ethylbenzene	ND	1	0.091	0.5	ug/L		12/16/18	LZ	
Hexachlorobutadiene	ND	1	0.073	1	ug/L		12/16/18	LZ	
Isopropylbenzene	ND	1	0.089	0.5	ug/L		12/16/18	LZ	

Matrix:	Water	Client:	Enthalpy - Berkeley	Collector:	Client
Sampled:	12/06/2018 16:05	Site:			
Sample #:	**410004-002**	Client Sample #:	SB-4-GW	Sample Type:	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
m and p-Xylene	ND	1	0.17	0.5	ug/L		12/16/18	LZ	
Methylene chloride	**17**	1	0.15	0.5	ug/L		12/16/18	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	0.068	0.5	ug/L		12/16/18	LZ	
Naphthalene	ND	1	0.061	0.5	ug/L		12/16/18	LZ	
N-butylbenzene	ND	1	0.094	0.5	ug/L		12/16/18	LZ	
N-propylbenzene	ND	1	0.09	0.5	ug/L		12/16/18	LZ	
o-Xylene	ND	1	0.075	0.5	ug/L		12/16/18	LZ	
Sec-butylbenzene	ND	1	0.077	0.5	ug/L		12/16/18	LZ	
Styrene	ND	1	0.088	0.5	ug/L		12/16/18	LZ	
Tert-butylbenzene	ND	1	0.092	0.5	ug/L		12/16/18	LZ	
Tetrachloroethene	ND	1	0.15	0.5	ug/L		12/16/18	LZ	
Toluene	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
trans-1,2-dichloroethene	ND	1	0.17	0.5	ug/L		12/16/18	LZ	
trans-1,3-dichloropropene	ND	1	0.056	0.5	ug/L		12/16/18	LZ	
trans-1,4-dichloro-2-butene	ND	1	0.075	5	ug/L		12/16/18	LZ	
Trichloroethene	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
Trichlorofluoromethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Vinyl Chloride	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
Xylenes (Total)	ND	1	0.25	0.5	ug/L		12/16/18	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*96*	*70-145*	
4-Bromofluorobenzene (SUR)	*97*	*70-145*	
Dibromofluoromethane (SUR)	*100*	*70-145*	
Toluene-d8 (SUR)	*102*	*70-145*	

Matrix:	Water	**Client:**	Enthalpy - Berkeley	**Collector:**	Client
Sampled:	12/06/2018 15:45	**Site:**			
Sample #:	**410004-003**	**Client Sample #:**	SB-7-GW	**Sample Type:**	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015B *NELAC*	Prep Method: EPA 5030B						QCBatchID:	QC1198776	
TPH Gasoline	ND	1	16	50	ug/L		12/17/18	EW	

Surrogate	*% Recovery*	*Limits*	*Notes*
4-Bromofluorobenzene (SUR)	*112*	*60-140*	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8260B *NELAC*	Prep Method: EPA 5030B						QCBatchID:	QC1198939	
1,1,1,2-Tetrachloroethane	ND	1	0.122	0.5	ug/L		12/16/18	LZ	
1,1,1-Trichloroethane	ND	1	0.063	0.5	ug/L		12/16/18	LZ	
1,1,2,2-Tetrachloroethane	ND	1	0.063	0.5	ug/L		12/16/18	LZ	
1,1,2-Trichloroethane	ND	1	0.045	0.5	ug/L		12/16/18	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	0.119	0.5	ug/L		12/16/18	LZ	
1,1-Dichloroethane	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
1,1-Dichloroethene	ND	1	0.13	0.5	ug/L		12/16/18	LZ	
1,1-Dichloropropene	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
1,2,3-Trichlorobenzene	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
1,2,3-Trichloropropane	ND	1	0.073	0.5	ug/L		12/16/18	LZ	
1,2,4-Trichlorobenzene	ND	1	0.068	0.5	ug/L		12/16/18	LZ	
1,2,4-Trimethylbenzene	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
1,2-Dibromo-3-chloropropane	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
1,2-Dibromoethane	ND	1	0.043	0.5	ug/L		12/16/18	LZ	
1,2-Dichlorobenzene	ND	1	0.051	0.5	ug/L		12/16/18	LZ	
1,2-Dichloroethane	ND	1	0.066	0.5	ug/L		12/16/18	LZ	
1,2-Dichloropropane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
1,3,5-Trimethylbenzene	ND	1	0.097	0.5	ug/L		12/16/18	LZ	
1,3-Dichlorobenzene	ND	1	0.052	0.5	ug/L		12/16/18	LZ	
1,3-Dichloropropane	ND	1	0.068	0.5	ug/L		12/16/18	LZ	
1,4-Dichlorobenzene	ND	1	0.12	0.5	ug/L		12/16/18	LZ	
2,2-Dichloropropane	ND	1	0.11	0.5	ug/L		12/16/18	LZ	
2-Butanone (MEK)	ND	1	0.3	5	ug/L		12/16/18	LZ	
2-Chlorotoluene	ND	1	0.079	0.5	ug/L		12/16/18	LZ	
4-Chlorotoluene	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
4-Isopropyltoluene	ND	1	0.091	0.5	ug/L		12/16/18	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	0.16	5	ug/L		12/16/18	LZ	
Acetone	**15**	1	0.2	10	ug/L		12/16/18	LZ	
Allyl Chloride	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
Benzene	ND	1	0.071	0.5	ug/L		12/16/18	LZ	
Bromobenzene	ND	1	0.073	1	ug/L		12/16/18	LZ	
Bromochloromethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Bromodichloromethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Bromoform	ND	1	0.053	0.5	ug/L		12/16/18	LZ	
Bromomethane	ND	1	0.13	1	ug/L		12/16/18	LZ	
Carbon Tetrachloride	ND	1	0.045	0.5	ug/L		12/16/18	LZ	
Chlorobenzene	ND	1	0.075	0.5	ug/L		12/16/18	LZ	
Chlorodibromomethane	ND	1	0.045	0.5	ug/L		12/16/18	LZ	
Chloroethane	ND	1	0.4	0.5	ug/L		12/16/18	LZ	
Chloroform	ND	1	0.044	0.5	ug/L		12/16/18	LZ	
Chloromethane	ND	1	0.055	0.5	ug/L		12/16/18	LZ	
cis-1,2-Dichloroethene	ND	1	0.055	0.5	ug/L		12/16/18	LZ	
cis-1,3-dichloropropene	ND	1	0.061	0.5	ug/L		12/16/18	LZ	
cis-1,4-dichloro-2-butene	ND	1	0.075	5	ug/L		12/16/18	LZ	
Dibromomethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Dichlorodifluoromethane	ND	1	0.062	0.5	ug/L		12/16/18	LZ	
Ethylbenzene	ND	1	0.091	0.5	ug/L		12/16/18	LZ	
Hexachlorobutadiene	ND	1	0.073	1	ug/L		12/16/18	LZ	
Isopropylbenzene	ND	1	0.089	0.5	ug/L		12/16/18	LZ	

Matrix:	Water	**Client:**	Enthalpy - Berkeley	**Collector:**	Client
Sampled:	12/06/2018 15:45	**Site:**			
Sample #:	**410004-003**	**Client Sample #:**	SB-7-GW	**Sample Type:**	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
m and p-Xylene	ND	1	0.17	0.5	ug/L		12/16/18	LZ	
Methylene chloride	**18**	1	0.15	0.5	ug/L		12/16/18	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	0.068	0.5	ug/L		12/16/18	LZ	
Naphthalene	ND	1	0.061	0.5	ug/L		12/16/18	LZ	
N-butylbenzene	ND	1	0.094	0.5	ug/L		12/16/18	LZ	
N-propylbenzene	ND	1	0.09	0.5	ug/L		12/16/18	LZ	
o-Xylene	ND	1	0.075	0.5	ug/L		12/16/18	LZ	
Sec-butylbenzene	ND	1	0.077	0.5	ug/L		12/16/18	LZ	
Styrene	ND	1	0.088	0.5	ug/L		12/16/18	LZ	
Tert-butylbenzene	ND	1	0.092	0.5	ug/L		12/16/18	LZ	
Tetrachloroethene	ND	1	0.15	0.5	ug/L		12/16/18	LZ	
Toluene	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
trans-1,2-dichloroethene	ND	1	0.17	0.5	ug/L		12/16/18	LZ	
trans-1,3-dichloropropene	ND	1	0.056	0.5	ug/L		12/16/18	LZ	
trans-1,4-dichloro-2-butene	ND	1	0.075	5	ug/L		12/16/18	LZ	
Trichloroethene	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
Trichlorofluoromethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Vinyl Chloride	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
Xylenes (Total)	ND	1	0.25	0.5	ug/L		12/16/18	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*97*	*70-145*	
4-Bromofluorobenzene (SUR)	*96*	*70-145*	
Dibromofluoromethane (SUR)	*100*	*70-145*	
Toluene-d8 (SUR)	*102*	*70-145*	

Matrix:	Water	**Client:**	Enthalpy - Berkeley	**Collector:**	Client
Sampled:	12/06/2018 15:30	**Site:**			
Sample #:	**410004-004**	**Client Sample #:**	SB-5-GW	**Sample Type:**	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015B *NELAC*	Prep Method: EPA 5030B						QCBatchID: QC1198776		
TPH Gasoline	ND	1	16	50	ug/L		12/17/18	EW	
Surrogate	*% Recovery*			*Limits*	*Notes*				
4-Bromofluorobenzene (SUR)	*107*			*60-140*					
Method: EPA 8260B *NELAC*	Prep Method: EPA 5030B						QCBatchID: QC1198939		
1,1,1,2-Tetrachloroethane	ND	1	0.122	0.5	ug/L		12/16/18	LZ	
1,1,1-Trichloroethane	ND	1	0.063	0.5	ug/L		12/16/18	LZ	
1,1,2,2-Tetrachloroethane	ND	1	0.063	0.5	ug/L		12/16/18	LZ	
1,1,2-Trichloroethane	ND	1	0.045	0.5	ug/L		12/16/18	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	0.119	0.5	ug/L		12/16/18	LZ	
1,1-Dichloroethane	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
1,1-Dichloroethene	ND	1	0.13	0.5	ug/L		12/16/18	LZ	
1,1-Dichloropropene	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
1,2,3-Trichlorobenzene	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
1,2,3-Trichloropropane	ND	1	0.073	0.5	ug/L		12/16/18	LZ	
1,2,4-Trichlorobenzene	ND	1	0.068	0.5	ug/L		12/16/18	LZ	
1,2,4-Trimethylbenzene	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
1,2-Dibromo-3-chloropropane	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
1,2-Dibromoethane	ND	1	0.043	0.5	ug/L		12/16/18	LZ	
1,2-Dichlorobenzene	ND	1	0.051	0.5	ug/L		12/16/18	LZ	
1,2-Dichloroethane	ND	1	0.066	0.5	ug/L		12/16/18	LZ	
1,2-Dichloropropane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
1,3,5-Trimethylbenzene	ND	1	0.097	0.5	ug/L		12/16/18	LZ	
1,3-Dichlorobenzene	ND	1	0.052	0.5	ug/L		12/16/18	LZ	
1,3-Dichloropropane	ND	1	0.068	0.5	ug/L		12/16/18	LZ	
1,4-Dichlorobenzene	ND	1	0.12	0.5	ug/L		12/16/18	LZ	
2,2-Dichloropropane	ND	1	0.11	0.5	ug/L		12/16/18	LZ	
2-Butanone (MEK)	ND	1	0.3	5	ug/L		12/16/18	LZ	
2-Chlorotoluene	ND	1	0.079	0.5	ug/L		12/16/18	LZ	
4-Chlorotoluene	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
4-Isopropyltoluene	ND	1	0.091	0.5	ug/L		12/16/18	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	0.16	5	ug/L		12/16/18	LZ	
Acetone	**18**	1	0.2	10	ug/L		12/16/18	LZ	
Allyl Chloride	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
Benzene	ND	1	0.071	0.5	ug/L		12/16/18	LZ	
Bromobenzene	ND	1	0.073	1	ug/L		12/16/18	LZ	
Bromochloromethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Bromodichloromethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Bromoform	ND	1	0.053	0.5	ug/L		12/16/18	LZ	
Bromomethane	ND	1	0.13	1	ug/L		12/16/18	LZ	
Carbon Tetrachloride	ND	1	0.045	0.5	ug/L		12/16/18	LZ	
Chlorobenzene	ND	1	0.075	0.5	ug/L		12/16/18	LZ	
Chlorodibromomethane	ND	1	0.045	0.5	ug/L		12/16/18	LZ	
Chloroethane	ND	1	0.4	0.5	ug/L		12/16/18	LZ	
Chloroform	ND	1	0.044	0.5	ug/L		12/16/18	LZ	
Chloromethane	ND	1	0.055	0.5	ug/L		12/16/18	LZ	
cis-1,2-Dichloroethene	ND	1	0.055	0.5	ug/L		12/16/18	LZ	
cis-1,3-dichloropropene	ND	1	0.061	0.5	ug/L		12/16/18	LZ	
cis-1,4-dichloro-2-butene	ND	1	0.075	5	ug/L		12/16/18	LZ	
Dibromomethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Dichlorodifluoromethane	ND	1	0.062	0.5	ug/L		12/16/18	LZ	
Ethylbenzene	ND	1	0.091	0.5	ug/L		12/16/18	LZ	
Hexachlorobutadiene	ND	1	0.073	1	ug/L		12/16/18	LZ	
Isopropylbenzene	ND	1	0.089	0.5	ug/L		12/16/18	LZ	

Matrix:	Water	Client:	Enthalpy - Berkeley	Collector:	Client
Sampled:	12/06/2018 15:30	Site:			
Sample #:	**410004-004**	Client Sample #:	SB-5-GW	Sample Type:	

Analyte	Result	DF	MDL	RDL	Units	Prepared	Analyzed	By	Notes
m and p-Xylene	ND	1	0.17	0.5	ug/L		12/16/18	LZ	
Methylene chloride	**18**	1	0.15	0.5	ug/L		12/16/18	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	0.068	0.5	ug/L		12/16/18	LZ	
Naphthalene	ND	1	0.061	0.5	ug/L		12/16/18	LZ	
N-butylbenzene	ND	1	0.094	0.5	ug/L		12/16/18	LZ	
N-propylbenzene	ND	1	0.09	0.5	ug/L		12/16/18	LZ	
o-Xylene	ND	1	0.075	0.5	ug/L		12/16/18	LZ	
Sec-butylbenzene	ND	1	0.077	0.5	ug/L		12/16/18	LZ	
Styrene	ND	1	0.088	0.5	ug/L		12/16/18	LZ	
Tert-butylbenzene	ND	1	0.092	0.5	ug/L		12/16/18	LZ	
Tetrachloroethene	ND	1	0.15	0.5	ug/L		12/16/18	LZ	
Toluene	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
trans-1,2-dichloroethene	ND	1	0.17	0.5	ug/L		12/16/18	LZ	
trans-1,3-dichloropropene	ND	1	0.056	0.5	ug/L		12/16/18	LZ	
trans-1,4-dichloro-2-butene	ND	1	0.075	5	ug/L		12/16/18	LZ	
Trichloroethene	ND	1	0.078	0.5	ug/L		12/16/18	LZ	
Trichlorofluoromethane	ND	1	0.06	0.5	ug/L		12/16/18	LZ	
Vinyl Chloride	ND	1	0.08	0.5	ug/L		12/16/18	LZ	
Xylenes (Total)	ND	1	0.25	0.5	ug/L		12/16/18	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*99*	*70-145*	
4-Bromofluorobenzene (SUR)	*97*	*70-145*	
Dibromofluoromethane (SUR)	*104*	*70-145*	
Toluene-d8 (SUR)	*101*	*70-145*	

QCBatchID: QC1198776	Analyst: sandyw	Method: EPA 8015B
Matrix: Water	Analyzed: 12/17/2018	Instrument: VOA-GC (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1198776MB1					
TPH (C6 to C10)	ND	ug/L	16	50	
TPH (C6 to C12)	ND	ug/L	16	50	
TPH Gasoline	ND	ug/L	16	50	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1198776LCS1											
TPH Gasoline	500		460		ug/L	92			70-130		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1198776MS1, QC1198776MSD1											**Source:**	**409947-001**
TPH Gasoline	ND	500	500	420	410	ug/L	84	82	2.4	70-130	30	

QCBatchID: QC1198939	Analyst: lucy	Method: EPA 8260B
Matrix: Water	Analyzed: 12/16/2018	Instrument: VOA-MS (group)

