2432 CHESTNUT STREET RESIDENTIAL PROJECT
CEQA ANALYSIS

Prepared for:
City of Oakland
Bureau of Planning
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Oakland, CA 94612

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URBAN PLANNING
ENVIRONMENTAL ANALYSIS
YEARS 40

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Project Characteristics

1. Project Title:	2432 Chestnut Street Residential Project PLN #19-279
2. Lead Agency Name and Address:	City of Oakland Planning & Building Department 250 Frank H. Ogawa Plaza, Suite 2114 Oakland, CA 94612
3. Contact Person and Phone Number:	Jason Madani, Planner III 510.238.4790 jmadani@oaklandca.gov
4. Project Location:	2420 and 2432 Chestnut Street, and 2423 Linden Street Oakland, CA 94607 Assessor's Parcel Numbers 5-435-17, 5-435-18-01, and 5-435-5
5. Project Sponsor's Name and Address:	Riaz Capital attn.: Ms. Lisa Vilhuer, Vice President of Land Entitlement BBA Office/ Artthaus Studios 2744 E 11th Street, Oakland, CA 94601 (682) 257-3324 lvilhauer@riazinc.com
6. Existing General Plan Designation:	Mixed Housing Type Residential
7. Existing Zoning:	RM-2 / RM-4 Height Limit: 30 feet (RM-2) / 35 feet (RM-4)
8. Requested Permits:	Regular Design Review Conditional Use Permit for: a) more than 3 units per lot in RM-2 zone; b) Community Assembly Civic Activity use in RM-2 zone (the proposed community room; c) reduced interior side setback (to 3 feet); and d) increased building wall and roof peak height (to 30 and 35 feet, respectively in RM-2 zone)

Executive Summary

Riaz Capitol, as applicant, seeks approvals from the City of Oakland to construct 12 new residential dwelling units within 3 separate new townhouse buildings, plus a separate community room (Project). The site of the proposed Project includes three separate parcels at 2420 and 2432 Chestnut Street and the third parcel at 2423 Linden Street. Two existing one-story light industrial buildings and a two-story residential building currently occupy the Project site, and would be demolished to accommodate the proposed new townhomes. The three existing parcels would be merged into a single parcel.

The Project site is located within a mixed residential, commercial and industrial area of the McClymonds neighborhood of West Oakland. Adjacent land uses include the 3-story Linden Court townhomes immediately to the north, and one- and two-story single family homes fronting 24th Street to the south and fronting Linden Street to the east. Immediately across Chestnut Street to the west is the Vincent Academy, a K through 5 charter public school. McClymonds High School occupies approximately 3 city blocks north of the Project site on the northerly side of 26th Street. Mixed commercial and older industrial land uses are predominant along Adeline Street, one block to the west.

The Project site is located within the West Oakland Specific Plan planning area. Much of the focus of the West Oakland Specific Plan addresses development and redevelopment of vacant and/or underutilized commercial and industrial properties in strategic areas of West Oakland (identified as "Opportunity Areas and Sites"). The Project site is not an identified Opportunity Site and is not within one of the West Oakland Specific Plan's Opportunity Areas. However, the West Oakland Specific Plan also recognizes that large portions of West Oakland's residential areas are in need of preservation and/or enhancement of existing residential characteristics. The Project site is within the "Residential Areas" portion of the West Oakland Specific Plan, where the overall policy direction calls for enhancement through the preservation of historic resources, facilitating maintenance of homes by property owners, and the infill of vacant parcels with similarly-scaled and compatible housing. The West Oakland Specific Plan policies for Residential Areas specifically seek to:

- establish more identifiable borders between established residential neighborhoods and the industrial and intensive commercial business areas
- prevent new land use incompatibilities that might adversely affect existing neighborhoods, and
- restore neighborhoods at the residential/ industrial interface

The Project proposes redevelopment of a former industrial property that is located within an otherwise established residential neighborhood, thereby restoring the residential neighborhood at the residential/ commercial-industrial interface.

The effects of future growth and development within West Oakland, including infill residential development within the Residential Areas, was fully considered in the cumulative growth projections factored into the West Oakland Specific Plan EIR analysis.

This California Environmental Quality Act (CEQA) Analysis evaluates the potential environmental effects of the Project. Based on this analysis, the Project is eligible for CEQA streamlining and/or tiering provisions under CEQA Guidelines §15183, which provide for streamlined review when a project is consistent with a Community or General Plan (e.g., the West Oakland Specific Plan), for which the impacts of that Plan have been analyzed in a certified program Environmental Impact Report (EIR). The Project is also eligible for CEQA streamlining and/or tiering provisions under CEQA Guidelines §15183.3 for certain qualified infill projects by limiting the topics that are subject to review at the project level, provided the effects of infill development have been addressed in a planning level decision (e.g., in the West Oakland Specific Plan EIR), or by uniformly applied development policies or standards.

This CEQA analysis uses streamlining and/or tiering provisions under CEQA Guidelines §15183 and §15183.3 to tier from prior program-level EIR analysis completed in the City of Oakland. These prior program-level EIRs include the West Oakland Specific Plan EIR, the City's General Plan Land Use and Transportation Element (LUTE) EIR, the 2010 EIR for the 2007-2014 General Plan Housing Element, and the 2014 Housing Element EIR Addendum for the 2015-2023 Housing Element Update (collectively referred to as the Housing Element EIR), all collectively referred to as the "prior Program EIRs". [1,2,3 4] These prior Program EIRs specifically analyzed the environmental impacts associated with infill residential development pursuant to these planning-level documents, including the required implementation of uniformly applied development policies or standards (i.e., Standard Conditions of Approval, or SCAs).

[1] City of Oakland, West Oakland Specific Plan EIR, 2014

[2] City of Oakland, Oakland General Plan Land Use and Transportation Element (LUTE) EIR, 1998

[3] City of Oakland, Oakland General Plan 2007-2014 Housing Element EIR, 2010

[4] City of Oakland, 2015-2023 Housing Element EIR Addendum, 2014

Purpose of this CEQA Document

The purpose of this document is to provide required CEQA review for the proposed Project. As such, this document includes:

- a description of the proposed Project
- an assessment of whether the Project qualifies for CEQA streamlining pursuant to CEQA Guidelines Section 15183, as a project that is consistent with the development density established by existing zoning, community plan or general plan policies for which an EIR was certified
- an assessment of whether the Project qualifies for CEQA streamlining pursuant to CEQA Guidelines Section 15183.3 as qualified infill project, and
- an examination of whether there are Project-specific significant effects that are peculiar to the project or its site, and that would necessitate preparation of a subsequent or supplemental Environmental Impact Report

Applicable CEQA sections are described below, each of which separately and independently provide a basis for CEQA compliance.

Applicable CEQA Provisions

CEQA Guidelines Section 15183 - Project Consistent with a Community Plan

Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183 mandates 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. This streamlines the review of such projects and reduces the need to prepare repetitive environmental studies.

This provision of CEQA applies only to projects that are consistent with: a) a community plan adopted as part of a general plan, b) a zoning action which zoned or designated the parcel on which the project would be located to accommodate a particular density of development, or c) a general plan of a local agency; and an EIR was certified by the lead agency for the zoning action, the community plan, or the general plan." Section 15183(a) provides that, in approving a project meeting these requirements, "a public agency shall limit its examination of environmental effects to those 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,
- were 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 EIR was certified, are determined to have a more severe adverse impact than discussed in the prior EIR."

Section 15183(c) provides 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 additional EIR need not be prepared for the project solely on the basis of that impact." When reviewing the environmental effects of a project pursuant to these provisions, "an effect of the project on the environment shall not be considered peculiar to the project or the parcel . . . if uniformly applied development policies or standards have been previously adopted by the city, with a finding that the development policies or standards will substantially mitigate that environmental effect 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." These provisions further provide that if the City, "failed to make a finding as to whether such policies or standards would substantially mitigate the effects of future projects, the decision-making body of the city, prior to approving such a future project pursuant to this section, may hold a public hearing for the purpose of considering whether, as applied to the project, such standards or policies would substantially mitigate the effects of the project. Such a public hearing need only be held if the city decides to apply the standards or policies as permitted in this section.

Furthermore, Section 15183(j) provides that, "this section does not affect any requirement to analyze potentially significant off-site or cumulative impacts, if those impacts were not adequately discussed in the prior EIR. If a significant off-site or cumulative impact was adequately discussed in the prior EIR, then this section may be used as a basis for excluding further analysis of that off-site or cumulative impact.

Subsequent sections of this CEQA Analysis document provide substantial evidence to support a conclusion that the Project qualifies for streamlined review under CEQA Guidelines §15183, and that no effects of the Project on the environment are peculiar to the project or the parcel when uniformly applied development policies or standards (i.e., City of Oakland Standard Conditions of Approval – or SCAs) are applied to the Project. A complete list of uniformly applied development standards (or City SCAs) that are applicable to the Project can be found in **Appendix A**, as cited throughout the CEQA Checklist.

CEQA Guidelines Section 15183.3 - Qualified Infill Exemption

The purpose of Public Resources Code Section 21094.5 and CEQA Guidelines Section 15183.3 is to streamline the environmental review process for eligible infill projects by limiting the topics subject to review at the project level, where the effects of infill development have been addressed in a planning level decision or by uniformly applicable development policies. To be eligible for the streamlining procedures prescribed in this section, "an infill project must:

- be located in an urban area on a site that either has been previously developed or that adjoins existing qualified urban uses on at least seventy-five percent of the site's perimeter. For the purpose of this subdivision "adjoin" means the infill project is immediately adjacent to qualified urban uses, or is only separated from such uses by an improved public right-of-way
- satisfy the performance standards provided in Appendix M of the CEQA Guidelines, and
- be consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable community strategy or an alternative planning strategy [with certain exceptions]

Pursuant to these streamlining provisions, CEQA does not apply to the effects of an eligible infill project under two circumstances. First, if an effect was addressed as a significant effect in a prior EIR for a planning level decision, then (with some exceptions) that effect need not be analyzed again for an individual infill project, even when that effect was not reduced to a less than significant level in the prior EIR. Second, an effect need not be analyzed, even if it was not analyzed in a prior EIR or is more

significant than previously analyzed, if the lead agency makes a finding that uniformly applicable development policies or standards apply to the infill project, and would substantially mitigate that effect. Depending on the effects addressed in the prior EIR and the availability of uniformly applicable development policies or standards that apply to the eligible infill project, streamlining under this section will range from a complete exemption to an obligation to prepare a narrowed, project-specific environmental document.

Subsequent sections of this CEQA Analysis document provide substantial evidence to support a conclusion that the Project qualifies for streamlined review under CEQA Guidelines §15183.3. Specifically, **Appendix B** of this document demonstrates the Project's consistency with the Infill Performance Standards pursuant to CEQA Guidelines §15183.3 and CEQA Guidelines Appendix M criteria.

Reliance on Prior Program EIRs

The provisions of CEQA Guidelines Section 15183 and 15183.3 both require the Project to be consistent with a zoning action, a community plan, or the General Plan, and the EIR that was certified for those plans, policies or regulations. The City of Oakland has prepared several prior Program EIR that are applicable to the Project and its site, and that provided programmatic environmental review of infill development (such as the Project). These Program EIRs include the City of Oakland General Plan Land Use and Transportation Element (LUTE) EIR, the Housing Element EIR, and the West Oakland Specific Plan EIR.

Pursuant to CEQA Guidelines Section 15168, "a program EIR as 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."

Further, pursuant to CEQA Guidelines Section 15168(c), "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:

- 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 agency finds that pursuant to Section 15162, no subsequent EIR would be required, the 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.
- An 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 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 were within the scope of the program EIR.

The Program EIRs relied on for this analysis include the City of Oakland General Plan Land Use and Transportation Element (LUTE) EIR, the Housing Element EIR, and the West Oakland Specific Plan EIR. These prior Program EIRs are applicable to the Project and support the streamlining and/or tiering provisions under CEQA Section 15183 and 15183.3. This CEQA Analysis for the Project, as provided the following Checklist, evaluates the specific environmental effects of the Project in light of the analysis and conclusions addressed in these prior Program EIRs.

The following describes the Program EIRs that constitute the previous CEQA documents considered in this CEQA Analysis. Each of the following documents 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, Oakland, California, 94612, and on the City of Oakland Planning and Building Department website at: https://www.oaklandca.gov/resources/environmental-review-docs

Land Use and Transportation Element EIR

The City certified the EIR for its General Plan LUTE in 1998. The LUTE identifies policies to guide land use changes in the City and sets forth an action program to implement the land use policy through development controls and other strategies. The LUTE EIR is a Program EIR as defined under CEQA Guidelines §15168, §15183, and §15183.3. As such, subsequent activities under the LUTE are subject to requirements under each of these CEQA sections.

Applicable mitigation measures identified in the LUTE EIR are largely the same as those identified in the other Program EIRs prepared after the LUTE EIR, either as mitigation measures or newer City Standard Conditions of Approval (SCAs).

Environmental Effects Summary –LUTE EIR

The LUTE EIR and its Initial Study determined that development consistent with the LUTE would result in impacts that would be less than significant for the following topic: aesthetics (scenic resources, light and glare); air quality (clean air plan consistency, roadway emissions in downtown, energy use emissions, local/regional climate change); biological resources; cultural resources (historic context/settings, architectural compatibility); energy; geology and seismicity; hydrology and water quality; land use (conflicts in mixed use projects and near transit); noise (roadway noise downtown and citywide, multifamily near transportation/transit improvements); population and housing (exceeding household projections, housing displacement from industrial encroachment); public services (water demand, wastewater flows, stormwater quality, parks services); and transportation/circulation (transit demand). No impacts were identified for agricultural or forestry resources, and mineral resources.

The LUTE EIR (including its Initial Study Checklist) determined that development consistent with the LUTE would result in impacts that would be reduced to a level of less than significant with implementation of mitigation measures for the following topics: aesthetics (views, architectural compatibility and shadow only); air quality (construction dust [including PM_{10}] and emissions Downtown, odors); cultural resources (except as noted below as less than significant); hazards and hazardous materials; land use (use and density incompatibilities); noise (use and density incompatibilities, including from transit/transportation improvements); population and housing (induced growth, policy consistency/clean air plan); public services (except as noted below as significant); and transportation/circulation (intersection operations Downtown).

The LUTE EIR determined that development consistent with the LUTE would result in significant and unavoidable impacts for the following environmental topics:

- air quality (regional emissions, roadway emissions in the downtown, and inconsistency with the Clean Air Plan);
- noise (construction noise and vibration in downtown);
- public services (fire safety);
- transportation/circulation (roadway segment operations); and
- wind hazards

Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

Housing Element EIR

The City has twice amended its General Plan to adopt updates to its Housing Element. The City certified an EIR in 2010 for the 2007-2014 Housing Element, and adopted an EIR Addendum in December 2014 for the 2015-2023 Housing Element (collectively the Housing Element EIR). The 2015-2023 Housing Element identifies the City's current and projected housing needs, and sets goals, policies and programs to address those needs as specified by the state's Regional Housing Needs Allocation process. Although not identified as a Housing Opportunity Site in the 2015-2023 Housing Element, the Project would contribute to the total number of housing units in the City needed to meet its Regional Housing Needs Allocation target. Applicable mitigation measures and SCAs identified in the Housing Element EIR are considered in the analysis in this document. The Housing Element EIR is a Program EIR as defined under CEQA Guidelines §15183 and §15183.3. As such, subsequent activities under the 2015-2023 Housing Element that involve housing are subject to requirements under each of these CEQA sections.

Environmental Effects Summary –Housing Element EIR

The Housing Element EIR determined that housing developed pursuant to the Housing Element would result in less than significant impacts for the following topics: hazards and hazardous materials (emergency plans and risk via transport/disposal); hydrology and water quality (flooding/flood flows, and inundation by seiche, tsunami or mudflow); land use (except no impact regarding community division or conservation plans); population and housing (except no impact regarding growth inducement); public services and recreation (except as noted above, and no impact regarding new recreation facilities); and utilities and service systems (landfill, solid waste, and energy capacity only, and no impact regarding energy standards). No impacts were identified for agricultural or forestry resources, and mineral resources.

The Housing Element EIR also determined that housing developed pursuant to the Housing Element would result in impacts that would be reduced to a level of less than significant with the implementation of mitigation measures and/or SCAs for the following topics: aesthetics (visual character/quality and light/glare only); air quality (except as noted below); biological resources; cultural resources; geology and soils; greenhouse gas emissions; hazards and hazardous materials (except as noted below, and no impacts regarding airport/airstrip hazards and emergency routes); hydrology and water quality (except as noted below); noise; public services (police and fire only); and utilities and service systems (except as noted below).

The Housing Element EIR found significant and unavoidable impacts for the following environmental topics:

- air quality (toxic air contaminant exposure), and
- traffic delays

Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

West Oakland Specific Plan EIR

The City certified the EIR for the West Oakland Specific Plan in 2014. The West Oakland Specific Plan identifies policies to guide future development in West Oakland by providing a comprehensive and multi-faceted strategy for development and redevelopment of vacant and/or underutilized commercial and industrial properties in strategic areas of West Oakland (Opportunity Areas). The West Oakland Specific Plan establishes a land use and development framework, identifies needed transportation and infrastructure improvements, and recommends implementation strategies needed to develop these areas. Subsequent activities under the West Oakland Specific Plan are subject to environmental review requirements pursuant to the West Oakland Specific Plan EIR. The cumulative effects of future growth and development within West Oakland, including infill residential development within West Oakland's Residential Areas, were fully considered in the cumulative growth projections factored into the West Oakland Specific Plan EIR analysis.

Environmental Effects Summary –WOSP EIR

The West Oakland Specific Plan EIR (including its Initial Study Checklist) determined that development consistent with the West Oakland Specific Plan would result in less than significant impacts related to the following environmental considerations: aesthetics (scenic resources, shadow, lighting, wind), air quality (clean air plan consistency, carbon dioxide concentrations), biological resources (wetlands, riparian, habitat conservation plan conflicts, cumulative impacts), greenhouse gas (GHG) emissions (except as noted below), land use, geology (earthquake/fault rupture, landslides), hydrology and water quality (waste discharge, groundwater, floods, dam failure, seiche/tsunami), noise (traffic, airport noise), population and housing, public services, transportation/circulation (congestion management program, travel times, safety), utilities and service systems, and mineral resources (loss). No impacts were identified for agricultural or forestry resources.

The West Oakland Specific Plan EIR (including its Initial Study Checklist) determined that development consistent with the West Oakland Specific Plan would result in potentially significant impacts that would be reduced to a less than significant level with the implementation of identified mitigation measures and/or SCAs for the following environmental topics: aesthetics (light and glare), air quality (construction dust), biological resources (special status species, movement and breeding, local policy conflicts), cultural resources, geology (seismic shaking, erosion, unstable/expansive soil), hazards and hazardous materials, hydrology and water quality (construction water quality and runoff), noise (construction and operational, vibration), and transportation/circulation (construction period).

Significant unavoidable impacts were identified for the following environmental topics in the WOSP EIR:

- air quality (odors, construction and operational criteria pollutant emissions, operational and exposure to toxic air emissions)
- GHG emissions (new stationary sources of GHG emissions, individual development projects), and
- transportation/circulation (existing plus project, cumulative plus project level of service effects at intersections).

Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

Standard Conditions of Approval

The City of Oakland established its Standard Conditions of Approval and Uniformly Applied Development Standards (SCAs) in 2008, and they have been amended and revised several times since then.[5] The City's SCAs are incorporated into 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 (such as the Oakland Planning and Municipal Codes, Oakland Creek Protection Ordinance, Stormwater Water Management and Discharge Control Ordinance, Oakland Protected Trees Ordinance, Oakland Grading Regulations, National Pollutant Discharge Elimination System [NPDES] permit requirements, Housing Element-related mitigation measures, California Building Code and Uniform Fire Code, among others), which have been found to substantially mitigate environmental effects. The SCAs are adopted as requirements of an individual project when it is approved by the City, and are designed to, and will substantially mitigate environmental effects.

Consistent with the requirements of CEQA, this Analysis determines whether the Project would have a significant impact was made prior to the approval of the Project and, where applicable, SCAs and/or mitigation measures in the Prior EIR has been identified to mitigate those impacts. In some instances, exactly how the measures/conditions identified will be achieved awaits completion of future studies, an approach that is legally permissible where measures/conditions are known to be feasible for the impact identified; where subsequent compliance with identified federal, state, or local regulations or requirements apply; where specific performance criteria are specified and required; and where the Project commits to developing measures that comply with the requirements and criteria identified.

SCAs that would apply to the Project are listed in Appendix A to this document, which is incorporated by reference into this CEQA Analysis. Because the SCAs are mandatory City requirements, the impact analysis for the Project assumes that they will be imposed and implemented, which the Project applicant has agreed to do, or to ensure that they are implemented as part of the Project. If this CEQA Checklist or its attachments inaccurately identifies or fails to list an applicable mitigation measure or SCA, that mitigation measure or SCA remains applicable to the Project.

[5] The most recent set of SCAs was published by the City of Oakland on November 5, 2018, as Revised December 16, 2020 to add new GHG-related SCAs

Project Description

This section describes the proposed 2432 Chestnut Street project (Project) evaluated in this CEQA Analysis, and includes a description of the project site, existing site conditions, the proposed development, and the required Project approvals.

Project Location and Surrounding Land Uses

The Project site is located within a mixed residential and industrial area of the McClymonds neighborhood of West Oakland (see **Figure 1**). Adjacent land uses include the 3-story Linden Court townhomes immediately to the north, and one- and two-story single family homes fronting 24th Street to the south and fronting Linden Street to the east. Immediately across Chestnut Street to the west is the Vincent Academy, a K through 5 charter public school. McClymonds High School occupies approximately 3 city blocks north of the Project site, on the northerly side of 26th Street. A mix of residential, commercial and older industrial land uses are predominant along Adeline Street, one block to the west.

Regional access is provided by I-980, I-580, and SR 24. Alameda–Contra Costa Transit (AC Transit) bus routes within 0.25 mile of the Project site include Routes 26 along Adeline Street, Route 88 along Market Street (4 blocks to the east) and Route NL along West Grand Avenue (1 ½ blocks to the south). The nearest bus stops for the Route 88 lines are at 24th/ Adeline and 26th/ Adeline, both less than a 700-foot walking distance to the Project site. The 19th Street BART Station lies approximately 1 mile to the southeast of the Project site, or approximately 1.3 mile walking distance along West Grand Avenue to Telegraph/Broadway.

Project Site

The Project site consists of three parcels, identified by Alameda County Assessor Parcel Number (APN) 5-435-18-1 located at 2432 Chestnut Street, APN 5-436-17 located at 2420 Chestnut Street, and APN 5-436-5 located at 2423 Liden Street (see **Figure 2**). Together, these three parcels aggregate to approximately 24,882 square feet (or 0.57 acres).

Individual Properties

2432 Chestnut Street

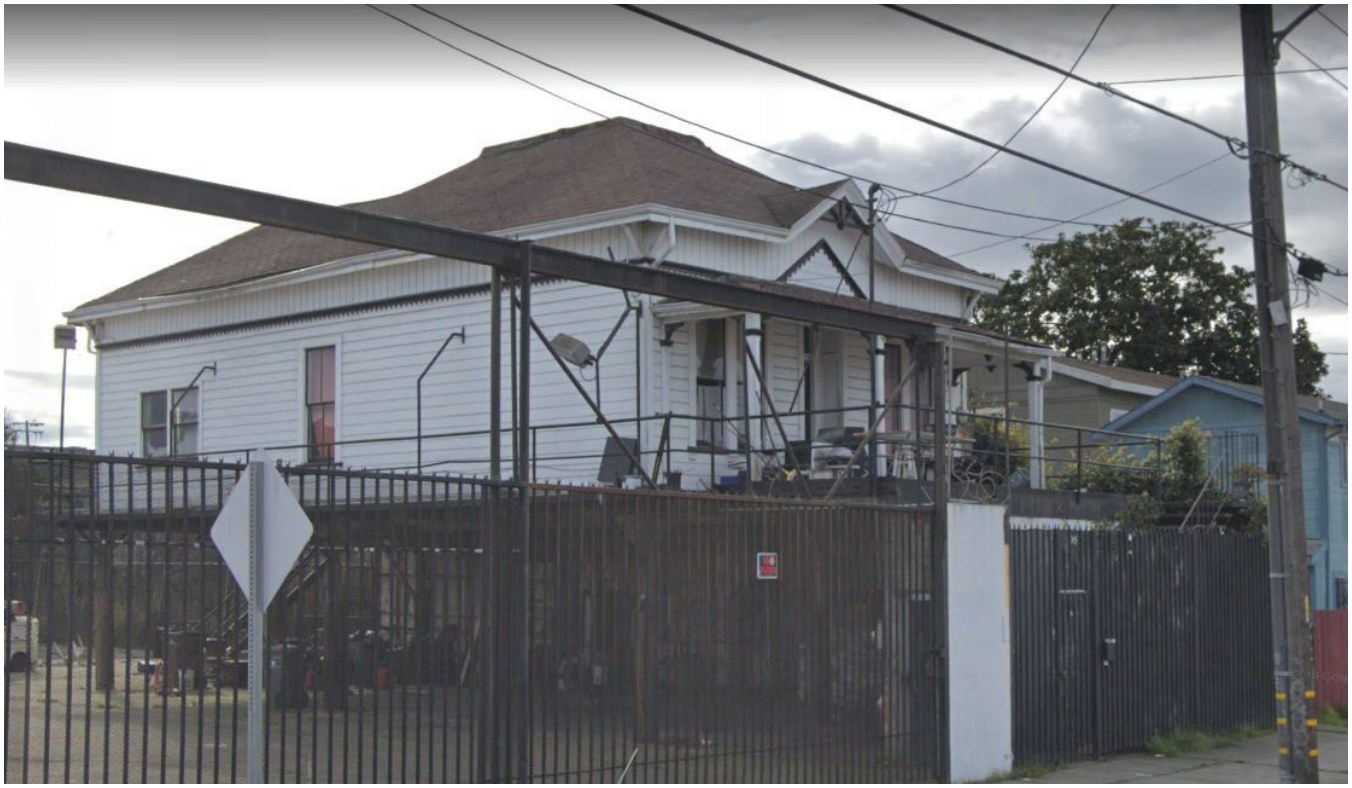
The largest parcel within the Project site is at 2432 Chestnut Street (identified as APN 5-435-18-1). This parcel is currently developed with two industrial buildings. The main building is an industrial, L-shaped building with a loft, located along the northwestern portion of the Project site, and with the main entrance located along the west (Chestnut Street) side of the building (see **Figure 3**). Additional doors and roll-up doors are located along the west side and east sides of the building. The building is segregated into an office area, warehouse area, auto maintenance area, and two separate lofts. Dalzell is the most recent commercial/industrial operator at this building, operating there between 1974 and 2017. Their operations included fabricating steel structures, acoustical silencers and mechanical plumbing devices. Prior to Dalzell's occupancy, historic operations included a cabinet shop, plaster storage, irrigation supply company and elevator company. An auto maintenance area is located along the northeast side of the building. This building is currently vacant. A separate warehouse with a parking canopy is also located at 2432 Chestnut Street, along the northeastern portion of the site. This warehouse building consists of a large open area with an overhead crane. The center of this parcel is an open parking area.

Figure 1
Project Location, within West Oakland Specific Plan

Source: City of Oakland, FInal West Oakland Specific Plan, 2014

Figure 2
Project Site

Former Dalzell Industrial Building at 2432 Chestnut Street



Existing Residence at 2420 Chestnut Street

Figure 3
Existing Buildings on Project Site

2420 Chestnut Street

The parcel at 2420 Chestnut Street (identified as APN 5-436-17) has a one-story residential dwelling, raised off the ground on a pier foundation (see also Figure 3). The house is currently unoccupied. The main entrance is located on the west (Chestnut Street) side of the building and accessible by an outdoor staircase.

This house is an intact example of a Victorian-era residence, was constructed at this West Oakland location circa 1887/1888, and as such is considered a Potential Designated Historic Property (PDHP). A more detailed description and analysis of the historic character of this building is addressed in the Historic Resources portion of the following CEQA Checklist.

2423 Linden Street

The parcel at 2423 Linden Street (identified as APN 5-436-5) is currently an undeveloped lot with asphalt covering. This narrow asphalt-covered lot provided a second entrance for the former industrial uses at the 2432 Chestnut Street parcel, serving as an alleyway connecting to Linden Street.

Overall Site Characteristics

The Project site is currently fenced at both the Chestnut Street and Linden Street entrances. On-site vegetation is limited to a grassy easement along Chestnut Street in front of the residence, as well as landscape screening along the southern wall of the residence at 2420 Chestnut. There are no street trees along the site's frontage on either Chestnut Street or along its short frontage on Linden Street.

The entire Project site is covered by impervious surfaces, either building rooftops, concrete or asphalt paving, including the rear yard of the residential parcel at 2420 Chestnut. There is no pervious surface within the site.

The entire Project site is listed on the State Water Resources Control Board GeoTracker website as an "Open Case under Assessment & Interim Remedial Action as of 4/17/2020".[6] The Alameda County Department of Environmental Health (ACDEH) is conducting regulatory oversight for the investigation and cleanup of the site to facilitate redevelopment with residential housing.[7] In April of 2020, ACDEH issued a directive letter conditionally approving implementation of proposed corrective actions and site redevelopment as presented in a Corrective Action Plan (CAP) and Corrective Action Implementation Plan (CAIP) for the site, as more fully discussed in the Hazards section of the following CEQA Checklist.

General Plan and Zoning Designations

General Plan Designation

The Oakland General Plan Land Use Diagram designates the Project site as Mixed Housing Type Residential (see **Figure 4**). The intent of the Mixed Housing Type Residential classification is to create, maintain and enhance residential areas typically located near the City's major arterials, and characterized by a mix of single-family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate. The West Oakland Specific Plan retained this General Plan land use designation for the site and the surrounding neighborhood.

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6 Accessed on 10-16-20 at: https://geotracker.waterboards.ca.gov/profile_report?global_id=T10000013059

7 ACDEH - Site Cleanup Program Case No. RO003369

General Plan Land Use Designations

Existing Zoning Districts

Figure 4
General Plan Land USe Designations and Zoning

Zoning

Zoning of the Project is split between two zoning districts, divided within the 2432 Chestnut parcel (see also Figure 4). The northern portion of 2432 Chestnut parcel is zoned as Mixed Housing Type Residential-4 (RM-4), and the remainder of this parcel, as well as the 2420 Chestnut and the 2423 Liden parcel are zoned as Mixed Housing Type Residential-2 (RM-2). The intent of the RM-2 Zone is to create, maintain and enhance residential areas characterized by a mix of single-family homes, duplexes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate. The RM-4 zoning is similar, with an emphasis on residential areas typically located on or near the City's major arterials, and at higher densities than RM-2. The RM-2 zone allows 1 unit per 2,500 square feet of lot area, whereas the RM-4 zone allows 1 unit per 1,100 square feet of lot area.