Blank Summary

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1198939MB1					
1,1,1,2-Tetrachloroethane	ND	ug/L	0.25	5	
1,1,1-Trichloroethane	ND	ug/L	0.38	5	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.25	5	
1,1,2-Trichloroethane	ND	ug/L	0.25	5	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	0.29	5	
1,1-Dichloroethane	ND	ug/L	0.32	5	
1,1-Dichloroethene	ND	ug/L	0.3	5	
1,1-Dichloropropene	ND	ug/L	0.25	5	
1,2,3-Trichlorobenzene	ND	ug/L	0.28	5	
1,2,3-Trichloropropane	ND	ug/L	0.16	5	
1,2,4-Trichlorobenzene	ND	ug/L	0.27	5	
1,2,4-Trimethylbenzene	ND	ug/L	0.28	5	
1,2-Dibromo-3-chloropropane	ND	ug/L	0.12	5	
1,2-Dibromoethane	ND	ug/L	0.19	5	
1,2-Dichlorobenzene	ND	ug/L	0.26	5	
1,2-Dichloroethane	ND	ug/L	0.2	5	
1,2-Dichloropropane	ND	ug/L	0.36	5	
1,3,5-Trimethylbenzene	ND	ug/L	0.24	5	
1,3-Dichlorobenzene	ND	ug/L	0.34	5	
1,3-Dichloropropane	ND	ug/L	0.19	5	
1,4-Dichlorobenzene	ND	ug/L	0.43	5	
2,2-Dichloropropane	ND	ug/L	0.32	5	
2-Butanone (MEK)	ND	ug/L	0.78	100	
2-Chlorotoluene	ND	ug/L	0.33	5	
4-Chlorotoluene	ND	ug/L	0.31	5	
4-Isopropyltoluene	ND	ug/L	0.32	5	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	0.12	5	
Acetone	ND	ug/L	50	100	
Allyl Chloride	ND	ug/L	0.19	5	
Benzene	ND	ug/L	0.18	1	
Bromobenzene	ND	ug/L	0.53	5	
Bromochloromethane	ND	ug/L	0.17	5	
Bromodichloromethane	ND	ug/L	0.31	5	
Bromoform	ND	ug/L	0.13	5	
Bromomethane	ND	ug/L	0.68	5	
Carbon Tetrachloride	ND	ug/L	0.27	5	
Chlorobenzene	ND	ug/L	0.19	5	
Chlorodibromomethane	ND	ug/L	0.21	5	
Chloroethane	ND	ug/L	0.45	5	
Chloroform	ND	ug/L	0.18	5	
Chloromethane	ND	ug/L	0.27	5	
cis-1,2-Dichloroethene	ND	ug/L	0.27	5	
cis-1,3-dichloropropene	ND	ug/L	0.25	5	
cis-1,4-dichloro-2-butene	ND	ug/L	0.17	5	
Dibromomethane	ND	ug/L	0.23	5	
Dichlorodifluoromethane	ND	ug/L	0.33	5	
Di-isopropyl ether (DIPE)	ND	ug/L	0.17	1	
Ethylbenzene	ND	ug/L	0.21	5	
Ethyl-tertbutylether (ETBE)	ND	ug/L	0.23	1	
Hexachlorobutadiene	ND	ug/L	0.51	5	
Isopropylbenzene	ND	ug/L	0.24	5	
m and p-Xylene	ND	ug/L	0.45	5	

QCBatchID: QC1198939	Analyst: lucy	Method: EPA 8260B
Matrix: Water	Analyzed: 12/16/2018	Instrument: VOA-MS (group)

Analyte	Blank Result	Units	MDL	RDL	Notes
QC1198939MB1					
Methylene chloride	ND	ug/L	0.16	5	
Methyl-t-butyl Ether (MTBE)	ND	ug/L	0.19	1	
Naphthalene	ND	ug/L	0.25	5	
N-butylbenzene	ND	ug/L	0.25	5	
N-propylbenzene	ND	ug/L	0.31	5	
o-Xylene	ND	ug/L	0.29	5	
Sec-butylbenzene	ND	ug/L	0.32	5	
Styrene	ND	ug/L	0.22	5	
t-Butyl alcohol (TBA)	ND	ug/L	5.2	10	
Tert-amylmethylether (TAME)	ND	ug/L	0.19	5	
Tert-butylbenzene	ND	ug/L	0.4	5	
Tetrachloroethene	ND	ug/L	0.8	5	
Toluene	ND	ug/L	0.24	5	
trans-1,2-dichloroethene	ND	ug/L	0.33	5	
trans-1,3-dichloropropene	ND	ug/L	0.23	5	
trans-1,4-dichloro-2-butene	ND	ug/L	0.17	5	
Trichloroethene	ND	ug/L	0.39	5	
Trichlorofluoromethane	ND	ug/L	0.25	5	
Vinyl Chloride	ND	ug/L	0.18	5	
Xylenes (Total)	ND	ug/L	0.45	5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1198939LCS1											
1,1-Dichloroethene	50		55		ug/L	110			59-172		
Benzene	50		48		ug/L	96			62-137		
Chlorobenzene	50		52		ug/L	104			60-133		
Methyl-t-butyl Ether (MTBE)	50		41		ug/L	82			62-137		
Toluene	50		54		ug/L	108			59-139		
Trichloroethene	50		52		ug/L	104			66-142		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1198939MS1, QC1198939MSD1										**Source:**	**409947-001**	
1,1-Dichloroethene	ND	50	50	51	50	ug/L	102	100	2.0	59-172	22	
Benzene	ND	50	50	47	46	ug/L	94	92	2.2	62-137	24	
Chlorobenzene	ND	50	50	49	49	ug/L	98	98	0.0	60-133	24	
Methyl-t-butyl Ether (MTBE)	1.9	50	50	40	42	ug/L	76	80	4.9	62-137	21	
Toluene	ND	50	50	51	51	ug/L	102	102	0.0	59-139	21	
Trichloroethene	ND	50	50	50	49	ug/L	100	98	2.0	66-142	21	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

Enthalpy Berkeley

2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900
(510) 486-0532

410004

Project Number: 305638
Site: SupplyBank

Subcontract Laboratory:
Enthalpy Analytical (Orange)
931 W Barkley Avenue
Orange, CA 92868
(714) 771-9923
ATTN: Lisa Nguyen

Results due: Report Level: II

Please send report to: Tracy Babjar (tracy.babjar@enthalpy.com)
*** Please report using Sample ID rather than Enthalpy (Berkeley) Lab #.

Sample ID	Sampled	Matrix	Analysis	Lab #	Comments
SB-2-GW	12/06 15:05	Water	8260-SUB	305638-001	5
SB-2-GW	12/06 15:05	Water	TVH-SUB 8015PPH	305638-001	
SB-4-GW	12/06 16:05	Water	8260-SUB	305638-002	5
SB-4-GW	12/06 16:05	Water	TVH-SUB	305638-002	
SB-7-GW	12/06 15:45	Water	8260-SUB	305638-003	5
SB-7-GW	12/06 15:45	Water	TVH-SUB	305638-003	
SB-5-GW	12/06 15:30	Water	8260-SUB	305638-004	5
SB-5-GW	12/06 15:30	Water	TVH-SUB	305638-004	

Hold
not Thurs

Notes:	Relinquished By:	Received By:
	[signature]	[signature]
	Date/Time: 12/14/18 14:35	Date/Time: 12/15/18 1047
	Date/Time:	Date/Time:

Signature on this form constitutes a firm Purchase Order for the services requested above.

Page 1 of 1

-002
1/5 HS

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: EA - Berkeley — Project: 305638

Date Received: 12/15/18 — Sampler's Name Present: ☐ Yes ☒ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) — Sample Temp (°C) (No Cooler): ____

Sample Temp (°C), One from each cooler: #1: 1.0 #2: ____ #3: ____ #4: ____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: ____

Section 3

Was the cooler packed with: ☑ Ice ☑ Ice Packs ☑ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other ____

Cooler Temp (°C): #1: 0.9 #2: ____ #3: ____ #4: ____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?	✓		
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Headspace: SB-4-GW (1/5)

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: ____ Date/Time ____

☒ Email (email sent to/on): LN / 12/15/18

Project Manager's response:

Completed By: [signature] Date: 12/15/18

Enthalpy Analytical, a subsidiary of Montrose Environmental Group ,Inc.
931 W. Barkley Ave, Orange, CA 92868 • T: (714) 771-6900 • F: (714) 538-1209
www.enthalpy.com/socal
Sample Acceptance Checklist – Rev 4, 8/8/2017

GSO | GLS www.gso.com

Ship From
ENTHALPY ANALYTICAL, LLC
PROJECT MANAGEMENT
2323 FIFTH STREET
BERKELEY, CA 94710

Tracking #: 543135321

SDS

Ship To
ENTHALPY ANALYTICAL
METALS DEPARTMENT
931 W. BARKLEY
ORANGE, CA 92868

ORC C

ORANGE

COD: $0.00
Weight: 0 lb(s)
Reference:

Delivery Instructions:

Signature Type: STANDARD

S92868A

95341555

Print Date: 12/14/2018 3:29 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the GSO service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gso.com.

1 + IP

0.9/1.0

Appendix P

SupplyBank Oakport Project - Transportation Impact Review

Fehr & Peers, April 28, 2023

FEHR & PEERS

Draft Memorandum

Date: April 28, 2023

To: Scott Gregory, Lamphier-Gregory

From: Sam Tabibnia and Molly Riddle, Fehr & Peers

Subject: SupplyBank.org at Oakport Project – Transportation Impact Review

OK22-0477

This memorandum summarizes the transportation assessment that Fehr & Peers completed for the proposed SupplyBank.org at Oakport Project in Oakland. The information provided in this memorandum is based on the City of Oakland's *Transportation Impact Review Guidelines* (TIRG) published in April 2017. Sections in this memorandum include:

1. Project Description

The Project site is located on a mostly vacant lot on the west side of Oakport Street, just north of Zhone Way (66th Avenue) and south of Peppermint Gate Access Road, in the City of Oakland. The Project would consist of a 10,000 square-foot workshop (Building 1), which this analysis assumes to be light industrial uses, a 123,000 square-foot warehouse (Building 2), and a five-story, 160,000 square-foot office building (Building 3). The Project would provide 331 surface parking spaces (including nine accessible spaces), 12 larger truck parking spaces, and 13 truck loading bays for the warehouse.

Automobile and truck access to the Project site would be provided via four driveways on Oakport Street. The two south driveways would primarily be used by passenger vehicles to access the south parking lot, which would provide 217 parking spaces and the adjacent office and warehouse facilities. The two north driveways would be used by both passenger vehicles and trucks to access the north parking lot, which would provide 114 passenger vehicle parking spaces and 12 truck parking spaces, and serve the adjacent workshop, warehouse, including 13 loading bays, and storage facilities.

An area adjacent to the north end of the Project would continue to be used by the East Bay Municipal Utility District (EBMUD) for storage of construction material with access to the Project site through the northwest corner of the Project.

2. Trip Generation

The Project trip generation is discussed below.

Automobile Trip Generation

Trip generation is the process of estimating the number of vehicles that would likely access the Project on any given weekday. **Table 1** summarizes the trip generation for the Project. Trip generation data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual (11th Edition)* was used as a starting point to estimate the vehicle trip generation.

ITE's *Trip Generation Manual (11th Edition)* is primarily based on data collected at single-use suburban sites where the automobile is often the only travel mode. Although the Project site is not located in a dense, mixed-use environment, it is about one mile from the Coliseum BART Station. This analysis therefore reduces the ITE-based trip generation by about 16 percent to account for non-automobile trips. This adjustment is consistent with the City of Oakland's TIRG and is based on US Census commute data for Alameda County from the 2014 5-Year Estimates of the American Community Survey (ACS), which shows that the non-automobile mode share is about 16 percent for areas located more than one mile from a BART station that have a population density of fewer than 6,000 people per square mile.

Table 1: Project Automobile Trip Generation

Land Use	ITE Code	Size[1] (KSF)	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				In	Out	Total	In	Out	Total
Office[2]	710	160	1,750	221	30	251	42	203	245
Warehousing[3]	150	123	230	29	9	38	11	30	41
Workshop[4]	110	10	90	10	1	11	1	7	8
ITE Trip Generation Subtotal			2,070	260	40	300	54	240	294
Non-Auto Adjustment[5]			*-320*	*-40*	*-7*	*-47*	*-8*	*-38*	*-46*
Net New Automobile Trips			**1,750**	**220**	**33**	**253**	**46**	**202**	**248**

Notes:
1. KSF = 1,000 square feet.
2. ITE *Trip Generation (11th Edition)* land use category 710 (General Office Building, General Urban/Suburban):
   Daily: Ln(T) = 0.87 * Ln(X) + 3.05
   AM Peak Hour: Ln(T) = 0.86 * Ln(X) + 1.16 (88% in, 12% out)
   PM Peak Hour: Ln(T) = 0.83 * Ln(X) + 1.29 (17% in, 83% out)
3. *ITE Trip Generation (11th Edition)* land use category 150 (Warehousing, General Urban/Suburban):
   Daily: T = 1.58 * X + 38.29
   AM Peak Hour: T = 0.12 * X + 23.62 (77% in, 23% out)
   PM Peak Hour: T = 0.12 * X + 26.48 (28% in, 72% out)
4. *ITE Trip Generation (11th Edition)* land use category 110 (General Light Industrial, General Urban/Suburban):
   Daily: T= 3.76 * X + 50.47
   AM Peak Hour: Ln(T) = 0.68 * Ln(X) + 3.81 (88% in, 12% out)
   PM Peak Hour: Ln(T) = 0.72 * Ln(X) + 0.38 (14% in, 86% out)
5. Reduction of 15.6% assumed, based on City of Oakland *TIRG*, using Census data for suburban environments with less than 6,000 people per square mile and more than one mile from a BART station.

Source: Fehr & Peers, 2023.

Non-Automobile Trip Generation

Consistent with the City of Oakland TIRG, **Table 2** presents the estimates of Project trip generation for all travel modes for the Project.

Table 2: Project Trip Generation by Travel Mode

Mode	Mode Share Adjustment Factors[1]	Daily	AM Peak Hour	PM Peak Hour
Automobile	0.844	1,750	253	248
Transit	0.113	230	34	33
Bike	0.009	20	3	3
Walk	0.026	50	8	8
	Total Trips	**2,050**	**298**	**292**

Notes:
1. Based on *City of Oakland TIRG*, assuming Project site is in a suburban environment located more than one mile from a BART station with fewer than 6,000 people per square mile.

Source: Fehr & Peers, 2023.

3. Vehicle Miles Traveled (VMT) Assessment

On September 21, 2016, the City of Oakland's Planning Commission directed staff to update the City of Oakland's California Environmental Quality Act (CEQA) Thresholds of Significance Guidelines related to transportation impacts in order to implement the directive from Senate Bill 743 (Steinberg 2013) to modify local environmental review processes by removing automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, as a significant impact on the environment pursuant to CEQA. The Planning Commission direction aligns with draft proposed guidance from the Governor's Office of Planning and Research and the City's approach to transportation impact analysis, with adopted plans and polices related to transportation, which promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. Consistent with the Planning Commission direction and the Senate Bill 743 requirements, the City of Oakland published the revised TIRG on April 14, 2017 to guide the evaluation of the transportation impacts associated with land use development projects.

Many factors affect travel behavior, including density of development, diversity of land uses, design of the transportation network, access to regional destinations, distance to high-quality transit, development scale, demographics, and transportation demand management. Typically, low-density development that is located at a great distance from other land uses, in areas with poor access to non-single occupancy vehicle travel modes generate more vehicle travel compared to development located in urban areas, where a higher density of development, a mix of land uses, and non-single occupancy vehicle travel options are available.

Given these travel behavior factors, most of Oakland has lower VMT per capita and VMT per worker ratios than the nine-county San Francisco Bay Area region. Further, within the City of Oakland, some neighborhoods may have lower VMT ratios than others.

VMT Estimate

This analysis uses the latest version of the Alameda County Transportation Commission (CTC) Travel Demand Model which was released in May 2019 and is consistent with the Metropolitan Transportation Commission Plan Bay Area 2040 (i.e., Sustainable Communities Strategy) transportation network and land uses for 2020 and 2040. The model produces forecasts that are generally consistent with the travel demand forecasts that the MTC has produced for Plan Bay Area 2040 for the Plan horizon year of 2040 and meets the regional model consistency requirements.

Neighborhoods within Oakland are expressed geographically in transportation analysis zones, or TAZs, which are used in transportation planning models for transportation analysis and other planning purposes. The Alameda CTC Travel Demand Model includes 369 TAZs within Oakland that vary in size from a few city blocks in the downtown core, to multiple blocks in outer neighborhoods, to even larger geographic areas in lower-density neighborhoods. Based on the transportation network and land use inputs, such as population and employment characteristics by TAZ, the Model predicts trip generation by TAZ and assigns all predicted trips within, across, or to/from the county onto the roadway network and the transit system by mode (single-driver and carpool vehicle, biking, walking, or transit) and transit carrier (bus, rail) for a particular scenario.

The Alameda CTC Model outputs the home-work (i.e., commute) VMT per worker, which measures all of the worker commute VMT by a motor vehicle on a typical weekday between homes and workplaces. Based on the Alameda CTC Travel Demand Model, the regional average daily VMT per worker is 18.1 under 2020 conditions and 18.2 under 2040 conditions.

Thresholds of Significance for VMT

According to the City of Oakland TIRG, the following threshold of significance related to substantial additional VMT is applicable to the Project:

- For office projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per worker minus 15-percent

Screening Criteria

VMT impacts would be less than significant for a project if any of the identified screening criteria outlined below are met:

1. Small Projects: The project generates fewer than 100 vehicle trips per day
2. Low-VMT Areas: The project meets map-based screening criteria by being located in an area that exhibits below-threshold VMT, or 15 percent or more below the regional average
3. Near Transit Stations: The project is located in a Transit Priority Area[1] or within a one-half

[1] According to the California Public Resource Code, a Transit Priority Area is defined as a one-half mile area around an existing major transit stop or an existing stop along a high-quality transit corridor. Public Resources Code, § 21064.3 defines major transit stop as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of 15 minutes or less during the morning and afternoon peak commute periods. Public Resources Code, § 21155 defines a high-quality transit corridor as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

mile of a Major Transit Corridor or Stop[2] and satisfies the following:

- Has a Floor Area Ratio (FAR) of more than 0.75,
- includes less parking for use by residents, customers, or employees of the project than other typical nearby uses, or less than or less than required by the City (if parking minimums pertain to the site) or allowed without a conditional use permit (if minimums and/or maximums pertain to the site),
- and is consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the MTC).

VMT Screening Analysis

The Project satisfies screening Criterion #2, as described below.

Criterion #1: Small Projects

As shown in Table 1, the Project would generate more than 100 vehicle trips per day and therefore does not meet Criterion #1.

Criterion #2: Low-VMT Area

Table 3 shows the estimated 2020 and 2040 VMT per worker for TAZ 1403, the TAZ in the Alameda CTC Model in which the Project is located, as well as the applicable VMT thresholds of 15 percent below the regional average. According to the TIRG, the warehouse and industrial components of the Project should be screened by comparing the VMT per worker in the TAZ to the regional average minus 15 percent due to their classification as production, distribution, and repair (PDR) uses. As shown in Table 3, the 2020 and 2040 estimated average daily VMT per worker in the Project TAZ is less than the regional averages minus 15 percent. The Project would therefore meet Criterion #2.

Criterion #3: Near Transit Stations

The Project is about one mile from the Coliseum BART Station. The nearest bus stop to the Project site is on 66th Avenue at Coliseum Way, about 0.4 mile east of the Project site. The bus stop is served by AC Transit Line 98, which operates with 20-minute headways during weekday peak commute periods. Thus, the Project is not located in a Transit Priority Area and is not within a one-half mile of a Major Transit Corridor or Stop. Therefore, it would not satisfy Criterion #3.

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[2] "Major transit stop" is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

Table 3: Project Daily Vehicle Miles Traveled Summary

Geographic Area	Home-Work VMT per Worker (2020)	Home-Work VMT per Worker (2040)
Proposed Project (Alameda CTC Model TAZ 1403)	14.0	14.6
Bay Area Region Average	18.1	18.2
Bay Area Region Average minus 15% (i.e., threshold of significance)	15.4	15.5
Significant Impact?	**No**	**No**

Notes:

1. Alameda CTC Travel Demand Model results at https://www.alamedactc.org/planning/sb743-vmt/ and accessed in July 2022.

Source: Fehr & Peers, 2023.

VMT Screening Conclusion

The Project satisfies the City of Oakland's VMT screening Criterion #2 and is therefore determined to have a less-than-significant impact on VMT.

4. Site Access and Circulation Analysis

An evaluation of access and circulation for all travel modes, based on the site plan, dated April 3, 2019 and provided in **Appendix A**, is summarized below.

Automobile Access and Circulation

All automobile access to the Project would be on Oakport Street, a two-lane roadway with no median, a gravel shoulder, no sidewalks, and a posted speed limit of 40 miles per hour (mph). Parking and stopping are currently prohibited on both sides of Oakport Street with concrete barriers along southbound Oakport Street to physically prohibit parking or stopping along the street.

Based on the Project site plan, the Project proposes to reconfigure Oakport Street to provide one 13-foot automobile lane and one five-foot Class 2 bicycle lane in each direction, and a five-foot sidewalk on the west side of the street.

Access to the Project site would be provided via four driveways; for the purpose of this discussion these are labeled A through D from north to south. The driveways would be 30-feet (Driveway A), 45-feet (Driveway B), 30-feet (Driveway C), and 26-feet wide (Driveway D). The Project proposes to provide a 220-foot long right-turn pocket on southbound Oakport Street at Driveway B. Each driveway would provide one inbound and one outbound lane with all movements allowed at the driveway. All four driveways would provide adequate sight distance between exiting motorists and pedestrians on the adjacent sidewalk on each side of the driveway.[3]

City of Oakland Municipal Code Section 12.04.270 requires driveways to be between 12 and 35 feet wide. Driveway B would be 45 feet wide, exceeding the maximum driveway width. This driveway would primarily be used for truck access. If the width of this driveway is reduced to 35 feet, larger trucks, such as a WB-67, turning into the driveway may not be able to use the driveway if another large truck is waiting at the driveway to exit. Reducing the driveway width to 40 feet would allow large trucks to simultaneously turn in to and out of the driveway. The City of Oakland Municipal Code Section 12.04.290 allows for an appeal to the Driveway Appeals Board to implement driveway widths not consistent with City Code requirements.

All four driveways would be controlled by an access gate and an adjacent guard shack. Driveway A (the northmost driveway) can accommodate a queue of about 80 feet at the access gate before queues spill back onto Oakport Street, and Driveways B through D can accommodate a queue of about 40 feet, which corresponds to about one or two vehicles, before queues spill back onto Oakport Street. The queuing space for Driveways C and D which provide access for the Project main parking lot may not be adequate to accommodate the passenger vehicles entering the site during the morning peak commute period.

> **Recommendation 1:** While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:
>
> - Implement one of the following at Driveway B (the second driveway from the north) to be consistent with the City of Oakland Municipal Code Section 12.04.270:
>   - Reduce the width of the driveway opening to 35 feet.
>   - If a high volume of large trucks, such as WB-67, is expected, then coordinate with the City of Oakland Driveway Appeals Board to provide a wider driveway.
> - Implement one of the following at Driveways C and/or D (the two south driveways) to reduce the potential for queues at Project access gates spilling back onto Oakport Street:

[3] Adequate sight distance is defined as a clear line-of-sight between a motorist ten feet back from the sidewalk and a pedestrian 10 feet away on each side of the driveway.

- Redesign the Project to provide at least 75 feet of queuing space for at least one of the driveways.
- Keep the access gates at the two driveways open during normal business hours.

Driveways A and B would provide access to the north parking lot and adjacent workshop, warehouse, and EBMUD storage facilities. The north lot would provide 114 passenger vehicle parking spaces, 12 truck parking spaces, and access to 13 loading bays. Drive aisles in this lot range from 30-feet to 60-feet wide. Driveways C and D would provide access to the south parking lot and adjacent office and warehouse facilities. The south lot would provide 217 parking spaces primarily limited to passenger vehicles. This lot would also provide access to a 20-foot wide fire access lane wrapping around the south and west sides of the office building. Drive aisles in this south lot range from 26-feet to 30-feet wide. Per *City of Oakland Municipal Code* Section 17.116.210, the dimensions of parking spaces and drive aisles meet requirements.

Stopping Sight Distance

This analysis uses stopping sight distance (SSD) as defined by Caltrans' *Highway Design Manual, Seventh Edition (*HDM, 2020*)* to determine if the Project driveways provide adequate sight distance between vehicles turning into and out of the Project driveways and through traffic on Oakport Street. SSD is defined as the distance required by the driver of a vehicle, traveling at a given speed, to bring the vehicle to a stop after an object on the road becomes visible and in advance of reaching the object. Currently, the posted speed limit on Oakport Street is 40 mph. Per *Caltrans Highway Design Manual* Table 201.1, the minimum SSD for 40 mph is 300 feet.

The SSD for each driveway is shown in **Appendix B** based on the Project site plan dated April 3, 2019, and is discussed below:

- Driveway A would exceed the minimum required SSD in both directions of Oakport Street.
- Driveway B would exceed the minimum required SSD for northbound Oakport Street but may not meet the minimum required SSD for southbound Oakport Street because vehicles in the proposed right-turn lane and potential landscaping may block sight lines between vehicles in the driveway and vehicles on southbound Oakport Street.
- Driveway C would exceed the minimum required SSD in both directions of Oakport Street.
- Driveway D would exceed the minimum required SSD for southbound Oakport Street but the existing curve on Oakport Street may limit the sight lines between vehicles turning

left out of Driveway D and through vehicles on northbound Oakport Street as well as between vehicles waiting to turn left from northbound Oakport Street into Driveway D and through vehicles on northbound Oakport Street.

Recommendation 2: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Eliminate the proposed right-turn-lane on southbound Oakport Steet at the approach to Driveway B (second driveway from the north).
- Limit the outbound movement at Driveway D (southmost driveway) to right-turns only.
- Provide a left-turn lane on northbound Oakport Street at the approach to Driveway D (southmost driveway). If a left-turn lane cannot be accommodated, prohibit left-turns into the driveway and physically limit the driveway to right-turns in and out only.

Automobile Parking

This section addresses the automobile parking required by the City of Oakland, the estimated parking demand for the Project, and changes to on-street parking.

Automobile Parking Requirements

The *City of Oakland Planning Code Sections* 17.116.080 and 17.116.090 establish minimum and maximum parking requirements for commercial and industrial activities, respectively, as shown in **Table 4**. No minimum parking requirements apply to the Project based on its zoning as Coliseum District 6 (D-CO-6). Maximum parking requirements apply only to the office land use, as described below. Table 4 summarizes the off-street automobile parking requirements for the Project. The Project is required to provide between 0 and 363 parking spaces. The Project would include 331 off-street parking spaces, which meets the City *Code* requirement.

New parking facilities with 300 to 350 parking spaces are required to provide at least eight ADA accessible parking spaces with one van-accessible space for every six accessible parking spaces. The Project would provide nine accessible parking spaces consisting of the following:

- Seven accessible parking spaces, including one van accessible space, in the south parking lot along the northeast corner of the office building

- Two accessible parking spaces, including one van accessible space, on the north side of the warehouse parking lot

Thus, the Project would meet the minimum requirement for accessible and van accessible parking spaces.

Table 4: Automobile Parking Requirements

Land Use	Size[1] (KSF)	Required Parking Rates		Required Parking Spaces	
		Min	Max	Min	Max
Office[2]	160	No minimum	Ground Floor: 1 per 300 SF, Above Ground Floor: 1 per 500 SF	n/a	363
Warehouse[3]	123	No minimum	No spaces required	n/a	0
Workshop[3]	10	No minimum	No spaces required	n/a	0
			Total Parking Required	*0 to 363*	
			Total Parking Supplied	*331*	
			Meets *Code* Requirements?	**Yes**	

Notes:
1. KSF = 1,000 square-feet.
2. Office Land Use: Per Oakland Municipal Code Section 17.116.080 – Off-Street Parking – Commercial Activities, Zone: Coliseum District 6 (D-CO-6).
3. Industrial Land Uses: Parking: Per Oakland Municipal Code Section 17.116.090 – Off-Street Parking – Industrial Activities, Zone: Coliseum District 6 (D-CO-6).

Source: Fehr & Peers, 2023.

Plug-In Electric Vehicle (PEV) Charging Infrastructure

Chapter 15.04 of the *Oakland Municipal Code* requires the Project to provide PEV-ready and PEV-capable parking spaces. Per *Code* Section 15.04.2.11.130, a minimum of ten percent of the parking spaces are required to be PEV-ready and an additional 10 percent of the spaces are required to be PEV-capable. Since the Project would provide 331 parking spaces, it is required to provide a minimum of 33 PEV-ready and 33 PEV-capable parking spaces. The Project site plan does not identify any parking spaces as PEV-ready or PEV-capable.

> **Recommendation 3:** While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:
>
> - Ensure that the Project provides a minimum of 33 PEV-ready and an additional 33 PEV-capable parking spaces.

Estimated Parking Demand

Table 5 summarizes the estimated parking demand for the Project based on parking data published by ITE in the *Parking Generation Manual (5th Edition)*. Similar to the trip generation estimate presented earlier in this memorandum, the ITE-based parking demand estimate is also reduced by about 16 percent to account for non-automobile trips. The Project is estimated to have parking demand of 369 vehicles, which would exceed the 331 spaces provided on site. Since the parking supply proposed by the Project is about 10 percent less than the estimated demand, the Project would not provide excessive parking supply that would encourage employees and visitors to not drive to and from the site. Thus, the parking supply proposed by the Project is consistent with the Transportation Demand Management (TDM) Plan that the Project is required to develop and implement, to reduce the vehicular trips and parking generated by the Project by at least 20 percent.

Table 5: Estimated Parking Demand

Land Use	ITE Code	Size[1] (KSF)	Weekday Parking Demand	
			Rate (Spaces per KSF)	Demand (Spaces)
Office[2]	710	160	2.39	382
Warehousing[2]	150	123	0.39	48
Workshop[2]	110	10	0.65	7
			Subtotal Parking Demand	*437*
			Non-Auto Reduction (15.6%)[3]	*-68*
			Total Parking Demand	369
			Parking Supply	331
			Does Parking Supply Meet or Exceed Demand?	**No**

Notes

1. KSF = 1,000 square feet.
2. Average Rates, Peak Period Parking Demand per 1,000 square feet Gross Floor Area:
   Office – General Office Building (land use category 710) Weekday (Monday-Friday), General Urban/Suburban, 9:00 AM-3:00 PM
   Industrial – Warehousing (150), Weekday (Monday-Friday), General Urban/Suburban, 11:00 AM-4:00 PM.
   Industrial – General Light Industrial (110), Weekday (Monday-Friday), General Urban/Suburban, 9:00 AM-4:00 PM.
3. Non-automobile trip reduction: Based on City of Oakland TIRG, assuming Project site is in a suburban environment located more than one mile from a BART station with fewer than 6,000 people per square mile.

Sources: ITE Parking Generation Manual, 5th Edition, 2019; Fehr & Peers, 2023.

On-Street Parking

Currently, no on-street parking is provided on either side of Oakport Street. The Project does not propose to provide on-street parking on either side of Oakport Street. No other on-street or public off-street parking is provided within walking distance (about 0.25 mile) of the Project site. Thus, Project employees and visitors who cannot park on-site would not be able to use on-street parking.

Passenger Vehicle Loading and Unloading

It is expected that some employees and visitors that travel to and from the Project site would be dropped off and/or picked-up, including via rideshare. If the Project driveways are controlled by access gates, these vehicles may not be able to enter the Project parking lot and Oakport Street adjacent to the Project does not provide a shoulder or parking lane to accommodate drop offs and pick-ups.

> **Recommendation 4:** While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Implement one of the following to accommodate passenger drop offs and pick-ups:
  - Provide a pull-out space on the west side of Oakport Street along the Project frontage to accommodate passenger loading and unloading.
  - Allow non-employee vehicles, such as rideshare vehicles, to enter the Project site to drop off and/or pick-up passengers.

Loading Requirements and Truck Access

The *City of Oakland Planning Code* Sections 117.116.140 and 117.116.150 establish minimum requirements for off-street loading berths for office and industrial activities, respectively. The *City of Oakland Planning Code* Section 17.116.220 establishes required dimensions for loading berths. Commercial (office) berths are required to be at least 33 feet long, 12 feet wide, and 14 feet high. Industrial loading berths are required to be at least 45 feet long, 12 feet wide, and 14 feet high. No specific drive aisle dimensions for loading areas are provided, rather, the *Code* states they are required to allow efficient utilization of all required loading berths by motor vehicles of the types typically employed by the activities served. **Table 6** summarizes these off-street loading requirements.

The Project would provide a total of 13 loading berths, five docks on the north side of the warehouse building and eight docks on the west side of the building. Both loading areas would accommodate trucks as long as 60 feet long and over 12-feet wide. The proposed number and dimensions of the loading berths, as well as their location within a single lot, would meet *Code* requirements.

Table 6: Loading Berth Requirements

Land Use	Size (KSF)[1]	Minimum Required Loading Berths	Loading Berths Required
Office[2]	160	3 berths per 160 KSF or more	3
Industrial Activity[3]	133	2 berths required per 50-99 KSF, plus an additional berth per each additional 150 KSF	3
		Total Loading Berths Required	6
		Total Loading Berths Supplied	13
		Meets *Code* Requirements?	**Yes**[4]

Notes
1. KSF = 1,000 square feet.
2. Per Oakland Planning Code Section 17.116.140 – Off-Street Loading – Commercial Activities, Business, Communication and Media Service with greater than 160,000 square feet of floor area.
3. Per Oakland Planning Code Section 17.116.150 – Off-Street Loading – Industrial Activities for 50,000—99,999 square feet of floor area and for each additional 150,000 square feet or fraction of one-half or more thereof.
4. Although all the loading berths are located in the warehouse building and no loading berths are provided for the office building, the total loading berths meet Code requirements because the buildings are located on the same lot, Per Oakland Planning Code Section 17.116.170.

Source: Fehr & Peers, 2023.

Truck Parking and Circulation

The Project would also provide 12 trailer parking spaces on the west end of the north parking lot. The trailer parking spaces would be 12-feet wide by 50-feet long. Drive aisles within this area of the parking lot would be 60-feet wide perpendicular to the trailer parking spaces and 30-feet to 45-feet wide on the north and east ends of the lot. An unobstructed maneuvering area at least 60-feet wide is available perpendicular to both contiguous loading berths.

Trucks would enter the Project site via Driveway B and drive to the west side of the north parking lot. Trucks accessing the loading berths on the north side of the warehouse (Building 2) would turn right into the 60-foot wide drive aisle and then back into the loading berths. To exit, trucks would turn right into the adjacent drive aisle and exit the site via Driveway B. Trucks accessing the loading berths on the west side of the warehouse (Building 2) would drive to the westmost drive aisle in the north parking lot, turn right into that drive aisle, reverse south along the building and back into the loading berths. To exit, the trucks would turn right out of the berths, follow the drive aisle along the north side of the building and exit via Driveway B.

Bicycle Access and Bicycle Parking

The only existing bicycle facility within the vicinity of the Project is a Class 1 shared-use path along the Oakland Estuary, accessible via a curb cut and a boardwalk on the west side of the Oakport Street/Zhone Way intersection. This facility is part of the San Francisco Bay Trail. There are no Bay Wheels bike-share stations in the vicinity of the Project.

The City's *Oakland Bike Plan (Let's Bike Oakland,* 2019*)*[4] proposes the following facilities in the vicinity of the Project:

- Class 2 separated bicycle path along Zhone Way/66th Avenue, between Oakport Street and San Leandro Street. However, the City of Oakland's *66th Avenue BART to Bay Trail One Bay Area Grant (OBAG) Project* proposes a Class 1 separated multi-use path for this corridor. The concept plan is included as **Appendix C** to this memorandum.[5]
- Class 2 bicycle path along Tidewater Avenue, between High Street and the San Francisco Bay Trail, 0.3 miles north of the Project.
- Class 2 bicycle path connecting the segment of the San Francisco Bay Trail south of Lions Creek to an existing Class 2 bicycle lane on Edgewater Drive, 0.2 miles south of the Project.

The City of Oakland's concept plan for the *66th Avenue BART to Bay Trail OBAG Project* includes the following improvements at the Oakport Street/Zhone Way intersection:

- A new multi-use path crossing treatment across the south approach of the intersection, including a curb ramp on the east side.
- A new Class 1 multi-use path along the south side of Zhone Way/66th Avenue.
- Upgrades to the existing signal at the intersection including a dedicated phase for the multi-use path users.
- A raised eight-foot wide median on Zhone Way/66th Avenue between Oakport Street and the I-880 Southbound off-ramp.
- Changes to roadway geometry and striping to maintain the current number of vehicle travel lanes and provide stop bars on the intersection approaches.