Proposed Project

The Project proposes demolition and removal of all existing structures prior to redevelopment, and merging the three individual parcels to form one larger parcel.

As shown on the Project site plan (**Figure 5)**, the Project would redevelop the site with three new multi-family residential buildings and a community room. Building 1 would contain 3 dwelling units, the larger Building 2 would contain 6 dwelling units and Building 3 would contain 3 dwelling units for a total of 12 residential dwelling units. Each of the buildings would have a 20-foot setback from Chestnut Street. The residential buildings would occupy the existing parcels at 2432 and 2420 Chestnut. Each building would be 3 stories high, with a maximum height of 35-feet at the roof peak (see **Figure 6**). The narrow parcel at 2423 Liden Street would be redeveloped as 1,750 square-foot community room including a common gathering area, a community kitchen and maintenance/storage space. The Community Room would be a 1-story building with a maximum height of approximately 19-feet at the roof peak, with an accessory storage/maintenance space that would be a maximum of 15-feet high at the roof peak (see **Figure 7**).

The Project would provide 12 off-street parking spaces (1 per unit, and one of which would be ADA accessible) at the southeast portion of the site, and 6 long-term and 12 short-term bike parking spaces at the northeast portion of the site. The Project would include approximately 3,300 square feet of landscaped open space including tree planters, planter boxes and courtyards between each building. Each of the buildings would be constructed as wood-frame structures and would be sprinklered.

The Project would replace the existing sidewalks along Chestnut Street, and pedestrian access to the residences and parking area would be provided from Chestnut Street and via gated entries. There would be no direct pedestrian access from Linden Street. Residents would have access from the courtyard and parking area to the community room to be developed on the eastern parcel. Access to the community room would also be provided from Linden Street with one vehicle parking space at the storage entry. Vehicular access to the site would be provided via the full-access drive aisle from Chestnut Street to the uncovered surface parking area. The Project would also provide 3 long-term bicycle parking spaces and 1 short-term parking space.

The Project would add a mix of trees, shrubs, and ground cover along Chestnut Street, with additional landscaping in the interior courtyard/open space areas and parking area. Landscaping would also be installed along the Project perimeter with perimeter fencing, as detailed in the landscape plan (**Figure 8**). The drive aisle, pedestrian pathways, courtyard area, and parking spaces would be paved with permeable pavers. Concrete paving would be used for the parking area, accessible parking, bicycle parking, trash enclosure and pedestrian access to the community room. **Table 1** provides a summary of the proposed Project.

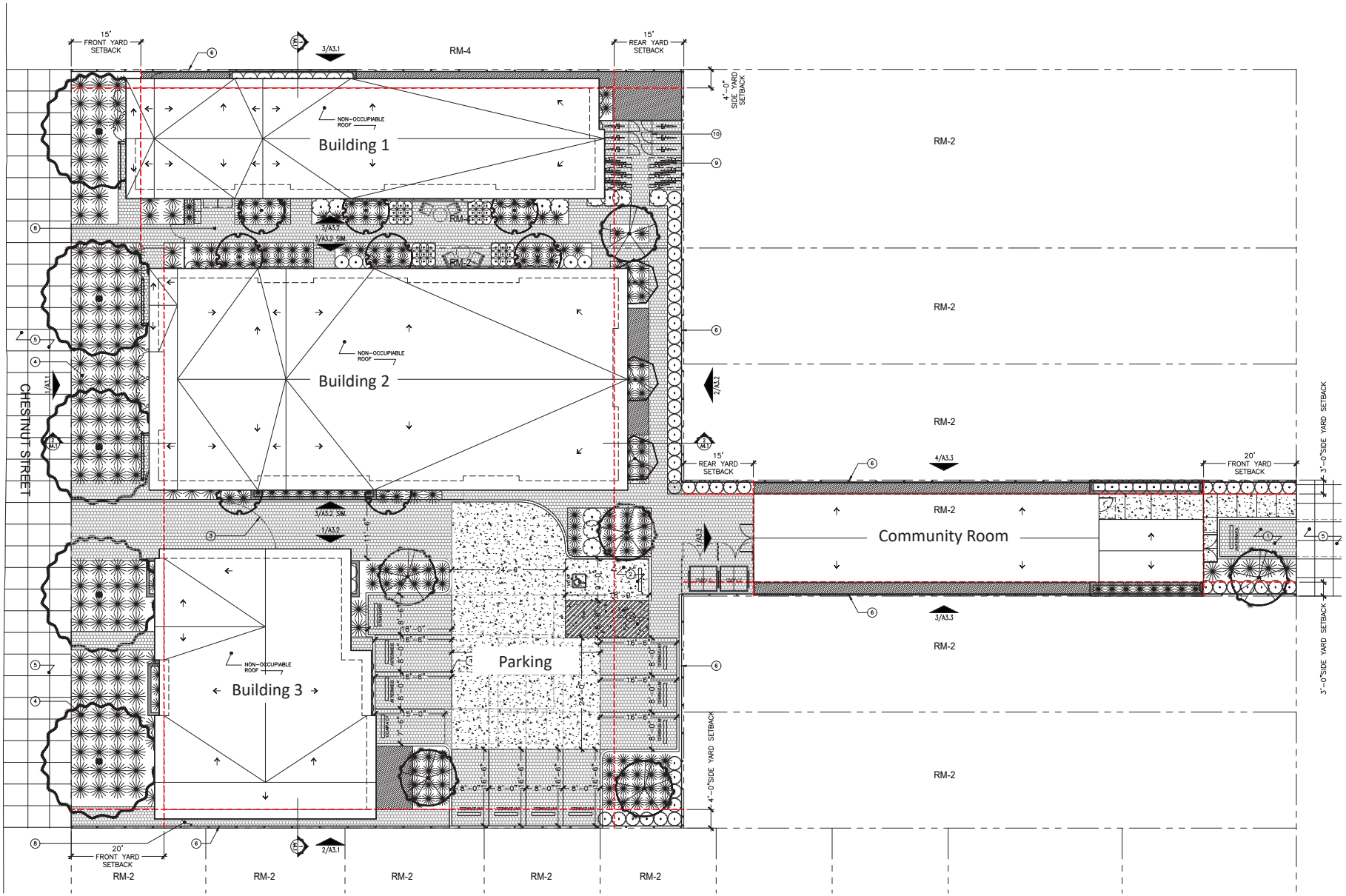
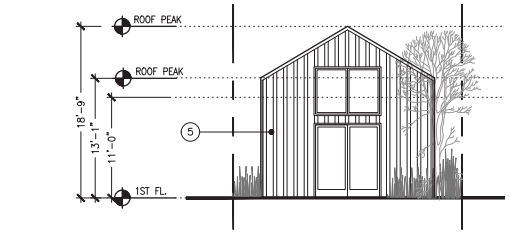


Figure 5
Project Site Plan

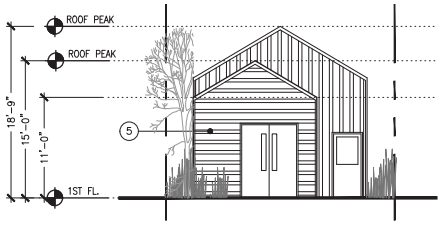
Source: Luk & Associates, April 2020

Figure 6
Residential Buildings - Elevation Drawings

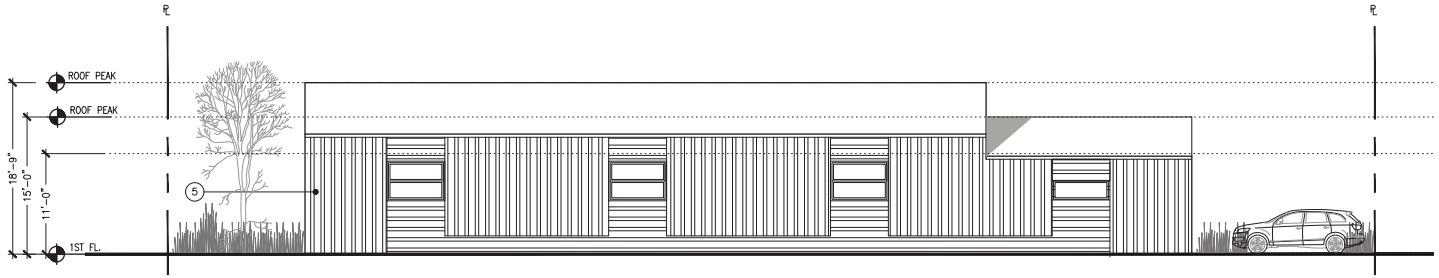
Source: Levy Design Partners, August 2020



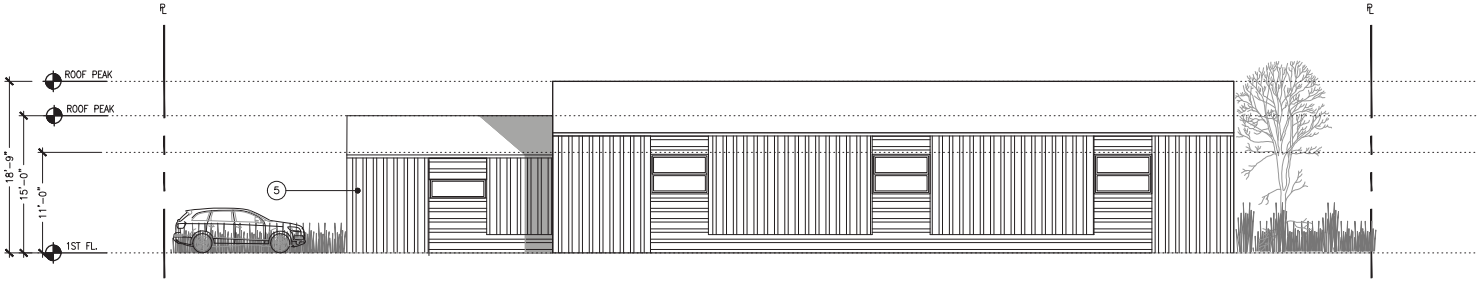
REAR ELEVATION (WEST ELEVATION)
1/8"=1'-0"



LINDEN STREET ELEVATION (EAST ELEVATION)
1/8"=1'-0"



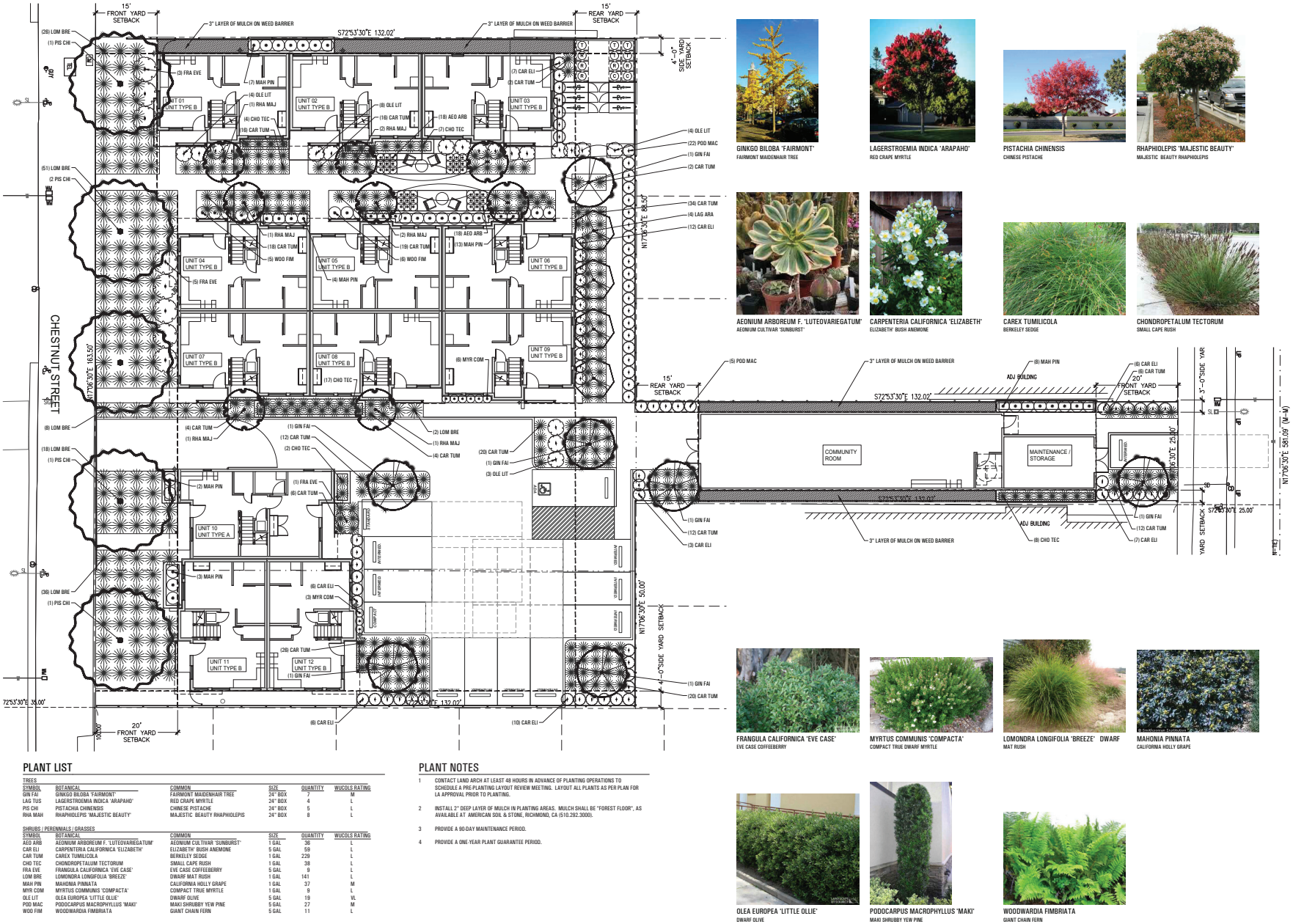
NORTH ELEVATION
1/8"=1'-0"



SOUTH ELEVATION
1/8"=1'-0"

Figure 7
Community Room - Elevation Drawings

Source: Levy Design Partners, August 2020



GINKGO BILOBA 'FAIRMONT'
FAIRMONT MAIDENHAIR TREE

LAGERSTROEMIA INDICA 'ARAPAHO'
RED CRAPE MYRTLE

PISTACHIA CHINENSIS
CHINESE PISTACHE

RHAPHIOLEPIS 'MAJESTIC BEAUTY'
MAJESTIC BEAUTY RHAPHIOLEPIS

AEONIUM ARBOREUM F. 'LUTEOVARIEGATUM'
AEONIUM CULTIVAR 'SUNBURST'

CARPENTERIA CALIFORNICA 'ELIZABETH'
ELIZABETH' BUSH ANEMONE

CAREX TUMILICOLA
BERKELEY SEDGE

CHONDROPETALUM TECTORUM
SMALL CAPE RUSH

FRANGULA CALIFORNICA 'EVE CASE'
EVE CASE COFFEEBERRY

MYRTUS COMMUNIS 'COMPACTA'
COMPACT TRUE DWARF MYRTLE

LOMONDRA LONGIFOLIA 'BREEZE' DWARF
MAT RUSH

MAHONIA PINNATA
CALIFORNIA HOLLY GRAPE

OLEA EUROPEA 'LITTLE OLLIE'
DWARF OLIVE

PODOCARPUS MACROPHYLLUS 'MAKI'
MAKI SHRUBBY YEW PINE

WOODWARDIA FIMBRIATA
GIANT CHAIN FERN

PLANT LIST

TREES

SYMBOL	BOTANICAL	COMMON	SIZE	QUANTITY	WUCOLS RATING
GIN FAI	GINKGO BILOBA 'FAIRMONT'	FAIRMONT MAIDENHAIR TREE	24" BOX	7	M
LAG TUS	LAGERSTROEMIA INDICA 'ARAPAHO'	RED CRAPE MYRTLE	24" BOX	4	L
PIS CHI	PISTACHIA CHINENSIS	CHINESE PISTACHE	24" BOX	5	L
RHA MAH	RHAPHIOLEPIS 'MAJESTIC BEAUTY'	MAJESTIC BEAUTY RHAPHIOLEPIS	24" BOX	8	L

SHRUBS / PERENNIALS / GRASSES

SYMBOL	BOTANICAL	COMMON	SIZE	QUANTITY	WUCOLS RATING
AEO ARB	AEONIUM ARBOREUM F. 'LUTEOVARIEGATUM'	AEONIUM CULTIVAR 'SUNBURST'	1 GAL	36	L
CAR ELI	CARPENTERIA CALIFORNICA 'ELIZABETH'	ELIZABETH' BUSH ANEMONE	5 GAL	59	L
CAR TUM	CAREX TUMILICOLA	BERKELEY SEDGE	1 GAL	229	L
CHO TEC	CHONDROPETALUM TECTORUM	SMALL CAPE RUSH	1 GAL	38	L
FRA EVE	FRANGULA CALIFORNICA 'EVE CASE'	EVE CASE COFFEEBERRY	5 GAL	9	L
LOM BRE	LOMONDRA LONGIFOLIA 'BREEZE'	DWARF MAT RUSH	1 GAL	141	L
MAH PIN	MAHONIA PINNATA	CALIFORNIA HOLLY GRAPE	1 GAL	37	M
MYR COM	MYRTUS COMMUNIS 'COMPACTA'	COMPACT TRUE MYRTLE	1 GAL	9	L
OLE LIT	OLEA EUROPEA 'LITTLE OLLIE'	DWARF OLIVE	5 GAL	19	VL
POD MAC	PODOCARPUS MACROPHYLLUS 'MAKI'	MAKI SHRUBBY YEW PINE	5 GAL	27	M
WOO FIM	WOODWARDIA FIMBRIATA	GIANT CHAIN FERN	5 GAL	11	L

PLANT NOTES

1. CONTACT LAND ARCH AT LEAST 48 HOURS IN ADVANCE OF PLANTING OPERATIONS TO SCHEDULE A PRE-PLANTING LAYOUT REVIEW MEETING. LAYOUT ALL PLANTS AS PER PLAN FOR LA APPROVAL PRIOR TO PLANTING.
2. INSTALL 2" DEEP LAYER OF MULCH IN PLANTING AREAS. MULCH SHALL BE "FOREST FLOOR", AS AVAILABLE AT AMERICAN SOIL & STONE, RICHMOND, CA (510.292.3000).
3. PROVIDE A 90-DAY MAINTENANCE PERIOD.
4. PROVIDE A ONE-YEAR PLANT GUARANTEE PERIOD.

Figure 8
Project Landscape Plan

Source: Chris Ford Landscape Architect, April 2020

Table 1. Project Development Summary					
Description	**Building 1 (Residential)**	**Building 2 (Residential)**	**Building 3 (Residential)**	**Building 4 (Community Room)**	**Project Total**
Lot Area	–	–	–	–	24,882 sf (0.57acre)
Building Area	6,105 sf	12,225 sf	6,495 sf	1,715 sf	26,540 sf (FAR = 1.1)
Building Height (max)	35 feet	35 feet	35 feet	18 feet, 9”	35 feet maximum
Number of Stories	3	3	3	1	3
Dwelling Units	3	6	3	–	12
Common Open Space	–	–	–	–	3,300 sf
Vehicle Parking Spaces	–	–	–	–	12

Each dwelling unit would be similar in size, at approximately 1,700 square feet, with the exception of Unit 10, which would be approximately 2,100 square feet in size. Each unit would be three stories tall, and contain 4 bedrooms. The ground floor of each unit would include a living room, kitchen/dining area, a bathroom and a smaller common space. The second and third floor would be similar, with two bedrooms on each floor, and each bedroom with a separate bath (see floor plans in **Figure 9**).

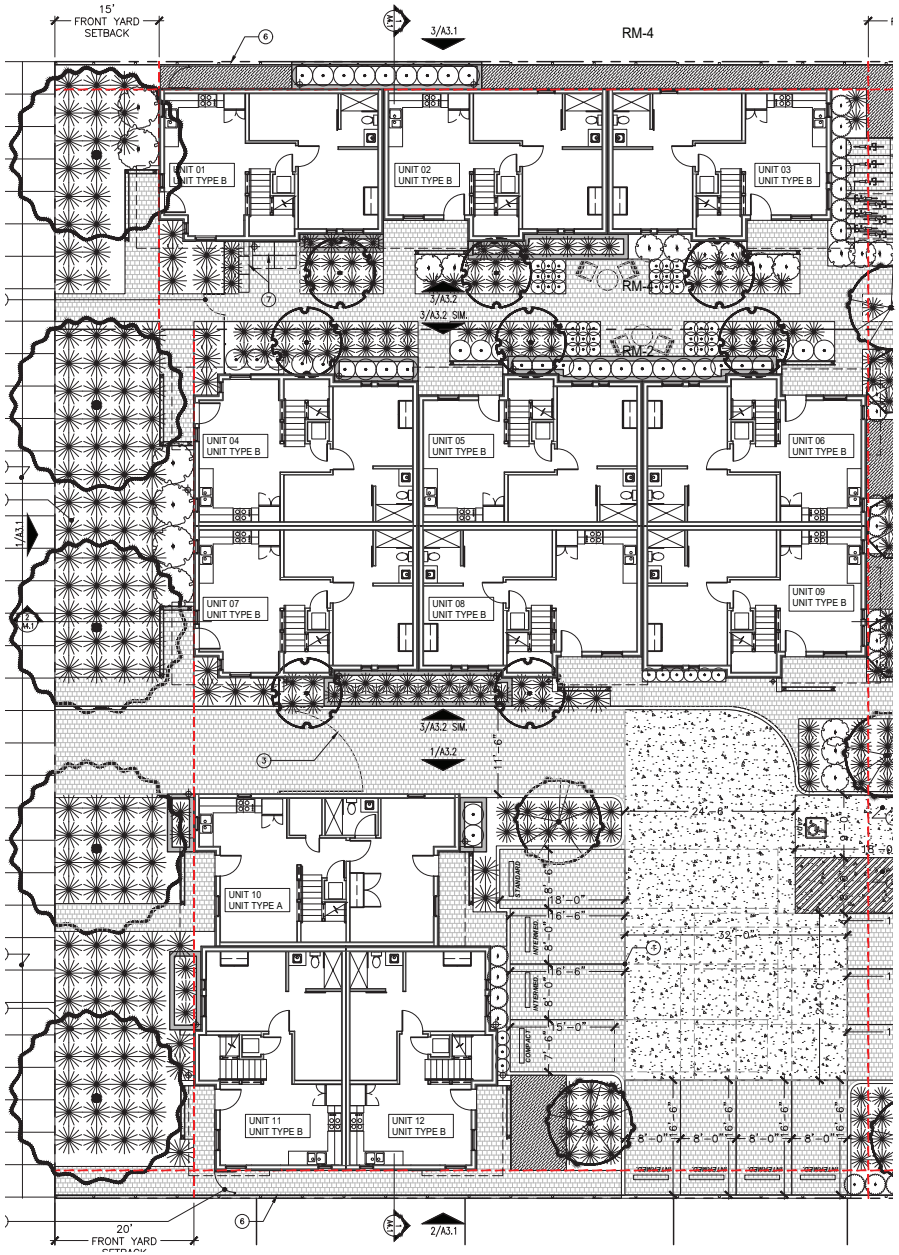
Site Preparation

As further documented in the Hazards section of the following CEQA Checklist, the Project will be required to implement corrective actions pursuant to an ACDEH-approved Corrective Action Plan and Corrective Action Implementation Plan. These corrective actions will include excavation of soil in five on-site areas where elevated concentrations of volatile organic compounds have been detected; excavation of lead-impacted soil in areas proposed for utility trenches and landscaped areas (or consolidation and capping of former utility services on-site beneath proposed foundations and hardscape areas); removal of subsurface infrastructure in suspected source areas; and removal of a limited volume of groundwater in select excavation pits.

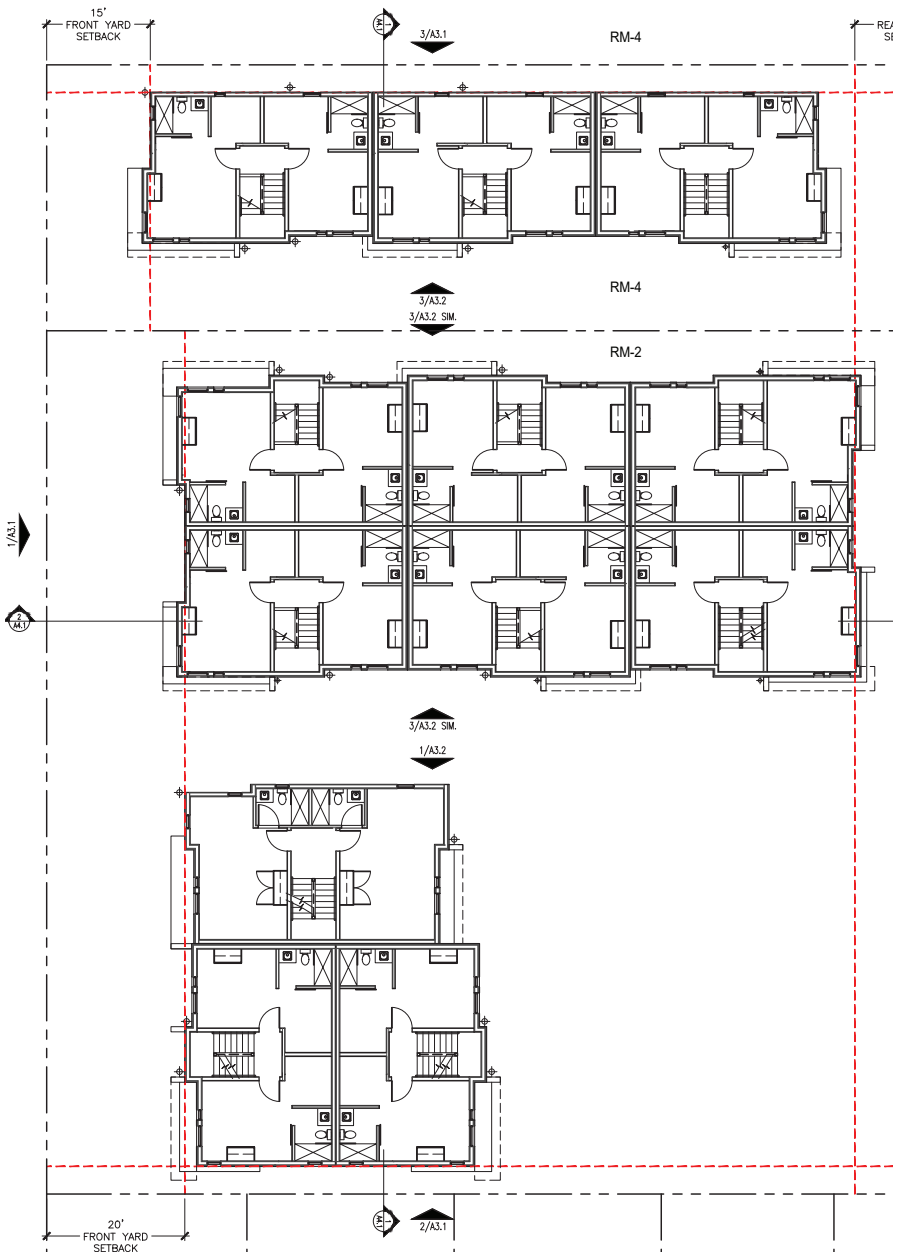
Other than these corrective actions, no other substantial grading or excavation is anticipated, as the new buildings are all designed as slab-on-grade foundations. During construction of these foundations, vapor mitigation engineering controls will be installed to control potential vapor intrusion to indoor air of the proposed residential structures and migration along new utility corridors.

Utilities and Stormwater Control

The Project includes other associated improvements such as storm drain and utility connections. On-site utilities would include gas, electricity, domestic water, wastewater, and storm drainage, all connected to existing mains within the public right-of-way. All on-site utilities would be designed and constructed in accordance with applicable codes and current engineering practices. The Project would also incorporate green building features such as energy-efficient lighting, and would be GreenPoint rated in compliance with the City’s Green Building Ordinance.



Ground Floor Plan



Levels 2 and 3 Floor Plans

Figure 9
Building Floor Plans

Source: Levy Design Partners, August 2020

Stormwater runoff from the site will be managed pursuant to the Project's Preliminary Stormwater Control Plan (see further discussion in the Hydrology section of the following CEQA Checklist) to provide for source control measures to limit pollutants (i.e., stenciling all storm drain inlets with "No Dumping – Drains to Bay", covering all trash areas and outdoor equipment and materials storage areas, and efficient irrigation and sustainable landscape practices); low-impact site design measures (i.e., pervious self-treating and self-retaining areas that include pervious pavers, and directing runoff to vegetated areas); and water quality treatment filtration with flow-through planters sized to accommodate flows from impervious areas (sizing based on the Alameda Countywide Clean Water Program's C-3 Stormwater Treatment Guidance).

Construction

The Project is currently in the design phase of development and no details are available regarding the construction schedule and activities. For the purpose of this analysis, however, the following is assumed. On-site construction work is expected to span approximately 18 months and include demolition, limited excavations for the foundation, footings, and utility services; grading and surface preparation; utility connections; and building construction. The first two months of construction activities would consist of demolition, grading, and site preparation. The remainder of the construction period would consist of installing utilities, building construction, site paving, and implementing the landscape plan.

Typical equipment used during construction may include an excavator, backhoe, trencher, forklift, grade-all, and paving equipment. Staging would occur as much as possible within the Project site. Street frontages and parking lanes are restricted, but these areas will need to be used at times for deliveries and removals of materials and equipment, subject to City review and approvals.

Project Approvals

The Project requires the following discretionary actions or approvals, including without limitation:

Actions by the City of Oakland

- Parcel Map Waiver to merge the three existing lots into one lot
- Conditional Use Permit for construction of 3 or more units in the RM-2 Zone
- Conditional Use Permit to increase the maximum pitched roof height in the RM-2 zone to thirty-five (35) feet, and the maximum wall height to thirty (30) feet, and to reduce certain side-yard interior setbacks to 3 feet in the RM-2 zone
- Regular Design Review for new building construction
- Encroachment permits for work within and close to public rights-of-way (Chapter 12.08 of the Oakland Municipal Code)
- Demolition, grading, and building permits

Actions by Other Agencies

A number of other public agencies' approval and authorization will or may be required to implement the project. These agencies and their approvals include:

- East Bay Municipal Utilities District – Approval of new service requests and water meter installation.

- Regional Water Quality Control Board – Acceptance of a Notice of Intent to obtain coverage under the General Construction Activity Storm Water Permit and Notice of Termination after construction is complete.
- Bay Area Air Quality Management District (BAAQMD) – Acceptance of notice of asbestos abatement and demolition activities
- Alameda County Department of Environmental Health (ACDEH) – Approval for all required corrective and remedial actions and required environmental clearances.