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[4] The proposed bicycle facilities for Zhone Way/66th Avenue and Tidewater Avenue were also included in the City of Oakland's *Coliseum Area Specific Plan* (2015).
[5] See https://www.oaklandca.gov/projects/66th-ave for additional information.

The Project proposes to provide a pedestrian connection from the west side of the office building at the south end of the Project to the existing north-south gravel path along the west side of the Project. The path would be accessible via a gate in the fence surrounding the Project site. The Project also proposes five-foot Class 2 bicycle lanes in both directions of Oakport Street along the Project frontage. However, the City's Bike Plan does not identify any bicycle facilities along Oakport Street.

> **Recommendation 5:** While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Eliminate the proposed Class 2 bicycle lanes on Oakport Street.
- At the Oakport Street/Zhone Way intersection, install a multi-use crossing treatment across the south approach of the intersection with a curb ramp with truncated domes on the east side consistent with the 66th Avenue BART to Bay Trail OBAG Project concept plan. Coordinate with City of Oakland staff to ensure this treatment is compatible with future plans for the Oakport Street/Zhone Way intersection.
- Pave the segment of the existing gravel path connecting the San Francisco Bay Trail and the proposed gate providing access to the Project site and sign and stripe this facility as a multi-use path. Install lighting along the multi-use path between the Project site and the Oakport Street/Zhone Way intersection.
- Install a curbless treatment or ramp with truncated domes or similar treatment at both ends of the marked path where it crosses the fire access lane so users have warning they are crossing a space shared by vehicles, bicycles, and pedestrians.

Bicycle Parking Requirements

Chapter 17.117 of the *City of Oakland Planning Code* requires long-term and short-term bicycle parking for new buildings. Long-term bicycle parking includes lockers or locked enclosures, and short-term bicycle parking includes bicycle U-racks. Sections 17.117.110 and 120 set minimum and maximum bicycle parking requirements for the Project's office and industrial land uses, respectively. These requirements are described in **Table 7**.

Per City *Code* the Project is required to provide 19 long-term spaces, eight short-term bicycle parking spaces, and four showers and 16 lockers within the office building (Building 3). Current site plans do not show any long-term bicycle facilities or showers and lockers in the office building. The site plan shows short-term bicycle racks accommodating 14 bicycles on the north side of the warehouse (Building 2) and 48 bicycles on the east side of the office building (Building 3).

Table 7: Bicycle Parking Requirements

Land Use	Size (KSF)[1]	Long-Term Bicycle Parking		Short-Term Bicycle Parking		Additional Facilities[4]	
		Spaces per Unit[2]	Spaces	Spaces per Unit[2]	Spaces	Showers	Lockers
Office[2]	160	1 space: 10 KSF, Minimum 2 spaces	16	1 space: 20 KSF, Minimum 2 spaces	8	4	16
Industrial Activities[3]	133	1 space: 40 KSF, Minimum 2 spaces	3	No spaces required	0	0	0
Minimum Required Parking Facilities			*19*		*8*	*4*	*16*
Proposed Parking Facilities			*None shown*		*62*	*None shown*	*None shown*
Meets Code Requirements?			***No***		***Yes***	***No***	***No***

Notes:
1. KSF = 1,000 square-feet.
2. Per Oakland Planning Code Section 17.117.110 – Required Bicycle Parking – Commercial Activities.
3. Per Oakland Planning Code Section 17.117.120 – Required Bicycle Parking – Industrial Activities.
4. Per Oakland Planning Code Section 17.117.130 – Required shower and locker facilities, a minimum of two (2) showers per gender plus one (1) shower per gender for each commercial (e.g., office) use of 150,000 sf. above 150,000 sf, and four (4) lockers are required per shower.

Source: Fehr & Peers, 2023.

Recommendation 6: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Provide long-term bicycle parking for at least 16 bicycles in the office building (Building 3) and at least three bicycles in the warehouse building (Building 2) to meet the minimum amount of long-term bicycle parking required (19 spaces). Ensure that long-term bicycle parking in the office building as well as short-term bicycle parking is easily accessible from the entrance, main lobby, and the proposed path on the west side of the building.
- Provide at least four shower and 16 locker facilities in the office building (Building 3).
- Ensure that the required number of short-term bicycle parking spaces is provided and the required clearance dimensions are provided for the style of bicycle rack provided.

Pedestrian Access and Circulation

Currently, no sidewalks are provided on either side of Oakport Street adjacent to the Project site, or on the north side of Zhone Way between Oakport Street and Coliseum Way. The San Francisco Bay Trail, an approximately 12-foot wide north-south multi-use path along the Estuary west of the Project site, provides access to the Project site, Oakport Field and nearby park amenities, and connects to areas north and south of the Project site. The San Francisco Bay Trail connects to the Oakport Street/Zhone Way intersection via a boardwalk.

Existing pedestrian facilities at the Oakport Street/Zhone Way intersection include the following:

- A striped crosswalk across the south intersection approach with a perpendicular curb ramp and truncated domes on the west side and a diagonal curb ramp with truncated domes on the east side.
- A five-foot sidewalk on the south side of 66th Avenue which continues along the Southbound I-880 On-ramp for approximately 240 feet east of the intersection with Oakport Street where it turns south as a path that reconnects with a sidewalk on the north/east side of Oakport Street south of 66th Avenue. The five-foot sidewalk on the north side of Oakport Street extends for about 115 feet to the east of the path and does not connect to any other pedestrian facility.

The *66th Avenue BART to Bay Trail OBAG Project* would include the addition of a high visibility green-painted multi-use path crossing treatment across the south approach at the Oakport Street/Zhone Way intersection as shown in the concept plan (see **Appendix C**). Per the concept plan, this crossing would be supported by a dedicated signal phase for the multi-use path users. **Recommendation 5** recommends that the Project install the multi-use path crossing treatment identified in the *66th Avenue BART to Bay Trail OBAG Project* concept plan.

The Project proposes a five-foot sidewalk along the west side of Oakport Street along the Project frontage and connecting to the Oakport Street/Zhone Way intersection. Pedestrian access gates along the Project frontage would restrict access between this sidewalk and the Project site. The Project site plan does not show any curb ramps or crosswalk markings across the Project driveways.

> **Recommendation 7:** While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Ensure that the sidewalk on the west side of Oakport Street has a minimum width of 5.5 feet (seven feet preferred)
- Provide high visibility crosswalk markings with directional curb ramps and truncated domes on both ends across each of the four Project driveways.

The workshop (Building 1) and the warehouse (Building 2) can be accessed by pedestrians through doorways directly accessible from the walkways connecting to the pedestrian access gates on Oakport Street. Pedestrians accessing the office (Building 3) from Oakport Street would walk along the walkway on the south side of the warehouse and then cross the drive aisle separating the warehouse and office buildings using the covered crosswalk near the southwest corner of the warehouse building. The Project would also provide a pedestrian connection to Bay Trail west of the Project site through an access gate near the southwest corner of the office building and crossing the fire lane west of the office building, which would also connect to the pedestrian walkways within the Project site.

The Project includes seven accessible parking spaces in the south parking lot along the northeast corner of the office building, with an accessible path to the main lobby of the office building and a covered crossing of the drive aisle north of the office building connecting to the warehouse. Two additional accessible parking spaces are provided on the north side of the warehouse adjacent to a doorway.

Transit Access

Transit service providers in the Project vicinity include BART, Amtrak, and AC Transit as described below.

Bay Area Rapid Transit (BART)

BART provides regional rail service throughout the East Bay and across the Bay. The Project is located approximately one mile (walking distance) northwest of the Coliseum BART Station. The nearest station portal is on the east side of San Leandro Street, approximately 0.2 miles south of 66th Avenue. The Coliseum Station is an above ground station with curbside pedestrian access and local transit connections.

This station serves BART's Orange Line (Berryessa/Nort San José - Richmond), Green Line (Berryessa/North San José - Daly City), and Blue Line (Dublin/Pleasanton - Daly City). These routes operate on weekdays with 15-minute headways and on weekends with 30-minute headways.

The Project is located northwest of the BART station, separated by several city streets and the I-880 freeway. The BART Station can be accessed from the Project site via a one-mile walking route along the San Francisco Bay Trail, the south side of 66th Avenue, and east side of San Leandro Street. No sidewalks currently exist along Oakport Street or the north side of 66th Street between Oakport Street and Coliseum Way. The planned *66th Avenue BART to Bay Trail OBAG Project* would improve the pedestrian and bicycle connections between the Project site and the Coliseum BART Station. In addition, the Project TDM Plan includes a shuttle service between the Project site and the Coliseum BART Station.

Amtrak

Amtrak provides regional rail service throughout the Bay and to destinations throughout northern California and the United States. The Project is located slightly more than one mile (walking distance) northwest of the Oakland Coliseum/Airport Amtrak Station. The station is on the west end of 73rd Avenue, accessible from San Leandro Street, approximately 0.2 miles south of 66th Avenue. The Oakland Coliseum/Airport Amtrak station is an at-grade station with curbside pedestrian access and local transit connections.

This station serves the Capitol Corridor route which operates between Auburn and San Jose, California. Capital Corridor trains stop at the Oakland Coliseum/Airport Amtrak Station on weekdays with a one- to two-hour frequency during AM and PM commute periods with one to two trains operating midday. On weekends, Capitol Corridor trains stop at the station with a two- to three-hour frequency throughout the day.

Alameda-Contra Costa Transit District (AC Transit)

AC Transit is the primary bus service provider in 13 cities, including Oakland, and adjacent unincorporated areas in Alameda and Contra Costa Counties, with Transbay service to destinations in San Francisco, San Mateo, and Santa Clara Counties.

The nearest bus stops to the Project site, which are served by Route 98, are located on 66th Avenue at Coliseum Way, approximately 0.4 miles east of the Project site. The westbound stop (AC Transit Stop Number 55296) is located on the nearside of the intersection, and the eastbound stop (AC Transit Stop Number 56452) is located on the far side on an island between Coliseum Way and a dedicated northbound right-turn lane. No amenities are provided at the westbound stop while the eastbound stop includes a bus shelter and bench.

Line 98 provides service between the Eastmont Transit Center and the Oakland BART Station. Line 98 operates with the following service frequency:[6]

- Weekday service: 5:54 AM-11:23 PM, approximately 20-minute headways
- Weekend service: 6:00 AM-10:40 PM, approximately 30-minute headways

The *66th Avenue BART to Bay Trail OBAG Project* would include new AC Transit stops at the Oakport Street/Zhone Way intersection (see **Appendix C**). Per the concept plan, a southbound stop would be installed on Oakport Street on the far side of the intersection and an eastbound stop would be installed on the south side of Zhone Way approximately 100 feet east of the intersection. The eastbound stop would require the reconfiguration of the Southbound I-880 On-ramp as envisioned in the *66th Avenue BART to Bay Trail OBAG Project* and cannot be implemented until the on-ramp reconfiguration has been completed.

> **Recommendation 8:** While not required to address a CEQA impact, and at the discretion of City of Oakland staff and in consultation with AC Transit, the following shall be considered as part of the final design for the Project:
>
> - Consistent with the *66th Avenue BART to Bay Trail OBAG Project* concept plan, install a new southbound AC Transit Stop on the west side of Oakport Street just south of the Oakport Street/Zhone Way intersection.
> - Install a temporary northbound/eastbound AC Transit stop on northbound Oakport Street approximately 350 feet south of the Oakport Street/Zhone Way intersection. The stop should be located adjacent to the existing pedestrian path between 66th Avenue and Oakport Street. The temporary stop can be removed when the Southbound I-880 On-ramp has been reconfigured by the *66th Avenue BART to Bay Trail OBAG Project* and the permanent bus stop has been installed on eastbound Zhone Way east of Oakport Street.
> - Install shelters with benches and real-time arrival information at both bus stops.

5. Collision Analysis

A five-year history (January 1, 2018 to December 31, 2022) of collision data on Oakport Street along the Project frontage was obtained from the Statewide Integrated Traffic Records System

[6] Source: AC Transit service tables accessed on January 27, 2023 from: https://www.actransit.org/bus-lines-schedules/98.

(SWITRS) and evaluated for this collision analysis. **Table 8** summarizes the collision data by type and location, and **Table 9** summarizes the collision data by severity and location.

As shown in Table 8, 15 collisions were reported during this five-year timeframe along Oakport Street adjacent the Project site. Two segments along Oakport Street are evaluated: one north segment extending between Peppermint Gate Access Road to just north of the S-curve adjacent the southeast corner of the Project site, and a south segment extending through the S-curve to the intersection with Zhone Way. One sideswipe property damage only collision was reported in the north segment near Peppermint Gate Access Road; All remaining collisions (14 of 15) occurred in south segment along the S-curve.

The most reported collision types within the south segment include hit object (29 percent), and head-on (21 percent) collisions. Collisions along this segment were mostly due to drivers traveling at unsafe speeds (29 percent), improper turning (21 percent), traveling on the wrong side of the road (21 percent), or unsafe starting and backing (21 percent). No collisions involved pedestrians or bicyclists. One collision involved a truck. Most collisions along the south segment resulted in property damage only (50 percent) with remaining collisions resulting in severe injury (14 percent), other visible injury (seven percent), and complaint of pain (29 percent); no collisions resulted in a fatality.

The *Highway Safety Manual* (HSM, Predictive Method - Volume 2, Part C) provides a methodology to predict the number of collisions for intersections and street segments based on their specific characteristics, such as vehicle and pedestrian volume, number of lanes, on-street parking, and number of driveways. **Table 10** presents the predicted collision frequencies for the two study segments using the HSM Predictive Method for Urban and Suburban Arterials and compares the predicted collision frequencies with the actual reported collision frequencies. **Appendix D** provides the detailed predicted collision frequency calculation sheets based on the HSM methodology. Roadway segments with collision frequencies greater than the predicted frequency are identified as locations that should be evaluated in greater detail for collision trends and potential modifications.

Table 8: Summary of Collisions by Type

Location	Head-on	Sideswipe	Rear-End	Broadside	Hit Object	Overturned	Pedestrian-Involved	Other	Total
Oakport Street, Peppermint Gate Access Road to SE corner of the Project site	0	1	0	0	0	0	0	0	**1**
Oakport Street, SE corner of the Project site to Zhone Way/66th Avenue	3	0	1	1	4	2	0	3	**14**
Total	**3**	**1**	**1**	**1**	**4**	**2**	**0**	**3**	**15**

Source: SWITRS five-year collision data reported from January 1, 2018 to December 31, 2022; Fehr & Peers, 2023.

Table 9: Summary of Collision Severity

Location	Crash Severity							Person-Injuries			
	Property Damage Only (0)	Fatal (1)	Injury (Severe) (2)	Injury (Other Visible) (3)	Complaint of Pain (4)	Total	Truck Involved Collisions	Bicycle	Pedestrian	Driver / Passenger	Total
Oakport Street, Peppermint Gate Access Road to SE corner of the Project site	1	0	0	0	0	**1**	0	0	0	0	**0**
Oakport Street, SE corner of the Project site to Zhone Way/66th Avenue	7	0	2	1	4	**14**	1	0	0	0	**0**
Total	**8**	**0**	**2**	**1**	**4**	**15**	**0**	**0**	**0**	**0**	**0**

Source: SWITRS five-year collision data reported from January 1, 2018 to December 31, 2022; Fehr & Peers, 2023.

Table 10: Predicted and Actual Collision Frequencies

Location	Predicted Collision Frequency (Per year)[1]	Actual Collision Frequency (Per year)[2]	Difference	Higher Than Predicted?
Oakport Street (north), Peppermint Gate Access Road to SE corner of the Project site	0.3	0.2	-0.1	No
Oakport Street (south), SE corner of the Project site to Zhone Way/66th Avenue	0.1	2.8	+2.7	**Yes**

Notes:
1. Based on the Highway Safety Manual Predictive Method (Volume 2, Part C).
2. Based on SWITRS five-year collision data reported from January 1, 2018 to December 31, 2022.

Source: Fehr & Peers, 2023.

As shown in Table 10, the south segment of Oakport Street between the southeast corner of the Project and Zhone Way (i.e., the roadway segment with an S-curve) has a higher reported collision frequency than predicted by the HSM. As previously noted, a review of the collision history along this segment shows these collisions were primarily due to drivers traveling at unsafe speeds through the curve, improper turning, or crossing the centerline through the S-curve, and unsafe starting or backing through the bend in the road. Review of Google Earth images from recent years show vehicles frequently parked on the shoulder of Oakport Street prior to installation of barriers around 2021. Most collisions within the south segment (about 65 percent) occurred prior to 2021, indicating that the installation of barriers, which prohibit vehicles from parking or stopping along this street segment, likely contributed to the reduction in collisions.

The Project proposes to install curb and gutter on both sides of Oakport Street as well as new lane striping. Installation of signage prior to the S-curve on the southbound and northbound approaches warning drivers to reduce their speed, combined with double-sided reflective chevron signs (or similar devices) installed through the S-curve could warn of the roadway geometry. All together these improvements could enhance sightlines and reduce the likelihood of collisions along this roadway segment.

Recommendation 9: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered prior to the Project occupancy:

- Conduct a speed study on Oakport Street to determine if the posted speed limit on Oakport Street along the Project frontage can be reduced. If justified, reduce the posted speed limit per the speed study.

Recommendation 10: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Install signage on southbound and northbound Oakport Street warning of the S-curve consistent with the *California Manual on Uniform Traffic Control Devices (CA MUTCD, 2014 Edition) Figure 2C-2. Example of Warning Signs for a Turn*.
- Install double-sided reflective chevron signs or similar devices through the S-curve per *CA MUTCD Figure 2C-2*.
- Install speed feedback signs in both directions of Oakport Street ahead of the S-curve.