Project's Consistency with Community Plan and Zoning

CEQA Guidelines §15183 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." CEQA §15183(c) specifies that an EIR does need to be prepared for the project "if an impact is not peculiar to the parcel or to the proposed project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards."

The following analysis provides substantial evidence to support a conclusion that the Project qualifies for streamlined review under CEQA Guidelines §15183 as a project consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified.

Residential Density

As demonstrated below, the proposed 12-unit Project is consistent with the density assumptions of the LUTE, the West Oakland Specific Plan and zoning.

Density per the General Plan and West Oakland Specific Plan

The General Plan's land use classification for the Project site is Mixed Housing Type Residential. This land use classification was retained for this neighborhood and for this site through the West Oakland Specific Plan process. The Mixed Housing Type Residential land use classification is intended to create, maintain and enhance residential areas typically located near the City's major arterials, and characterized by a mix of single-family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate. Development of single-family homes, townhouses and small multi-unit buildings is generally allowed at a maximum density of 30 principal units per gross acre, although there are pockets of lower density housing which should be preserved through appropriate zoning designations. At 30 units per gross acre, the 0.57-acre site yields a gross density of 17 principal units. The Project, at 12 units, is consistent with (lower than) the allowable density of the Mixed Housing Type Residential land use classification.

Density per RM-2 and RM-4 Zoning

The Project site is split between two different zoning districts, with 19,800 square feet in the RM-2 zone and 5,080 square feet in the RM-4 zone. The maximum residential density in the RM-2 zone is 1 unit/2,500 square feet of lot area, and the maximum residential density in the RM-4 zone is 1 unit/1,100 square feet of lot area. At these densities, the zoning for the site yields a maximum of 8 units in the RM-2 zone (19,800/2,500), and a maximum of 4 units in the RM-4 zone (5,080/1,100), or 12 units. The Project, at 12 units, is consistent with this allowable density per City zoning. A Conditional Use Permit (CUP) is required in the RM-2 zone for 3 or more units on a lot.

Policy Consistency

Consistency with Neighborhood Policies of the LUTE

The LUTE recognizes that Oakland's neighborhoods contain some of the Bay Area's most attractive architecture and most comfortable living environments, but that a number of the City's low density

neighborhoods have been subject to significant development pressures that allowed the construction of multi-story, multi-unit apartment buildings immediately adjacent to single unit, single story residences. While mixed-unit neighborhoods are generally desirable, a lack of attention to compatibility concerns has affected the character and stability of some areas of the City. LUTE policies recommend that new development be compatible with the existing or desired character of an area, and that infrastructure and street width/capacity be taken into consideration when analyzing development proposals.

The following policy consistency analysis provided in **Table 2** demonstrates that the Project would be consistent with the relevant policies of the LUTE that encourage the construction, conservation and enhancement of housing resources to meet current and future needs of the Oakland community, and policies that encourage a mix of housing costs, unit sizes, types and ownership structures.

Table 2: Evaluation of Consistency with General Plan Land Use and Transportation Element (LUTE)

Relevant Policies, Principles and Guidelines of the LUTE	Project Consistency
Policy N3.1 Facilitating Housing Construction: Facilitating the construction of housing units should be considered a high priority for the City of Oakland.	C**onsistent.** The Project would add 12 new housing units to the overall housing stock of the City.
Policy N3.2 Encouraging Infill Development: In order to facilitate the construction of needed housing units, infill development that is consistent with the General Plan should take place throughout the City of Oakland.	C**onsistent.** The Project site is surrounded by residential development on each of its three sides, and represents a residential infill within an existing residential neighborhood.
Policy N3.5 Encouraging Housing Development: The City should actively encourage development of housing in designated mixed housing type and urban housing areas through regulatory and fiscal incentives, assistance in identifying parcels that are appropriate for new development, and other measures	C**onsistent.** The Project would redevelop a vacant industrial property and one existing residences to add 12 new housing units in an area designated by the General Plan as Mixed Housing Type Residential.
Policy N3.8 Required High-Quality Design: High-quality design standards should be required of all new residential construction. Design requirements and permitting procedures should be developed and implemented in a manner that is sensitive to the added costs of those requirements and procedures.	C**onsistent.** The Project would be designed and constructed pursuant to California Building Code and local City Municipal Code standards, and is subject to Design Review approval.
Policy N3.9 Orienting Residential Development: Residential developments should be encouraged to face the street and to orient their units to desirable sunlight and views, while avoiding unreasonably blocking sunlight and views for neighboring buildings, respecting the privacy needs of residents of the development and surrounding properties, providing for sufficient conveniently located on-site open space, and avoiding undue noise exposure.	C**onsistent.** As indicated in Project elevation drawings (see Figure 6), each of the residential units adjacent to Chestnut Street are oriented with their front (entry) facing onto Chestnut Street. The 35-foot building height (consistent with the adjacent Linden Court townhomes) would not block sunlight or views to an unreasonable extent. The Project includes setbacks that are consistent with existing zoning to provide privacy to adjacent residences. The Project also includes common open spaces that provide a landscaped setting.

Policy N3.10 Guiding the Development of Parking: Off-street parking for residential buildings should be adequate in amount and conveniently located and laid out, but its visual prominence should be minimized.	**Consistent.** Twelve off-street parking spaces would be provided in a paved surface parking area, located within an interior portion of the Project site. City Municipal Code requires 1 off-street parking space per residential unit, and 12 are provided.
Policy N6.1 Mixing Housing Types. Oakland presently offers a dramatic variety of household types including single habitants, roommates, two-parent and single-parent families, and an increasing number of shared housing arrangements such as cohousing. Policies support continued diversity in unit and ownership type to meet the needs of these different households. The City will generally be supportive of a mix of projects that provide a variety of housing types, unit sizes, and lot sizes which are available to households with a range of incomes.	**Consistent.** The Project's unit design of individual 4-bedroom units is intended to meet a variety of housing needs within the City, including roommate and shared housing arrangements such as co-housing. The Project adds a different housing type and units size intended to be available and accessible to households and/or individuals with a range of incomes.
Policy N7.1 Ensuring Compatible Development: New residential development in Detached Unit and Mixed Housing Type areas should be compatible with the density, scale, design and existing or desired character of surrounding development.	**Consistent.** The Project's choice of materials, design features, and scale of development would be compatible with the existing character of the adjacent Linden Court townhomes, and would not be inconsistent with the surrounding development. The Project design includes a pitched roof form that is consistent with the home designs in the surrounding residential neighborhood.
Policy N7.2 Defining Compatibility: Infrastructure availability, environmental constraints and natural features, emergency response and evacuation times, street width and function, prevailing lot size, predominant development type and height, scenic values, distance from public transit, and desired neighborhood character are among the factors that could be taken into account when developing and mapping zoning designations or determining compatibility. These factors should be balanced with the citywide need for additional housing.	**Consistent.** The Project's design would be consistent with these policy-based values that define compatibility. The Project is located on a site served by existing infrastructure, transit and community services. The Project would be consistent in scale and development types with the existing surrounding community character, and would remove an existing non-compatible industrial building. The proposed 12 residential dwelling units would be compatible with the density of the Mixed Housing Type Residential land classification.
Policy N9.7 Creating Compatible but Diverse Development: Diversity in Oakland's built environment should be as valued as the diversity in population. Regulations and permit processes should be geared toward creating compatible and attractive development, rather than "cookie cutter" development.	**Consistent.** The Project's choice of materials, design features, and scale of development would be compatible with existing character of surrounding development, but not identical. The Project is subject to Design Review approval by the City.
Policy N11.4 Alleviating Public Nuisances: The City should strive to alleviate public nuisances and unsafe and illegal activities. Code Enforcement efforts should be given as high a priority as facilitating the development process. Public nuisance regulations should be designed to allow community members to use City codes to facilitate nuisance abatement in their neighborhood.	**Consistent.** The project site would be redeveloped to accommodate new residential uses. No alcoholic beverage sales, adult entertainment, or other entertainment uses are proposed.

Consistency with Residential Area Policies of the West Oakland Specific Plan

The Project site is located within the West Oakland Specific Plan planning area. Much of the focus of the West Oakland Specific Plan addresses development and redevelopment of vacant and/or underutilized

commercial and industrial properties in strategic areas of West Oakland (known as "Opportunity Areas"). The Project site is not an identified Opportunity Site and is not within one of the West Oakland Specific Plan's Opportunity Areas. However, the West Oakland Specific Plan also recognizes that large portions of West Oakland's residential areas need preservation and/or enhancement of existing residential characteristics. The Project site is within the "Residential Areas" portion of the West Oakland Specific Plan, where the overall policy direction calls for enhancement through the preservation of historic resources, facilitating maintenance of homes by property owners, and the infill of vacant parcels with similarly scaled and compatible housing.

The intent of those portions of West Oakland identified as "Residential Areas" is to allow for a range of low- to mid-density housing opportunities on numerous smaller infill sites within established residential neighborhoods and along mixed-use roadway corridors, and recognizes that many of West Oakland's established residential neighborhoods have the potential to accommodate additional residential infill development. Although not applicable directly to the Project site, one of the West Oakland Specific Plan's implementation actions was to address the properties immediately across the street from the Project site (on the west side of Chestnut Street between 24th and 26th Streets) by amending the General Plan land use classification form Business Mix to Housing and Business Mix, and re-zoning these properties from Commercial/Industrial Mix (CIX-1/S-19) to Housing and Business Mix (HBX-2) to encourage infill residential of this area, compatible in scale and character with the surrounding neighborhood.

The following policy consistency analysis provided in **Table 3** demonstrates that the Project would be consistent with the relevant policies of the West Oakland Specific Plan's Residential Areas, relevant to the Project:

Table 3: Evaluation of Consistency with West Oakland Specific Plan

Relevant Objectives of the West Oakland Specific Plan	Project Consistency
The West Oakland Specific Plan specifically seek to establish more identifiable borders between established residential neighborhoods and the industrial and intensive commercial business areas, prevent new land use incompatibilities that might adversely affect existing neighborhoods, and restore neighborhoods at the residential/ industrial interface.	**Consistent.** The Project proposes redevelopment of a former industrial property that is located within an otherwise established residential neighborhood, thereby restoring the residential neighborhood at the residential/ commercial-industrial interface.
Low Dens. Res.-1: Encourage infill residential development within the West Oakland Residential Areas that is compatible in scale and character with the surrounding neighborhood.	**Consistent.** The Project would include development of 12 new residential units on an infill site adjacent to existing residential uses. In scale and development type, The Project's scale and development types would be consistent with existing community character.
Pedestrian-1: Promote street right-of-way design standards that make walking convenient and enjoyable.	**Consistent**. The Project site would be landscaped along the Chestnut Street frontage. Shade trees would be placed in or adjacent to sidewalks, benefiting pedestrians.
Parking-3: Ensure that all new development provides for the mitigation of potential adverse aesthetic impacts of parking.	**Consistent**. The Project would provide off-street surface parking behind the residential buildings.

Consistency with Zoning Standards

As indicated in the description of the Project site (above) zoning of the Project is split between two Mixed Housing Type Residential zones, the RM-2 and RM-4 zones. The northerly 1/3 of the 2432 Chestnut parcel (approximately 5,080 square feet) is zoned as RM-4, and the remainder of this parcel, as well as the 2420 Chestnut and the 2423 Linden parcel (approximately 19,800 square feet) are zoned as RM-2. The Project's consistency with the development standards of the respective zoning districts is discussed below.

Permitted and Conditionally Permitted Facilities and Activities

Within both the RM-2 and RM-4 districts, permanent residential use is considered a permitted activity, but multi-family dwelling of more than 3 units on a lot greater than 4,000 square feet requires a condition us permit (CUP) in the RM-2 zone, and multi-family dwelling of more than 5 units on a lot greater than 4,000 square feet requires a CUP in the RM-4 zone. The Project requires a CUP because a total of 9 units are proposed on the portion of the site zoned RM-2.

The Project's proposed Community Room is located on the 2432 Linden parcel, which is zoned RM-2. Pursuant to Section 17.10.160 of the Planning Code, the Community Room would be considered a Community Assembly Civic Activity (i.e., a private non-profit meeting hall or recreation center), permitted within the RM-2 zone with a CUP. The maintenance/storage addition to the Community Room would be considered an accessory structure, incidental to the principal Community Room facility.

Development Standards

The following consistency analysis provided in **Table 4** demonstrates that the Project would be consistent with the relevant development standards of the Oakland Municipal Code, Chapter 17: Planning Code that are relevant to the Project, pursuant to Table 17.17.03: Property Development Standards.

Table 4: Evaluation of Consistency with RM-2/RM-4 Zone Development Standards

Development Criteria	Development Standard	Project Requirement	Project Consistency
Minimum Lot Dimensions: RM-2 and RM-4	25 ft.	25 ft.	**Consistent**. The Project's frontage along Chestnut Street is 163.5 feet, and its frontage on Linden Street is 25 feet. Meeting the minimum requirement.
Minimum Lot Area RM-2 and RM-4	4,000 sf	4,000 sf	**Consistent**. As a combined 24,882-square-foot lot, the Project site meets the minimum lot area for the RM-2 and RM-4 zones.
Maximum Density with CUP: RM-2 RM-4 Total	 1 unit/2,500 sf 1 unit/1,100 sf	 8 4 12 units	**Consistent**. A maximum of 12 units are permitted on the Project site with approval of a CUP (needed for more than 3 units in RM-2 zone), and the Project proposes to develop 12 residential units.
Front Setback: RM-2 RM-4	 20 ft 15 ft	 20 ft	**Consistent.** The Project provides a 20-foot front setback along Chestnut Street and a 20-foot front setback for the Community Room along Linden.

Interior Side Setback: RM-2 with CUP RM-4	 4 ft (no CUP) 3 ft 4 ft	 4 ft 3 ft with CUP	**Consistent.** The Project provides 4-foot side yard setbacks to the north and south from the residential units, but accommodates only a 3-foot side yard setback on either side of the Community Room, thus requiring a CUP
Rear Setback: RM-2 and RM-4	 15 ft	 15 ft	**Consistent.** The Project provides a 15-foor rear setback from the northerly residential units and from the Community Room, and a larger than 15-foot setback (including parking area) from the southerly residential units.
Maximum Lot Coverage (for 3 or more units), RM-2 only	40%	40% for RM-2	**Consistent**. The lot coverage for the portion of the site within the RM-2 zone would be 40% (7,960 sf of building space in Buildings 1, 2 and the Community Room) /19,800 sf in RM-2 = 40%), consistent with this requirement.
Maximum Wall Height RM-2 with CUP RM-4	 25 ft 30 ft 35 ft	 30 ft. with CUP	**Consistent**. The Project's residential units have a maximum wall height of 30 feet and thus require a CUP for those residential buildings in the RM-2 zone. The Community Room has a maximum wall height of only 13 feet, and would be consistent with the 25-foot standard.
Maximum Pitch Roof Height RM-2 with CUP RM-4	 30 ft 35 ft 35 ft	 35 ft. with CUP	**Consistent**. The Project's residential units have a maximum pitched roof height of 35 feet and thus require a CUP for those residential buildings in the RM-2 zone. The Community Room has a maximum pitched roof height of just under 19 feet, and would be consistent with the 30-foot standard.
Maximum height for accessory structures (RM-2)	15 ft	15 ft	**Consistent**. The maintenance/storage addition to the Community Room would be considered an accessory structure, and has a maximum pitched roof height of 15 feet, consistent with this height standard.
Group open space (per regular unit) : RM-2 (9 units) RM-4 (3 units)	 300 ft/unit 175 ft/unit	 2,700 sf 525 sf 3,225 sf total	**Consistent.** The project would provide 3,300 sf of group open space, which is slightly more than the combined 3,225 required for the RM-2 and RM-4 zones.
Vehicle Parking:	1 space/unit	12	**Consistent**: The Project provides a total of 12 off-street parking spaces
Bicycle Parking Long-term Short-term	 1 per 4 units 1 per 20 units	 3 1	**Consistent:** The Project provides 6 long-term bike parking spaces and 12 short-term bike parking space at the northeaster portion of the site.

Conclusions

Based on the above, the Project is consistent with the residential density assumptions for this site as derived from the General Plan LUTE, the West Oakland Specific Plan, and applicable RM-2 and RM-4 zoning. The Project is also consistent with the planning policies and objectives of the LUTE and the West Oakland Specific Plan, and consistent with the applicable development standards of RM-2 and RM-4 zoning districts. Therefore, the Project qualifies as a project that is Consistent with a Community Plan or Zoning pursuant to CEQA Guidelines §15183.

Since the Project is consistent with the development assumptions for the land use classification and the site as provided under the LUTE EIR, the Housing Element EIR and the West Oakland Specific Plan EIR, the Project's potential contribution to cumulatively significant effects has already been addressed in these prior Program EIRs. CEQA Guidelines §15183 applies to the Project, which allows for streamlined environmental review. The following CEQA Checklist considers whether there are Project-specific effects peculiar to the Project or its site, and otherwise relies on the streamlining provisions of CEQA Guidelines §15183 to address cumulative effects.

The Project is eligible for consideration of CEQA streamlining pursuant to California Public Resources Code Section 21083.3 and Section 15183 of the CEQA Guidelines. The Project also qualifies as a Qualified Infill Project under CEQA Guidelines §15183.3(b) and CEQA Guidelines Appendix M, as demonstrated in **Appendix B**.

CEQA Determination / Findings

An evaluation of the proposed Project is provided in the following CEQA Analysis Checklist. This evaluation concludes that the Project requires no additional environmental review, and that 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 prior Program EIRs). As such, the Project would be required to comply with the applicable City of Oakland SCAs (see Appendix A for a complete list of SCAs referred to and required by this CEQA Analysis). With implementation of the applicable SCAs, the Project would not result in a substantial increase in the severity of any significant impacts that were previously identified in the prior Program EIRs, or any new significant impacts that were not previously identified in the prior Program EIRs.

In accordance with Public Resources Code §21083.3 and §21094.5, and State CEQA Guidelines §15183 and §15183.3, and as set forth in this CEQA Analysis, the Project qualifies for CEQA tiering/streamlining because the following findings can be made:

- **Consistency with Community Plan or Zoning (CEQA Guidelines §15183):** The following analysis demonstrates that the Project is consistent with the development density established by existing zoning and General Plan policies for which an EIR was certified (i.e., the Program EIRs). The Project is consistent with these prior Program EIRs (the General Plan LUTE EIR, the Housing Element EIR and the West Oakland Specific Plan EIR) and will not result in significant impacts that were not previously identified as significant project-level, cumulative or offsite effects in those EIRs.

The Project is permitted in the zoning district where the Project site is located (RM-2 and RM-4) and is consistent with the bulk, density and land use standards envisioned in the General Plan LUTE, West Oakland Specific Plan and the Municipal Code. The analysis presents substantial evidence that there would be no significant impacts peculiar to the Project or its site, and that the Project's potentially significant effects have already been addressed as such in the Program EIRs, or will be substantially mitigated by the imposition of SCAs, as further described in Appendix A. No further environmental documents are required in accordance with CEQA Guidelines §15183.

- **Qualified Infill Exemption (CEQA Guidelines §15183.3):** The following analysis also demonstrates that the Project is located in an urban area on a site that has been previously developed; satisfies the performance standards provided in CEQA Guidelines Appendix M; and is consistent with the General Plan land use designation, density, building intensity and applicable policies. As such, this environmental review is limited to an assessment of whether the Project may cause any project-specific effects, and relies on uniformly applicable development policies or standards to substantially mitigate cumulative effects.

Each of the above findings provides a separate and independent basis for CEQA compliance.

Edward Manasse, Acting Deputy Director
Bureau of Planning, Environmental Review Officer

Date

CEQA Checklist

The analysis in this CEQA Checklist provides a summary of the potential environmental impacts that may result from approval and implementation of the Project. It evaluates those potential environmental impacts in relation to the impacts evaluated in the prior Program EIRs (i.e., the LUTE EIR, the Housing Element EIR, and West Oakland Specific Plan EIR).

This CEQA Checklist incorporates by reference the discussion and analysis of all potential environmental impact topics as presented in the certified prior Program EIRs. Only those environmental topics that could have a potential project-level environmental impact are included. The significance criteria have been consolidated and abbreviated in this CEQA Checklist for administrative purposes. This CEQA Checklist provides a determination of whether the Project would result in:

- an equal or less severe impact than previously identified in the prior Program EIRs, or
- a new impacts, or a substantial increase in the severity of a significant impact as identified in the prior Program EIRs

If the severity of a potential impacts of the Project would be the same as or less than the severity of the impact as described in the prior Program EIRs, the checkbox for "Equal or Less Severity of Impact" is checked. If the checkbox is marked as "New or Substantial Increase in Severity", that would indicate that the Project's impacts that are either:

- peculiar to the Project or the Project site (pursuant to CEQA Guidelines §15183(b)(1))
- not identified in the prior Program EIRs (per CEQA Guidelines §15183(b)(2)), including off-site and cumulative impacts (per CEQA Guidelines §15183(b)(3)), or
- due to substantial new information that was not known at the time the prior Program EIRs were certified (per CEQA Guidelines §15183(b)(4))

In such a circumstance, a new EIR would be required for the Project. None of these conditions are found for the Project, as demonstrated throughout the following CEQA Checklist.

The Checklist uses the acronym SU for significant and unavoidable impacts, and LTS for less than significant impacts, and LTS w/SCAs or MMs for impacts that would be reduced to LTS with implementation of identified SCAs and/or mitigation measures. Topics for which no impact was identified in the prior Program EIRs remain potentially applicable to the Project. The Project is required to comply with applicable mitigation measures identified in the prior Program EIRs and with applicable City of Oakland SCAs. The Project sponsor has agreed to incorporate and/or implement the required mitigation measures and SCAs as part of the Project. This CEQA Checklist includes references to the applicable mitigation measures and SCAs. A dash (–) is used in the Checklist to indicate that the prior Program EIR did not identify any MMs or SCAs for the respective environmental impact. The abbreviation N/A is used when an MM was identified in the prior Program EIRs, but it does not apply to the Project.

Aesthetics, Shadow, and Wind

		Project			
		Relationship to WOSP EIR Findings			
Impact Topics	WOSP EIR Findings	Equal or Less Severe	New or Substantial Increase in Severity	Applicable SCAs or Mitigation Measures	Level of Significance
Scenic Vistas or Resources	LTS	■	□	–	LTS
Visual Character or Quality	LTS	■	□	SCA AES-1: Trash and Blight Removal SCA AES-2: Graffiti Control SCA AES-3: Landscape Plan	LTS
Light or Glare	LTS w/SCA	■	□	SCA AES-4: Lighting	LTS
Shadows	LTS	■	□	–	LTS
Wind	LTS	■	□	–	LTS

Prior EIR Findings

Land Use and Transportation Element EIR

Scenic vistas, scenic resources, visual character, and light and glare, and shadow were analyzed in the LUTE EIR, and found that impacts associated with new development pursuant to the General Plan pertaining to these topics would be less than significant. The LUTE EIR did identify a significant and unavoidable impact regarding wind hazards at certain locations in the Downtown Showcase District. The LUTE EIR identified mitigation measures that are functionally equivalent to current SCAs to reduce this impact, but determined that wind hazard impacts in the Downtown would remain significant and unavoidable. The Project is not in the Downtown Showcase District, and the LUTE EIR's recommended mitigation measure does not apply.

Housing Element EIR Findings

Scenic vistas, scenic resources, visual character, light and glare, and shadow impacts were analyzed in the Housing Element EIR, which found that the effects to these topics would be less than significant. The Housing Element EIR cited applicable SCAs related to landscaping requirements for housing developments that would ensure visual quality impacts would not be significant, including requirements for a landscape plan for new housing construction, landscape requirements for street frontages and downslope lots, and landscape completion and maintenance obligations.

West Oakland Specific Plan EIR Findings

The West Oakland Specific Plan EIR found that impacts related to scenic vistas, scenic resources, visual character, light and glare, and shadow would be less than significant with the implementation of SCAs. Specifically, the WOSP EIR concluded:

- No scenic vistas or view corridors would be substantially obstructed, degraded or adversely affected by new development in accordance with the West Oakland Specific Plan.
- Development and public realm improvements in accordance with the West Oakland Specific Plan would not substantially damage scenic resources including trees or historic buildings, but rather would improve the quality of views of the Planning Area from the I-580 scenic highway.
- Infill development and redevelopment would repair the existing inconsistent urban fabric where such inconsistencies exist, resulting in a more unified and coherent development character. The West Oakland Specific Plan's proposed land use patterns and development types, including its focus on change within Opportunity Areas while preserving established residential neighborhoods, would provide sensitive transitions to existing development, reinforce the character of residential and non-residential areas, and harmonize existing incompatibilities. Gateway and streetscape improvements, and development of new activity nodes would improve visual quality and reinforce community identity.
- Development facilitated by the West Oakland Specific Plan would create new sources of light and glare, but this light and glare would be consistent with typical light and glare conditions in the area and would not be significant. Pursuant to SCAs requiring a Lighting Plan, new lights would be required to meet the lighting power allowances as required by Building Energy Efficiency Standards.
- Modeling of shadow impacts conducted for the West Oakland Specific Plan EIR found that new development pursuant to that Plan would shadow only a limited portion of five West Oakland parks, and only for a limited duration. No shadows would be cast on other parks, open spaces or school grounds in the Planning Area. With evaluation of shadows as part of the City's standard design and environmental review of individual development applications, development allowed by the West Oakland Specific Plan would not cast substantial shadows on solar collectors or passive solar heating, or onto historic resources with light-sensitive features.
- The West Oakland Specific Plan Planning Area does not lie within the area identified by the City as requiring modeling for evaluation of wind impacts.

Project Analysis

The Project site is located in an urbanized area with no significant scenic vistas or designated or eligible scenic highways in the vicinity. Development of the Project would demolish the existing office/warehouse building to develop new residences. The three new residential buildings would be of similar scale and bulk, and would include pitched roofs consistent with the existing residential buildings in the area (see prior Figure 6). This infill development would help unify the visual character of development in the area and would provide an overall positive improvement to the existing visual character of the area. The Project would be contemporary in design and include amenities such as streetscape landscaping, open space landscaping and lighting. The Project would create new sources of light and glare, but these new sources would not be substantial and would be similar to existing light and glare conditions in the vicinity.

Consistent with the findings of the West Oakland Specific Plan EIR, the Project's potential impacts on scenic vistas, scenic resources, visual character, and light and glare would be less than significant with implementation of the following City of Oakland SCAs required of the Project to discourage blight, graffiti defacement, and ensure continued compliance with applicable landscaping and lighting requirements:

- **SCA AES-1: Trash and Blight Removal** (applies to all projects)
- **SCA AES-2: Graffiti Control** (applies to all projects)
- **SCA AES-3: Landscape Plan** (applies to the establishment of one or more new residential units, excluding secondary units), and
- **SCA AES-4: Lighting** (applies to all projects containing new exterior lighting)

Development of the Project would not result in shadows on any public or quasi-public park, lawn, garden or open space, as there are none adjacent to the Project site. The 35-foot tall buildings would cast shadows on the adjacent area, including shadows cast into the adjacent Area of Secondary Historic Importance to the south and east. However, these shadows would not be cast on historic resources with light sensitive features and would not materially impair the potential historic significance of these properties. Consistent with the findings of the West Oakland Specific Plan EIR, the Project's potential shadow impacts would be less than significant.

At 35 feet tall, the Project would not be subject to the requirement of a wind analysis. There would be no impact related to wind.

Conclusions – Aesthetics

Based on an examination of the analysis, findings, and conclusions of the Prior EIRs, implementation of the Project would not substantially increase the severity of any significant impacts identified in these Prior EIRs, nor would it result in new significant impacts related to aesthetics or visual resources that were not previously identified. The Prior EIRs did not identify any mitigation measures related to aesthetics or visual resources that would apply to the Project, and none would be needed. The SCAs identified above and listed in Appendix A at the end of this CEQA Checklist pertaining to aesthetics would apply to the Project, as would any additional Project-specific conditions of approval resulting from the City's Design Review process.

Air Quality

		Project			
		Relationship to WOSP EIR Findings			
Impact Topics	WOSP EIR Findings	Equal or Less Severe	New or Substantial Increase in Severity	Applicable SCAs or Mitigation Measures	Level of Significance
Criteria Air Pollutant Emissions - Construction	LTS w/SCAs	■	□	SCA AIR-1 Dust Controls – Construction Related SCA AIR-2 Criteria Air Pollutant Controls – Construction-Related	LTS w/SCAs
Criteria Air Pollutant Emissions - Operational	SU (cumulative)	■	□	--	LTS
Toxic Air Contaminants - Construction	LTS w/SCAs SU (cumulative)	■	□	SCA AIR-1 Dust Controls – Construction Related SCA AIR-2 Criteria Air Pollutant Controls – Construction-Related SCA AIR-3: Asbestos in Structures	LTS w/SCAs
Toxic Air Contaminants - Operational	SU (cumulative)	■	□	--	LTS

Prior EIR Findings

Land Use and Transportation Element EIR

The LUTE EIR identified Transportation Control Measures as recommended by the Bay Area Air Quality Management District (BAAQMD) as mitigation to address mobile sources of criteria pollutants for large development projects located in Downtown and in the Coliseum Showcase District. Implementation of the LUTE was determined to be inconsistent with population and vehicle miles traveled (VMT) assumptions used in regional air quality planning, and the LUTE EIR identified unavoidable cumulative effects related to increased criteria pollutants from increased regional traffic emissions.

Housing Element EIR

The Housing Element EIR found that impacts from new housing development related to criteria air pollutants would be less than significant. Potential impacts related to emissions of diesel particulate matter (DPM) from mobile and stationary sources were identified in the Housing Element EIR, which required implementation of SCAs to reduce DPM, as well as installation of air filtration systems or other equivalent measures to reduce indoor exposure to DPM to acceptable levels. The Housing Element EIR

identified significant and unavoidable impacts associated with cumulative health risks resulting from TAC emissions from local stationary sources, and recommended that project-specific health risk assessments be conducted, with implementation of identified health risk reduction measures.