6. Conclusion and Summary of Recommendations

Per the site plan review, the following recommendations would improve access and circulation for the Project and the surrounding areas:

Recommendation 1: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Implement one of the following at Driveway B (the second driveway from the north) to be consistent with the City of Oakland Municipal Code Section 12.04.270:
  - Reduce the width of the driveway opening to 35 feet.
  - If a high volume of large trucks, such as WB-67, is expected, then coordinate with the City of Oakland Driveway Appeals Board to provide a wider driveway.
- Implement one of the following at Driveways C and/or D (the two south driveways) to reduce the potential for queues at Project access gates spilling back onto Oakport Street:
  - Redesign the Project to provide at least 75 feet of queuing space for at least one of the driveways.
  - Keep the access gates at the two driveways open during normal business hours

Recommendation 2: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Eliminate the proposed right-turn-lane on southbound Oakport Steet at the approach to Driveway B (second driveway from the north).
- Limit the outbound movement at Driveway D (southmost driveway) to right-turns only.
- Provide a left-turn lane on northbound Oakport Street at the approach to Driveway D (southmost driveway). If a left-turn lane cannot be accommodated, prohibit left-turns into the driveway and physically limit the driveway to right-turns in and out only.

Recommendation 3: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Ensure that the Project provides a minimum of 33 PEV-ready and an additional 33 PEV-capable parking spaces.

Recommendation 4: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Implement one of the following to accommodate passenger drop offs and pick-ups:
  - Provide a pull-out space on the west side of Oakport Street along the Project frontage to accommodate passenger loading and unloading.
  - Allow non-employee vehicles, such as rideshare vehicles, to enter the Project site to drop off and pick-up passenger.

Recommendation 5: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Eliminate the proposed Class 2 bicycle lanes on Oakport Street.
- At the Oakport Street/Zhone Way intersection, install a multi-use crossing treatment across the south approach of the intersection with a curb ramp with truncated domes on the east side consistent with the 66th Avenue BART to Bay Trail OBAG Project concept plan. Coordinate with City of Oakland staff to ensure this treatment is compatible with future plans for the Oakport Street/Zhone Way intersection.

- Pave the segment of the existing gravel path connecting the San Francisco Bay Trail and the proposed gate providing access to the Project site and sign and stripe this facility as a multi-use path. Install lighting along the multi-use path between the Project site and the Oakport Street/Zhone Way intersection.
- Install a curbless treatment or ramp with truncated domes or similar treatment at both ends of the marked path where it crosses the fire access lane so users have warning they are crossing a space shared by vehicles, bicycles, and pedestrians.

Recommendation 6: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Provide long-term bicycle parking for at least 16 bicycles in the office building (Building 3) and at least three bicycles in the warehouse building (Building 2) to meet the minimum amount of long-term bicycle parking required (19 spaces). Ensure that long-term bicycle parking in the office building as well as short-term bicycle parking is easily accessible from the entrance, main lobby, and the proposed path on the west side of the building.
- Provide at least four shower and 16 locker facilities in the office building (Building 3).
- Ensure that the required number of short-term bicycle parking spaces is provided and the required clearance dimensions are provided for the style of bicycle rack provided.

Recommendation 7: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Ensure that the sidewalk on the west side of Oakport Street has a minimum width of 5.5 feet (seven feet preferred)
- Provide high visibility crosswalk markings with directional curb ramps and truncated domes on both ends across each of the four Project driveways.

Recommendation 8: While not required to address a CEQA impact, and at the discretion of City of Oakland staff and in consultation with AC Transit, the following shall be considered as part of the final design for the Project:

- Consistent with the *66th Avenue BART to Bay Trail OBAG Project* concept plan, install a new southbound AC Transit Stop on the west side of Oakport Street just south of the Oakport Street/Zhone Way intersection.

- Install a temporary northbound/eastbound AC Transit stop on northbound Oakport Street approximately 350 feet south of the Oakport Street/Zhone Way intersection. The stop should be located adjacent to the existing pedestrian path between 66th Avenue and Oakport Street. The temporary stop can be removed when the Southbound I-880 On-ramp has been reconfigured by the *66th Avenue BART to Bay Trail OBAG Project* and the permanent bus stop has been installed on eastbound Zhone Way east of Oakport Street.
- Install shelters with benches and real-time arrival information at both bus stops.

Recommendation 9: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered prior to the Project occupancy:

- Conduct a speed study on Oakport Street to determine if the posted speed limit on Oakport Street along the Project frontage can be reduced. If justified, reduce the posted speed limit per the speed study.

Recommendation 10: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Install signage on southbound and northbound Oakport Street warning of the S-curve consistent with the *California Manual on Uniform Traffic Control Devices (CA MUTCD, 2014 Edition) Figure 2C-2. Example of Warning Signs for a Turn.*
- Install double-sided reflective chevron signs or similar devices through the S-curve per *CA MUTCD Figure 2C-2*.
- Install speed feedback signs in both directions of Oakport Street ahead of the S-curve.

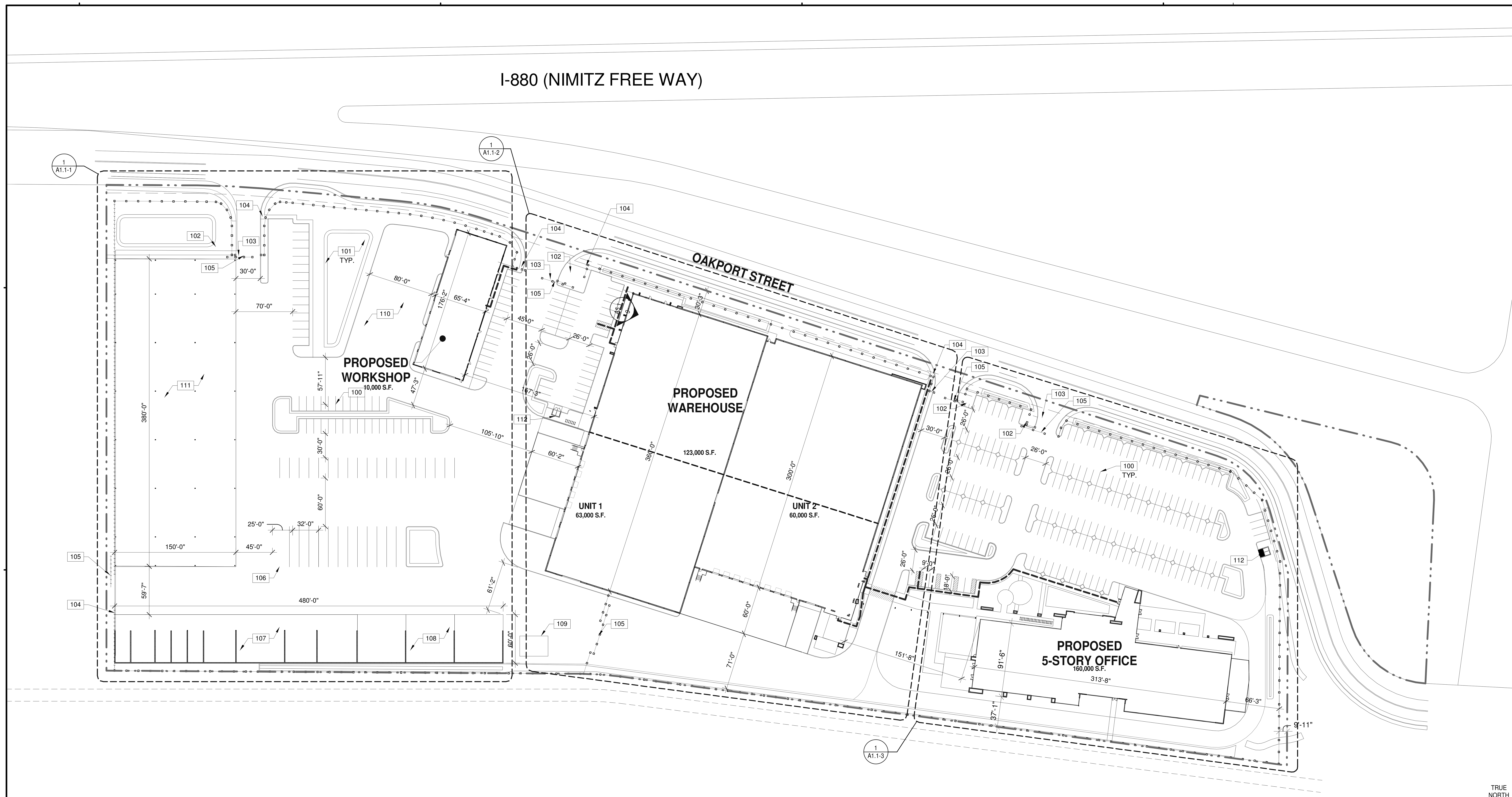
Please contact Sam Tabibnia (stabibnia@fehrandpeers.com or 510-835-1943) with questions or comments.

ATTACHMENTS

Appendix A – Project Site Plan
Appendix B – Stopping Sight Distance Diagrams
Appendix C – 66th Avenue BART to Bay Trail OBAG Project Concept Plan
Appendix D – Predicted Collision Frequency

Appendix A:
Project Site Plan

CAUTION: IF THIS SHEET IS NOT 24"x36" IT IS A REDUCED PRINT



OVERALL SITE PLAN

SCALE: 1" = 60'-0"

1 TRUE NORTH N

SITE LEGEND

- PROPERTY LINE.
- ACCESSIBLE PATH OF TRAVEL, 1:20 MAX. SLOPE 2% MAX. CROSS SLOPE.
- POLE MOUNTED LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS
- WALLPACK LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS
- T — TRANSFORMER WITH CONCRETE PAD, SEE ELECTRICAL DRAWINGS. (PROVIDE PROTECTION BOLLARDS PER LOCAL UTILITY OR PUBLIC WORK STANDARDS)
- FIRE LANE (HATCHED)
- X — PARKING STALL COUNT TOTAL
- DOCK HIGH TRUCK DOOR
- GRADE LEVEL TRUCK DOOR
- FIRE HYDRANT (VERIFY LOCATION WITH CIVIL DRAWINGS)
- P.I.V. WITH TAMPER, SEE FIRE PROTECTION DRAWINGS

NOTES

SEE SHEET A0.2 FOR GENERAL NOTES

100. PAINTED PARKING STRIPING PER CITY STANDARDS.
101. LANDSCAPE AND IRRIGATION AREA.
102. GUARD SHACK.
103. GATED DRIVEWAY.
104. PEDESTRIAN GATE.
105. VEHICLE GATE.
106. VEHICLE WASH ENCLOSURE.
107. MATERIAL BIN.
108. SCRAPS BINS.
109. PROPANE TANK.
110. PTA TRAINING AREA.
111. PIPE LAYDOWN AREA.
112. TRASH ENCLOSURE.

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OVERALL SITE PLAN

	DATE	REMARKS
1	04/03/2019	PLANNING SUBMITTAL

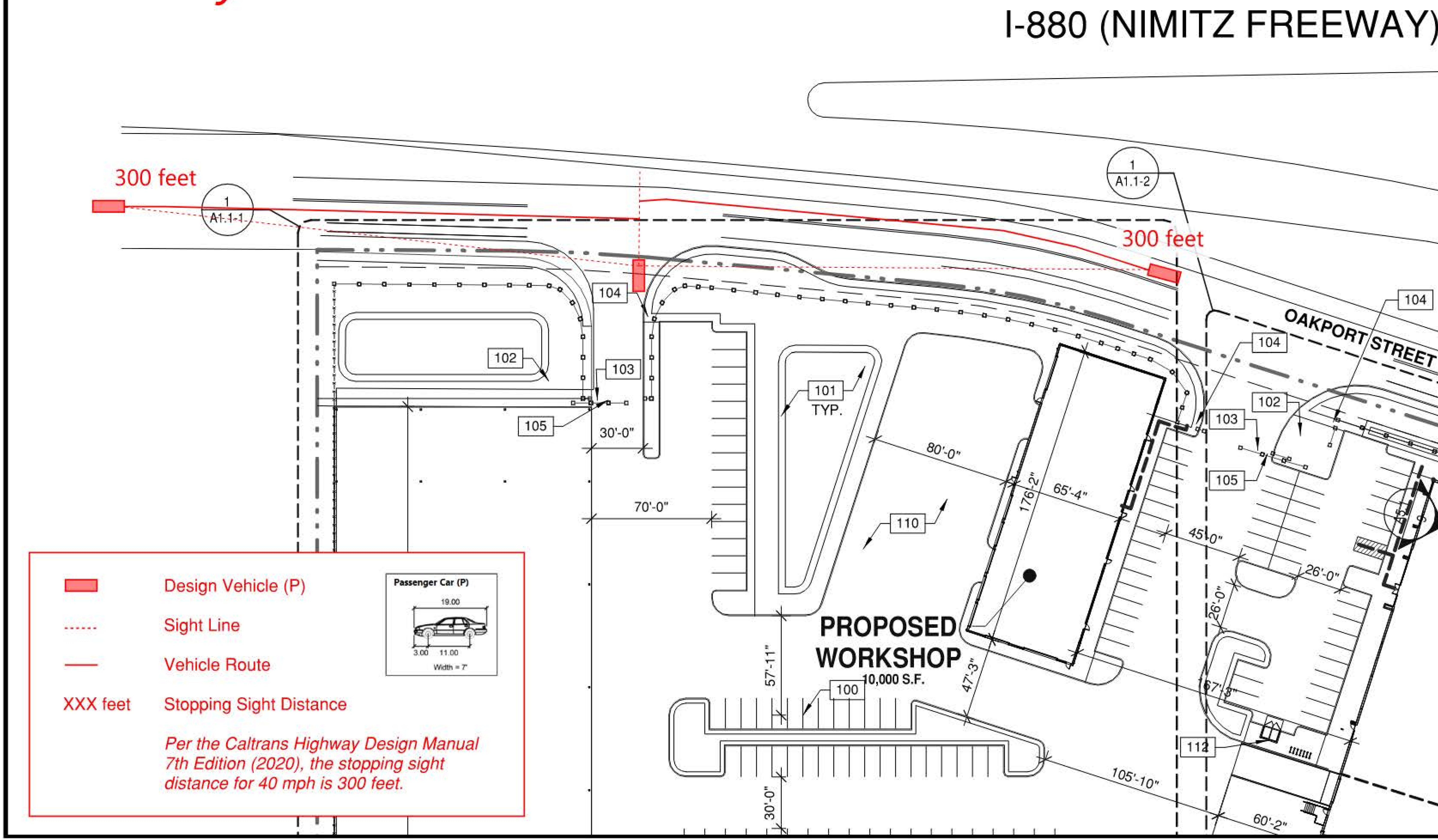
PA/PM:	J. BABINE
DRAWN BY.:	E.S.
JOB NO.:	SNR17-0069-00