West Oakland Specific Plan EIR

The West Oakland Specific Plan EIR found the following specific impacts related to air quality:

- Development facilitated by the West Oakland Specific Plan would not fundamentally conflict with the then-applicable 2010 Bay Area Clean Air Plan because the rate of increase in vehicle miles travelled and vehicle trips generated by the Specific Plan would be less than the projected rate of population increase, and because the Specific Plan demonstrated reasonable efforts to implement control measures contained in the Clean Air Plan.
- During construction, individual development projects pursuant to the West Oakland Specific Plan will generate fugitive dust from demolition, grading, hauling and construction activities. These impacts can be reduced to less than significant levels with implementation of SCAs pertaining to construction-related air pollution controls for dust and equipment emissions.
- During construction, individual development projects pursuant to the West Oakland Specific Plan will generate criteria pollutants 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 SCAs. However, larger individual construction projects could generate emissions of criteria air pollutants that would exceed the City's thresholds of significance, and impacts from these larger projects could be significant and unavoidable.
- During construction, larger development projects pursuant to the Specific Plan could 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 $PM_{2.5}$ concentration levels. These construction-related TAC emissions from large construction projects would be reduced to a less than significant level with implementation of required City of Oakland Standard Conditions of Approval.
- New development pursuant to the West Oakland Specific Plan will generate operational emissions of criteria pollutants as a result of increased motor vehicle traffic and area source emissions. Traffic emissions combined with anticipated area source emissions would generate levels of criteria air pollutants that would exceed the City's project-level thresholds of significance. Although SCAs requiring parking and traffic management plans were identified, this impact remained significant and unavoidable.
- New development pursuant to the West Oakland Specific Plan would not exposure sensitive uses and would not generate emissions leading to significant concentrations of carbon monoxide that would violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation.
- Development pursuant to the West Oakland Specific Plan would include new light industrial, custom manufacturing and other similar land uses, as well as the introduction of new diesel generators that could emit toxic emissions. The EIR identified SCAs related for exposure to air pollution (toxic air contaminants), BAAQMD regulations, Mitigation Measure AIR-9: Risk Reduction Plans, Mitigation Measure Air-9B regarding loading docks locations and Mitigation Measure Air-9C regarding truck fleet emission standards. Even with all available SCAs and mitigation measures, this impact remained significant and unavoidable.

- Certain future development projects could result in new sensitive receptors being exposed to existing levels of toxic air contaminants (TACs) or concentrations of $PM_{2.5}$ that could result in increased cancer risk or other health hazards. Potential effects of the environment on a project are legally not required to be analyzed or mitigated under CEQA, but the West Oakland Specific Plan EIR provided this analysis (i.e., siting new receptors near existing TAC sources) to provide information to the public and decision-makers, and recommended SCAs pertaining to exposure to air pollution (toxic air contaminants) and Mitigation Measure Air-10 requiring future discretionary development projects that would place new sensitive receptors in areas subject to cancer risks and exposure to diesel PM concentrations that exceed applicable thresholds to incorporate best management practices (BMPs) for air quality.
- Development in accordance with the West Oakland Specific Plan could expose a substantial number of new people to existing and new objectionable odors (i.e., siting new sensitive receptors near existing sources of odors).

Project Analysis

Construction-Period Criteria Pollutant Emission

Construction activities for the Project would result in emission of fugitive dust and criteria pollutants, including PM_{10} and $PM_{2.5}$, on a temporary and intermittent basis. Construction-related emissions of the Project are not peculiar because the Project would use standard construction equipment such as loaders, backhoes, and haul trucks, similar to other projects under construction in Oakland, and the site's proximity to sensitive receptors is typical of other project sites in this urbanized area. The BAAQMD has published screening criteria for air quality emissions, and projects that do not exceed the screening criteria are presumed to have less than significant air quality effects. The construction-period criteria pollutant screening size for low-rise apartment projects is 240 dwelling units. The Project, at 12 dwelling units, does not exceed the applicable construction screening size for criteria pollutants and thus would not exceed the applicable thresholds and would be less than significant.

To validate this conclusion, an estimate of the emissions that would result from construction activity associated with the Project have been derived from the California Emissions Estimator Model (CalEEMod) Version 2016.3.2. The model output from CalEEMod, along with construction inputs, are included in **Appendix C**. The CalEEMod emission calculator computes annual emissions from construction projects based on the project type, size and acreage, and provides emission estimates for both on-site and off-site construction activities. On-site emissions are primarily from construction equipment. As shown in **Table 5**, the Project's construction-period emissions would not exceed the applicable significance thresholds for construction period criteria pollutant emissions, and this impact would be less than significant.

Table 5 - Construction-Period Criteria Pollutant Emissions				
Scenario	**ROG**	**NO_x**	**PM_{10} Exhaust**	**$PM_{2.5}$ Exhaust**
Total construction emissions (tons/year)	0.24 tons	0.48 tons	0.03 tons	0.02 tons
Average daily emissions (pounds)[1]	3.8 lbs./day	7.7 lbs./day	0.4 lbs./day	0.4 lbs./day
Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

1. 1. Assumes 125 workdays
2. Source: Lamphier-Gregory 2020, CalEEMod results included in **Appendix C**

Consistent with the findings of the West Oakland Specific Plan EIR, the Project's impacts related to construction-period criteria pollutant would be further reduced with implementation of the following City of Oakland SCAs:

- **SCA AIR-1: Dust Controls – Construction Related** (applies to all projects involving construction activities)
- **SCA AIR-2: Criteria Air Pollutant Controls – Construction Related** (applies to all projects involving construction activities)
- Compliance with the requirements found under the City Municipal Code (Section 15.36.100; Dust Control Measures) would also be required.

Operational Period Criteria Pollutant Emissions

The Project will generate operational emissions of criteria pollutants as a result of increased motor vehicle traffic and area source emissions. The applicable screening size threshold for operational emissions of criteria pollutants for low-rise apartment projects is 451 dwelling units. The Project, at 12 dwelling units, would not exceed the applicable operational screening size for criteria pollutants and thus would not exceed the City thresholds.

To validate this conclusion, the CalEEMod emissions estimator was used to estimate operational air emissions, assuming full build-out of the Project. These operational emissions would be generated primarily from traffic generated by future residents and other area-based sources of operational emissions. As shown in **Table 6**, the Project's operational emissions would not exceed the applicable significance thresholds for criteria pollutant emissions, and this impact would be less than significant.

Table 6 – Operational Period Criteria Pollutant Emissions				
Scenario	**ROG**	**NO_x**	**PM_{10} Exhaust**	**$PM_{2.5}$ Exhaust**
Project Operational Emissions (tons/year)	0.18 tons	0.16 tons	0.008 tons	0.007 tons
Average daily emissions (pounds/day)[1]	1.0 lbs./day	0.9 lbs./day	0.04 lbs./day	0.04 lbs./day
Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

1. 1. Assumes 365 day operations
2. Source: Lamphier-Gregory 2020, CalEEMod results included in **Appendix C**

Construction-period TAC Emissions

For the purpose of assessing a project's impact on exposure of adjacent sensitive receptors to risks and hazards, the threshold of significance is exceeded when the project-specific cancer risk exceeds 10 in 1 million, the non-cancer risk exceeds a Hazard Index of 1.0, or $PM_{2.5}$ concentrations exceed 0.3 micrograms per cubic meter. Examples of sensitive receptors are places where people live, play, or convalesce and include schools, hospitals, residential areas, and recreation facilities.

Construction activities associated with the project would generate construction-related TAC emissions, specifically diesel particulate matter (DPM), from on-road haul trucks and off-road equipment exhaust emissions, resulting in increased cancer risk or non-cancer health concerns for nearby sensitive receptors. Due to the variable nature of construction activity, the generation of TAC emissions 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. Construction-related TAC emissions would not be peculiar because the Project would use standard construction equipment such as loaders, backhoes and haul trucks, similar to other projects of the same size under construction in Oakland, and the site's proximity to sensitive receptors is typical of other project sites in this urbanized area. Modeling to quantify health risks attributed to construction activities was not originally intended for active emissions periods spanning less than 7 years, and is not recommended by any agency for use for less than a 2-year period of focused construction. The Project's construction activity would not involve a 2-year period of focused construction and would not be significant.

Required implementation of SCA AIR-1 Dust Controls – Construction Related and SCA AIR-2: Criteria Air Pollutant Controls – Construction Related will further reduce construction-period TAC emissions to sensitive receptors from temporary construction emissions of DPM. Consistent with the findings of the West Oakland Specific Plan EIR, the Project's less-than-significant impacts related to TAC emission would be further reduced with implementation of the following City of Oakland SCA:

- **SCA AIR-3: Asbestos in Structures** (applies to all projects involving demolition of structures)

Because the Project does not involve construction activities for greater than 100 dwelling units, or for greater than 50 dwelling units in an area defined as needing either "Best Practices" or "Further Study" (which are typically within 1,000 feet of a freeway or along major thoroughfares), the Project is not subject to City SCAs pertaining to Diesel Particulate Matter Controls-Construction Related.

Operational TAC Emissions

As a small residential project, the Project will not be a substantial source of operational TAC emissions, and the Project would not have the potential to act as a substantial source of health risk to others. Potential impacts attributed to operational TAC emissions would be less than significant.

Conclusions – Air Quality

Based on an examination of the analysis, findings and conclusions of the Prior EIRs, implementation of the Project would not substantially increase the severity of any significant impacts identified in these Prior EIRs, nor would it result in new significant impacts related to air quality that were not previously identified. The Prior EIRs did not identify any mitigation measures related to air quality that would apply to the Project, and none would be needed. The SCAs identified above and listed in Appendix A at the end of this CEQA Checklist pertaining to air quality would apply to the Project.

Biological Resources

Impact Topics	WOSP EIR Findings	Project			
		Relationship to WOSP EIR Findings		Applicable SCAs or Mitigation Measures	Level of Significance
		Equal or Less Severity	New or Substantial Increase in Severity		
Special-Status Species, Wildlife Corridors, Riparian/ Sensitive Habitat, Wetlands	LTS	■	□	–	LTS
Tree and Creek Protection	LTS w/SCAs	■	□	–	LTS

Prior EIR Findings

The LUTE EIR determined that impacts on biological resources would be less than significant. The Housing Element EIR also identified less than significant impacts on biological resources.

WOSP EIR Findings

The West Oakland Specific Plan EIR concluded that future development pursuant to the West Oakland Specific Plan would not have a direct substantial adverse effect on any species identified as a candidate, sensitive, or special status species; would not have a substantial adverse effect on any riparian habitat or other sensitive natural community; would not have a substantial adverse effect on federally protected wetlands; and would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The West Oakland Specific Plan EIR did find that indirect impacts (primarily related to water quality) could occur to candidate, sensitive, or special status species; riparian habitat or other sensitive natural community; protected wetlands; and migratory fish or wildlife species, but that these indirect impacts could be reduced to less than significant levels with implementation of water quality-based SCAs.

The West Oakland Specific Plan EIR did conclude that tree removal, building demolition and other construction activities can cause disturbance, noise or loss of habitat for resident or migratory birds and mammals (including bat roosts), and required implementation of SCA pertaining to tree removal during breeding season and bird collision reduction. The West Oakland Specific Plan EIR also concluded that future development pursuant to or consistent with the West Oakland Specific Plan may require the removal of trees that are protected by the City of Oakland Tree Protection Ordinance. Required implementation of SCAs pertaining to tree removal permits, tree replacement plantings and tree protection during construction would reduce these impacts to less than significant.

Project Analysis

The approximately 24,882 square-foot Project site is located in an urban setting on a fully developed site containing two light industrial buildings, a residential building and paved surface parking. As such, the Project site provides no natural habitat for special status species, wildlife corridors, or riparian or sensitive habitat. There are no wetlands or sensitive natural communities associated with the site, and

the Project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

There are no existing trees on the site or within the street frontage right-of-way, and there are open sections of any creek near the site. Neither the Creek Protection Ordinance nor the Tree Ordinance apply to the Project, including the Tree Protection Ordinance. Implementation of the project would have a less than significant impact on biological resources.

The Project would install new landscaping that would include a mix of trees, shrubs, and ground cover along Chestnut Street, with additional landscaping in the interior courtyard and the Project site perimeter (see prior Figure 8).

Conclusions – Biological Resources

Based on an examination of the analysis, findings and conclusions of the Prior EIRs, implementation of the Project would not substantially increase the severity of any significant impacts identified in these Prior EIRs, nor would it result in new significant impacts related to biological resources that were not previously identified. The Prior EIRs did not identify any mitigation measures related to biological resources that would apply to the Project, and none would be needed. No SCAs pertaining to biological resources apply to the Project.

Cultural Resources

Impact Topics	WOSP EIR Findings with Implementation of Mitigation Measures (if required)	Project: Relationship to WOSP EIR Findings: Equal or Less Severity	Project: Relationship to WOSP EIR Findings: Substantial Increase in Severity	Applicable SCAs or Mitigation Measures	Level of Significance
Historical Resources	LTS w/SCAs	■	□	SCA CUL-1: Property Relocation	LTS w/SCAs
Archaeological, Paleontological, and Tribal Resources and Human Remains	LTS w/SCAs	■	□	SCA CUL-2: Archaeological and Paleontological Resources – Discovery During Construction SCA CUL-3: Human Remains – Discovery During Construction	LTS w/SCAs

Prior EIR Findings

The LUTE EIR concluded that many of the City's historic resources are located Downtown and along transit corridors, where higher density uses are proposed and redevelopment is encouraged. This was determined to potentially have direct impacts on historic resources by increasing the pressure to remove or demolish older buildings, including some historic structures. This impact was determined to be less than significant due to compliance with policies of the Historic Preservation Element, the policies in the Land Use and Transportation Element, and measures identified in that EIR (including amending zoning regulations to incorporate preservation regulations and incentives, and developing design guidelines for Landmarks and Preservation Districts. The Housing Element EIR determined that the 2015-2023 Housing Element would not cause a substantial adverse change in the significance of a historic resource, and that any potential construction of residential units which may be affected by adoption of the Housing Element is neither more, nor less likely to create historic impacts. Future development would need to comply with the Oakland General Plan, the zoning ordinance and City SCAs, and would undergo project-specific CEQA review, which reduce potential impacts to a less than significant level. Therefore, impacts to historic resources associated with the Housing Element were found to be less than significant.

The LUTE EIR found that excavation of development sites consistent with the LUTE could unearth archaeological resources, some of which could have scientific or cultural importance. The LUTE EIR identified mitigation measures to reduce the potentially significant impacts on archaeological resources, paleontological resources and human remains to less than significant. These mitigation measures are now incorporated into the applicable City SCAs. Similarly, the Housing Element EIR found potentially significant impacts on existing or undiscovered cultural resources would be reduced to a level of less than significant with implementation of City SCAs related to property relocation, vibrations and adjacent historic structures, archaeological resources, human remains, and paleontological resources.

WOSP EIR Findings

The WOSP EIR determined that the Specific Plan does not propose demolition of any historic properties to allow for new development and requires that any changes to historic properties adhere to the Secretary of the Interior's Standards for the Treatment of Historic Properties. Implementation of the

Specific Plan was not found to cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5, but SCAs pertaining to vibrations adjacent to historic structures was required. The WOSP also concluded that compliance with Policy 3.7 of the Historic Preservation Element (Property Relocation Rather than Demolition) would likely not be feasible for most of the Local Register properties located within the West Oakland Opportunity Areas given their size, design and materials, and the importance of their location and setting). No additional mitigation measures were identified. The WOSP also found that development in accordance with the Specific Plan could cause a substantial adverse change in the significance of an archaeological resource or destroy a unique paleontological resource or site or unique geologic feature. SCAs pertaining to the discovery and treatment of discovered archaeological resources, sensitive sites, human remains, and paleontological resources were identified as reducing these potential impacts to less than significant.

Project Analysis

Historical Resources

Information presented in the following section of this CEQA Checklist is derived from the following primary source:

- Watson Heritage Consulting, *Historic Resource Evaluation of 2420 Chestnut Street*, October 27, 2020 (**Appendix D**)

Of the three existing buildings on the Project site, the two industrial warehouse buildings on 2432 Chestnut do not meet any criteria as potentially historic structures, and are not further considered.

According to City historic records, the house at 2420 Chestnut Street was constructed circa 1887-1888, and first appears on Sanborn Fire Insurance Company maps in 1902, and again in 1912, 1945 and 1952. A comparison of historic Sanborn maps to a current aerial photograph shows that the building's footprint has remained largely unchanged since at least 1902. The property is rated by the City of Oakland Cultural Heritage Survey as Dc3 (D = minor importance, representative example, 3 = not in a historic district, and c = contingency rating to highlight potential value as a restoration opportunity). The Dc3 rating puts the property into the category of a Potential Designated Historic Property (PDHP). The Historic Resource Evaluation provides a re-assessment of this building for its potential to be considered a historic resource.

Description of 2420 Chestnut

The residential building at 2420 Chestnut Street is a one-story over basement residence with a roughly rectangular footprint. The walls are wood clapboard siding attached horizontally. The roof is hipped with a small, front-facing gable over the front porch. The roof is covered with composition shingles. A porch spans the width of the symmetrical facade. The main entrance door is flanked by pairs of wood-framed, one-over-one, double-hung windows. Windows on secondary facades visible from the public right-of-way appear to be wood-framed, one-over-one, double-hung windows. Ornamentation includes scroll-sawn brackets at the corners of porch columns and decorative molding at the cornice line. Alterations visible at the exterior include:

- The building is raised on piers with the addition of access stairs
- An addition is observed at southwest corner (per a comparison of Sanborn maps to 2020 Google aerial
- Addition of tall, metal fence around property perimeter

California Register Eligibility Evaluation

The California Register of Historical Resources (CRHR) is an inventory of significant architectural, archaeological and historical resources in the State of California. Resources can be listed in the CRHR through a number of methods. State Historical Landmarks and National Register-listed properties are automatically listed in the CRHR. Properties can also be nominated to the CRHR by local governments, private organizations or citizens. The evaluative criteria used by the CRHR for determining eligibility are closely based on those developed by the National Park Service for the National Register of Historic Places (NRHP). 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 criteria. These criteria and their associated conclusions are assessed below:

- *Is the building associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage?* The residence at 2420 Chestnut Street does not appear to be associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- *Is the building associated with the lives of persons important in our past?* As presented in Appendix D, the residence at 2420 Chestnut Street does not appear to be associated with the lives of persons important in our past.
- *Does the building embody the distinctive characteristics of a type, period, region or method of construction, or represent the work of an important creative individual, or possesses high artistic values?* The original building permit for this property is not available, and historical background research for this report did not reveal the building's architect or builder. Based on available data and a virtual property survey, this building is a highly intact example of a Victorian-era residence in West Oakland, but the property does not rise to the level of significance required for individual eligibility under CRHR Criterion 3.
- *Has the site yielded, or may be likely to yield archaeological information important in history or prehistory?* An archaeological investigation has not been conducted at the site, but there are no know records of important discoveries of archaeological resources in the vicinity.

Based on this assessment, the property at 2420 Chestnut Street does not appear to be individually eligible for the CRHR under any of the four significance criteria and is not considered an historic resource under CEQA, and no impacts to historic resources would occur.

Applicable Polices of the Historic Resource Element of the General Plan

The building at 2420 Chestnut Street is rated by the City as a Dc3 building, and considered a Potential Designated Historic Property (PDHP) as a restoration opportunity. Pursuant to Policy 3.7 of the Historic Preservation Element of the Oakland General Plan, the project applicant is required to comply with the following SCA:

- **SCA CUL-1: Property Relocation** (applies to all projects that involve demolition of a Potential Designated Historic Property (PDHP) or a CEQA Historic Resource

Pursuant to this SCA, the Project applicant must make a good faith effort to relocate the historic resource to a site acceptable to the City. A good faith effort includes, at a minimum, advertising the availability of the building; maintaining a log of all the good faith efforts; maintaining the signs and advertising in place for a minimum of 90 days; and making the building available at no or nominal cost until removal is necessary for construction of a replacement project, but in no case for less than a period of 90 days after such advertisement. Whereas the Project property is not considered an historic

resource under CEQA and no impacts to historic resources would occur, implementation of SCA CUL-1 is required for the Project pursuant to General Plan policy, irrespective of CEQA impacts.

Archaeological Resources

The Project site is in urbanized portion of Oakland, has been previously developed, and is surrounded by other urban development. The inadvertent discovery of archaeological resources and human remains during ground-disturbing activities could occur. Consistent with the findings of the West Oakland Specific Plan EIR, impacts related to unknown archaeological resources that may be discovered during construction of the Project would be reduced to less than significant levels with implementation of the following City of Oakland SCA:

- **SCA CUL-2: Archaeological and Paleontological Resources–Discovery During Construction** (applies to all projects involving construction), and
- **SCA CUL-3: Human Remains–Discovery During Construction** (applies to all projects involving construction)

Implementation of SCA CUL-2 and -3 during construction would be required for the Project, to reduce the risk of damage to currently unknown archaeological resources to a level of less than significant.

Conclusions – Cultural Resources

Based on an examination of the analysis, findings and conclusions of the Prior EIRs, implementation of the Project would not substantially increase the severity of any significant impacts to cultural resources as identified in these Prior EIRs, nor would it result in new significant impacts related to cultural resources that were not previously identified. The Prior EIRs did not identify any mitigation measures related to geology that would apply to the Project, and none would be needed. Adherence to existing General plan policy requirements and City SCAs will be required for the Project. The SCAs identified above and listed in Appendix A at the end of this CEQA Checklist pertaining to cultural resources would apply to the Project and would reduce cultural resource impacts to levels of less than significant.

Geology, Soils, and Geologic Hazards

		Project			
		Relationship to WOSP EIR Findings			
Impact Topics	WOSP EIR Findings	Equal or Less Severity	Substantial Increase in Severity	Applicable SCAs or Mitigation Measures	Level of Significance
Seismic Hazards and Unstable Soil	LTS w/SCAs	■	□	SCA GEO-1: Construction-Related Permits SCA GEO-2: Seismic Hazards Zone	LTS w/SCAs
Soil Erosion	LTS w/SCAs	■	□	SCA HYDRO-1: Erosion and Sedimentation Control Measures for Construction	LTS w/SCAs

Prior EIR Findings

The LUTE EIR determined that impacts related to geology, soils, and geohazards would be less than significant. The Housing Element EIR concluded that impacts related to geology, soils and geological hazards would be less than significant with required implementation of SCAs requiring best management practices, mandating site-specific studies and requiring setbacks, and compliance with State and local regulations pertaining to structural design and construction of future development within the City.

WOSP EIR Findings

The West Oakland Specific Plan EIR concluded the following about geologic hazards throughout West Oakland:

- There are no Alquist-Priolo Earthquake Fault Zones and no known earthquake fault traces within the Planning Area. Development in accordance with the Specific Plan would not expose people or structures to substantial adverse effects, including the risk of loss, injury or death, as a result of the surface rupture of a known earthquake fault.
- A combination of strong earthquake ground shaking, underlying geological material consisting of sand, alluvial and fluvial deposits and artificial fill, and shallow depth to groundwater result in a high potential for liquefaction throughout most of the Planning Area. The California Geological Survey identifies a majority of West Oakland as being located within a Seismic Hazard Zone due to high liquefaction potential. However, with required implementation of SCAs, the impact of the Specific Plan related to seismic ground shaking and seismic-related ground failure due to liquefaction would be reduced to less than significant.
- Nearly all of the Planning Area is flat and far from hillsides, and is not subject to risk from landslides.
- Future grading and excavation activities necessary for new construction throughout the Planning Area have the potential to expose underlying soils. Once exposed, these soils could be subject to erosion and sedimentation from stormwater runoff. City SCAs that are mandatory requirements of each individual future project within the Planning Area would require a site-

specific erosion and sedimentation control plan, reducing erosion and the loss of topsoil to less than significant.

- Future development in accordance with the Specific Plan in areas underlain by unstable geologic conditions or soils, or expansive soils could expose people or structures to substantial adverse effects. City's SCAs mandate that individual project within the Planning Area prepare site-specific soils reports that identify geologic and soils-related hazards and necessary corrective measures, and that implementation of these measures would reduce soils hazards to less than significant.

The West Oakland Specific Plan EIR concluded that implementation of City SCAs would reduce all potential impacts related to geologic hazards to less than significant levels.

Project Analysis

A preliminary geotechnical study was performed for the Project site to evaluate subsurface conditions and to develop preliminary conclusions and recommendations regarding the geotechnical aspects of the Project:

- Rockridge Geotechnical, *Preliminary Geotechnical Study for Proposed Townhouse Buildings at 2432 Chestnut Street*, March 22, 2019 (**Appendix E**)

Much of the following information is derived from the geotechnical study, which relied on available geotechnical data of the surrounding area. A subsurface investigation was not performed for this study.

Earthquake Faults, Ground Shaking and Seismic-related Ground Failure, and Landslides

The seismicity of the site is governed by the activity of the Hayward Fault, although ground shaking from future earthquakes on other faults, including the San Andreas, San Gregorio, and Calaveras faults will also be felt at the site. Strong to very strong ground shaking could occur at the site during a large earthquake on one of the nearby faults. The site is not within an Earthquake Fault Zone as defined by the Alquist-Priolo Earthquake Fault Zoning Act, and no known active or potentially active faults exist on the site. The risk of fault offset at the site from a known active fault is very low. The remote possibility exists for future faulting in areas where no faults previously existed, but the risk of surface faulting and consequent secondary ground failure from previously unknown faults is very low.

The site is relatively flat and would not be subject to instability resulting from a landslide. There would be no impact related to landslide hazards.

Seismically induced compaction of sand above the groundwater table caused by earthquake vibrations may result in differential settlement. Soils above the groundwater at the site are predominantly clay, which is not susceptible to cyclic densification due to its cohesion. It is anticipated that loose fill at the site will be reworked/recompacted during construction of Project, and that the potential for ground surface settlement resulting from cyclic densification is very low. Liquefaction is a phenomenon in which saturated soil temporarily loses strength from the buildup of excess pore water pressure, especially during earthquake-induced cyclic loading. Soil susceptible to liquefaction includes loose to medium dense sand and gravel, low-plasticity silt, and some low-plasticity clay deposits. The site is located within

a zone of liquefaction potential.[8] However, nearby borings conducted by others appears to indicate the soil underlying the vicinity is predominantly cohesive material which is not susceptible to liquefaction.[9] Thin lenses of medium dense clayey sand underlying the site are susceptible to pore pressure build-up during a major earthquake, but these lenses appear to be thin and discontinuous. Rockridge Geotechnical judges that pore pressure build-up will not result in noticeable ground surface settlement at the site (i.e. on the order of 1/4 inch or less), and the overall risk of liquefaction or liquefaction-induced ground failure is low.

Consistent with the findings of the West Oakland Specific Plan EIR, geological hazards associated with the Project pertaining to ground shaking and seismic-related ground failure would be reduced to less than significant levels with implementation of the following City of Oakland SCAs:

SCA GEO-1: Construction-Related Permits (applies to all projects requiring a construction-related permit)

SCA GEO-2: Seismic Hazards Zone - Landslide/Liquefaction (applies to all new structures located in a Seismic Hazards Zone per the State Seismic Hazards Mapping Act pertaining to seismically-induced liquefaction and landslides)

Although a preliminary geotechnical report for the site has been prepared to address general suitability of the site for new development, that report indicates that further site-specific geotechnical investigation should be performed to further evaluate subsurface conditions and provide final conclusions and recommendations regarding the geotechnical aspects of the Project, consistent with SCA GEO-2.

Expansive Soils

The Rockridge preliminary geotechnical report finds that expansive near-surface soil is subject to volume changes during seasonal fluctuations in moisture content. These volume changes can cause movement and cracking of foundations, slabs and pavements. They anticipate the near-surface clay is moderately to highly expansive, and that proposed improvements (i.e. foundations, floor slabs, and pavements) should be designed and constructed to mitigate the effects of the expansive soil. In general, the Rockridge report concludes that the effects of expansive soil can be mitigated by moisture-conditioning the expansive soil, providing non-expansive fill below interior and exterior slabs, and either supporting foundations below the zone of severe moisture change or by providing a stiff, shallow foundation that can limit deformation of the superstructure as the underlying soil shrinks and swells. The Rockridge report assumes that undocumented fill beneath the proposed buildings will be over-excavated and recompacted during site grading and building pad subgrade preparation. If the proposed buildings will be constructed at-grade, they preliminarily conclude that the proposed buildings may be supported on individual spread footings at interior column locations and continuous, deepened perimeter footings. The perimeter footings should be deepened to act as barriers to reduce the potential for moisture change beneath the slab-on-grade floors.

As with the assessment of geotechnical hazards, the Rockridge report's recommendations for soils conditions is preliminary and indicates that further site-specific geotechnical investigation (pursuant to **SCA GEO-2: Seismic Hazards Zone - Landslide/Liquefaction**) should be performed to further evaluate subsurface conditions and provide final conclusions and recommendations. With further

[8] California Geological Survey (CGS), State of California Seismic Hazard Zones, Oakland West Quadrangle, Official Map, dated February 14, 2003

[9] and CPTs by T&R (2000 and 2001)

implementation of SCA GEO-2, hazards associated with expansive soils conditions would be reduced to less than significant levels.

Erosion or Loss of Topsoil

Grading and site preparation activities necessary for construction of the Project has the potential to expose underlying soils to wind and water erosion and the loss of topsoil. Consistent with the findings of the West Oakland Specific Plan EIR, impacts related to erosion during construction of the Project would be reduced to less than significant levels with implementation of the following City of Oakland SCA:

- **SCA HYDRO-1: Erosion and Sedimentation Control Measures for Construction** (applies to all projects involving construction activities that require a grading permit)

Implementation of SCA HYDRO-1: Erosion and Sedimentation Control Measures for Construction would be required for the project to reduce the risk of soil erosion to a level of less than significant.

Other Geology and Soils Hazards

There are no known wells, pits, swamps, mounds, tank vaults, or unmarked sewer lines located below the surface of the site that would be disturbed by project development, and there is no evidence to suggest that the site had been previously used as a landfill. The site would continue to be served by existing municipal sewage systems. There would be no impact related to this topic.

Conclusions – Geology and Soils

Based on an examination of the analysis, findings and conclusions of the Prior EIRs, implementation of the Project would not substantially increase the severity of any significant geological impacts identified in these Prior EIRs, nor would it result in new significant impacts related to geology and geologic hazards that were not previously identified. The Prior EIRs did not identify any mitigation measures related to geology that would apply to the Project, and none would be needed. Adherence to existing regulatory requirements and City SCAs will be required for the Project. The SCAs identified above and listed in Appendix A at the end of this CEQA Checklist pertaining to geology would apply to the Project and would reduce geologic impacts to less than significant levels.

Greenhouse Gases and Climate Change

		Project			
		Relationship to WOSP EIR Findings			
Impact Topics	WOSP EIR Findings	Equal or Less Severity	Substantial Increase in Severity	Applicable SCAs or Mitigation Measures	Level of Significance
GHG Emissions	Potentially SU	■	☐	GHG-1: Project Compliance with the ECAP Consistency Checklist GHG-2: Greenhouse Gas (GHG) Reduction Plan	LTS w/ SCAs
Consistency with Applicable GHG Plans	LTS	■	☐	GHG-1 and GHG-2	LTS w/SCAs

Prior EIR Findings

Greenhouse gas (GHG) emissions and climate change were not expressly addressed in the LUTE EIR. The Housing Element EIR identified less than significant GHG impacts, and no mitigation measures were necessary.

West Oakland Specific Plan EIR

The West Oakland Specific Plan EIR concluded that development facilitated by the Specific Plan would allow for the construction and operation of land uses that would produce greenhouse gas emissions. The level of emissions was expected to exceed the project-level threshold of 1,100 metric tons carbon dioxide equivalent ($MTCO_2e$) per year, but would not exceed the project-level efficiency threshold for year 2020 of 4.6 $MTCO_2e$ of annual emissions per service population nor would it exceed the Plan-level threshold for year 2020 of 6.6 $MTCOC_2e$ annually per service population. Development facilitated by the Specific Plan was thus not expected to generate greenhouse gas emissions at levels that would result, in the aggregate, in significant or cumulatively considerable GHG emissions.

The West Oakland Specific Plan EIR also concluded that the Specific Plan did not conflict with applicable plans, policies and regulations adopted for the purpose of reducing GHG emissions. The West Oakland Specific Plan would not be in conflict with current plans or policies the policies adopted for the purpose of reducing GHG emissions as it would not exceed the numeric thresholds at either the Plan or Project level.

The West Oakland Specific Plan EIR noted that future development pursuant to the WOSP would be required to comply with applicable requirements of the City's Energy and Climate Action Plan, and that new industrial and commercial growth facilitated by the Specific Plan could introduce new stationary sources of greenhouse gases that, on an individual basis, could exceed project-level GHG thresholds. Until such projects are proposed and evaluated, the efficacy of any measures in reducing GHG emissions below relevant thresholds cannot be determined with certainly, and this impact was conservatively considered significant and unavoidable.

2030 Equitable Climate Action Plan

The City of Oakland's 2030 Equitable Climate Action Plan (ECAP, July 2020) calls for ambitious reductions in carbon emissions intended to achieve a 36 percent reduction in total GHG emission as compared to 2005 baseline emission by year by 2020, a 56 percent reduction by year 2030, and an 83 percent reduction in GHG emission as compared to 2005 emissions by year 2050. To achieve these ambitious targets, GHG emission reductions are needed throughout all sectors, but with a particular emphasis on new development and the transportation sectors. As stated in the ECAP, "by implementing all Actions in this ECAP, Oakland can reduce GHG emissions at least 60% by 2030, and 84% by 2050. Most critically, the Actions in this ECAP will form the foundation for actions required in future years to meet the deepest emissions reductions. Without successful implementation of this ECAP, it will not be possible to achieve future commitments." Important among the ECAP Actions is the Transportation and Land Use Action-2, which call for better aligning the City's permit and project approval process with ECAP priorities:

> **"ECAP Action TLU-2:** Amend Standard Conditions of Approval (SCAs), as well as mitigation measures and other permit conditions to align with the City's GHG reduction priorities stated in this ECAP. Explore, through the Planning Commission, adoption of a threshold of significance for GHG impacts to align with this ECAP. In applying conditions on permits and project approvals, ensure that all cost-effective strategies to reduce GHG emissions from buildings and transportation are required or otherwise included in project designs, including infrastructure improvements like bicycle corridor enhancements, wider sidewalks, crossing improvements, public transit improvements, street trees and urban greening, and green stormwater infrastructure. Where onsite project GHG reductions are not cost-effective, prioritize local projects benefiting frontline communities."

The City's recently adopted new thresholds of significance for GHG impacts that better align with ECAP, effective as of December 16, 2020. Therefore, the following Project Analysis relies on a comparison with the new GHG checklist approach, consistent with the 2020 ECAP Action TLU-2, which assesses the Project's compliance with identified strategies aimed at reducing GHG emissions from new development projects and associated transportation. These strategies require projects to include design measures and infrastructure systems that systematically achieve cost-effective GHG emission reductions.

Project Analysis

Construction and operation of the Project would contribute additional sources of GHG emissions, primarily through consumption of fuel for transportation and energy usage on an ongoing basis.

Stationary Sources

The Project is not anticipated to include any stationary sources of GHGs that would generate emissions approaching the stationary source threshold of 10,000 MTCO2e per year. Any new stationary sources will be subject to BAAQMD's requirement for New Source Review, and BAAQMD may impose conditions that would lead to emissions reductions from any new stationary sources that may be proposed.

Mobile Sources

Per CEQA Guidelines Section 15183.5(c), environmental documents for certain residential and mixed-use projects and transit priority projects (as defined in Section 21155 of the Public Resources Code) need not analyze global warming impacts resulting from cars and light duty trucks if the projects are consistent with the general use designation, density, building intensity and applicable policies specified for the

project area in an applicable Sustainable Communities Strategy or alternative planning strategy. If a project meets the definition of a transit priority project, its mobile source emissions need not be included in the assessment of GHG impacts. The Project site is within the West Oakland Priority Development Area as defined by Plan Bay Area 2040, and is therefore consistent with the region's Sustainable Communities Strategy. As documented in the Transportation section of this CEQA Checklist, the Project is also located within one-half mile of a major transit stop and a high quality transit corridor, and its impacts on VMT are less than significant. Therefore, mobile source emissions attributed to the Project need not be included in the assessment of GHG impacts.

Thresholds of Significance [10]

Pursuant to the Thresholds of Significance as adopted by the City of Oakland in December 2020, the Project would have a significant impact on the environment if it would:

1. For a project involving a stationary source, produce total emissions of more than 10,000 metric tons of CO2e annually.
2. For a project involving a land use development, fail to demonstrate consistency with the 2030 Equitable Climate Action Plan (ECAP) adopted by the City Council on July 28, 2020. Consistency with the 2030 ECAP can be shown by either:

   (a) committing to all of the GHG emissions reductions strategies described on the ECAP Consistency Checklist,[11] or

   (b) 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 emission reductions than would be achieved by meeting the ECAP Consistency Checklist.

ECAP Consistency Checklist

The City has developed an ECAP Consistency Checklist that includes a series of design measures and infrastructure systems that, if implemented, would systematically achieve cost-effective GHG emission reductions intended to meet ECAP emission reduction targets. Projects that are fully consistent with all of the Checklist strategies are presumed to result in less than significant GHG emissions, and align with the ECAP reduction targets. The following **Table 7** compares the Project to each of the ECAP Consistency Checklist strategies.

[10] The City's Thresholds of Significance pertaining to greenhouse gas (GHG) emissions and global climate change are intended to achieve deeper emissions reductions than the more lenient thresholds adopted by the Bay Area Air Quality Management District (BAAQMD) in June 2010. Pursuant to CEQA, lead agencies must apply appropriate thresholds based on substantial evidence in the record. The City's Thresholds rely upon the technical and scientific basis for the City's 2030 Equitable Climate Action Plan (ECAP), which provide substantial evidence that adherence to the 2030 ECAP action items will achieve GHG emissions reduction targets of 56% below 2005 levels by 2030 and 83% below 2005 levels by 2050. Use of the City's thresholds is consistent with and authorized by CEQA Guidelines section 15064. The City's thresholds have not been challenged and remain in effect.

[11] The ECAP Consistency Checklist includes all of the project-level GHG emissions reduction strategies that are either regulatory requirements or are necessary at a project level to meet the adopted city-wide GHG emissions reduction targets of 56% reduction from 2005 levels by 2030 and 83% reduction by 2050. As new strategies are adopted to align with the 2030 ECAP, the Checklist will be up-dated and new projects will be expected to achieve the revised strategies or comply with GHG Reduction Standard Condition of Approval.

Table 7: ECAP Consistency Checklist		
Yes	**No**	
■		Is the Project substantially consistent with the City's over-all goals for land use and urban form, and/or does the Project take advantage of allowable density and/or FAR standards of the City's General Plan?

As fully documented in the section of this CEQA Analysis titled: 'Project's Consistency with Community Plan and Zoning', the proposed 12-unit Project is consistent with the density assumptions of the LUTE, the West Oakland Specific Plan and applicable zoning standards. The Project is consistent with relevant policies of the LUTE that encourage the construction, conservation and enhancement of housing resources to meet current and future needs of the Oakland community, and policies that encourage a mix of housing costs, unit sizes, types and ownership structures. The Project is also consistent with West Oakland Specific Plan policies that seek to establish more identifiable borders between established residential neighborhoods and the industrial and intensive commercial business areas, prevent new land use incompatibilities that might adversely affect existing neighborhoods, and restore neighborhoods at the residential/ industrial interface.

Yes	**No**	
N/A		For projects that are subject to a Transportation Demand Management Program, would the project include transit passes for employees and/or residents?

According to the City of Oakland's Transportation Impact Review Guidelines (TIRG, April 2017), projects that generate 50 or more vehicle trips during a single peak hour are required to prepare a Transportation Demand Management (TDM) Plan. The TIS prepared for this CEQA Analysis ((Fehr & Peers, Appendix K), determined that the Project would generate approximately 70 daily, 5 AM peak hour, and 6 PM peak hour net new automobile trips. The Project would not generate 50 or more vehicle trips during either of the peak hours, so no TDM Plan is required of the Project.

Yes	**No**	
■		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 and other measures as identified in the City's Transportation Impact Review Guidelines)

The City's Transportation Impact Review Guidelines also identify that providing bicycle parking in excess of City requirements is a viable and acceptable TDM measure. Per the zoning requirements applicable to the site (RM-2 / RM-4) the required bike parking is 1 long-term space for every 4 units, and 1 short-term space for every 20 units (2 minimum). With 12 units, that requirement equates to 3 long-term and 2 short-term bike parking spaces. The Project design includes 12 short-term and 6 long-term bike parking spaces, thereby exceeding the City requirements by 9 short-term and 4 long-term bike parking spaces.

Yes	**No**	
■		For development projects located in "Transit Accessible Areas" as defined in the Planning Code, would the Project provide less than half the maximum allowable parking, or the minimum allowable parking, or take advantage of available parking reductions?

Pursuant to OMC Section 17.116.060, the minimum off-street parking requirement for permanent residential activities in the applicable zoning districts is 1 off-street parking space per unit. The Project is a 12-unit residential development and provides the minimum of 12 off-street parking spaces.

Yes	No	
	N/A	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 include structured parking.

Yes	No	
■		Does the project comply with the Plug-In Electric Vehicle (PEV) Charging Infrastructure requirements (Chapter 15.04 of the Oakland Municipal Code), if applicable?

Pursuant to SCA TRANS-3: Plug-In Electric Vehicle (PEV) Charging Infrastructure, the applicant is required to 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 must indicate sufficient electrical capacity to supply the required PEV-capable parking spaces.

Yes	No	
■		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 existing residence at 2420 Chestnut Street is vacant, and demolition of this residence would not directly displace any persons. The Dalzell business that once occupied the industrial buildings ay 2432 Chestnut closed its operations at the site since 2017, and the Project would not displace and existing commercial/industrial use.

Yes	No	
■		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 City's adopted Bicycle Master Plan does not show either Chestnut Street or Linden Street as part of the existing or proposed bicycle network. The Project's two driveway entrances (one at an existing curb cut on Chestnut and other at an existing curb cut on Linden, would not conflict with an existing or planned bike path. The Project would improve the existing sidewalk along Chestnut Street as part of the required 20-foot setback.

Yes	No	
	■	Does the project rely on all electric energy (i.e., no natural gas connections/hook-ups)?

The Project proposes to use natural gas energy for tankless hot water heating systems within the residential units. The Project **does not comply** with this GHG reduction strategy (see Project discussion, below)

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

The City of Oakland's Green Building Ordinance compliance standards for multi-family residences (as of January 2020) require a completed Green Point Rating (GPR) Checklist; all pre-requisite measures except J5.1: Building Performance Exceeds Title 24 Part 6 and any cool roof requirements; a minimum of 23 points from the GPR Checklist (3 Community, 6 Air Quality/Health, 6 Resources and 8 Water); all CALGreen mandatory measures for new residential construction; and a GPR compliance verification. As shown on the Project's application materials, the Project has had a GPR Checklist completed by a verified GPR

rater. That Checklist indicates that the Project would comply with all CALGreen mandatory measures and would achieve a total of 33 points, thereby exceeding the 23 required points. The Project would achieve 4 Community points, 6 Air Quality/Health points, 7 Resources points, and 8.5 Water points (each meeting or exceeding the individual category requirements), as well 7.5 Energy points. [12]

Yes	No	
N/A		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 site is not City-owned or controlled.

Yes	No	
■		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

Pursuant to SCA UTIL-1: 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.

Yes	No	
■		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?

The Project site is completely covered with impervious surfaces (rooftops, asphalt or concrete) and there are no trees on the site or within the public right-of-way frontages of the site. The Project's landscape Plan proposes to add 5 street trees along the Chestnut Street frontage and 1 street tree along the narrow Linden Street frontage. The Project's landscape plan also shows a total of 18 additional trees to be planted on-site.

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

There are no rivers, creeks or streams located on, or in the vicinity of the Project site and no Creek permits would be required. The Project would remove all existing structures and pavement that currently covers the entire 24,882 square-foot site, and would replace those surfaces with new impervious surfaces (rooftops and paving). The Project includes a Preliminary Stormwater Control Plan that provides for source control measures to limit pollutants (i.e., stenciling all storm drain inlets with "No Dumping – Drains to Bay", covering all trash areas and outdoor equipment and materials storage areas, and efficient irrigation and sustainable landscape practices); low-impact site design measures (i.e., pervious self-treating and self-retaining areas, and directing runoff to vegetated areas); and low-impacts water quality treatment filtration with flow-through planters sized to accommodate flows from impervious areas (sizing based on the Alameda Countywide Clean Water Program's C-3 Stormwater Treatment Guidance). With implementation of an approved Stormwater Control Plan, the Project will comply with the Creek Protection, Storm Water Management and Discharge Control Ordinance (Chapter 13.16 of the Oakland Municipal Code).

[12] Build it Green Checklist, 2432 Chestnut Street, GPR Rater: Paul Cprrea, #!3117, Project Plan submittal August 2020

As indicated in the ECAP Consistency Checklist above, the Project complies with all applicable ECAP Checklist items, with the exception of using natural gas.

All-Electric Construction Ordinance

In furtherance of the 2030 ECAP and its carbon neutrality target by year 2045, the Oakland City Council adopted OMC Chapter 15.37, "All-Electric Construction In Newly Constructed Buildings" on December 15, 2020. These new regulations require all newly constructed buildings to meet the definition of an All-Electric Building, and contain an all-electric design. As defined in the ordinance, "Newly Constructed Buildings" shall mean any building that: (1) has obtained a valid land use entitlement from the City on or after the effective date of the ordinance and has never before been used or occupied for any purpose, or (2) has obtained a valid land use entitlement from the City before the effective date of this ordinance, but has failed to file for a development-related permit within one (1) year from the effective date of this Chapter and has never before been used or occupied for any purpose. As such, the Project is subject to the provisions of the all-electric provisions of this ordinance.

Pursuant to Section 15.37.050: Infeasibility Waiver, if an applicant for a newly constructed building believes that circumstances exist that makes it infeasible to meet the requirements of this Chapter, the applicant may request an exemption at the time of building permit application submittal. In applying for such an exemption, the burden is on the applicant to show infeasibility. If the Project applicant believes such circumstances exist, they must indicate the maximum threshold of compliance they believe is feasible for the Project and the circumstances that make it infeasible to fully comply with this Chapter. Circumstances that constitute infeasibility include, but are not limited to conflicts with other City regulations (such as those requiring historic preservation), a lack of commercially available materials and technologies to comply with the requirements, or if the requirements of this ordinance would effectuate an unconstitutional taking of property or otherwise have an unconstitutional application to the property.

The Project applicant has indicated that they intended to apply for this Infeasibility Waiver at the time of building permit application.

Compliance with CEQA Thresholds

As indicated in the CEQA Thresholds listed above, the Project would have a significant GHG emissions impact if it cannot demonstrate consistency with the 2030 ECAP by either committing to all of the GHG emissions reductions strategies (including all-electric), or if it does not comply with the GHG Reduction SCA 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. These thresholds are further implemented by the following City of Oakland SCA:

- **SCA GHG-1: Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist Requirement** – requiring implementation of all the measures in the ECAP Consistency Checklist

or -

- **SCA GHG-2: Greenhouse Gas (GHG) Reduction Plan** – requiring a GHG Reduction Plan for City review and approval that achieves the goal of increasing energy efficiency and reducing GHG emissions to at least the amount that would be achieved by committing to all of the emission reduction strategies identified on the ECAP Consistency Checklist

Implementation of SCA GHG-1 or GHG-2 would be required for the Project to reduce GHG emissions to levels considered less than significant (i.e., reducing GHG emissions as compared to 2005 emissions by at least 60% by year 2030, and 84% by year 2050).

The Project does not commit to all of the ECAP GHG emissions reductions strategies (i.e., it does not propose to be an all-electric building), and the Project applicant has indicated their intention to apply for an Infeasibility Waiver to the requirements of OMC Chapter 15.37: All-Electric Construction In Newly Constructed Buildings. Therefore, the Project applicant proposes to comply with the GHG Reduction SCA by implementing a Project-level GHG Reduction Plan that achieves the same or greater emission reductions than would be achieved by meeting the all-electric criteria of the ECAP Consistency Checklist. GHG reduction measures considered as potential offsets include measures recommended in BAAQMD's latest CEQA Air Quality Guidelines, the California Air Resources Board Scoping Plan (December 2008, as may be revised), the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures (August 2010, as may be revised), the California Attorney General's website, and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council. The types of allowable GHG reduction measures include physical design features, operational features, and/or the payment of fees to fund GHG-reducing programs (i.e., the purchase of "carbon credits").

Greenhouse Gas Reduction Plan Requirements

The Project intends to use natural gas to power its proposed tankless hot water heaters. Tankless hot water heating systems are manufactured as both natural gas and electrical, but natural gas systems are more prevalent in the market. Both electrical and natural gas systems are highly energy efficient. The system proposed by the Project has a Uniform Efficiency Rating (UEF) of 0.96, indicating only a 4% energy loss in the conversion to hot water, and electrical systems are similarly UEF rated. However, natural gas system generate more GHG emissions per equivalent energy use than does electricity from PG&E's current portfolio of energy sources transmitted through the electrical grid. For example, the 24 small tankless hot water heaters are calculated to require a total of 4,200 therms of natural gas energy per year to supply hot water for the residences, resulting in approximately 22.5 MTCO2e emission per year. An electric tankless hot water system relying on an equivalent energy demand (or approximately 123,090 kWh of electrical energy) would result in approximately 16.33 MTCO2e per year. The difference of approximately 6.21 MTCO2e per year is the additional GHG emissions attributed to using the same amount of energy, but from natural gas rather than electric energy sources. Pursuant to current ECAP consistency requirements and SCAs, the Project is therefore required to offset these 6.21 MTCO2e of GHG emissions with an equivalent or greater reduction from other emission sources.

Proposed GHG Emission Offsets

The greatest source of Project-generated GHG emissions is attributed to mobile sources, or vehicles that are owned/used by Project residents. Mobile source emission of 81.75 MTCO2e/year have been calculated as being attributed to the 12 vehicles (or 12 parking spaces) provided by the Project, or approximately 6.81 MTCO2e per vehicle per year (see **Appendix C**). The Project's proposed GHG Reduction Plan targets the following specific reductions in mobile source emissions as the best opportunity to offset emissions from its proposed natural gas hot water systems, and to further reduce GHG emissions from the Project to satisfy the ECAP's consistency requirements and SCAs (see **Appendix F**):

- PEV-Only Parking: According to CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*, when vehicles are powered by grid electricity rather than fossil fuel, direct GHG emissions from fuel combustion are replaced with indirect GHG emissions associated with the electricity used to

power the vehicles. CAPCOA also presents a method for calculating the resulting GHG emission reductions (i.e., 1- [electric vehicle emission / baseline gasoline-powered vehicle emissions).[13] Using this methodology (as presented in Appendix F), the GHG emission reductions attributed to an electric vehicle are calculated as approximately 37.3% of that attributed to a gasoline-powered vehicle, based on the average driving characteristics of a person living within the Traffic Analysis Zone where the Project is located. A 37.3 percent reduction in GHG emissions from one Project vehicle is equivalent to a 2.54 MTCO2e/year reduction in mobile source GHG emissions, and a 37.3 percent reduction of GHG emissions from 2 Project vehicles is equivalent to a 5.09 MTCO2e/year reduction in mobile source GHG emissions. Therefore, replacing 2 gasoline powered vehicles with 2 electric vehicles could achieve approximately 82 percent of the Project's required GHG emission offsets.

City SCAs already applicable to the Project (SCA TRANS-3: Plug-In Electric Vehicle Charging Infrastructure) requires the Project applicant to provide inaccessible conduit capable of serving 1 PEV-capable parking space, and an electric panel capacity sufficient to supply 3 parking spaces (per Section 15.04.3.11.110 of the Oakland Municipal Code). To further incentivize the use of PEV at the Project site and thereby achieve the estimated GHG emission reductions, the Project applicant intends to install a dual PEV charging station serving 2 of the on-site parking spaces, and to restrict these parking spaces to electric vehicles, only.

- Unbundled Parking: As an additional mobile source GHG emissions offset, the Project applicant intends that all on-site parking spaces provided by the Project will be leased separately from the rental of the dwelling units, so that tenants have the option of renting a parking space at an additional cost, and would experience a cost savings if they opt not to rent parking. According to the City of San Francisco's TDM Program Standards - Appendix A, unbundling the parking from the costs of rent can achieve an approximate 1% reduction in the Project's total estimated VMT, or a commensurate 1% reduction on mobile source GHG emissions, equivalent to a 0.82 MTCO2e/year GHG emissions offset.[14]
- Bike Repair Station: As a further mobile source GHG emissions offset, the Project applicant intends to include a bicycle repair station consisting of a designated, secure area within the Project's Community Room (or elsewhere at a location easily accessible to Project residences), where bicycle maintenance tools and supplies are readily available on a permanent basis and offered in good condition to encourage bicycling. According to the City of San Francisco's TDM Program Standards - Appendix A, such a bike repair station can achieve an approximate 1% reduction in the Project's total estimated VMT, or a commensurate 1% reduction on mobile source GHG emissions, equivalent to a 0.82 MTCO2e/year GHG emissions offset.[15]

As demonstrated in **Table 8** (as summarized from Appendix F), the Project's additional increment of GHG emissions attributed to use of natural gas for the tankless hot water heaters can be fully offset by the Project's proposed mobile source GHG reduction measures.

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[13] CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, Transportation Strategy 3.7.3 Utilize Electric or Hybrid Vehicles, page 309, August 2010

[14] City of San Francisco. TDM Measures, Appendix A – TDM Program Standards, updated June 2018, Option PKG-1, Unbundle Parking,

[15] Ibid, Option Active-5A, Bicycle Repair Station

Table 8: Summary of Proposed GHG Reduction Plan Emission Offsets

GHG Emissions – Non-Compliant with ECAP Checklist Criteria	**MTCO2e/year**
Natural gas tankless water heater	22.55
comparable electric tankless water heater	- 16.33
Net Difference (GHG emissions in excess of Checklist criteria)	**6.21**
Proposed GHG Reduction Plan, Emission Offsets	
1 dual PEV charging station serving 2 designated electric vehicle parking spaces	5.09
Car-share parking space	0.82
Bike Repair Station	0.82
Total GHG Emission Offsets (greater than additional increment of GHG emissions attributed to use of natural gas)	**6.72**

By implementing the Project's proposed GHG Emission Reduction Plan, the Project will achieve the same or greater emission reductions than would be achieved by meeting all of the criteria of the ECAP Consistency Checklist (i.e., all-electric building), and the Project's GHG emissions would be less than significant.

Conflict with GHG Reduction Plan Policies or Regulations

If the Project applicant does seek an Infeasibility Waiver pursuant to Section 15.37.050 of the OMC at the time of building permit approval, and if this waiver is not approved, the Project will be required to design and construct the building as an all-electric. Under this scenario, the Project would, by regulatory requirements, comply with all provisions of the ECAP Checklist and the City's regulations (the All-Electric Construction In Newly Constructed Buildings ordinance) as adopted to reduce GHG emissions, and its impacts would be less than significant.

If the Project applicant does seek an Infeasibility Waiver pursuant to Section 15.37.050 of the OMC at the time of building permit approval, and if this waiver is approved, the Project will be required to implement the proposed GHG Emissions Reduction Plan to offset emissions attributed to the use of natural gas for hot water heating, thereby complying with SCA GHG-2 and reducing GHG emissions by an equivalent or greater reduction that otherwise achieved with full compliance with all provisions of the ECAP Checklist. By implementing this offset GHG Emission Reduction Plan, the Project retains consistency with the 2030 ECAP and is consist with applicable citywide GHG reduction goals, and the Project's GHG emissions impact would also be less than significant.

Conclusions – Greenhouse Gas Emissions

Based on an examination of the analysis, findings and conclusions of the Prior EIRs, implementation of the Project would not substantially increase the severity of any significant impacts identified in these Prior EIRs, nor would it result in new significant impacts related to GHG emissions that were not previously identified.

Hazards and Hazardous Materials

		Project			
		Relationship to WOSP EIR Findings			
Impact Topics	WOSP EIR Findings	Equal or Less Severity	Substantial Increase in Severity	Applicable SCAs or Mitigation Measures	Level of Significance
Hazardous Materials during Construction	LTS w/ SCAs	■	□	SCA HAZ-1: Hazardous Materials Related to Construction SCA HAZ-2: Hazardous Building Materials and Site Contamination SCA AIR-3: Asbestos in Structures	LTS w/ SCAs
Use, Exposure, Storage, & Disposal of Hazardous Materials	LTS w/SCAs	■		SCA HAZ-3: Hazardous Materials Business Plan	LTS
Exposure to Hazardous Materials in the Subsurface, Cortese List	LTS w/ SCAs	■	□	SCA HAZ-2: Hazardous Building Materials and Site Contamination	LTS
Airports, Emergency Response or Evacuation, Wildfire Hazards	LTS w/ SCAs	■	□	SCA TRANS-1: Construction Activity in the Public Right-of-Way	LTS w/ SCAs

Prior EIR Findings

Land Use and Transportation Element EIR

The LUTE EIR found that effects regarding risk of upset in proximity to schools, and conflicts with emergency response/evacuation plans, would be less than significant. To reduce potentially significant effects from the exposure of workers and the public to hazardous substance, the LUTE EIR identified mitigation requiring the preparation and implementation of site-specific health and safety plans. This mitigation measure is now incorporated into the City Standard Conditions of Approval (now SCA HAZ-2: Hazardous Building Materials and Site Contamination).

Housing Element EIR

The Housing Element EIR concluded that effects regarding the risk of upset of hazards and hazardous materials in proximity to schools, and conflicts with emergency response/evacuation plans, would be less than significant. The Housing Element EIR also concluded that impacts associated with hazardous materials transport, use, and disposal would be less than significant with compliance with the Municipal Code.

Impacts related to hazardous building materials and contaminated soils and/or groundwater were found to be reduced to less than significant levels with compliance with the City of Oakland SCAs. These SCAs require preparation of Phase I and Phase II Environmental Site Assessments and implementation of recommended remediation measures; applicable regulatory agency oversight including site review by the City Fire Services Division; assessment of lead-based paint, asbestos and polychlorinated biphenyl occurrence; implementation of site-specific health and safety plans, hazardous building materials remediation, best management practices for soil and groundwater hazards, and verification of regulatory agency clearance of all required remediation requirements.

To reduce impacts associated with wildland fires to a level of less than significant, the Housing Element EIR required SCA related to implementation of vegetation management plans and compliance with Municipal Code requirements.

West Oakland Specific Plan EIR

The West Oakland Specific Plan EIR found that the West Oakland Planning Area contains numerous sites that are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Continued occupancy and use, or future redevelopment of these hazardous materials sites in accordance with the Specific Plan, could create a significant hazard to the public or the environment. However, with required implementation of City of Oakland SCAs and required compliance with local, state and federal regulations for treatment, remediation or disposal of contaminated soil or groundwater, these impacts were found reduced to a level of less than significant.

The West Oakland Specific Plan EIR concluded that development pursuant to the Specific Plan could create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. The Specific Plan could also facilitate the addition of new businesses that emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of a school. However, with required implementation of City of Oakland SCAs and compliance with all other applicable federal, state and local laws, regulations, standards and oversight currently in place, these impacts were found reduced to a level of less than significant.

The West Oakland Specific Plan EIR found that asbestos and lead based paint is present within older structures in the Planning Area and could be released into the environment during demolition or construction activities, resulting in soil contamination or posing a health risk to construction workers or future occupants. With required implementation of City of Oakland SCAs and compliance with all other applicable federal, state and local laws, regulations, standards and oversight currently in place, these impacts were found reduced to a level of less than significant.

Finally, the West Oakland Specific Plan EIR concluded that the West Oakland Planning Area is not located within an airport Area of Influence or within two miles of a public airport or public use airport, or near a private airstrip, and that West Oakland is an urbanized area not within a High or Very High Fire Hazard Severity Zone. These impacts were considered to be less than significant.

Project Analysis

Information presented in the following section of this CEQA Checklist is derived from the following primary sources:

- RMD Environmental Solutions, Corrective Action Plan, August 5, 2019 (**Appendix G**)

- RMD Environmental Solutions, Data Gap Investigation Report and Addendum to Corrective Action Plan (Addendum), March 26, 2020 (**Appendix H**)

Exposure to Hazardous Materials in the Subsurface, Cortese List

The Project site is listed on the State Water Resources Control Board's (SWRCB) GeoTracker website as a Cleanup Program Site (Case # RO0003369) with a cleanup status of "Open - Assessment & Interim Remedial Action as of 4/17/2020".[16] Because of this listing, the Project is not eligible for certain CEQA exemptions (e.g., is not eligible as a Class 32 Infill Exemption pursuant to CEQA Guidelines Section 15332). The Project remains eligible for CEQA streamlining provisions of Section 15183 as a project consistent with a Community Plan, and Section 15183.3 as a Qualified Infill Project, provided that this environmental effect was analyzed in the prior Program EIRs and that uniformly applied development standards will substantially mitigate environmental effects.

- As indicated above, the West Oakland Specific Plan EIR found that West Oakland contains numerous sites included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and therefore this condition is not unique or peculiar to this site.
- The West Oakland Specific Plan EIR also found that future redevelopment of these sites (potentially including the Project site) could create a significant hazard to the public or the environment, but that this impact would be reduced to less than significant with required implementation of City of Oakland SCAs and required compliance with local, state and federal regulations for treatment, remediation or disposal of contaminated soil or groundwater.

Consistent with the findings of the West Oakland Specific Plan EIR, the Project's impacts related to existing site contamination conditions require implementation of the following City of Oakland SCAs:

- **SCA General-1: Regulatory Permits and Authorizations from Other Agencies** (applies to all projects requiring a permit or authorization from any regional, state or federal resource or permitting agency)
- **SCA HAZ-1: Hazardous Building Materials and Site Contamination** (applies to all projects involving redevelopment or change of use of a historically industrial or commercial site, a contaminated site as identified in City records, a site listed on the State Cortese List, and where site remediation activities are required based on an Environmental Site Assessment)

Pursuant to these SCAs, the Project applicant is required to submit evidence to the City demonstrating approval of permits and authorizations, as well as evidence demonstrating compliance with regulatory permits and authorizations from Alameda County Department of Environmental Health (ACDEH) or the SWRCB, as applicable. More detailed information on this topic follows, including the results of site investigations and regulatory actions associated with this Project.