SHEET
A1.0

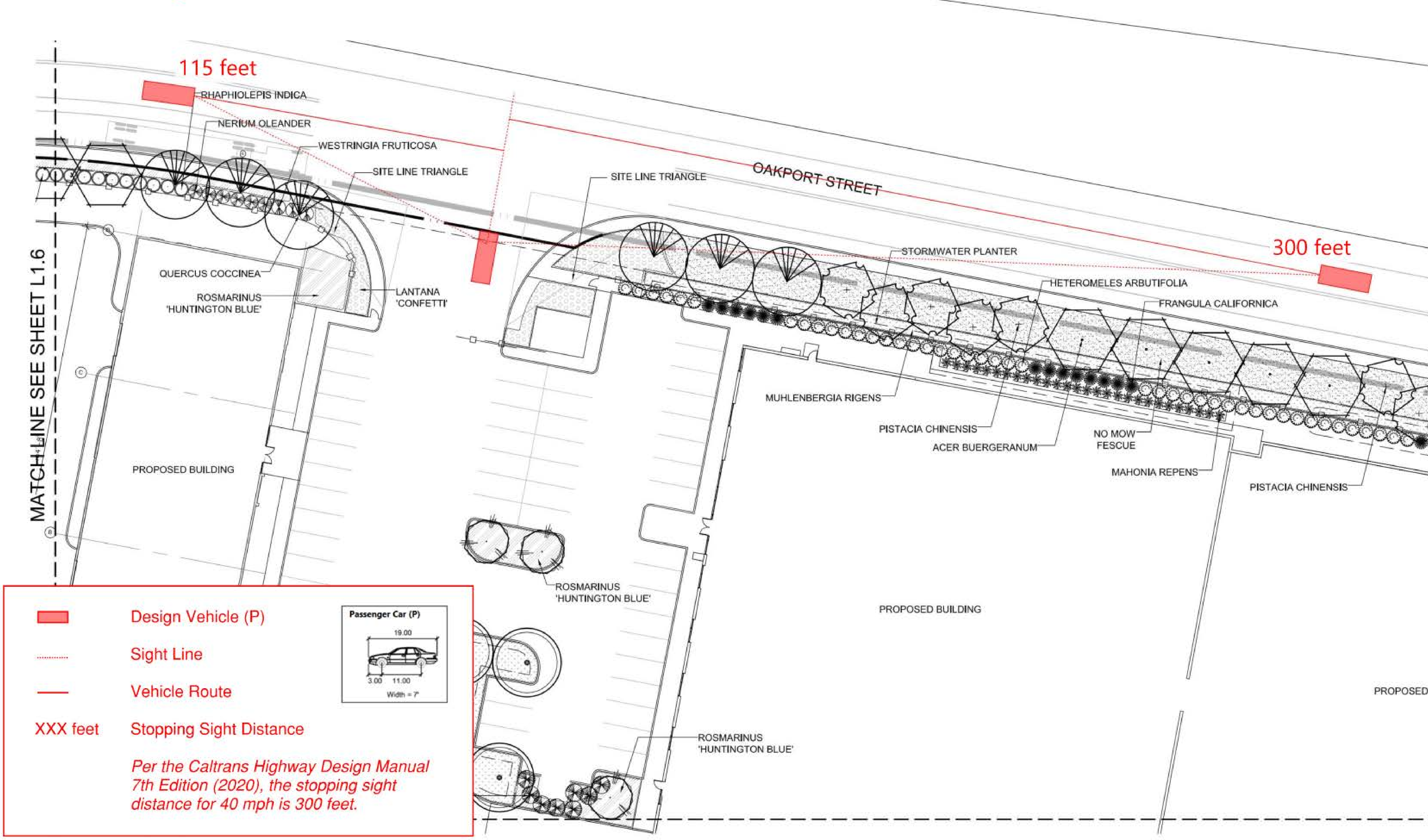
4/2/2019 12:48:38 PM

Appendix B:
Stopping Sight Distance Diagrams

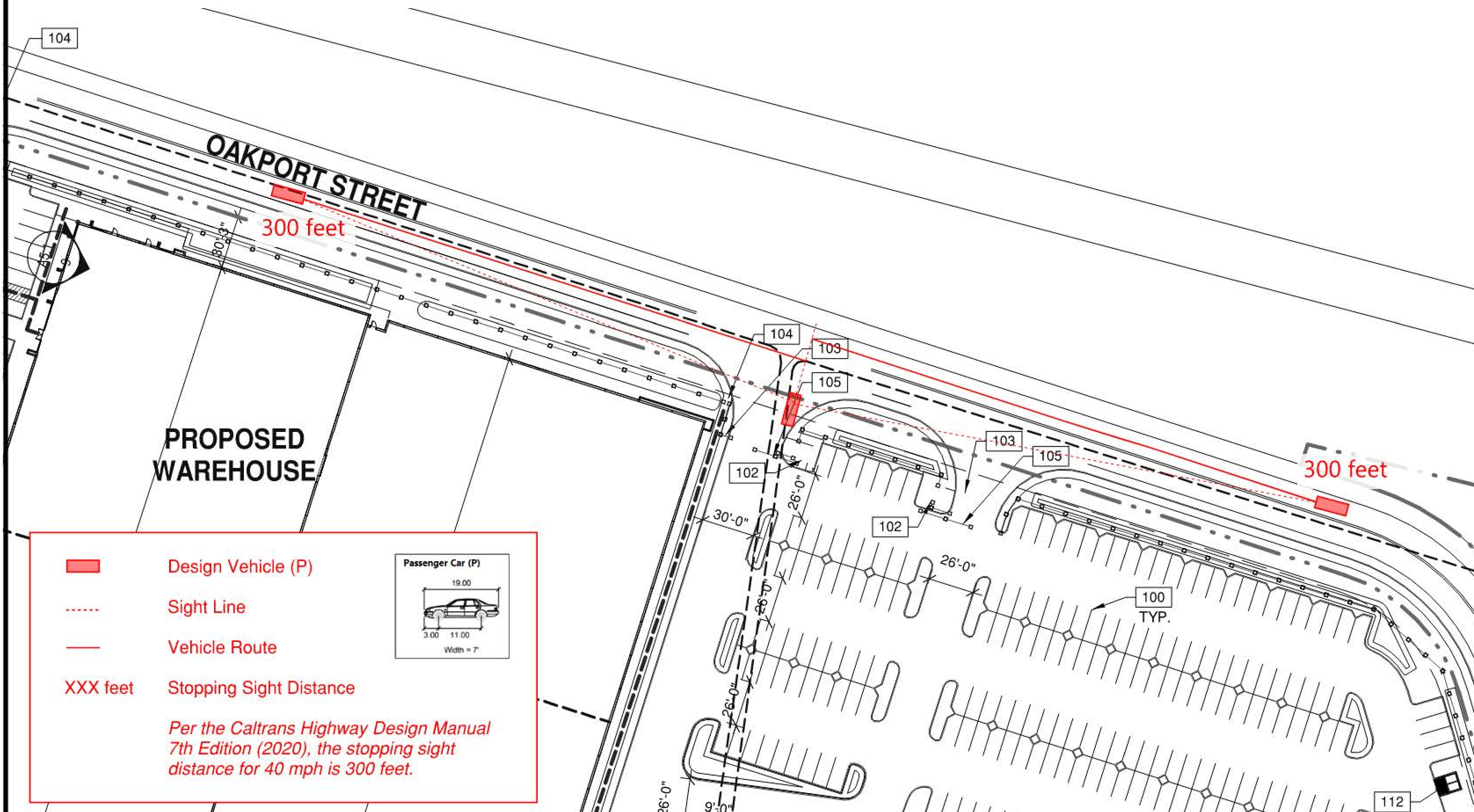
Stopping Sight Distance
Driveway A



Stopping Sight Distance
Driveway B



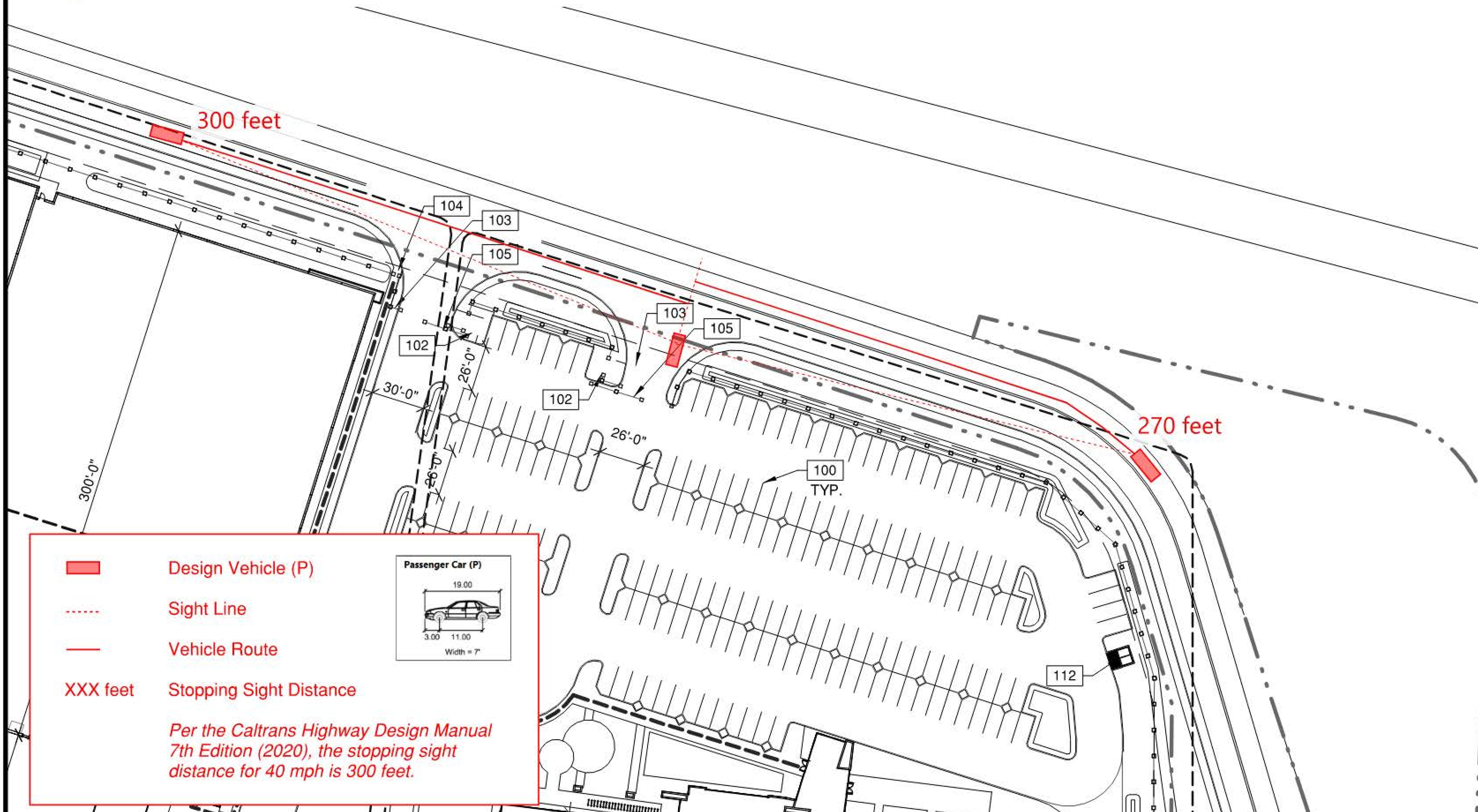
Stopping Sight Distance
Driveway C



Stopping Sight Distance

Driveway D

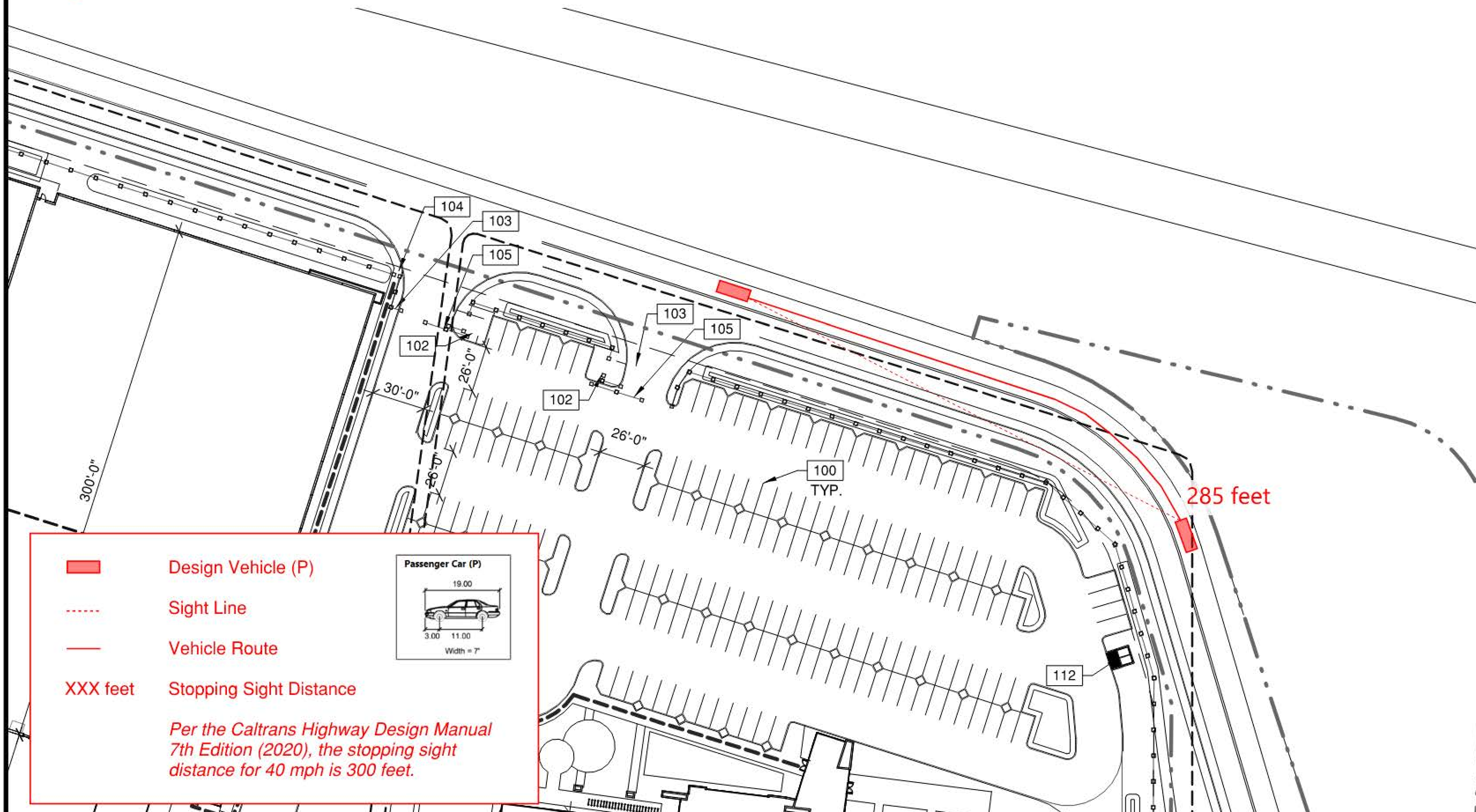
Diagram I of II



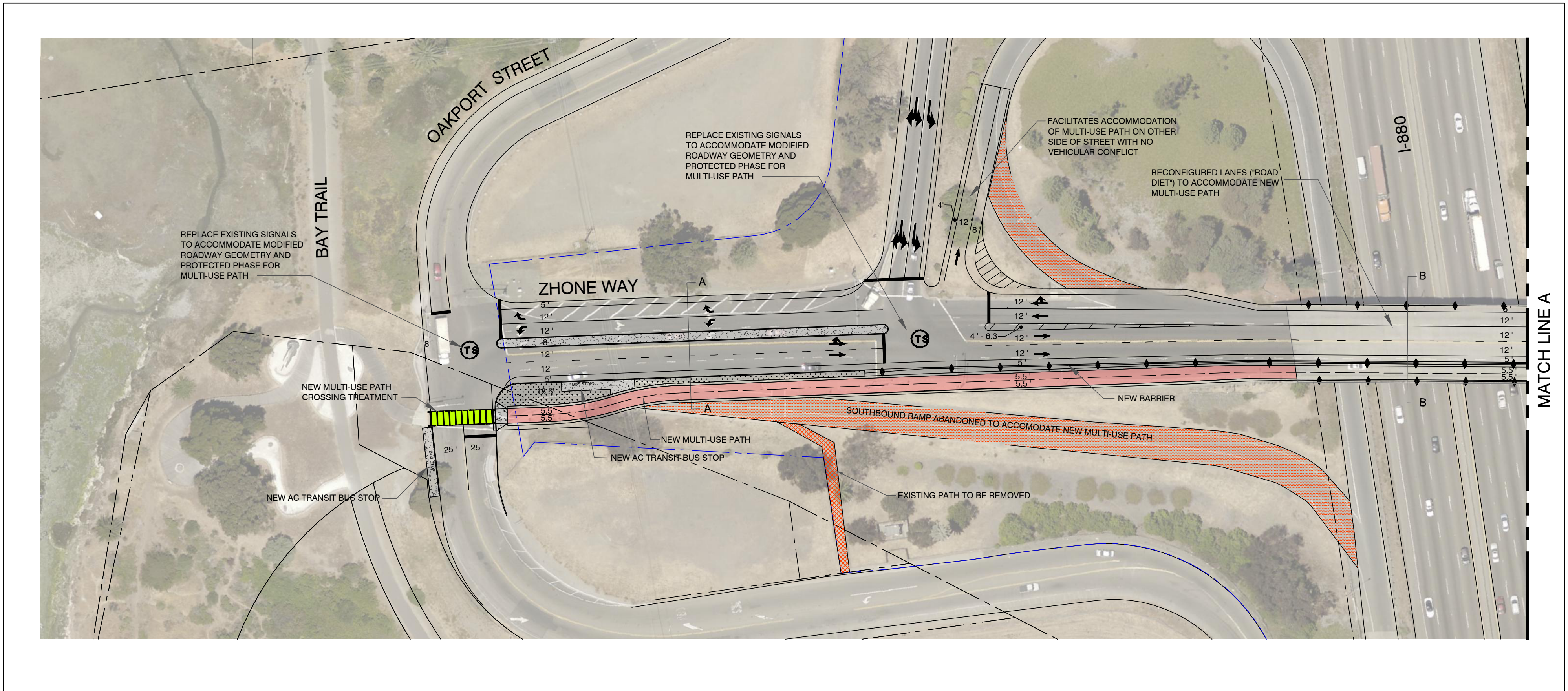
Stopping Sight Distance

Driveway D

Diagram II of II



Appendix C:
66th Avenue BART to Bay Trail OBAG Project Concept Plan



Legend

- New Multi-Use Path
- Area Subject to Ramp Removal/ Relocation
- Railroad Gate Arm
- Railroad Signal Light
- Potential Green Infrastructure
- Concrete Sidewalk/Median
- Caltrans Right of Way
- Parcel Line

Sam Schwartz

ActiveWayz Engineering

BART to Bay Trail OBAG Grant

Design Concept Plan

CITY OF OAKLAND

20' 40' 80'

6/3/2022

Appendix D:
Predicted Collision Frequency

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	Molly Riddle	Roadway	Oakport Street
Agency or Company	Fehr & Peers	Roadway Section	Peppermint Gate Access Road to Southeast Corner of Project
Date Performed	01/17/23	Jurisdiction	City of Oakland, CA
		Analysis Year	2023

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	2U
Length of segment, L (mi)		--	0.35
AADT (veh/day)	$AADT_{MAX}$ = 32,600 (veh/day)	--	4,110
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	Not Present
Lighting (present / not present)		Not Present	Not Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	1
Minor industrial / institutional driveways (number)		--	3
Major residential driveways (number)		--	0
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	0
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	5
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.00	1.00	1.00	1.00	1.00

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-15.22	1.68	0.84	0.101	1.000	0.101	1.00	1.00	0.101
Fatal and Injury (FI)	-16.22	1.66	0.65	0.032	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.300	0.030	1.00	1.00	0.030
Property Damage Only (PDO)	-15.62	1.69	0.87	0.074	$(5)_{TOTAL}-(5)_{FI}$ 0.700	0.071	1.00	1.00	0.071

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted $N_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted $N_{brmv\ (PDO)}$ (crashes/year)**	**Predicted $N_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.030	1.000	0.071	0.101
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.730	0.022	0.778	0.055	0.077
Head-on collision	0.068	0.002	0.004	0.000	0.002
Angle collision	0.085	0.003	0.079	0.006	0.008
Sideswipe, same direction	0.015	0.000	0.031	0.002	0.003
Sideswipe, opposite direction	0.073	0.002	0.055	0.004	0.006
Other multiple-vehicle collision	0.029	0.001	0.053	0.004	0.005

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.47	0.56	0.81	0.156	1.000	0.156	1.00	1.00	0.156
Fatal and Injury (FI)	-3.96	0.23	0.50	0.045	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.297	0.046	1.00	1.00	0.046
Property Damage Only (PDO)	-6.51	0.64	0.87	0.107	$(5)_{TOTAL}-(5)_{FI}$ 0.703	0.109	1.00	1.00	0.109

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted $N_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted $N_{brsv\ (PDO)}$ (crashes/year)**	**Predicted $N_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.046	1.000	0.109	0.156
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.026	0.001	0.066	0.007	0.008
Collision with fixed object	0.723	0.033	0.759	0.083	0.116
Collision with other object	0.010	0.000	0.013	0.001	0.002
Other single-vehicle collision	0.241	0.011	0.162	0.018	0.029

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15{,}000)^t$	from Table 12-7
Major commercial	0	0.158	1.000	0.000	--
Minor commercial	0	0.050	1.000	0.000	
Major industrial/institutional	1	0.172	1.000	0.047	
Minor industrial/institutional	3	0.023	1.000	0.019	
Major residential	0	0.083	1.000	0.000	
Minor residential	0	0.016	1.000	0.000	
Other	0	0.025	1.000	0.000	
Total	--	--	--	0.066	0.81

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL}$ * (3)	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.066	1.000	0.066	1.00	1.00	0.066
Fatal and injury (FI)	--	0.323	0.021	1.00	1.00	0.021
Property damage only (PDO)	--	0.677	0.045	1.00	1.00	0.045

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8	(5)*(6)
Total	0.101	0.156	0.066	0.323	0.005	0.002
Fatal and injury (FI)	--	--	--	--	--	0.002

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9	(5)*(6)
Total	0.101	0.156	0.066	0.323	0.004	0.001
Fatal and injury (FI)	--	--	--	--	--	0.001

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
	MULTIPLE-VEHICLE		
Rear-end collisions (from Worksheet 1D)	0.022	0.055	0.077
Head-on collisions (from Worksheet 1D)	0.002	0.000	0.002
Angle collisions (from Worksheet 1D)	0.003	0.006	0.008
Sideswipe, same direction (from Worksheet 1D)	0.000	0.002	0.003
Sideswipe, opposite direction (from Worksheet 1D)	0.002	0.004	0.006
Driveway-related collisions (from Worksheet 1H)	0.021	0.045	0.066
Other multiple-vehicle collision (from Worksheet 1D)	0.001	0.004	0.005
Subtotal	0.052	0.116	0.167
	SINGLE-VEHICLE		
Collision with animal (from Worksheet 1F)	0.001	0.007	0.008
Collision with fixed object (from Worksheet 1F)	0.033	0.083	0.116
Collision with other object (from Worksheet 1F)	0.000	0.001	0.002
Other single-vehicle collision (from Worksheet 1F)	0.011	0.018	0.029
Collision with pedestrian (from Worksheet 1I)	0.002	0.000	0.002
Collision with bicycle (from Worksheet 1J)	0.001	0.000	0.001
Subtotal	0.049	0.109	0.159
Total	0.101	0.225	0.326

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	0.3	0.35	0.9
Fatal and injury (FI)	0.1	0.35	0.3
Property damage only (PDO)	0.2	0.35	0.6

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments			
General Information		**Location Information**	
Analyst	Molly Riddle	Roadway	Oakport Street
Agency or Company	Fehr & Peers	Roadway Section	Southeast Corner of Project to Zhone Way
Date Performed	01/27/23	Jurisdiction	City of Oakland, CA
		Analysis Year	2023

Input Data		**Base Conditions**	**Site Conditions**
Roadway type (2U, 3T, 4U, 4D, ST)		--	2U
Length of segment, L (mi)		--	0.09
AADT (veh/day)	$AADT_{MAX}$ = 32,600 (veh/day)	--	4,110
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	Not Present
Lighting (present / not present)		Not Present	Not Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	0
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	75
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	2
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments					
(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.97	1.00	1.00	1.00	1.97

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments									
(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-15.22	1.68	0.84	0.026	1.000	0.026	1.97	1.00	0.051
Fatal and Injury (FI)	-16.22	1.66	0.65	0.008	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.300	0.008	1.97	1.00	0.015
Property Damage Only (PDO)	-15.62	1.69	0.87	0.019	$(5)_{TOTAL}-(5)_{FI}$ 0.700	0.018	1.97	1.00	0.036

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments					
(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted $N_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted $N_{brmv\ (PDO)}$ (crashes/year)**	**Predicted $N_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.015	1.000	0.036	0.051
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.730	0.011	0.778	0.028	0.039
Head-on collision	0.068	0.001	0.004	0.000	0.001
Angle collision	0.085	0.001	0.079	0.003	0.004
Sideswipe, same direction	0.015	0.000	0.031	0.001	0.001
Sideswipe, opposite direction	0.073	0.001	0.055	0.002	0.003
Other multiple-vehicle collision	0.029	0.000	0.053	0.002	0.002

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments									
(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.47	0.56	0.81	0.040	1.000	0.040	1.97	1.00	0.079
Fatal and Injury (FI)	-3.96	0.23	0.50	0.012	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.297	0.012	1.97	1.00	0.023
Property Damage Only (PDO)	-6.51	0.64	0.87	0.028	$(5)_{TOTAL}-(5)_{FI}$ 0.703	0.028	1.97	1.00	0.055

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments					
(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted $N_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted $N_{brsv\ (PDO)}$ (crashes/year)**	**Predicted $N_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.023	1.000	0.055	0.079
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.026	0.001	0.066	0.004	0.004
Collision with fixed object	0.723	0.017	0.759	0.042	0.059
Collision with other object	0.010	0.000	0.013	0.001	0.001
Other single-vehicle collision	0.241	0.006	0.162	0.009	0.015

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments					
(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.158	1.000	0.000	--
Minor commercial	0	0.050	1.000	0.000	
Major industrial/institutional	0	0.172	1.000	0.000	
Minor industrial/institutional	0	0.023	1.000	0.000	
Major residential	0	0.083	1.000	0.000	
Minor residential	0	0.016	1.000	0.000	
Other	0	0.025	1.000	0.000	
Total	--	--	--	0.000	0.81

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments						
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL}$ * (3)	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.000	1.000	0.000	1.97	1.00	0.000
Fatal and injury (FI)	--	0.323	0.000	1.97	1.00	0.000
Property damage only (PDO)	--	0.677	0.000	1.97	1.00	0.000

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments						
(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8	(5)*(6)
Total	0.051	0.079	0.000	0.130	0.005	0.001
Fatal and injury (FI)	--	--	--	--	--	0.001

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments						
(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9	(5)*(6)
Total	0.051	0.079	0.000	0.130	0.004	0.001
Fatal and injury (FI)	--	--	--	--	--	0.001

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.011	0.028	0.039
Head-on collisions (from Worksheet 1D)	0.001	0.000	0.001
Angle collisions (from Worksheet 1D)	0.001	0.003	0.004
Sideswipe, same direction (from Worksheet 1D)	0.000	0.001	0.001
Sideswipe, opposite direction (from Worksheet 1D)	0.001	0.002	0.003
Driveway-related collisions (from Worksheet 1H)	0.000	0.000	0.000
Other multiple-vehicle collision (from Worksheet 1D)	0.000	0.002	0.002
Subtotal	0.015	0.036	0.051
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.001	0.004	0.004
Collision with fixed object (from Worksheet 1F)	0.017	0.042	0.059
Collision with other object (from Worksheet 1F)	0.000	0.001	0.001
Other single-vehicle collision (from Worksheet 1F)	0.006	0.009	0.015
Collision with pedestrian (from Worksheet 1I)	0.001	0.000	0.001
Collision with bicycle (from Worksheet 1J)	0.001	0.000	0.001
Subtotal	0.025	0.055	0.080
Total	0.040	0.091	0.131

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	0.1	0.09	1.5
Fatal and injury (FI)	0.0	0.09	0.4
Property damage only (PDO)	0.1	0.09	1.0

Appendix Q

SupplyBank.org at Oakport Project – Transportation Demand Management Plan

Fehr & Peers, April 28, 2023

FEHR PEERS

Draft Memorandum

Date: April 28, 2023

To: Scott Gregory, Lamphier-Gregory

From: Sam Tabibnia and Molly Riddle, Fehr & Peers

Subject: SupplyBank.org at Oakport Project – Transportation Demand Management Plan

OK21-0392

The proposed SupplyBank.org at Oakport Project (Project) is required to prepare a Transportation and Parking Demand Management (TDM) Plan per the City of Oakland Standard Condition of Approval (SCA) 78 (Department of Planning and Building, Bureau of Planning, Revised December 16, 2021). According to the SCA, the TDM Plan goal is to achieve a 20 percent vehicle trip reduction (VTR) because the project would generate more than 100 net new peak hour trips.

This memorandum describes the project and its setting, lists the mandatory TDM strategies that the project shall implement, and describes the compliance for the TDM Plan.

Project Description

The Project site is located on a mostly vacant lot on the west side of Oakport Street, just north of Zhone Way (66th Avenue) and south of Peppermint Gate Access Road, in the City of Oakland. The Project would consist of a 10,000 square-foot workshop (Building 1), a 123,000 square-foot warehouse (Building 2), and a five-story, 160,000 square-foot office building (Building 3). The Project would include 331 surface parking spaces, 12 larger truck parking spaces, and 13 truck loading bays for the warehouse. Automobile and truck access to the Project site would be provided via four driveways on Oakport Street.

Project Location

Located in the Coliseum/Airport area of Oakland, the Project is in a low-density area with a mix of commercial and industrial uses and park land located west of I-880 and east of the Oakland Estuary. Few streets are provided in the vicinity of the Project and Oakport Street, the street adjacent the Project, lacks sidewalks. Streets further away in neighborhoods on the east side of I-880 and approximately 0.2 miles north and south of the Project site are generally aligned to a grid and have sidewalks on most streets.

The Project is approximately one mile from the Coliseum BART Station and the Oakland Coliseum/ Airport Amtrak Station. The nearest AC Transit bus stop is along 66th Avenue at Coliseum Way (Line 98 with headways ranging from 20 to 30 minutes), about 0.4 mile east of the Project site.

The Project is currently served by a Class 1 multi-use path on the west side of the Project along the Oakland Estuary. This facility is part of the San Francisco Bay Trail. Planned bicycle facilities include the *66th Avenue BART to Bay Trail OBAG Project,* which would provide a Class 4 separated bicycle lane along the south side of 66th Avenue, between Oakport and San Leandro Streets, and would connect the Project site to the Coliseum BART Station and the Oakland Coliseum/Airport Amtrak Station.

Trip Generation and Commute Mode Share

Table 1 summarizes the trip generation for the Project by travel mode as summarized in the *Project Transportation Impact Review (TIR)* Memorandum per the City of Oakland's *Transportation Impact Review Guidelines* (TIRG, April 2017).

Table 1: Project Trip Generation by Travel Mode

Mode	Mode Share Adjustment Factors[1]	Daily	AM Peak Hour	PM Peak Hour
Automobile	0.844	1,750	253	248
Transit	0.113	230	34	33
Bike	0.009	20	3	3
Walk	0.026	50	8	8
	Total Trips	**2,050**	**298**	**292**

Notes:
1. Based on *City of Oakland TIRG*, assuming the Project site is in a suburban environment located more than one mile from a BART station with fewer than 6,000 people per square mile.

Source: Fehr & Peers, 2023.

Table 2 summarizes the commute mode split for workers in the Project census tract (Tract 4090). Based on the Census data, about 82 percent of the workers in the project census tract drive alone and about 11 percent carpool to and from work.

Table 2: Journey to Work for Workers in Project Census Tract (Tract 4090)

Transportation Mode	Percent of Workers in Project Census Tract
Automobile	
Drove Alone	82%
Carpooled	11%
Subtotal	*93%*
Transit	
BART	2%
Bus	2%
Subtotal	*4%*
Bike	<1%
Walk	<1%
Other	3%
Total	**100%**

Source: U.S. Census Bureau, American Community Survey 2012-2016 Five-year estimates. Special Tabulation: Census Transportation Planning Products; Fehr & Peers, 2023.

Mandatory TDM Measures

This section describes the mandatory strategies that are part of the City's TIRG and that shall be directly implemented by the Project Applicant and building management. **Appendix A** lists the mandatory strategies and their applicability to the Project.

Table 3 lists the mandatory TDM strategies, and the effectiveness of each strategy primarily on reducing VTR based on the Alameda County Transportation Commission (CTC) VMT Reduction Calculator Tool,[1] which is a tool that accounts for the particular location of a development project and quantifies the effects of various strategies in reducing VMT based on research compiled in *Quantifying Greenhouse Gas Mitigation Measures* (California Air Pollution Control Officers Association (CAPCOA), December 2021). This report is a resource for local agencies to quantify the benefit, in terms of reduced travel demand, of implementing various TDM strategies.

[1] See https://www.alamedactc.org/planning/sb743-vmt/ for more information.

Table 3: Mandatory TDM Program Components

TDM Strategy	Description	Estimated Vehicle Trip Reduction[1]
A. Infrastructure Improvements	Various improvements	N/A[2]
B. Pre-Tax Commuter Benefit	Require tenants to provide employees with pre-tax commuter benefits up to $300 per month	1-2%
C. Subsidized or Discounted Transit Program	Require tenants to provide subsidized, discounted, or free transit passes for employees	2-3%[3]
D. Employee BART Shuttle	Provide a free shuttle between the Project Site and the Coliseum BART Station which would operate during weekday peak commute periods.	3-5%[4]
E. Limited Parking Supply	Provide fewer parking spaces than the estimated demand for the site	8-10%
F. Parking Management	Establish eligibility requirements for parking permits and/or charge for parking	
G. Parking Cash Out	Require tenants to provide cash value equivalent to the cost of a parking pass for employees that forgo a subsidized/free parking space	2-12%
H. Preferential Parking for Carpoolers	Provide preferential parking for eligible carpoolers.	0-2%
I. Carpooling and Ride-Matching Assistance	Assist employees in forming carpools.	
J. Bicycle Amenities and Monitoring	Provide bicycle parking above the minimum requirement, including showers, long-term bicycle storage and personal lockers, and monitor usage	0-1%
K. Remote Work Options	Where feasible, encourage tenants to provide employees the opportunity to work flexible schedules and telecommute.	5-7%[5]
L. Guaranteed Ride Home	Encourage employees to register for the Guaranteed Ride Home (GRH) program.	N/A[2]
M. TDM Coordinator	Designate a coordinator responsible for implementing and managing the TDM Plan	N/A[2]
N. TDM Marketing and Education	Provide active marketing of carpooling, BART, AC Transit, and other non-auto modes	1-4%
	Estimated Trip Reduction	**20-38%**

Notes
1. Generally based on the results of the Alameda CTC VMT Reduction Calculator Tool unless noted otherwise. Although the focus of the Tool is reductions to VMT, the research used to generate the reductions also indicates vehicle trip reductions are applicable as well. For the purposes of this analysis the VTR is assumed to equal the VMT reduction.
2. The effectiveness of this strategy cannot be quantified at this time. This does not necessarily imply that the strategy is ineffective. It only demonstrates that at the time of the CAPCOA report development, existing literature did not

provide a robust methodology for calculating its effectiveness. In addition, many strategies are complementary to each other and isolating their specific effectiveness may not be feasible.
3. This strategy assumes that all employees would receive a transit subsidy of $5.00 per weekday (value to employee).
4. Based on available ridership data for other employee-based shuttle services in the East Bay (The West Berkeley Shuttle and the Harbor Bay Shuttle in Alameda)
5. This strategy assumes that 50 percent of the office employees would telework one day a week.

Source: Fehr & Peers, 2023.

The TDM strategies include both one-time physical infrastructure improvements and on-going operational strategies. Physical improvements will be implemented as part of the Project and thus are anticipated to have a one-time capital cost. Some level of ongoing maintenance cost may also be required for certain measures. Operational strategies provide on-going incentives and support for the use of non-auto transportation modes. These TDM measures have monthly or annual costs and will require on-going management.

Operational TDM strategies are most effective for persons that commute to and from a site on a regular basis, especially during weekday peak commute periods when transit service peaks and is most conveniently available. Thus, the mandatory strategies in Table 3 are primarily targeted at the Project employees. Project visitors are not directly targeted because they would generally visit the site too infrequently to be aware of the TDM benefits or to make them cost-effective. However, some of the mandatory strategies, especially the ones that would improve the infrastructure, would also benefit the site visitors as well as visitors to the larger area surrounding the Project site.

A more detailed description of the TDM measures that comprise the mandatory TDM program is provided below:

A. *Infrastructure Improvements* – the following infrastructure improvements in the Project vicinity, which were identified in the site plan evaluation completed as part of the Project TIR, would improve the bicycling and walking facilities in the area and further encourage the use of these modes:

   Recommendation 1: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

   - Implement one of the following at Driveway B (the second driveway from the north) to be consistent with the City of Oakland Municipal Code Section 12.04.270:
     - Reduce the width of the driveway opening to 35 feet.

  - If a high volume of large trucks, such as WB-67, is expected, then coordinate with the City of Oakland Driveway Appeals Board to provide a wider driveway.
- Implement one of the following at Driveways C and/or D (the two south driveways) to reduce the potential for queues at Project access gates spilling back onto Oakport Street:
  - Redesign the Project to provide at least 75 feet of queuing space for at least one of the driveways.
  - Keep the access gates at the two driveways open during normal business hours

Recommendation 2: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Eliminate the proposed right-turn-lane on southbound Oakport Steet at the approach to Driveway B (second driveway from the north).
- Limit the outbound movement at Driveway D (southmost driveway) to right-turns only.
- Provide a left-turn lane on northbound Oakport Street at the approach to Driveway D (southmost driveway). If a left-turn lane cannot be accommodated, prohibit left-turns into the driveway and physically limit the driveway to right-turns in and out only.

Recommendation 3: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Ensure that the Project provides a minimum of 33 PEV-ready and an additional 33 PEV-capable parking spaces.