Site Investigations and Known Site Contamination Issues

In January 2019, a Cleanup Program Case (RO0003347; GeoTracker Global ID T10000012542) was opened and a number of site investigations have been conducted at the Project site to identify recognized environmental conditions and site contamination issues. These investigations have included a Phase I Environmental Site Assessment (Basic Environmental, December 14, 2018); a Limited Investigation Report for B1 through B8, (P&D Environmental, January 2019), a Site Conceptual Model (Roux Associates, Inc., February 2019), a Data Gaps Work Plan (Roux Associates, Inc., February 2019), a

[16] SWRCB Geotracker website at: https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000013059 , accessed 9/30-2020

Limited Investigation Report for B9 through B11, SG1-SG6, and UST Pit Observation (P&D Environmental, April 2019), and additional subsurface activities pursuant to the Corrective Action Plan (RMD Environmental, Section 4 and Attachment B, August 2019).

These investigations reveal that the Project site had been developed as a gasoline service station, and historical records indicated three underground storage tanks (USTs) had been present during operation of the gasoline service station. Due to the age of the existing buildings, the potential for asbestos-containing materials and lead-based paints was identified. A summary of additional, known environmental conditions in the soil and groundwater at the Project site is provided below.[17]

- Lead exists at the site in the shallow fill layer and has been detected at concentrations that exceed residential, commercial, and construction worker human health risk-based screening levels.
- Cobalt exists at the site above screening levels, localized to two soil samples and at depths at or below 4.5 feet below ground surface.
- Elevated concentrations of petroleum-related and VOC compounds have been detected in the site's soil. Based on the results of previous investigations, petroleum-related and/or VOC-impacted soil may be encountered in near-surface soil during earthwork activities.
- Groundwater has been encountered at depths of approximately 9 to 10 feet below ground surface, and petroleum hydrocarbons, associated VOCs (benzene, ethylbenzene, toluene, and total xylenes), and halogenated VOCs (including PCE, TCE, and cis-1,2-DCE) have been detected the groundwater.
- Soil vapor is impacted with petroleum hydrocarbon as gasoline (TPH-g) and various VOCs (benzene, PCE, and chloroform) in excess of respective residential Tier 1 San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Environmental Screening Levels (ESLs).
- Due to historic uses at the site, redevelopment activities may reveal unexpected conditions such as previously unidentified areas of contamination or underground structures such as USTs, vaults, hoists, sumps, maintenance pits, pipelines, etc.

Corrective Actions

Pursuant to City SCA HAZ-1, the Project applicant has commissioned reports prepared by qualified environmental assessment professionals that include recommendations for remedial (or corrective) action, as appropriate, for hazardous materials. These reports include a Corrective Action Plan (CAP) dated August 5, 2019 (Appendix G); a Data Gap Investigation Report and Addendum to Corrective Action Plan (Addendum) dated March 26, 2020; and a Corrective Action Design and Implementation Plan (CAIP) dated March 26, 2020 (Appendix H), each of which have been submitted for review to ACDEH.

A Fact Sheet was mailed to community members summarizing the project (see **Appendix I**) and providing notification of a 30-day public comment period for the CAP, with the public comment period ending October 18, 2019. Based on discussion with ACDEH, no public comments were received.[18]

ACDEH has indicated their understanding that the Project applicant is proceeding to obtain necessary approvals from the City of Oakland for the proposed Project, and will implement the corrective actions

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[17] RMD Environmental Solutions, *Construction Soil and Groundwater Management Plan*, *Appendix B to the Corrective Action Design and Implementation Plan*, March 26, 2020

[18] RMD Environmental Solutions, *Data Gap Investigation Report and Addendum to Corrective Action Plan* (Addendum), March 26, 2020

presented in the CAIP during Project redevelopment activities. These corrective actions, as presented in the CAP and further detailed in the CAIP (see Appendices G and H), include the following:

- Excavation of soil in five on-site areas where elevated concentrations of volatile organic compounds have been detected in soil, soil vapor or groundwater, and off-site disposal at a permitted disposal facility
- Excavation of lead-impacted soil in proposed utility trenches and landscaped areas, and off-site disposal at a permitted disposal facility, or consolidation and capping on-site beneath proposed foundations and hardscape areas
- Removal of subsurface infrastructure in suspected source areas including an oil and water separator and associated piping, and a portion of the sewer lateral beneath the on-site warehouse
- Removal of a limited volume of groundwater in select excavation pits, and discharge to the sanitary sewer or off-site disposal at a permitted facility
- Installation of vapor mitigation engineering controls, to control potential vapor intrusion to indoor air of the proposed residential structures and migration along new utility corridors
- Collection of an additional round of groundwater samples from the on-site monitoring wells to evaluate whether implementation of the Monitored Natural Attenuation (MNA) Program proposed in the CAP will be required to monitor the effectiveness of natural biological, chemical and physical processes to reduce VOCs in soil vapor and groundwater over time, after corrective actions are completed.

Regulatory Actions

Pursuant to City SCA HAZ-1, the Project applicant has obtained ACDEH concurrence that implementation of these proposed corrective actions will minimize risk to on- and off-site receptors from exposure to residual subsurface contamination at the site (see **Appendix J**).[19] ACDEH has approved implementation of the proposed corrective actions and redevelopment of the site as presented in the CAIP, provided that ACDEH's conditions of approval, as provided in Attachment 1: List of Deliverables & Compliance Dates, and Attachment 2: Technical Comments and Deliverable Requirements as attached to their April 17, 2020 letter of Conditional Approval of the Corrective Action Plan and Corrective Action Design and Implementation Plan, are met.

Per their April 17, 2020 letter, ACDEH concurs that implementation of the proposed corrective actions presented in the CAIP will minimize risk to on- and off-site receptors from exposure to residual subsurface contamination at the site. Additional submittals required under the CAIP include:

- Soil Excavation Corrective Action Implementation Report documenting completion of the activities proposed
- Health and Safety Plan
- Vapor Intrusion Mitigation System CAIP

[19] Alameda County Department of Environmental Health Local Oversight Program for Hazardous Materials Releases (ACHDEH), *Conditional Approval of the Corrective Action Plan and Corrective Action Design and Implementation Plan for Site Cleanup Program Case No. RO0003369 and GeoTracker Global ID T10000013059, Dalzell Corporation Property Development located at 2432 Chestnut Street, Oakland, CA 94607, Assessor's Parcel Numbers: 5-435-18-1, 5-436-5, and 5-436-17*, April 17,2020

- Remedial Action Implementation Report, including documentation of disposal or consolidation and capping of shallow metals-impacted soil and a Record Report of Construction for Hardscape Cap, and
- Long Term Site Management Plan

Upon completion of the above submittals and milestones, it is anticipated that ACDEH will provide the responsible party with a No Further Action Letter or similar, allowing residential land use in accordance with the Long Term Site Management Plan. Adherence to these regulatory requirements would reduce the environmental effects associated with existing on-site contamination to levels of less than significant, consistent with the conclusions of the prior Program EIRs.

Use, Exposure, Storage, & Disposal of Hazardous Materials

Construction activities associated with the Project would involve the routine transport, use and disposal of hazardous materials. These activities could result in the accidental release of hazardous materials (including asbestos and lead-based paint) and may involve the handling, transport or use of small quantities of hazardous materials. Construction activities involving the use of hazardous materials is required to comply with all applicable regulations.

The Project also involves demolition of existing structures. Because of the age of these structures, there is the potential for hazardous materials to be in building components, including lead-based paint, asbestos in insulation, flooring, walls or ceilings, and polychlorinated biphenyls (PCBs) in electrical equipment. If these materials are not properly managed during renovation activities, the Project could result in adverse human health or environmental risks resulting from the inadvertent or accidental release of hazardous materials into the air or soil surrounding the structure.

Consistent with the findings of the West Oakland Specific Plan EIR, the Project's impacts related to hazardous materials used during construction and encountering existing hazardous materials during demolition require implementation of the following City of Oakland SCAs:

- **SCA HAZ-1: Hazardous Building Materials and Site Contamination** – see above,
- **SCA HAZ-2: Hazards Materials Related to Construction** (applies to all projects involving construction activities, and
- **SCA AIR-4: Asbestos in Structures** (applies to all projects involving demolition of structures or renovation of structures known to contain or that may contain asbestos)

The Project would also be required to conform to Title 49 of the Code of Federal Regulations, US Department of Transportation, State of California, and local laws, ordinances and procedures pertaining to the use storage and disposal of hazardous materials.

Implementation of these SCA requirements to minimize the risk of hazardous materials exposure to the public during construction requires the Project applicant to submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials, lead-based paint, PCBs, and any other building materials or stored materials classified as hazardous materials by state or federal law. The applicant would also be required to submit specifications for the stabilization or removal of identified hazardous material.

Construction of the Project will be required to follow all applicable laws and regulations related to transportation, use, storage and disposal of all hazardous materials, and to safeguard workers and the general public (including the Oakland Military Institute, a middle and high school located within one-quarter mile of the Project site).

With implementation of SCAs HAZ-1, HAZ-2, and AIR-4 during or in advance of construction, impacts related to hazardous material use or the encounter of hazardous materials during construction and operation would be reduced to less than significant, consistent with the conclusions of the prior Program EIRs.

Airports, Emergency Response or Evacuation, Wildfire Hazards

The Project site is not within an Airport Land Use Plan Area, nor is it within two miles of a public airport, public use airport, or a private airstrip, and it would not result in any airport or aircraft-related safety hazards. The Project would not change the surrounding streets or roadways, or limit emergency access or evacuation plans. The Project would not result in changes to the main evacuation arteries identified in the Oakland General Plan Safety Element. The Project site is not within a Fire Hazard Severity Zone or subject to significant wildfire hazard. The Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

Consistent with the findings of the West Oakland Specific Plan EIR, the Project's potential temporary impacts related to the obstruction or interference with emergency access or emergency evacuation require implementation of the following City of Oakland SCAs:

- **SCA TRANS-1: Construction Activity in the Public Right-of-Way** (applies to all temporary construction-related obstruction in the public right-of-way)

This SCA requires obtaining an obstruction permit and preparation of a traffic control plan for work within a City right-of-way. With implementation of SCA TRANS-1, the Project would not fundamentally impair implementation of or physically interfere with emergency access, an adopted emergency response plan or emergency evacuation plans, and impacts would remain less than significant, consistent with the conclusions of the prior Program EIRs.

Conclusions – Hazards and Hazardous Materials

Based on an examination of the analysis, findings and conclusions of the Prior EIRs, implementation of the Project would not substantially increase the severity of any significant impacts identified in these Prior EIRs, nor would it result in new significant impacts related to hazards or hazardous materials that were not previously identified. The Prior EIRs did not identify any additional mitigation measures other than the identified SCA related to hazards and hazardous materials that would apply to the Project, and none would be needed. The SCAs identified above and listed in Appendix A at the end of this CEQA Checklist pertaining to hazards and hazardous materials apply to the Project.

Hydrology and Water Quality

		Project			
		Relationship to WOSP EIR Findings			
Impact Topics	WOSP EIR Findings	Equal or Less Severity	New or Substantial Increase in Severity	Applicable SCAs or Mitigation Measures	Level of Significance
Water Quality & Drainage	LTS w/ SCAs	■	□	SCA HYDRO-1: Erosion and Sedimentation Control Measures for Construction SCA HYDRO-2: Site Design Measures to Reduce Stormwater Runoff SCA HYDRO-3: Source Control Measures to Limit Stormwater Pollution	LTS w/ SCAs
Use of Groundwater	LTS	■	□	–	LTS
Flooding & Substantial Risk from Flooding	LTS	■	□	–	NI

Prior EIR Findings

Land Use and Transportation Element EIR

The LUTE EIR found impacts related to hydrology and water quality would be less than significant, primarily given required adherence to existing regulatory requirements. The LUTE EIR acknowledged that areas considered under that EIR could potentially occur within a 100-year flood boundary. Adherence to existing regulatory requirements that are incorporated in the City's SCAs would address potentially significant effects regarding flooding.

Housing Element EIR Findings

The Housing Element EIR found less than significant impacts related to hydrology and water quality, primarily given required adherence to existing regulatory requirements, many of which are incorporated in the City's SCAs. The Housing Element EIR also found less than significant impacts related to flooding and risks from flooding.

WOSP EIR Findings

The WOSP EIR found that implementation of City of Oakland SCAs would reduce potentially significant impacts to water quality from construction and from operational runoff to less than significant. Other hydrology and water quality impacts related to waste discharge, groundwater, floods, dam failure, and seiche/tsunami were found to be less than significant.

- Future development in accordance with the Specific Plan would not be subject to waste discharge requirements and would not violate any water quality standards or waste discharge requirements.
- Future redevelopment of existing developed properties and future development of vacant properties in West Oakland pursuant to or consistent with the Specific Plan would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table.
- Grading and excavations associated with future development pursuant to or consistent with the Specific Plan could expose underlying soils to erosion or siltation, leading to downstream sedimentation in stormwater runoff. However, with required implementation of City of Oakland Standard Conditions of Approval, impacts related to siltation would be reduced to less than significant levels.
- Operational activities such as increased vehicular use, landscaping maintenance and industrial operations could potentially introduce pollutants into stormwater runoff, resulting in degradation of downstream water quality. New development pursuant to the Specific Plan could create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems, create or contribute substantial runoff which would be an additional source of polluted runoff, or otherwise substantially degrade water quality. These potential impacts would be reduced to a level of less than significant through implementation of City of Oakland Standard Conditions of Approval.
- The Specific Plan does not propose any changes to the existing drainage pattern within the Planning Area. All drainage and stormwater runoff is conveyed via underground pipes and conduits to pumping plants, which discharge runoff into the Bay. There are no surface water features or open drainage systems which would be altered, or where an increase in captured runoff may adversely affect the capacity of such features.
- No portion of the Planning Area is located within a 100-year or 500-year flood hazard area, as mapped on the National Flood Insurance Program Flood Insurance Rate Maps. Development in accordance with the Specific Plan would not place housing within a 100-year flood hazard area.

Project Analysis

The Project site is not within a 100-year floodplain or a dam failure inundation area.[20] The site is located east of Mandela Parkway, outside the City's mapped tsunami run-up zone. The site is not close enough to the San Francisco Bay to be affected by a seiche. The site is flat and is not subject to risk from landslides or mudflow. There are no rivers, creeks or streams located on or in the vicinity of the Project site. Development of the Project would not substantially alter existing drainage patterns or increase the rate or amount of flow to a creek, river or stream in a manner that would result in substantial on- or off-site flooding. The Project would not introduce features that would significantly modify natural flows or water capacity, deposit substantial amounts of new material into a creek, or cause substantial bank erosion or instability. Consequently, the Project would not pose a substantial danger to public or private property, nor would it threaten public health or safety pertaining to hydrology issues.

[20] Federal Emergency Management Agency. Flood Insurance Rate Map Panel 06001C0058H, December 21, 2018.

Sedimentation During Construction

Site preparation, grading and soil removal activities identified in the ACDHEH-approved corrective action plan for toxic soil contaminants have the potential to expose underlying soils to wind and water erosion. Eroded soils captured in stormwater runoff can lead to excessive sedimentation of downstream waters. Consistent with the findings of the West Oakland Specific Plan EIR, impacts related to erosion during construction of the Project would be reduced to less than significant levels with implementation of the following City of Oakland SCA:

- **SCA HYDRO-1: Erosion and Sedimentation Control Measures for Construction** (applies to all projects involving construction activities, except projects requiring a grading permit)

Pursuant to SCA HYDRO-1, the Project (at less than 1-acre in size) is required to prepare and implement an Erosion and Sedimentation Control Plan that includes all necessary measures to be taken to prevent excessive stormwater runoff or carrying of pollutants off-site in stormwater runoff. The Erosion and Sediment Control Plan must include construction-period erosion control measures such as waterproofed slope coverings, 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. Implementation of these measures would ensure that potentially significant water quality impacts during construction remain less than significant.

Post-Construction Stormwater Treatment

Operation of the Project would not generate any uses that would directly result in substantial degradation of water quality. However, the Project's new residential uses could introduce new sources of pollutants such as automotive fluids, pesticides, fertilizers and herbicides used in landscaped areas, trash and excess irrigation water, and air pollutants deposited on roof tops and other impervious surfaces. These pollutants could enter the storm drainage system and eventually contribute to surface water quality degradation.

Consistent with the findings of the West Oakland Specific Plan EIR, impacts related to post-construction stormwater quality would be reduced to less than significant levels with implementation of the following City of Oakland SCA:

- **SCA HYDRO-2: NPDES C.3 Stormwater Requirements for Regulated Projects** (applies to all projects considered Regulated Projects under the NPDES C.3 requirements, including projects that create or replace 10,000 square feet or more of new or existing impervious surface area)

The Project would remove all existing structures and pavement that currently covers the entire 24,882 square-foot site, and would replace those surfaces with new impervious surfaces (rooftops and paving). The Project includes a Preliminary Stormwater Control Plan (see **Figure 10**) that provides for source control measures to limit pollutants (i.e., stenciling all storm drain inlets with "No Dumping – Drains to Bay", covering all trash areas and outdoor equipment and materials storage areas, and efficient irrigation and sustainable landscape practices); low-impact site design measures (i.e., pervious self-treating and self-retaining areas, and directing runoff to vegetated areas); and low-impacts water quality treatment filtration with flow-through planters sized to accommodate flows from impervious areas (sizing based on the Alameda Countywide Clean Water Program's C-3 Stormwater Treatment Guidance).

Since the Project site is relatively flat and largely covered with impervious surfaces, and would remain so under the Project, the Project would not substantially alter drainage patterns or increase the volume of runoff from the site. Implementation of SCA HYDRO-2 would reduce the impacts related to post-construction polluted stormwater runoff to a level of less than significant.

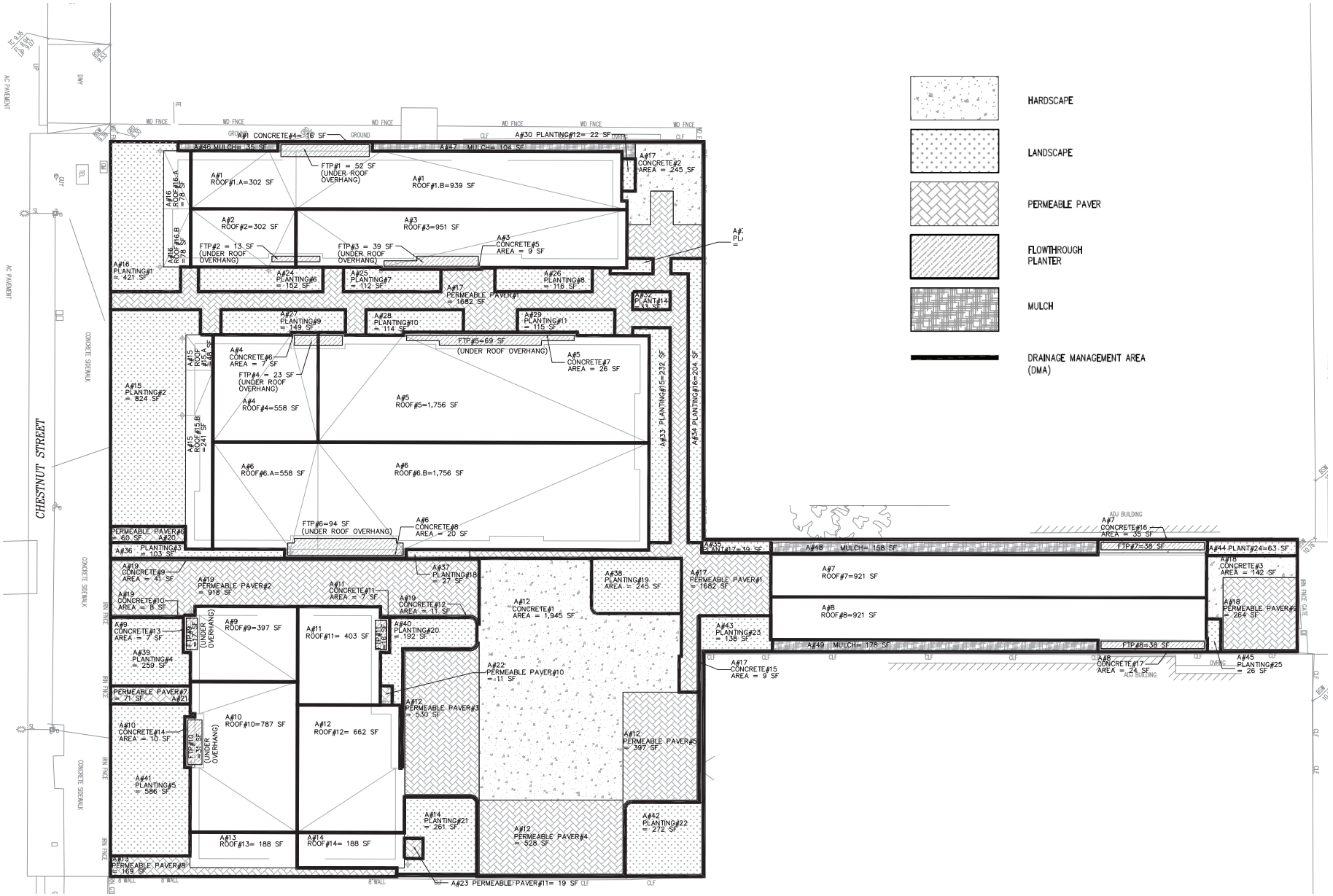

Figure 10
Preliminary Stormwater Treatment Plan

Source: Luk & Associates, April 2020

Conclusions – Hydrology and Water Quality

Based on an examination of the analysis, findings and conclusions of the Prior EIRs, implementation of the Project would not substantially increase the severity of any significant hydrology impacts identified in these Prior EIRs, nor would it result in new significant impacts related to hydrology or water quality that were not previously identified. The Prior EIRs did not identify any additional mitigation measures other than the identified SCA related to hydrology and water quality that would apply to the Project, and none would be needed. The SCAs identified above and listed in Appendix A at the end of this CEQA Checklist pertaining to hydrology apply to the Project.

Land Use, Plans, and Policies

Impact Topics	WOSP EIR Findings	Project			
		Relationship to WOSP EIR Findings			
		Equal or Less Severity	Substantial Increase in Severity	Applicable SCAs or Mitigation Measures	Level of Significance
Division of an Existing Community	LTS	■	□	–	NI
Conflict with Land Uses / Land Use Plans	LTS	■	□	–	LTS

Prior EIR Findings

The LUTE EIR found impacts related to land use, plans, and policies would be less than significant, and no mitigation measures were warranted. The Housing Element EIR also concluded that impacts related to land use, plans and policies would be less than significant, and no mitigation measures were warranted.

West Oakland Specific Plan EIR Findings

The West Oakland Specific Plan EIR found that the Specific Plan would not disrupt or divide the physical arrangement of the West Oakland community or any surrounding community, but rather would improve certain existing conditions that currently divide the community, and would result in a gradual improvement in compatibility between residential and other types of land uses. It also concluded that the Specific Plan would not fundamentally conflict with any applicable land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and that there was no Habitat Conservation Plan, Natural Community Conservation Plan or other adopted habitat conservation plan applicable to the Planning Area such that the Specific Plan would not conflict with such plans.

Project Analysis

Redevelopment of the Project site with residential uses would not introduce features that would impair mobility within the community or between the community and outlying areas. The Project represents a residential urban infill development of an underutilized (mostly commercial) property in a primarily residential neighborhood, and would not physically divide the established community.

The Project site's General Plan land use classification is Mixed Housing Type Residential. The majority of the Project site, including the parcel at 2420 Chestnut, the parcel at 2423 Linden and the southerly two-thirds of the parcel at 2432 Chestnut is zoned RM-2, The northerly one-third of the parcel at 2432 Chestnut is zoned as RM-4, similar to the adjacent newer, 3-story townhomes at Linden Court. more dense residential development to the north at in the northern portion. As previously demonstrated in this document (section titled Project's Consistency With Community Plan or Zoning), the Project would be consistent with the density and development standards of these existing zoning districts. The Project would be consistent with the land use plans and policies for the site, and the impacts related to land use would be less than significant.

Conclusions – Land Use

Based on an examination of the analysis, findings and conclusions of the Prior EIRs, implementation of the Project would not substantially increase the severity of any significant land use impacts identified in these Prior EIRs, nor would it result in new significant impacts related to land use that were not previously identified. The Prior EIRs did not identify any additional mitigation measures or SCAs related to land use that would apply to the Project, and none would be needed.

Noise

Impact Topics	WOSP EIR Findings	Project			
		Relationship to WOSP EIR Findings		Applicable SCAs or Mitigation Measures	Level of Significance
		Equal or Less Severity	Substantial Increase in Severity		
Construction Noise and Vibration	LTS w/ SCAs	■	☐	SCA NOI-1: Construction Days/Hours) SCA NOI-2: Construction Noise) SCA NOI-3: Extreme Construction Noise SCA NOI-4: Construction Noise Complaints	LTS w/ SCAs
Operational Noise and Vibration	LTS w/ SCAs	■	☐	SCA NOI-5: Operational Noise	LTS w/ SCAs
Noise Exposure / Compatibility	LTS w/ SCAs	■	☐	SCA NOS-6: Exposure to Community Noise	LTS w/SCAs

Prior Program EIR Findings

Land Use and Transportation Element EIR

The LUTE EIR identified mitigation measures to address potential noise conflicts between different land uses, none of which would apply to the Project. These measures included requirements for the City to establish design requirements for large-scale commercial development to provide a buffer from residential uses, and to rezone mixed residential and non-residential neighborhoods, as well as other strategies and policies to reduce land use conflicts pertaining to operational commercial and industrial noise. The LUTE EIR found that construction noise and vibrations within the downtown would be significant and unavoidable, even after the incorporation of mitigation measures.

Housing Element EIR Findings

The Housing Element EIR identified potentially significant impacts related to construction noise and operational noise. With implementation of SCAs requiring restrictions on noise-generating activities, reductions in noise levels from construction activities, notification of construction activities and complaint procedures, retention of a structural engineer to determine potentially damaging vibration thresholds, and inclusion of project design measures to reduce interior noise and groundborne vibration to acceptable levels within the buildings, these impacts were found to be reduced to a level of less than significant. Traffic and airport noise impacts were determined to be less than significant.

West Oakland Specific Plan EIR Findings

The West Oakland Specific Plan EIR concluded that construction activities pursuant to the Specific Plan would temporarily increase noise levels in the vicinity of individual construction sites and may generate operational ground-borne vibration at levels that would be perceptible beyond the property boundaries of those construction sites, but concluded that implementation of SCAs applicable to construction noise would reduce these impacts to less than significant levels. It also concluded that on-going operational noise generated by stationary sources could generate noise in violation of the City of Oakland Noise Ordinance, but that SCAs and Oakland Planning and Municipal Code requirements would limit operational noise levels such that these impacts would be less than significant.

Although not legally required to be analyzed or mitigated under CEQA, the West Oakland Specific Plan did analyze potential effects of the environment on the project (i.e. siting new receptors near existing noise sources), in order to provide relevant information to the public and decision-makers. That analysis concluded that occupants of new residential and other noise-sensitive development facilitated by the Specific Plan (particularly new development near freeways and large-traffic volume arterial roadways) could be exposed to ambient community noise levels inconsistent with the Land Use Compatibility Guidelines of the Oakland General Plan, and potentially inconsistent with interior California Noise Insulation Standards.

The West Oakland Specific Plan EIR determined that West Oakland is more than two miles outside of the Oakland International Airport's 65 dBA CNEL noise contour for airport operations and aircraft overflight, and that airport-related noise impacts would be less than significant. It also concluded that new development pursuant to the Specific Plan would not generate traffic noise resulting in a 5 dBA permanent increase in ambient noise levels in the vicinity.

Project Analysis

The Project site is located in an area of mixed residential and commercial uses, with sensitive residential noise receptors located immediately adjacent to the site on the north, south and west.

Construction Noise

The Project's construction activities would generate noise during demolition, site preparation, foundation work and framing. These construction activities could generate substantial construction noise, but on a short-term and temporary basis. There is nothing unique or peculiar about the Project's construction activities that would substantially increase the level of construction noise impacts over typical construction noise as identified in the prior Program EIRs, or result in new significant construction noise impacts that were not previously identified in these prior Program EIRs. The Project's construction would not include extreme noise generating construction activities such as pier drilling, pile driving and other activities generating greater than 90dB over an extended period of time.

Consistent with the findings of the West Oakland Specific Plan EIR, impacts related to construction period noise would be reduced to less than significant levels with implementation of the following City of Oakland SCAs:

- **SCA NOISE-1: Construction Days/Hours** (applies to all projects involving construction)
- **SCA NOISE-2: Construction Noise** (applies to all projects involving construction)
- **SCA NOISE-3: Extreme Construction Noise** (applies to all projects involving construction, and a Construction Noise Management Plan may be required prior to project approval for extreme

noise generating construction activities such as pier drilling, pile driving and other activities generating greater than 90dB)

- **SCA NOISE-4: Construction Noise Complaints**

These SCAs are comprehensive in their content and for practical purposes represent all feasible measures available to reduce construction noise. With implementation of SCAs NOISE1 through -3 during construction, impacts related to excessive construction noise would be reduced to less than significant, consistent with the conclusions of the prior Program EIRs.

Operational Noise

As a smaller-sized residential infill development, the Project would not be a new source of major community noise. Operation of the Project would generate noise from new sources such as heating, ventilation and air conditioning equipment, and noise from a minor increment of increased traffic would also be generated. However, there is nothing unique or peculiar about the Project's operational activities that would generate a substantially increase in operational noise, or that represent a new significant operational noise impact not previously identified in the prior Program EIRs.

Consistent with the findings of the West Oakland Specific Plan EIR, impacts related to construction period noise would be reduced to less than significant levels with implementation of the following City of Oakland SCA:

- **SCA NOISE-5: Operational Noise** (applies to all projects)

With implementation of SCA Noise-5, the Project would not generate operational noise in violation of the City of Oakland Noise Ordinance and would be required to comply with City of Oakland operational noise standards, including noise standards for rooftop mechanical equipment (e.g., heating, ventilating, air conditioning, and refrigeration equipment), including incorporation of noise reduction measures as may be required at the time of building permits. Impacts from operational noise would be less than significant.

Conclusions – Noise

Based on an examination of the analysis, findings and conclusions of the Prior EIRs, implementation of the Project would not substantially increase the severity of any significant noise impact as identified in the Prior EIRs, nor would it result in new significant noise impacts that were not previously identified. The Prior EIRs did not identify any additional mitigation measures other than the identified SCA related to noise that would apply to the Project, and none would be needed. The SCAs identified above and listed in Appendix A at the end of this CEQA Checklist pertaining to noise apply to the Project.

Population and Housing

Impact Topics	WOSP EIR Findings with Implementation of Mitigation Measures (if required)	Project: Relationship to WOSP EIR Findings: Equal or Less Severity	Project: Relationship to WOSP EIR Findings: Substantial Increase in Severity	Project: Applicable SCAs or Mitigation Measures	Project: Level of Significance
Population Growth	LTS	■	□	SCA PH-1: Affordable Housing Impact Fee	LTS
Displacement of Housing and People	LTS	■	□	–	LTS

Prior Program EIR Findings

The LUTE EIR found less than significant impacts related to population, housing, and potentially significant impacts related to increased employment exceeding regional projections. The LUTE EIR identified mitigation requiring the City to develop a database of vacant and underutilized parcels to address unanticipated employment growth (compared to regional ABAG projections); no other mitigation was warranted. The Housing Element EIR found less than significant impacts related to population, housing and employment, and no mitigation measures were warranted.

WOSP EIR Findings

Development pursuant to the West Oakland Specific Plan is projected to add up to 7,312 housing units and 37,493 residents to West Oakland between 2005 and 2035, representing approximately 2 percent of the total projected population growth for the City of Oakland during the same period. The West Oakland Specific Plan EIR concluded that Specific Plan build-out projections are consistent with ABAG projections for household and employment growth. Population and employment growth facilitated or induced by the Specific Plan would not represent growth for which adequate planning has not occurred, and the growth inducement impacts of the Specific Plan were found to be less than significant. The West Oakland Specific Plan EIR also concluded that overall, the loss of certain housing units and associated direct displacement of people as a result of redevelopment facilitated by the Specific Plan would be offset by the number of new units proposed by the Specific Plan, by new units identified under the 2015-2023 Housing Element, and by existing housing in Oakland.

Project Analysis

Development of the Project would result in the removal of one existing single-family residence and two light industrial buildings, to develop twelve 4-bedroom dwelling units. The displacement of existing residents, employees, or business that would result from implementation of the Project would be minimal. Development of the Project would increase the number of residents West Oakland; however, this increase would not be considered substantial, and would not induce additional population growth. The increase in new housing has been analyzed in the prior Program EIRs and accounted for in the

buildout projections of the 2015-2023 Housing Element and West Oakland Specific Plan, and are also consistent with ABAG projections of household growth within the City.

Consistent with the findings of the West Oakland Specific Plan EIR, impacts related to population growth and displacement of affordable housing would be less than significant, but would still require implementation of the following City of Oakland SCA:

- **SCA HSNG-1: Affordable Housing Impact Fee** (applies to all projects subject to the Affordable Housing Impact Fee Ordinance per OMC chap. 15.72)

This SCA would require the applicant to comply with the City's Affordable Housing Impact Fee Ordinance (Chapter 15.72 of the Oakland Municipal Code). With implementation of SCA HSNG-1, impacts related to population growth and housing would be further reduced, consistent with the conclusions of the prior Program EIRs.

Conclusions – Population and Housing

Based on an examination of the analysis, findings and conclusions of the Prior EIRs, implementation of the Project would not substantially increase the severity of any significant population or housing impact as identified in the Prior EIRs, nor would it result in new significant population or housing impacts that were not previously identified. The Prior EIRs did not identify any additional mitigation measures other than the identified SCA that would apply to the Project, and none would be needed. The SCAs identified above and listed in Appendix A at the end of this CEQA Checklist pertaining to affordable housing fees applies to the Project.

Public Services, Parks, and Recreation Facilities

		Project			
		Relationship to WOSP EIR Findings			
Impact Topics	WOSP EIR Findings with Implementation of Mitigation Measures (if required)	Equal or Less Severity	Substantial Increase in Severity	Applicable SCAs or Mitigation Measures	Level of Significance
Public Services	LTS w/ SCAs	■	□	SCA PS-1: Capital Improvements Impact Fee	LTS
Parks and Recreation	LTS	■	□	–	LTS

Prior Program EIR Findings

Land Use and Transportation Element EIR

The LUTE EIR identified a significant and unavoidable impact for fire safety, with mitigation measures recommending construction of a new fire station the North Oakland Hills area. The LUTE EIR identified additional significant impacts related to public services, with mitigation measures (functionally equivalent to current SCAs) for funding to reduce potential effects to less than significant. Mitigation measures identified in the LUTE EIR related to police and fire protection, schools and libraries are specific policies or strategies to be implemented by the City (not individual projects), such as considering the availability of police and fire protection services, park and recreation services, schools and library services during review of major land use or policy decisions, and measures to be considered by the Oakland Unified School District, such as reassigning students among district schools to account for changing population and new development.

Housing Element EIR Findings

The Housing Element EIR found less than significant impacts related to schools, libraries and parks. Potentially significant impacts on police and fire facilities and services were reduced to a level of less than significant with implementation of SCAs requiring Fire Services Division Approval to ensure that the site design and fire safety features of the project adequately address fire hazards, spark arrestors on construction equipment to further reduce the risk of construction-period fires, as well as the mitigation measures identified in the LUTE.

West Oakland Specific Plan EIR Findings

The West Oakland Specific Plan EIR found less than significant impacts related to police protection, schools, and other public services. Potentially significant impacts on police and fire facilities and services were reduced to a level of less than significant with implementation of SCAs requiring all projects to implement site design and fire safety features that adequately address potential fire hazards. The EIR also considered that implementation of the Specific Plan may reduce crime by incorporating crime prevention design principles and up-to-date security features and technology in new development. The OUSD collects school impact fees from residential and non-residential development and, pursuant to

California Government Code Sections 65995, 65996(a) and 65996(b), payment of these fees is deemed to be full and complete mitigation. New development pursuant to the Specific Plan was not expected to increase the use of existing parks and recreational facilities such that substantial physical deterioration of such facilities may occur or be accelerated.

Project Analysis

Public Services

The Project would not significantly increase demand for police, fire or other public services, but its incremental increase in demand for these services but would be subject to the City's policies, regulations, and standards (including appropriate standards for emergency access roads, emergency water supply, and fire preparedness, capacity, and response). With implementation of the City's standard development review and permitting procedures, and building and fire code requirements, the Project's impacts related to fire protection would be less than significant.

Consistent with the findings of the West Oakland Specific Plan EIR, impacts related to public services would be less than significant, but would still require implementation of the following City of Oakland SCA:

- **SCA PUBSERV-1: Capital Improvements Impact Fee** (applies to all projects subject to the Capital Improvements Impact Fee Ordinance per OMC chap. 15.74)

This SCA would require the applicant to pay applicable fees to offset the respective costs of these public services, consistent with the Oakland Municipal Code. With implementation of SCA PS-1, impacts related to public services would be further reduced, consistent with the conclusions of the prior Program EIRs.

Schools

The Project would not create a significant increase in student population. As authorized by California Government Code Sections 65995, 65996(a), and 65996(b), OUSD collects school impact fees when building permits are issued. The Project would be required to pay these school impact fees as applicable, representing its fair-share mitigation for school impacts. Consistent with the conclusions of the West Oakland Specific Plan EIR, the increase in school services are fully off-set by the imposition of school impact fees, and the impact of the Project would be less than significant.

Parks and Recreation

Although development of the Project would incrementally increase demand for public open space and recreation facilities in the vicinity, it would not result in an increase in park or recreation space demand that would require construction of new facilities, nor would it deteriorate existing facilities in a way that would have a significant impact on the environment.

Conclusions – Public Services and Recreation

Based on an examination of the analysis, findings and conclusions of the Prior EIRs, implementation of the Project would not substantially increase the severity of any significant impact on public services as identified in the Prior EIRs, nor would it result in new significant impacts on public services that were not previously identified. The Prior EIRs did not identify any additional mitigation measures other than the identified SCA that would apply to the Project, and none would be needed. The SCAs identified above

and listed in Appendix A at the end of this CEQA Checklist pertaining to capital improvement fees applies to the Project.

Transportation and Circulation

		Project			
		Relationship to WOSP EIR Findings			
Impact Topics	WOSP EIR Findings	Equal or Less Severity	Substantial Increase in Severity	Applicable SCAs or Mitigation Measures	Level of Significance
Conflict with Circulation Plans	LTS w/ SCAs	■	□	SCA TRANS-1: Construction Activity in the Public Right-of-Way SCA TRANS-2: Bicycle Parking SCA TRANS-3: Plug-in Electric Vehicle Charging Infrastructure	LTS
Substantial Additional VMT [a]	LTS-SU	■	□	–	LTS
Induce Traffic	LTS	■	□	–	NI

[a] The City of Oakland has replaced Level of Service impact analysis with VMT-based analysis. WOSP EIR findings were for potential Level of Service impacts.

Prior Program EIR Findings

Land Use and Transportation Element EIR

The LUTE EIR identified significant and unavoidable traffic impacts related to operational levels of service (LOS) at intersections and/or roadway segments throughout the City. The LUTE EIR identified a potential impacts along the San Pablo Avenue from I-580 to Grand Avenue, which were already operating at an unacceptable LOS. This unacceptable level of service was occurring prior to adoption of the LUTE.

Housing Element EIR Findings

The Housing Element EIR also found significant and unavoidable LOS-related traffic impacts at numerous intersections and roadway segments throughout Oakland. Specifically, the Housing Element EIR identified a potential cumulative impact at the roadway segment of Grand Avenue between Harrison Street and I-580 and recommended mitigation measures to reduce this potentially significant impact, including required traffic impact studies and project-specific mitigation improvements dependent on the results of those individual project traffic studies. Even with implementation of those mitigation measures, these impacts were found to remain significant and unavoidable.

Other transportation and circulation impacts identified in the Housing Element EIR were found to be reduced to less than significant with adherence to the City SCAs.

West Oakland Specific Plan EIR Findings

Under existing plus Project and year 2035 cumulative scenarios, the West Oakland Specific Plan EIR found numerous intersections and roadway segments that would exceed peak hour LOS thresholds

throughout West Oakland and the surrounding community. Mitigation measures that provided increased vehicle capacity and operating efficiencies were identified where feasible, but numerous intersections and roadway segment impacts remained significant and unavoidable. The LOS thresholds analyzed in the West Oakland Specific Plan EIR are no longer applicable, now replaced by thresholds pertaining to vehicle miles travelled, or VMT (see further discussion below).

The West Oakland Specific Plan found that implementation of the Specific Plan (including new development consistent with the Plan) would not result in significant transportation impacts related to the following:

- Travel times for AC Transit buses along West Grand Avenue would increase, but the travel time increase would be offset by support of the transit systems and safety and convenience of pedestrian, bicycle, and transit users.
- The Specific Plan would not directly or indirectly cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard due to a new or existing physical design feature or incompatible uses.
- The Specific Plan would not directly or indirectly result in a permanent substantial decrease in pedestrian safety.
- The Specific Plan would not directly or indirectly result in a permanent substantial decrease in bus rider safety.

Project Analysis

Information presented in the following section of this CEQA Checklist is derived from the following primary sources:

- Fehr & Peers, Inc., *Transportation Impact Study* (TIS) (**Appendix K**).

A summary of the TIS findings is included below.

Applicable Thresholds

According to the City of Oakland's *Transportation Impact Review Guidelines* (TIRG, April 14, 2017), a project would have a significant effect on the environment if it would:

- Conflict with a plan, ordinance or policy addressing the safety or performance of the circulation system, including transit, roadways, bicycle lanes and pedestrian paths (except for automobile level of service or other measures of vehicle delay); or
- Cause substantial additional VMT per capita, per service population, or other appropriate efficiency measure. For residential projects, a project would cause substantial additional VMT if it exceeds existing regional household VMT per capita minus 15 percent; or
- 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.

Trip Generation

The TIS found that the Project would generate about 5 new peak hour automobile trips during the morning peak hour, and 6 new automobile trips during the evening peak hour on a typical weekday. The daily trip generation for the Project is estimated at 70 vehicle trips.

Vehicle Miles Traveled (VMT)

According to the City of Oakland's TIRG, Section 5.4: VMT Screening Criteria, the following screening criteria may be used to identify types, characteristics and/or locations of land use projects that would not exceed VMT thresholds of significance. If a project or components of the project meet any of these screening criteria, then it is presumed VMT impacts would be less than significant for the project or component of the project, and a detailed VMT analysis is not required. There are three key screening criteria for land use development projects: small size, project location in a low-VMT area, and project location near transit stations. A project only needs to meet one of the three screening criteria to "screen out":

- Small Projects: Absent substantial evidence indicating that a project would generate a potentially significant level of vehicle miles traveled (VMT), projects that generate fewer than 100 vehicle trips per day generally may be assumed to cause a less than significant transportation impact.
- Low-VMT Areas: Residential, locally-serving retail and office projects that locate in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, low parking ratios, transit accessibility) will tend to exhibit similarly low VMT. Therefore, maps or tables illustrating areas that exhibit below-threshold VMT can be used to screen out residential, office and retail projects which may not require a detailed VMT analysis.
- Projects Near Transit Stations: The TIRG also allows for the presumption that residential, retail and office projects, as well as mixed-use projects that are a mix of these uses, proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor will result in a less than significant transportation impact.

The TIS prepared for the Project provides for an analysis of these screening criteria, as summarized below.

Small Project

Based on the trip generation assumptions (above) the Project would generate 70 daily vehicle trips, fewer than 100 vehicle trips per day, and therefore meets the Small Project screening criterion.

Low-VMT Area

The Project site is located in Transportation Analysis Zone (TAZ) 989 per the Metropolitan Transportation Commission (MTC) Travel Model. As shown in **Table 9**, the average daily VMT per capita for residential uses in TAZ 989 is 7.5 VMT for year 2020, and 6.2 VMT for year 2040, both of which are below the respective regional averages for years 2020 and 2040 minus 15%.

Table 9: Daily Vehicle Miles Traveled Summary

Land Use	Bay Area				TAZ 989	
	2020		2040			
	Regional Average	Regional Average minus 15%	Regional Average	Regional Average minus 15%	2020	2040
Residential	15.0	12.8	13.8	11.7	7.5	6.2

Source: Fehr and Peers Transportation Assessment included as Appendix K

The Project meets the Low-VMT Area criteria and would have a less than significant impact on VMT.

Near Transit Stations

The Project site is located approximately 1.2 miles walking distance from the 19th Street Oakland BART station, within 0.5 mile of frequent bus service along San Pablo Avenue (72/72M/ 72R, with combined 6-minute peak headways), 0.6 miles of Martin Luther King Jr. Way (Route 18, with 15-minute peak headway), and about 0.2 miles from frequent bus service along Grand Avenue (Route NL with 15-minute peak headways) and Market Street (Route 88, with 15-minute peak headways). The Project site is within 0.5 mile of the Major Transit Stops created by the intersection of AC Transit Routes 88 and 72/72M/72R at the Market Street/San Pablo Avenue intersection, and Routes 88 and NL at the Market Street/Grand Avenue intersection. The Project would satisfy the Near Transit Station criteria because it would also meet all of the following conditions:

- The Project has a FAR of 1.1, which is greater than 0.75
- The Project includes 12 on-site parking spaces, which meets (but does not exceed) the City of Oakland Municipal Code Section 117.116.090 requirements
- The Project is within the West Oakland Priority Development Area as defined by *Plan Bay Area 2040* and is therefore consistent with the region's Sustainable Communities Strategy

The Project meets the Near Transit Station criteria and, as indicated above, also meets the Low VMT Area and Small Project criteria (only needing to meet one of the three screening criteria) and would have a less than significant impact on VMT.

Conflict with a Plan, Ordinance or Policy

The Project would encourage the use of non-automobile transportation modes by providing conventional residential uses in a dense, walkable urban environment that is well-served by both local and regional transit. No changes to the bus routes operating in the vicinity are proposed, and the Project would not modify access between the Project site and transit facilities. The Project is consistent with the City's 2017 Pedestrian Master Plan and 2007 Bicycle Master Plan. The Project would not make any modifications to existing pedestrian or bicycle facilities in the surrounding areas, and would not adversely affect installation of future facilities.

Additionally, the Project is consistent with the assumptions used in the West Oakland Specific Plan EIR. Since the Project, combined with other developments currently proposed or under construction in the West Oakland Specific Plan Area would generate fewer automobile trips than assumed in the West Oakland Specific Plan EIR, the Project would not result in additional impacts on traffic operations at those intersections analyzed in the West Oakland Specific Plan EIR.

Construction activities associated with the project could potentially temporarily disrupt transportation, bicycle, and pedestrian movement, as well as reduce parking availability in the project area.

Consistent with the findings of the West Oakland Specific Plan EIR, impacts related to consistency with transportation plans and policies would be reduced to less than significant levels with implementation of the following City of Oakland SCA:

- **SCA TRANS-1: Construction Activity in the Public Right-of-Way**
- **SCA TRANS-2: Bicycle Parking** (applies to all projects that require bicycle parking per chapter 17.117 of the Oakland Planning Code, such as new residential units in multi-family dwellings)
- **SCA TRANS-3: Plug-in Electrical Vehicle Charging Infrastructure** (applies to all new construction projects with 11 or more on-site parking spaces)

- **SCA TRANS-4: Transportation Impact Fee** (applies to all projects subject to the Transportation Impact Fee Ordinance per OMC Chapter 15.74)

With implementation of SCA TRANS-1 through -5, the Project would not conflict with transportation-related plan, polices of regulations of the City of Oakland, including those plans or polices related to alternative transportation (transit, bicycles and pedestrian movement). Transportation-related impacts would be less than significant.

Additional Automobile Travel

Development of the Project would slightly increase vehicular traffic in the vicinity, but the increase in Project-generated traffic would be fully accommodated by existing roadways. The Project would not increase physical capacity of any roadway and no roadway modifications or additions are planned as part of the Project. The impact would be less than significant.

Conclusions – Transportation

Based on an examination of the analysis, findings and conclusions of the Prior EIRs, implementation of the Project would not substantially increase the severity of any significant transportation impact as identified in the Prior EIRs, nor would it result in new significant transportation impacts that were not previously identified. The Prior EIRs did not identify any additional mitigation measures other than the identified SCA related to transportation that would apply to the Project, and none would be needed. The SCAs identified above and listed in Appendix A at the end of this CEQA Checklist pertaining to transportation apply to the Project.

Utilities and Service Systems

Impact Topics	WOSP EIR Findings with Implementation of Mitigation Measures (if required)	Project			
		Relationship to WOSP EIR Findings			
		Equal or Less Severity	Substantial Increase in Severity	Applicable SCAs or Mitigation Measures	Level of Significance
Wastewater and Stormwater Facilities	LTS	■	□	–	LTS
Water Supplies	LTS	■	□	–	LTS
Solid Waste Services	LTS	■	□	–	LTS
Energy	LTS	■	□	–	LTS

Prior Program EIR Findings

Land Use and Transportation Element EIR

The LUTE EIR identified significant effects related to water, wastewater and stormwater facilities, solid waste and energy. It identified mitigation measures (now incorporated into the applicable City SCAs) that reduced these effects to less than significant levels. The mitigation recommended review of major new development proposals to determine projected water, wastewater and storm drainage loads compared with available water, sewer and storm drain capacity. Where appropriate, these measures also recommended appropriate capital improvements and funding sources be assured prior to project approval.

Housing Element EIR Findings

The Housing Element EIR identified significant effects related to wastewater treatment and capacity, as well as stormwater facilities. These potential impacts were determined to be reduced to less than significant with implementation of SCAs requiring the replacement or rehabilitation of existing sewer systems to reduce inflow and infiltration, new wastewater system designs to prevent infiltration and inflow to the maximum extent feasible, site design measures for post-construction stormwater management, and implementation of a post-construction stormwater management plans. Impacts related to solid waste and energy were found to be less than significant.

West Oakland Specific Plan EIR Findings

The West Oakland Specific Plan EIR concluded that future development in accordance with the Specific Plan would consist primarily of redevelopment of previously developed properties, so there would be limited change in impervious surface area and stormwater runoff. Development facilitated by the Specific Plan would not result in an increase in stormwater runoff with implementation of applicable SCAs.

The Water Supply Assessment prepared by EBMUD for the West Oakland Specific Plan EIR concluded that EBMUD has sufficient water supplies to meet current water demand and future water demand through 2035, including the increased water demand associated with the Specific Plan, during normal, single dry, and multiple dry years. Construction of any needed water system improvements would typically occur within existing public rights-of-way, and construction period traffic, noise, air quality, water quality and other potential impacts would be mitigated through the City's standard construction mitigation practices.

The West Oakland Specific Plan EIR concluded that, with construction of needed sewer system improvements pursuant to City SCAs (including payment of improvements and hook-up fees), the wastewater collection and treatment system would have adequate capacity to serve future development in accordance with the Specific Plan.

The West Oakland Specific Plan EIR concluded that the Altamont Landfill and Vasco Road Landfill have sufficient permitted capacity to accommodate the solid waste disposal needs of future development pursuant to the Specific Plan, and that with required implementation of SCAs related to waste reduction and recycling, the Specific Plan would not violate applicable federal, state, and local statutes and regulations related to solid waste.

Finally, the West Oakland Specific Plan EIR concluded that Pacific Gas & Electric Company (PG&E) has capacity to handle projected energy demands within its current system, and that with SCAs, development under the Specific Plan would not cause a violation of regulations relating to energy standards nor result in a determination by PG&E that it does not have adequate capacity to serve.

Project Analysis

Utilities

The Project involves demolition of the two existing light industrial buildings and one residential building, and construction of a 12 new units of residential development. The Project site is currently served by all utilities. All on-site utility extension needed for the Project would be designed in accordance with applicable codes and current engineering practices. Consistent with the conclusions of the West Oakland Specific Plan EIR, the Project would not generate substantial additional wastewater or require a substantial increase in the supply of potable water. Construction and operation of the Project would not require additional utility service or require new stormwater drainage facilities. The Project site would also be served by a landfill that has capacity to serves the area. The Project's impact on utilities and service systems would be less than significant.

Consistent with the findings of the West Oakland Specific Plan EIR, impacts related to utilities and service systems would be further reduced with implementation of the following City of Oakland SCAs:

- **SCA UTIL-1: Construction and Demolition Waste Reduction and Recycling** (applies to all construction projects)
- **SCA UTIL-2: Underground Utilities** (applies to all construction projects)
- **SCA UTIL-3: Recycling Collection and Storage Space** (applies to new residential development of five or more units)
- **SCA UTIL-4: Water Efficient Landscape Ordinance** (applies to all new construction projects with an aggregate landscape area equal to or greater than 500 sq.ft.)

Energy

The Project would have a significant impact related to energy use if it would violate applicable federal, state or local statutes and regulations relating to energy standards, or if increased energy consumption resulting from the Project would trigger the need for expanded off-site energy facilities that would have significant environmental impacts.

The PG&E infrastructure for electricity and natural gas would be extended onto the Project site as part of the Project. Off-site improvements to energy infrastructure would not be required to support the Project. The Project would result in the consumption of fuel, both during construction and during ongoing operations. However, because the Project's impacts related to VMT would be less than significant, the increased fuel demands of the Project would be similarly less than significant

Consistent with the findings of the West Oakland Specific Plan EIR, impacts related to energy would be further reduced with implementation of the following City of Oakland SCA:

- **SCA UTIL-5: Green Building Requirements** (applies to new construction of a multi-family dwelling of 3+ units)

As shown on the Project's application materials, the Project has a Green Point Rating that complies with all CALGreen mandatory measures, and would achieve a total of 33 points, thereby exceeding the 23 required points to meet current City Green Building requirements. Specifically, the Project would achieve 4 Community points, 6 Air Quality/Health points, 7 Resources points, and 8.5 Water points (each meeting or exceeding the individual category requirements), as well 7.5 Energy points. With implementation of these measures, the Project would meet and exceed all applicable standards of the City Green Building requirements for incorporating energy-conserving design and construction. This Project is anticipated to have similar, less than significant energy requirements as other modern residential developments in the vicinity. Although the Project would incrementally increase energy consumption, it would comply with all applicable regulations and energy standards and would not result in a significant impact related to the provision of energy services.

Conclusions – Utilities and Service Systems

Based on an examination of the analysis, findings and conclusions of the Prior EIRs, implementation of the Project would not substantially increase the severity of any significant impact on utilities or service systems as identified in the Prior EIRs, nor would it result in new significant impacts to utilities or service systems that were not previously identified. The Prior EIRs did not identify any additional mitigation measures other than the SCAs identified above. The SCAs identified above and listed in Appendix A at the end of this CEQA Checklist pertaining to utilities or service systems apply to the Project.

Acronyms and Terms

ABAG	Association of Bay Area Governments
AC Transit	Alameda–Contra Costa Transit District
ACDEH	Alameda County Department of Environmental Health
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area rapid Transit
CEQA	California Environmental Quality Act
City	City of Oakland
dBA	A-weighted decibel
EIR	Environmental Impact Report
GHG	greenhouse gas
I-580	Interstate 580
LUST	leaking underground storage tank
LUTE	Land Use and Transportation Element
$MTCO_2e$	metric tons carbon dioxide equivalent
NPDES	National Pollution Discharge Elimination System
$PM_{2.5}$	particulate matter, 2.5 micrometers or less
PM_{10}	particulate matter, 10 micrometers or less
SCA	Standard Condition of Approval
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAZ	transportation analysis zone
VMT	vehicle miles traveled

Appendix A

City of Oakland Standard Conditions of Approval

Appendix A: City of Oakland – Standard Conditions of Approval

The City of Oakland's Uniformly Applied Development Standards, adopted as Standard Conditions of Approval (or SCAs), were originally adopted by the City in 2008 (Ordinance No. 12899 C.M.S.) pursuant to Public Resources Code section 21083.3, and have been incrementally updated over time. The SCAs incorporate development policies and standards from various adopted plans, policies and ordinances (such as the Oakland Planning and Municipal Codes, Oakland Creek Protection, Stormwater Water Management and Discharge Control Ordinance, Oakland Tree Protection Ordinance, Oakland Grading Regulations, National Pollutant Discharge Elimination System (NPDES) permit requirements, Housing Element-related mitigation measures, Green Building Ordinance, historic/Landmark status, California Building Code, and Uniform Fire Code, among others), which have been found to substantially mitigate environmental effects.

These SCAs are incorporated into projects as conditions of approval, regardless of the determination of a project's environmental impacts. As applicable, the SCAs are adopted as requirements of an individual project when it is approved by the City, and are designed to, and will, avoid or substantially reduce a project's environmental effects.

In reviewing project applications, the City determines which SCAs apply based upon the zoning district, community plan, and the type of permits/approvals required for the project. Depending on the specific characteristics of the project type and/or project site, the City will determine which SCAs apply to a specific project. Because these SCAs are mandatory City requirements imposed on a city-wide basis, environmental analyses assume that these SCAs will be imposed and implemented by the project and are not imposed as mitigation measures under CEQA.

All SCAs identified in the CEQA Analysis—which are consistent with the measures and conditions presented in the General Plan—are included herein. To the extent that any SCA identified in the CEQA Analysis was inadvertently omitted, it is automatically incorporated herein by reference.

- The first column identifies the SCA applicable to that topic in the CEQA Analysis.
- The second column identifies the monitoring schedule or timing applicable to the project.
- The third and fourth columns names the City department or agency responsible for initial approval and monitoring the required action for the project.

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

Note that the SCAs included in this document are referred to using an abbreviation for the environmental topic area and are numbered sequentially for each topic area—e.g., **SCA AIR-1**, **SCA AIR-2**. The SCA title and the SCA number that corresponds to the City's Master SCA list are also provided in the Appendix listing—e.g., **SCA AIR-1: Dust Controls – Construction Related (#21)**.

Table A-1. City of Oakland Standard SCAs Required for the Project

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
Aesthetics			
SCA AES-1: 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 multi-family 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
SCA AES-2: 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: 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.	Ongoing	N/A	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
ii. Covering with new paint to match the color of the surrounding surface. iii. Replacing with new surfacing (with City permits if required).			
SCA AES-3: 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, 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 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 systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.	Ongoing	N/A	Bureau of Building
SCA AES-4: 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
Air Quality			
SCA AIR-1: Dust Controls – Construction Related The project applicant shall implement all of the following applicable air pollution control measures during construction of the project:	During construction	N/A	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
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.			
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 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").	During construction	N/A	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
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.			
SCA AIR-3: 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
Cultural Resources			
SCA CUL-1: Property Relocation Pursuant to Policy 3.7 of the Historic Preservation Element of the Oakland General Plan, the project applicant shall make a good faith effort to relocate the historic resource to a site acceptable to the City. A good faith effort includes, at a minimum, all of the following: a. Advertising the availability of the building by: (1) posting of large visible signs (such as banners, at a minimum of 3' x 6' size or larger) at the site; (2) placement of advertisements	Prior to approval of construction-related permit	Bureau of Planning (including Oakland Cultural Resource Survey)	NA

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
in Bay Area news media acceptable to the City; and (3) contacting neighborhood associations and for-profit and not-for-profit housing and preservation organizations; b. Maintaining a log of all the good faith efforts and submitting that along with photos of the subject building showing the large signs (banners) to the City; c. Maintaining the signs and advertising in place for a minimum of 90 days; and d. Making the building available at no or nominal cost (the amount to be reviewed by the Oakland Cultural Heritage Survey) until removal is necessary for construction of a replacement project, but in no case for less than a period of 90 days after such advertisement.			
SCA CUL-2: 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. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented. In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological	During construction	N/A	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense. In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.			
SCA CUL-3: 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 halt immediately, and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.	During Construction	N/A	Bureau of Building
Geology and Soils			
SCA GEO-1: Construction-Related Permits 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

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
SCA GEO-2: 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), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant shall implement the recommendations contained in the approved report during project design and construction.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
GHG Emissions and 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.	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Planning
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.	During construction	Bureau of Planning	Bureau of Building
c. For ECAP Consistency Checklist measures that operational 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.	Ongoing	N/A	Bureau of Planning
SCA GHG-2 - Greenhouse Gas (GHG) Reduction Plan a. Greenhouse Gas (GHG) Reduction Plan Required. The project applicant shall retain a qualified air quality consultant to develop a Greenhouse Gas (GHG) Reduction Plan for City review and approval, and shall implement the approved GHG Reduction Plan. The goal of the GHG Reduction Plan shall be to increase energy efficiency and to reduce GHG emissions	Prior to approval of construction-related permit	Bureau of Planning	NA

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection

to at least the amount that would be achieved by committing to all of the emissions reductions strategies identified on the ECAP Consistency Checklist as the City's project-level implementation of its Equitable Climate Action Plan (adopted in 2020), which calls for reducing city-wide GHG emissions by 56 percent below 2005 levels by 2030 and 83 percent by 2050.The GHG Reduction Plan shall include, at a minimum,

(a) detailed quantified GHG emissions inventory for the project, taking into consideration energy efficiencies included as part of the project (including proposed mitigation measures, project design features, those strategies being implemented and other City requirements),

(b) for each ECAP Consistency Checklist strategy that the project will not meet, a quantified calculation of the additional GHG emission reductions that would have occurred had it implemented the GHG emissions reduction measure consistent with the ECAP Consistency Checklist,

(c) a quantified strategy for achieving a GHG emission reduction equivalent to the reduction that would have resulted from complying with the ECAP Consistency Checklist strategy, and

(d) requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented.