Recommendation 4: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Implement one of the following to accommodate passenger drop offs and pick-ups:
  - Provide a pull-out space on the west side of Oakport Street along the Project frontage to accommodate passenger loading and unloading.
  - Allow non-employee vehicles, such as rideshare vehicles, to enter the Project site to drop off and pick-up passenger.

Recommendation 5: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Eliminate the proposed Class 2 bicycle lanes on Oakport Street.
- At the Oakport Street/Zhone Way intersection, install a multi-use crossing treatment across the south approach of the intersection with a curb ramp with truncated domes on the east side consistent with the 66th Avenue BART to Bay Trail OBAG Project concept plan. Coordinate with City of Oakland staff to ensure this treatment is compatible with future plans for the Oakport Street/Zhone Way intersection.
- Pave the segment of the existing gravel path connecting the San Francisco Bay Trail and the proposed gate providing access to the Project site and sign and stripe this facility as a multi-use path. Install lighting along the multi-use path between the Project site and the Oakport Street/Zhone Way intersection.
- Install a curbless treatment or ramp with truncated domes or similar treatment at both ends of the marked path where it crosses the fire access lane so users have warning they are crossing a space shared by vehicles, bicycles, and pedestrians.

Recommendation 6: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Provide long-term bicycle parking for at least 16 bicycles in the office building (Building 3) and at least three bicycles in the warehouse building (Building 2) to meet the minimum amount of long-term bicycle parking required (19 spaces). Ensure that long-term bicycle parking in the office building as well as short-term bicycle parking is easily accessible from the entrance, main lobby, and the proposed path on the west side of the building.
- Provide at least four shower and 16 locker facilities in the office building (Building 3).
- Ensure that the required number of short-term bicycle parking spaces is provided and the required clearance dimensions are provided for the style of bicycle rack provided.

Recommendation 7: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Ensure that the sidewalk on the west side of Oakport Street has a minimum width of 5.5 feet (seven feet preferred)

- Provide high visibility crosswalk markings with directional curb ramps and truncated domes on both ends across each of the four Project driveways.

Recommendation 8: While not required to address a CEQA impact, and at the discretion of City of Oakland staff and in consultation with AC Transit, the following shall be considered as part of the final design for the Project:

- Consistent with the *66th Avenue BART to Bay Trail OBAG Project* concept plan, install a new southbound AC Transit Stop on the west side of Oakport Street just south of the Oakport Street/Zhone Way intersection.
- Install a temporary northbound/eastbound AC Transit stop on northbound Oakport Street approximately 350 feet south of the Oakport Street/Zhone Way intersection. The stop should be located adjacent to the existing pedestrian path between 66th Avenue and Oakport Street. The temporary stop can be removed when the Southbound I-880 On-ramp has been reconfigured by the *66th Avenue BART to Bay Trail OBAG Project* and the permanent bus stop has been installed on eastbound Zhone Way east of Oakport Street.
- Install shelters with benches and real-time arrival information at both bus stops.

Recommendation 9: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered prior to the Project occupancy:

- Conduct a speed study on Oakport Street to determine if the posted speed limit on Oakport Street along the Project frontage can be reduced. If justified, reduce the posted speed limit per the speed study.

Recommendation 10: While not required to address a CEQA impact, and at the discretion of City of Oakland staff, the following shall be considered as part of the final design for the Project:

- Install signage on southbound and northbound Oakport Street warning of the S-curve consistent with the *California Manual on Uniform Traffic Control Devices (CA MUTCD, 2014 Edition) Figure 2C-2. Example of Warning Signs for a Turn.*
- Install double-sided reflective chevron signs or similar devices through the S-curve per *CA MUTCD Figure 2C-2*.
- Install speed feedback signs in both directions of Oakport Street ahead of the S-curve.

B. *Pre-tax Commuter Benefits* – Require tenants to provide employees the option to enroll in the pre-tax commuter benefits program. This strategy allows employees to deduct monthly transit passes or other amount using up to $300 pre-tax dollars. This can help to lower payroll taxes and allows employees to save on transit.

C. *Subsidized or Discounted Transit Program* – Require tenants to provide free or reduced cost transit for employees to increase transit mode share. Options include:

- Offer a monthly commuter check (or alternatively Clipper Card, which is accepted by BART, AC Transit, and other major transit providers in the Bay Area) to employees to use public transit. Note that as of 2023, IRS allows up to $300 per employee per month.[2]
- Participate in AC Transit's EasyPass program, which enables institutions to purchase annual bus passes for their employees in bulk at a deep discount. The passes allow unlimited rides on all AC Transit buses for all participants. For more information, see https://www.actransit.org/easypass.

Based on the CAPCOA report, a transit fare subsidy of about $5.00 per employee per weekday (value to rider and not cost to employer) available to all employees would translate to an approximately two to three percent VTR.

D. *Employee BART Shuttle* – The Project would provide a free shuttle between the Project and the Coliseum BART station, which would also provide access to AC Transit and Amtrak). At a minimum, the shuttle would operate during the weekday peak commute periods (7:00 to 9:30 AM and 3:30 to 6:30 PM) with 20-minute headways.

E. *Limited Parking Supply* – Based on the parking demand analysis completed for the Project TIR, the Project is estimated to have a peak parking demand of 369 vehicles, exceeding the parking supply of 331 spaces provided on-site by about 10 percent. Since no on-street or other off-street parking is available in the Project vicinity, the proposed constrained parking supply would discourage some site employees from driving.

F. *Parking Management* – Since the Project would provide fewer on-site parking spaces than the expected peak demand and the Project parking facilities would be gated, it is expected that parking passes would be issued to site employees. Consider one or more of the following in determining which employees receive parking passes:

- Establish eligibility requirements to provide parking passes to only employees who demonstrate a need for a vehicle, such as disabled employees, employees not living within walking distance of public transit, employees with atypical

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[2] Department of the Treasury Internal Revenue Service, Publication 15-B (2023) Employer's Tax Guide to Fringe Benefits, (https://www.irs.gov/publications/p15b)

working hours, and/or employees who need vehicle for other needs such as drop off and pick-up of children.

- No free parking passes included in tenant leases.
- Charge employees for parking passes.

G. *Parking Cash Out* – If employees are provided with subsidized/free parking, require Project tenants to offer employees the choice of forgoing their subsidized/free parking for a cash payment equivalent to or greater than the cost of a parking pass.

H. *Preferential Parking for Carpoolers* – The Project would offer designated preferential carpool parking for eligible commuters. To be eligible for carpool parking, the carpool shall consist of two or more people. The Project shall monitor and provide adequate carpool spaces to meet and exceed potential demand.

I. *Carpooling and Ride-Matching Assistance* – Encourage tenants to provide personalized ride-matching assistance to pair employees interested in forming commute carpools. As an enhancement, consider using specific services such as ComoVee, or 511.org RideShare.

J. *Bicycle Amenities and Monitoring* –The Project would include long-term parking in a secure bicycle room, as well as showers and lockers, in the Project office building, and short-term parking in the form of bike racks adjacent to the warehouse and office buildings. The Project shall monitor the usage of these facilities and provide additional bicycle parking, if necessary.

K. *Guaranteed Ride home* – Encourage tenants and employees to register for the Guaranteed Ride Home (GRH) program. Employees may be hesitant to commute by any other means, besides driving alone, since they lose the flexibility of leaving work in case of an emergency. GRH programs encourage alternative modes of transportation by offering free rides home in the case of an illness or crisis, if the employee is required to work unscheduled overtime, if a carpool or vanpool is unexpectedly unavailable, or if a bicycle problem arises. The Alameda County Transportation Commission offers a GRH service for all registered permanent employees who are employed within Alameda County, live within 100 miles of their worksite, and do not drive alone to work. The GRH program is offered at no cost to the employer, and employers are not required to register for their employees to enroll and use the program.

L. *TDM Coordinator* – The Project shall designate a staff person as their TDM coordinator to coordinate, monitor and publicize TDM activities for the entire site. In addition, each tenant shall also designate a staff person as their TDM coordinator.

M. *TDM Marketing and Education* – Site management shall regularly provide employees information about transportation options. This information shall be provided as part of new employee orientations and would also be posted at central location(s) and be updated as necessary. This information shall include:

- *Transit Routes* – Promote the use of transit by providing user-focused maps. These maps provide employees with wayfinding to nearby transit stops and transit-accessible destinations and are particularly useful for those without access to portable mapping applications.
- *Real-time Transit Information System* – The Project should consider installing real-time transit information, such as TransitScreen, in a visible location, such as the office building lobby to provide employees and visitors with up-to-date transit arrival and departure times.
- *Transit Fare Discounts* – Provide information about local discounted fare options offered by BART and AC Transit, including discounts for youth, elderly, persons with disabilities, and Medicare cardholders.
- *Car Sharing* – Promote accessible car sharing programs, such as Zipcar, and Getaround by informing employees of nearby car sharing locations and applicable membership information.
- *Ridesharing* – Provide employees with phone numbers and contact information for ride sharing options including Uber, Lyft, and Oakland taxicab services.
- *Carpooling* – Provide employees with phone numbers and contact information for carpool matching services such as the Metropolitan Transportation Commission's 511 RideMatching.
- *Bicycle Routes* – Educate employees about nearby bicycle routes providing access to local and reginal destinations, such as the San Francisco Bay Trail located west of the Project site along the Oakland Estuary.
- *Bay Area Commuter Benefits Program* – Provide information on the Bay Area Commuter Benefits Program to all Project tenants. As of September 30, 2014, Bay Area employers with 50 or more full-time employees within the Bay Area Air Quality Management District (Air District) geographic boundaries are required to register and offer commuter benefits to their employees in order to comply with Air District Regulation 14, Rule 1, also known as the Bay Area Commuter Benefits Program. Employers must select one of four Commuter Benefit options to offer their employees: a pre-tax benefit, an employer-provided subsidy, employer-provided transit, or an alternative commute benefit.[3]

[3] Information about Commute Benefits Program is at 511.org/employers/commuter/overview

Additional TDM Measures

The project should consider the implementation of some or all of the following additional strategies to limit automobile use and encourage non-automotive travel. If the mandatory TDM strategies do not meet the required goals, the implementation of some or all these measures may become necessary.

N. *Employee Vanpool* – Provide a Project-sponsored vanpool service. Vanpooling is a flexible form of public transportation that provides groups of 5-15 people with a cost-effective and convenient rideshare option for commuting. Best practice is to subsidize the cost for employees that have a similar origin and destination and provide priority parking for employees that vanpool.

O. *Designated Parking Spaces for Car-Share* – Offer to designate at least two on-site parking spaces for car-sharing (such as Getaround, Zip Car, etc.) for free. Monitor the usage of the car sharing spaces and adjust if necessary. An additional strategy is to consider providing free/subsidized car-share membership to employees.

P. *Personalized Trip Planning* – Provide personalized trip planning in the form of in-person assistance or as a web tool, this provides employees with a customized menu of options for commuting. Trip planning reduces the barriers employees see to making a walk, bike, or transit trip to the site. Transit trip making tools, such as those available from Google or 511.org, could be promoted to inform employees of transit options to/from work. Providing a map of preferred walking and bicycling routes to destinations within the Project vicinity would be a proactive strategy to encourage those individuals to use alternatives to driving. An additional strategy is to conduct a survey or mapping exercise with employees and connect those who are traveling from similar origins. The Project can make a presentation to tenants and their employees upon request or at set times.

Monitoring, Evaluation, and Enforcement

Since the Project would generate more than 100 peak hour trips, this TDM program requires regular periodic evaluation of the program to determine if the program goals in reducing automobile trips are satisfied and to assess the effectiveness of the various strategies implemented. The Project shall submit an annual compliance report for the first five years following completion of the Project for review and approval by the City. The annual report shall document the following:

- Summary of implemented TDM measures and their effectiveness (e.g., bicycle parking occupancy, number of transit passes issued, etc.)
- Results of Project employee transportation survey to monitor the vehicle trip generation and mode share for Project employees
- Weekday AM and PM peak period and daily traffic volume counts at the Project driveways

If deemed necessary, the City may elect to have a peer review consultant, paid for by the Project, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the Project has failed to implement the TDM Plan, the Project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in the Project Conditions of Approval. The Project shall not be considered in violation of this Condition if the TDM Plan is fully implemented but the VTR goal is not achieved.

If in two successive years the project's TDM goals are not satisfied, Project shall implement additional TDM measures. If in five successive years the project is found to meet the stated TDM goal, additional surveys and monitoring shall be suspended until such a time as the City deems they are needed.

Please contact Sam Tabibnia (stabibnia@fehrnadpeers.com, 510.835.1943) with questions or comments.

Appendix A: Mandatory TDM Program Components

TDM Strategy	Required When	Required for Project?
Bus boarding bulbs or islands	• A bus boarding bulb or island does not already exist and a bus stop is located along the project frontage; and/or • A bus stop along the project frontage serves a route with 15 minutes or better peak hour service and has a shared bus-bike lane curb	No, no bus stop is currently located along the Project frontage.
Bus Shelter	• A stop with no shelter is located within the project frontage, or • The project is located within 0.10 miles of a flag stop with 25 or more boardings per day	No, no bus stop is currently located along the Project frontage or within 0.10 miles of the Project site.
Concrete Bus Pad	• A bus stop is located along the project frontage and a concrete bus pad does not already exist	No, no bus stop is currently located along the Project frontage.
Curb Extensions or bulb-outs	• Identified as an improvement within site analysis	No, the site analysis did not identify new curb extensions or bulb-outs.
Implementation of Corridor-Level Bikeway Improvement	• A buffered Class II or Class IV bikeway facility is in a local or county adopted plan within 0.10 miles of the project location; and • The project would generate 500 or more daily bicycle trips	No, the Project would not generate 500 or more daily bicycle trips.
Implementation of Corridor-Level Transit Capital Improvement	• A high quality transit facility is in a local or county adopted plan within 0.25 miles of the project location; and • The project would generate 400 or more peak period transit trips	No, the Project would not generate 400 or more peak period transit trips.
Installation of amenities such as lighting; pedestrian oriented green infrastructure, trees, or other greening landscape; and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.	• Always required	**Yes, the Project would provide a 5.5-foot sidewalk along the Project frontage on Oakport Street and connect to the Oakport Street/Zhone Way intersection and the Bay Trail west of the Project site (TIR Recommendation 5).**

TDM Strategy	Required When	Required for Project?
Installation of safety improvements identified in the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.)	• When improvements are identified in the Pedestrian Master Plan along project frontage or at an adjacent intersection	**Yes, the Project would make improvements at the Oakport Street/Zhone Way intersection consistent with the 66th Avenue BART to Bay Trail OBAG Project concept plan (TIR Recommendation 5).**
In-street bicycle corral	• A project includes more than 10,000 square feet of ground floor retail, is located along a Tier 1 bikeway, and • On-street vehicle parking is provided along the project frontages.	No, the Project does not include more than 10,000 square feet of ground floor retail.
Intersection improvements	• Identified as an improvement within site analysis	**Yes, the Project would improve the south crossing at the Oakport Street/Zhone Way intersection (TIR Recommendation 5).**
New sidewalk, curb ramps, curb and gutter meeting current City and ADA standards	• Always required	**Yes, the Project would provide a 5.5-foot sidewalk along the Project frontage on Oakport Street and connect to the Oakport Street/Zhone Way intersection (TIR Recommendation 7).**
No monthly permits and establish minimum price floor for public parking	• If proposed parking ratio exceeds 1:1000 sf (commercial)	**Yes, the Project would not provide monthly permits, nor would parking be accessible to the public.**
Parking garage is designed with retrofit capability	• Optional if proposed parking ratio exceeds 1:1.25 (residential) or 1:1000 sf (commercial)	No, the Project does not propose to build a parking garage.
Parking space reserved for car share	• A project is located within downtown. One car share space preserved for buildings between 50 – 200 units, then one car share space per 200 units.	No, the Project is not located in downtown and is not residential.
Paving, lane striping or restriping (vehicle and bicycle), and signs to midpoint of street section	• Typically required	**Yes, the Project would update the paving and striping along the Project frontage to the opposite edge of the roadway.**

TDM Strategy	Required When	Required for Project?
Pedestrian crossing improvements, pedestrian supportive signal changes	• Identified as an improvement within site analysis • Identified as an improvement within operations analysis	**Yes, the Project would improve pedestrian crossings across the four driveways along the Project frontage and provide an enhanced multi-use crossing treatment at the Oakport Street/Zhone Way intersection (TIR Recommendations 5 and 7).**
Real-time transit information system	• A project frontage block includes a bus stop or BART station and is along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better	**Yes, although there are no transit stops located along the Project frontage, the Project would include real-time transit information for the recommended new bus stops at the Oakport Street/ Zhone Way intersection (TIR Recommendation 8)**.
Relocating bus stops to far side	• A project is located within 0.10 mile of any active bus stop that is currently near-side	No, there are no transit stops located within 0.10 miles of the Project.
Signal upgrades	• Project size exceeds 100 residential units, 80,000 sf of retail, or 100,000 sf of commercial; and • Project frontage abuts an intersection with signal infrastructure older than 15 years	No, the only signal adjacent to the Project site is at the Oakport Street/Zhone Way intersection which would be upgraded by the City's *66th Avenue BART to Bay Trail OBAG Project*.
Transit queue jumps	• Identified as a needed improvement within operations analysis of a project with frontage along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better	No, not identified as a needed improvement.
Trenching and placement of conduit for providing traffic signal interconnect	• Project size exceeds 100 units, 80,000 sf of retail, or 100,000 sf of commercial; and • Project frontage block is identified for signal interconnect improvements as part of a planned ITS improvement; and • A major transit improvement is identified within operations analysis requiring traffic signal interconnect	No, not identified as a needed improvement.
Unbundled parking	• If proposed parking ratio exceeds 1:1.25 (residential)	No, the Project does not meet land use requirements.

Sources: City of Oakland Transportation Impact Review Guidelines, 2017; Fehr & Peers, 2023.