If the project is to be constructed in phases, the GHG Reduction Plan shall provide GHG emission scenarios by phase.

Potential additional GHG reduction measures to be considered include, but are not be limited to, measures recommended in BAAQMD's latest CEQA Air Quality Guidelines, the California Air Resources Board Scoping Plan (December 2008, as may be revised), the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures (August 2010, as may be revised), the California Attorney General's website, and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council.

The types of allowable GHG reduction measures include the following (listed in order of City preference): (1) physical design features; (2) operational features; and (3) the payment of fees to fund GHG-reducing programs (i.e., the purchase of "carbon credits") as explained below. The allowable locations of the GHG reduction measures include the following (listed in order

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
of City preference): (1) the project site; (2) off-site within the City of Oakland; (3) off-site within the San Francisco Bay Area Air Basin; then (4) off-site within the State of California. As with preferred locations for the implementation of all GHG reductions measures, the preference for carbon credit purchases include those that can be achieved as follows (listed in order of City preference): (1) within the City of Oakland; (2) within the San Francisco Bay Area Air Basin; then (3) within the State of California. The cost of carbon credit purchases shall be based on current market value at the time purchased and shall be based on the project's net difference operational emissions estimated in the GHG Reduction Plan for the project as compared to the Checklist baseline. For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits.			
b) GHG Reduction Plan Implementation During Construction. The project applicant shall implement the GHG Reduction Plan during construction of the project. For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be implemented during construction. For physical GHG reduction measures to be incorporated into off-site projects, the project applicant shall obtain all necessary permits/approvals and the measures shall be included on drawings and submitted to the City Planning Director or his/her designee for review and approval. These off-site improvements shall be installed prior to completion of the subject project (or prior to completion of the project phase for phased projects). For GHG reduction measures involving the purchase of carbon credits, evidence of the payment/purchase shall be submitted to the City for review and approval prior to completion of the project (or prior to completion of the project phase, for phased projects).	During construction	Bureau of Planning	Bureau of Building
c) GHG Reduction Plan Implementation After Construction. The project applicant shall implement the GHG Reduction Plan after construction of the project (or at the completion of the project phase for phased projects). For operational GHG reduction measures to be incorporated into the project or off-site projects, the measures shall be implemented on an indefinite and ongoing basis. The project applicant shall satisfy the following requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. The GHG Reduction Plan requires regular periodic evaluation over the life of the project (generally estimated to be at least 40 years) to determine how the Plan is	Ongoing	Bureau of Planning	Bureau of Planning

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
achieving required GHG emissions reductions over time, as well as the efficacy of the specific additional GHG reduction measures identified in the Plan. (1) Annual Report. Implementation of the GHG reduction measures and related requirements shall be ensured through compliance with Conditions of Approval adopted for the project. Generally, starting two years after the City issues the first Certificate of Occupancy for the project, the project applicant shall prepare each year of the useful life of the project an Annual GHG Emissions Reduction Report ("Annual Report"), for review and approval by the City Planning Director or his/her designee. The Annual Report shall be submitted to an independent reviewer of the City's choosing, to be paid for by the project applicant. The Annual Report shall summarize the project's implementation of GHG reduction measures over the preceding year, intended upcoming changes, compliance with the conditions of the Plan, and include a brief summary of the previous year's Annual Report results (starting the second year). The Annual Report shall include a comparison of annual project emissions to the Checklist baseline emissions reported in the GHG Plan. The GHG Reduction Plan shall be considered fully attained when project emissions are less than the Checklist baseline, as confirmed by the City through an established monitoring program. Monitoring and reporting activities will continue at the City's discretion, as discussed below. (2) Corrective Procedure. If the third Annual Report, or any report thereafter, indicates that, in spite of the implementation of the GHG Reduction Plan, the project is not achieving the GHG reduction goal, the project applicant shall prepare a report for City review and approval, which proposes additional or revised GHG measures to better achieve the GHG emissions reduction goals, including without limitation, a discussion on the feasibility and effectiveness of the menu of other additional measures ("Corrective GHG Action Plan"). The project applicant shall then implement the approved Corrective GHG Action Plan. If, one year after the Corrective GHG Action Plan is implemented, the required GHG emissions reduction target is still not being achieved, or if the project applicant fails to submit a report at the times described above, or if the reports do not meet City requirements outlined above, the City may, in addition to its other remedies, (a) assess the project applicant a financial penalty based upon actual percentage reduction in			

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
GHG emissions as compared to the percent reduction in GHG emissions established in the GHG Reduction Plan; or (b) refer the matter to the City Planning Commission for scheduling of a compliance hearing to determine whether the project's approvals should be revoked, altered or additional conditions of approval imposed. The penalty as described in (a) above shall be determined by the City Planning Director or his/her designee and be commensurate with the percentage GHG emissions reduction not achieved compared to the applicable numeric significance thresholds described in the GHG Reduction Plan. In determining whether a financial penalty or other remedy is appropriate, the City shall not impose a penalty if the project applicant has made a good faith effort to comply with the GHG Reduction Plan. The City would only have the ability to impose a monetary penalty after a reasonable cure period and in accordance with the enforcement process outlined in Planning Code Chapter 17.152. If a financial penalty is imposed, such penalty sums shall be used by the City solely toward the implementation of the Equitable Climate Action Plan. (3) Timeline Discretion and Summary. The City shall have the discretion to reasonably modify the timing of reporting, with reasonable notice and opportunity to comment by the applicant, to coincide with other related monitoring and reporting required for the project.			
Hazards and Hazardous Materials			
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

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
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.	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 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.	Prior to approval of construction-related permit	Applicable regulatory agency with jurisdiction	Applicable regulatory agency with jurisdiction
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. 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	During construction	N/A	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal requirements. ii. Groundwater pumped from the subsurface shall be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building.			
SCA HAZ-3: 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 and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as	During construction	N/A	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
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.			
Hydrology and Water Quality			
SCA HYDRO-1: Erosion and Sedimentation Control Measures for Construction The project applicant shall implement Best Management Practices (BMPs) to reduce erosion, sedimentation, and water quality impacts during construction to the maximum extent practicable. At a minimum, the project applicant shall provide filter materials deemed acceptable to the City at nearby catch basins to prevent any debris and dirt from flowing into the City's storm drain system and creeks.	During Construction	N/A	Bureau of Building
SCA HYDRO-2: 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 vii. Hydromodification 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 Planning; Bureau of Building	Bureau of Building

Standard Conditions of Approval	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, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.	Prior to approval of construction-related permit	Bureau of Planning; Bureau of Building	Bureau of Building
Noise			
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.	During Construction	N/A	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
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., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures. c. Applicant shall use temporary power poles instead of generators where feasible.	During Construction	N/A	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
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 a. Construction Noise Management Plan Required. Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90 dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following: i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings; ii. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site; iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and v. Monitor the effectiveness of noise attenuation measures by taking noise measurements. b. Public Notification Required. The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days	Prior to Approval	Bureau of Building	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
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.			
SCA NOISE-4: 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
SCA NOS-5: 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 HSNG-1: Affordable Housing Impact Fee The project applicant shall comply with the requirements of the City of Oakland Affordable Housing Impact Fee Ordinance (chapter 15.72 of the Oakland Municipal Code).	Prior to issuance of building permit	Bureau of Building	N/A

Public Services			
SCA PUBSERV-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
Transportation and Traffic			
SCA TRANS-1: 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 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.		Department of Transportation	Department of Transportation
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 TRANS-2: 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 TRANS-3: Plug-In Electric Vehicle (PEV) Charging Infrastructure 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.	Prior to Issuance of Building Permit	Bureau of Building	Bureau of Building
SCA TRANS-4: 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
Utilities and Service Systems			
SCA UTIL-1: 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 UTIL-2: 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 UTIL-3: 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 nonresidential 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
SCA UTIL-4: Water Efficient Landscape Ordinance (WELO) 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. Prior to construction, the project applicant shall prepare and submit a Landscape Documentation Package for review and approval, which includes the following a. Project Information: i. Date, ii. Applicant and property owner name, iii. Project address, iv. Total landscape area, v. Project type (new, rehabilitated, cemetery, or homeowner installed), vi. Water supply type and water purveyor, vii. Checklist of documents in the package, and viii. Project contacts ix. 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." b. Water Efficient Landscape Worksheet i. Hydrozone Information Table	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Planning

ii. Water Budget Calculations with Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use c. Soil Management Report d. Landscape Design Plan e. Irrigation Design Plan, and f. Grading Plan 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 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.			
SCA UTIL-5: Green Building Requirements a. <u>Compliance with Green Building Requirements During Plan-Check</u>. 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). The following information shall be submitted to the City for review and approval with the application for a building permit: • Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards. • Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit. • Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit. • Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below. • 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.	Prior to approval of construction-related permit	Bureau of Building	N/A

	• 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. • Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. The set of plans in subsection (i) shall demonstrate compliance with the following: • CALGreen mandatory measures. • Green building point level/certification requirement • 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. • The required green building point minimums in the appropriate credit categories.			
b.	Compliance with Green Building Requirements During Construction. 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
c.	Compliance with Green Building Requirements After Construction. Prior to the final 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

Appendix B

Qualified Infill Performance Standards, Per CEQA Guidelines §15183.3 Appendix M

Appendix B: Infill Performance Standards, Per CEQA Guidelines §15183.3

Table B-1 demonstrates how the proposed Project meets the eligibility requirements to qualify as an infill project under CEQA Guidelines §15183.3(b) and CEQA Guidelines Appendix M.

Table B-1. Eligibility for Streamlining – Infill Project

CEQA Eligibility Criteria	Eligibility of Project
To be eligible for the streamlining procedures prescribed in this section, an infill project must:	
1) Be located in an urban area on a site that either has been previously developed or that adjoins existing qualified urban uses on at least seventy-five percent of the site's perimeter. For the purpose of this subdivision "adjoin" means the infill project is immediately adjacent to qualified urban uses, or is only separated from such uses by an improved public right-of-way.	The Project is eligible. The Project site is located in an urban area in Oakland, it has been previously developed, and it adjoins existing urban uses on 75 percent of its perimeter or is separated from such uses by an improved public right-of-way.
2) Satisfy the performance standards provided in Appendix M.	The Project is eligible - see responses to individual Appendix M standards, below.
3) Be consistent with the general use designation, density, building intensity and applicable policies specified for the project area in either a sustainable community strategy or an alternative planning strategy.	The Project is eligible. The Consistency with Community Plan and Zoning section of the CEQA Analysis for the Project demonstrates that the Project is consistent with the density assumptions of the LUTE, the West Oakland Specific Plan and zoning; is consistent with the relevant policies of the LUTE that encourage the construction, conservation and enhancement of housing resources to meet current and future needs of the Oakland community, and policies that encourage a mix of housing costs, unit sizes, types and ownership structures; is consistent with relevant policies of the West Oakland Specific Plan's Residential Areas that seek to establish more identifiable borders between established residential neighborhoods and the industrial and intensive commercial business areas, and restore neighborhoods at the residential/ industrial interface; and is consistent with the development standards of the Oakland Municipal Code that are relevant to the Project. Further, the Project site is within the West Oakland Priority Development Area (PDA) as identified in the region's sustainable community strategy (*Plan Bay Area 2040*) and in the City of Oakland's Energy and Climate Action Plan. Each of these factors demonstrates the Project's overall consistency with the applicable

Table B-1. Eligibility for Streamlining – Infill Project	
CEQA Eligibility Criteria	**Eligibility of Project**
	policies of the region's Sustainable Communities Strategy, as well as the City of Oakland's Energy and Climate Action Plan.
Satisfaction of Appendix M Performance Standards	
Renewable Energy All non-residential projects shall include on-site renewable power generation, such as solar photovoltaic, solar thermal and wind power generation, or clean backup power supplies, where feasible. Residential projects are also encouraged to include such on-site renewable power generation.	The Project satisfies this performance standard. The predominant use of the Project is residential, and on-site renewable power generation is encouraged but not required. The Project does not include, and is not required to include on-site renewable power generation
Soil and Water Remediation If the project site is included on any list compiled pursuant to Section 65962.5 of the Government Code, the project shall document how it has remediated the site, if remediation is completed. Alternatively, the project shall implement the recommendations provided in a preliminary endangerment assessment or comparable document that identifies remediation appropriate for the site.	The Project satisfies this performance standard. The Project site is included on a list compiled pursuant to Section 65962.5 of the Government Code, and remediation of the site is not completed. However, as documented in the Hazards section of the CEQA Checklist, the Project has received ACDEH approval for implementation of its proposed corrective actions and redevelopment of the site (ACDEH, April 17, 2020 letter of Conditional Approval of the Corrective Action Plan and Corrective Action Design and Implementation Plan). Per their April 17, 2020 letter, ACDEH concurs that implementation of the proposed corrective actions presented in the CAIP will minimize risk to on- and off-site receptors from exposure to residual subsurface contamination at the site.
Residential Units Near High-Volume Roadways and Stationary Sources If a project includes residential units located within 500 feet, or other distance determined to be appropriate by the local agency or air district based on local conditions, of a high volume roadway or other significant sources of air pollution, the project shall comply with any policies and standards identified in the local general plan, specific plan, zoning code or community risk reduction plan for the protection of public health from such sources of air pollution. If the local government has not adopted such plans or policies, the project shall include measures, such as enhanced air filtration and project design, that the lead agency finds, based on substantial evidence, will promote the protection of public health from sources of air pollution. Those measures may include, among others, the recommendations of the California Air Resources Board, air districts, and the California Air Pollution Control Officers Association.	The Project satisfies this performance standard. The Project does include new residential units, but is not within 1,000 feet of a high-volume roadway (defined by City SCAs as a freeway or a roadway with more than 10,000 vehicles/day). However, ambient air conditions at the Project site may be adversely affected by other stationary sources, and the City SCA pertaining to Exposure to Air Pollution (Toxic Air Contaminants) would apply. This SCA requires the Project to either retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) to determine the health risk of exposure of project residents/occupants/users to air pollutants and to implement health risk reduction measures to reduce the health risk to acceptable levels, or to incorporate health risk reduction measures into the project (e.g., air filter devices rated MERV-16 for projects located in the West Oakland Specific Plan area).

Table B-1. Eligibility for Streamlining – Infill Project	
CEQA Eligibility Criteria	**Eligibility of Project**
VMT Residential. To be eligible for streamlining pursuant to Section 15183.3, a Residential project must satisfy one of the following: ***Projects achieving below average regional per capita vehicle miles traveled (VMT).*** A residential project is eligible if it is located in a "low vehicle travel area" within the region. ***Projects located within ½ mile of an Existing Major Transit Stop or High Quality Transit Corridor.*** A residential project is eligible if it is located within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor. ***Low-Income Housing.*** A residential or mixed-use project consisting of 300 or fewer residential units all of which are affordable to low income households is eligible if the developer of the development project provides sufficient legal commitments to the lead agency to ensure the continued availability and use of the housing units for lower income households, as defined in Section 50079.5 of the Health and Safety Code, for a period of at least 30 years, at monthly housing costs, as determined pursuant to Section 50053 of the Health and Safety Code.	The Project satisfies this performance standard. As documented in the Transportation section of the CEQA Checklist, the Project site meets the Low-VMT Area criteria and would have a less than significant impact on VMT. The Project site is also located within 0.5 mile of frequent bus service along San Pablo Avenue (72/72M/ 72R, with combined 6-minute peak headways), 0.6 miles of Martin Luther King Jr. Way (Route 18, with 15-minute peak headway), and about 0.2 miles from frequent bus service along Grand Avenue (Route NL with 15-minute peak headways) and Market Street (Route 88, with 15-minute peak headways). The Project site is within 0.5 mile of the Major Transit Stops created by the intersection of AC Transit Routes 88 and 72/72M/72R at the Market Street/San Pablo Avenue intersection, and Routes 88 and NL at the Market Street/Grand Avenue intersection.
Commercial/Retail. To be eligible for streamlining pursuant to Section 15183.3, a Commercial/Retail project must satisfy one of the following: ***Regional Location.*** A commercial project with no single-building floor-plate greater than 50,000 square feet is eligible if it locates in a "low vehicle travel area."[1] ***Proximity to Households.*** A project with no single-building floor-plate greater than 50,000 square feet located within one-half mile of 1800 households is eligible.	Not applicable. The project is not a commercial/retail project.
Office Building: To be eligible for streamlining pursuant to Section 15183.3, an Office Building project must satisfy one of the following: ***Regional Location***. Office buildings, both commercial and public, are eligible if they locate in a low vehicle travel area. ***Proximity to a Major Transit Stop***. Office buildings, both commercial and public, within ½ mile of an existing major transit stop, or ¼ mile of an existing stop along a high quality transit corridor, are eligible.	Not applicable. The project is not an office building project.

Table B-1. Eligibility for Streamlining – Infill Project	
CEQA Eligibility Criteria	**Eligibility of Project**
Transit. Transit stations, as defined in Section 15183.3(e)(1), are eligible.	Not applicable. The project is not a transit project.
Schools. Elementary schools within one mile of fifty percent of the projected student population are eligible. Middle schools and high schools within two miles of fifty percent of the projected student population are eligible. Alternatively, any school within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor is eligible. Additionally, in order to be eligible, all schools shall provide parking and storage for bicycles and scooters and shall comply with the requirements in Sections 17213, 17213.1 and 17213.2 of the California Education Code.	Not applicable. The project is not a school project.
Small Walkable Community Projects. Small walkable community projects, as defined in Section 15183.3, subdivision (e)(6), that implement the project features described in Section Ill above are eligible.	Not applicable. The project is not a small walkable community project.
Mixed Use Projects. Where a project includes some combination of residential, commercial and retail, office building, transit station, and/or schools, the performance standards in this Section that apply to the predominant use shall govern the entire project.	Not applicable. The project is not a mixed use project.

Appendix C

Lamphier-Gregory, *CalEEMod Output*

August, 2020

2432 Chestnut - Alameda County, Annual

2432 Chestnut
Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	12.00	Dwelling Unit	0.57	26,540.00	34

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E Emission Factor for 2020.

Land Use - Lot acerage and square footage from plans.

Demolition -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	12,000.00	26,540.00
tblLandUse	LotAcreage	0.75	0.57
tblProjectCharacteristics	CO2IntensityFactor	641.35	290

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2351	0.4788	0.4483	7.5000e-004	9.9800e-003	0.0262	0.0361	2.3900e-003	0.0242	0.0266	0.0000	66.1878	66.1878	0.0184	0.0000	66.6489
Maximum	**0.2351**	**0.4788**	**0.4483**	**7.5000e-004**	**9.9800e-003**	**0.0262**	**0.0361**	**2.3900e-003**	**0.0242**	**0.0266**	**0.0000**	**66.1878**	**66.1878**	**0.0184**	**0.0000**	**66.6489**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					

2021	0.2351	0.4788	0.4483	7.5000e-004	9.9800e-003	0.0262	0.0361	2.3900e-003	0.0242	0.0266	0.0000	66.1877	66.1877	0.0184	0.0000	66.6488
Maximum	**0.2351**	**0.4788**	**0.4483**	**7.5000e-004**	**9.9800e-003**	**0.0262**	**0.0361**	**2.3900e-003**	**0.0242**	**0.0266**	**0.0000**	**66.1877**	**66.1877**	**0.0184**	**0.0000**	**66.6488**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-5-2021**	**7-4-2021**	0.2895	0.2895
2	**7-5-2021**	**9-30-2021**	0.4203	0.4203
		Highest	0.4203	0.4203

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1527	1.6700e-003	0.1273	8.0000e-005		5.9400e-003	5.9400e-003		5.9400e-003	5.9400e-003	0.5471	0.3703	0.9173	1.0200e-003	4.0000e-005	0.9535
Energy	1.3200e-003	0.0113	4.7900e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	19.6864	19.6864	9.2000e-004	3.8000e-004	19.8215
Mobile	0.0213	0.1440	0.2312	8.9000e-004	0.0684	8.4000e-004	0.0692	0.0184	7.9000e-004	0.0192	0.0000	81.6571	81.6571	3.5200e-003	0.0000	81.7451
Waste						0.0000	0.0000		0.0000	0.0000	1.1205	0.0000	1.1205	0.0662	0.0000	2.7760
Water						0.0000	0.0000		0.0000	0.0000	0.2480	0.7834	1.0315	0.0256	6.2000e-004	1.8544
Total	**0.1753**	**0.1570**	**0.3634**	**1.0400e-003**	**0.0684**	**7.6900e-003**	**0.0761**	**0.0184**	**7.6400e-003**	**0.0260**	**1.9156**	**102.4971**	**104.4128**	**0.0972**	**1.0400e-003**	**107.1506**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1527	1.6700e-003	0.1273	8.0000e-005		5.9400e-003	5.9400e-003		5.9400e-003	5.9400e-003	0.5471	0.3703	0.9173	1.0200e-003	4.0000e-005	0.9535
Energy	1.3200e-003	0.0113	4.7900e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	19.6864	19.6864	9.2000e-004	3.8000e-004	19.8215
Mobile	0.0213	0.1440	0.2312	8.9000e-004	0.0684	8.4000e-004	0.0692	0.0184	7.9000e-004	0.0192	0.0000	81.6571	81.6571	3.5200e-003	0.0000	81.7451
Waste						0.0000	0.0000		0.0000	0.0000	1.1205	0.0000	1.1205	0.0662	0.0000	2.7760
Water						0.0000	0.0000		0.0000	0.0000	0.2480	0.7834	1.0315	0.0256	6.2000e-004	1.8544
Total	**0.1753**	**0.1570**	**0.3634**	**1.0400e-003**	**0.0684**	**7.6900e-003**	**0.0761**	**0.0184**	**7.6400e-003**	**0.0260**	**1.9156**	**102.4971**	**104.4128**	**0.0972**	**1.0400e-003**	**107.1506**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/5/2021	4/16/2021	5	10	
2	Site Preparation	Site Preparation	4/17/2021	4/19/2021	5	1	
3	Grading	Grading	4/20/2021	4/21/2021	5	2	
4	Building Construction	Building Construction	4/22/2021	9/8/2021	5	100	
5	Paving	Paving	9/9/2021	9/15/2021	5	5	
6	Architectural Coating	Architectural Coating	9/16/2021	9/22/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 53,744; Residential Outdoor: 17,915; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	36.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	9.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					3.8800e-003	0.0000	3.8800e-003	5.9000e-004	0.0000	5.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9800e-003	0.0363	0.0379	6.0000e-005		2.0400e-003	2.0400e-003		1.9400e-003	1.9400e-003	0.0000	5.2047	5.2047	9.7000e-004	0.0000	5.2289
Total	**3.9800e-003**	**0.0363**	**0.0379**	**6.0000e-005**	**3.8800e-003**	**2.0400e-003**	**5.9200e-003**	**5.9000e-004**	**1.9400e-003**	**2.5300e-003**	**0.0000**	**5.2047**	**5.2047**	**9.7000e-004**	**0.0000**	**5.2289**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	4.8500e-003	9.0000e-004	1.0000e-005	3.0000e-004	1.0000e-005	3.2000e-004	8.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.3609	1.3609	7.0000e-005	0.0000	1.3626
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.1000e-004	1.1900e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3392	0.3392	1.0000e-005	0.0000	0.3394
Total	**3.0000e-004**	**4.9600e-003**	**2.0900e-003**	**1.0000e-005**	**7.0000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**1.7001**	**1.7001**	**8.0000e-005**	**0.0000**	**1.7020**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.8800e-003	0.0000	3.8800e-003	5.9000e-004	0.0000	5.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9800e-003	0.0363	0.0379	6.0000e-005		2.0400e-003	2.0400e-003		1.9400e-003	1.9400e-003	0.0000	5.2047	5.2047	9.7000e-004	0.0000	5.2289
Total	**3.9800e-003**	**0.0363**	**0.0379**	**6.0000e-005**	**3.8800e-003**	**2.0400e-003**	**5.9200e-003**	**5.9000e-004**	**1.9400e-003**	**2.5300e-003**	**0.0000**	**5.2047**	**5.2047**	**9.7000e-004**	**0.0000**	**5.2289**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	4.8500e-003	9.0000e-004	1.0000e-005	3.0000e-004	1.0000e-005	3.2000e-004	8.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.3609	1.3609	7.0000e-005	0.0000	1.3626
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.1000e-004	1.1900e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3392	0.3392	1.0000e-005	0.0000	0.3394
Total	**3.0000e-004**	**4.9600e-003**	**2.0900e-003**	**1.0000e-005**	**7.0000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**1.7001**	**1.7001**	**8.0000e-005**	**0.0000**	**1.7020**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2000e-004	3.9100e-003	2.0100e-003	0.0000		1.5000e-004	1.5000e-004		1.4000e-004	1.4000e-004	0.0000	0.4276	0.4276	1.4000e-004	0.0000	0.4310
Total	**3.2000e-004**	**3.9100e-003**	**2.0100e-003**	**0.0000**	**2.7000e-004**	**1.5000e-004**	**4.2000e-004**	**3.0000e-005**	**1.4000e-004**	**1.7000e-004**	**0.0000**	**0.4276**	**0.4276**	**1.4000e-004**	**0.0000**	**0.4310**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0170	0.0170	0.0000	0.0000	0.0170
Total	**1.0000e-005**	**1.0000e-005**	**6.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0170**	**0.0170**	**0.0000**	**0.0000**	**0.0170**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2000e-004	3.9100e-003	2.0100e-003	0.0000		1.5000e-004	1.5000e-004		1.4000e-004	1.4000e-004	0.0000	0.4276	0.4276	1.4000e-004	0.0000	0.4310
Total	**3.2000e-004**	**3.9100e-003**	**2.0100e-003**	**0.0000**	**2.7000e-004**	**1.5000e-004**	**4.2000e-004**	**3.0000e-005**	**1.4000e-004**	**1.7000e-004**	**0.0000**	**0.4276**	**0.4276**	**1.4000e-004**	**0.0000**	**0.4310**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0170	0.0170	0.0000	0.0000	0.0170
Total	**1.0000e-005**	**1.0000e-005**	**6.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0170**	**0.0170**	**0.0000**	**0.0000**	**0.0170**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0000e-004	7.2500e-003	7.5700e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.9000e-004	3.9000e-004	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458
Total	**8.0000e-004**	**7.2500e-003**	**7.5700e-003**	**1.0000e-005**	**7.5000e-004**	**4.1000e-004**	**1.1600e-003**	**4.1000e-004**	**3.9000e-004**	**8.0000e-004**	**0.0000**	**1.0409**	**1.0409**	**1.9000e-004**	**0.0000**	**1.0458**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0679	0.0679	0.0000	0.0000	0.0679
Total	**3.0000e-005**	**2.0000e-005**	**2.4000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0679**	**0.0679**	**0.0000**	**0.0000**	**0.0679**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0000e-004	7.2500e-003	7.5700e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.9000e-004	3.9000e-004	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458
Total	**8.0000e-004**	**7.2500e-003**	**7.5700e-003**	**1.0000e-005**	**7.5000e-004**	**4.1000e-004**	**1.1600e-003**	**4.1000e-004**	**3.9000e-004**	**8.0000e-004**	**0.0000**	**1.0409**	**1.0409**	**1.9000e-004**	**0.0000**	**1.0458**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.4000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0679	0.0679	0.0000	0.0000	0.0679
Total	**3.0000e-005**	**2.0000e-005**	**2.4000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0679**	**0.0679**	**0.0000**	**0.0000**	**0.0679**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Off-Road	0.0388	0.3993	0.3632	5.7000e-004		0.0224	0.0224		0.0206	0.0206	0.0000	50.0410	50.0410	0.0162	0.0000	50.4456
Total	**0.0388**	**0.3993**	**0.3632**	**5.7000e-004**		**0.0224**	**0.0224**		**0.0206**	**0.0206**	**0.0000**	**50.0410**	**50.0410**	**0.0162**	**0.0000**	**50.4456**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5000e-004	5.3500e-003	1.1300e-003	1.0000e-005	3.3000e-004	1.0000e-005	3.4000e-004	9.0000e-005	1.0000e-005	1.1000e-004	0.0000	1.3099	1.3099	7.0000e-005	0.0000	1.3117
Worker	1.4400e-003	1.0200e-003	0.0107	3.0000e-005	3.5600e-003	2.0000e-005	3.5800e-003	9.5000e-004	2.0000e-005	9.7000e-004	0.0000	3.0531	3.0531	7.0000e-005	0.0000	3.0550
Total	**1.5900e-003**	**6.3700e-003**	**0.0119**	**4.0000e-005**	**3.8900e-003**	**3.0000e-005**	**3.9200e-003**	**1.0400e-003**	**3.0000e-005**	**1.0800e-003**	**0.0000**	**4.3630**	**4.3630**	**1.4000e-004**	**0.0000**	**4.3666**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0388	0.3993	0.3632	5.7000e-004		0.0224	0.0224		0.0206	0.0206	0.0000	50.0410	50.0410	0.0162	0.0000	50.4456
Total	**0.0388**	**0.3993**	**0.3632**	**5.7000e-004**		**0.0224**	**0.0224**		**0.0206**	**0.0206**	**0.0000**	**50.0410**	**50.0410**	**0.0162**	**0.0000**	**50.4456**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5000e-004	5.3500e-003	1.1300e-003	1.0000e-005	3.3000e-004	1.0000e-005	3.4000e-004	9.0000e-005	1.0000e-005	1.1000e-004	0.0000	1.3099	1.3099	7.0000e-005	0.0000	1.3117
Worker	1.4400e-003	1.0200e-003	0.0107	3.0000e-005	3.5600e-003	2.0000e-005	3.5800e-003	9.5000e-004	2.0000e-005	9.7000e-004	0.0000	3.0531	3.0531	7.0000e-005	0.0000	3.0550
Total	**1.5900e-003**	**6.3700e-003**	**0.0119**	**4.0000e-005**	**3.8900e-003**	**3.0000e-005**	**3.9200e-003**	**1.0400e-003**	**3.0000e-005**	**1.0800e-003**	**0.0000**	**4.3630**	**4.3630**	**1.4000e-004**	**0.0000**	**4.3666**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Off-Road	1.8000e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.8000e-003**	**0.0168**	**0.0177**	**3.0000e-005**		**8.8000e-004**	**8.8000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.3481**	**2.3481**	**6.8000e-004**	**0.0000**	**2.3652**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.0000e-004	1.0700e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3053	0.3053	1.0000e-005	0.0000	0.3055
Total	**1.4000e-004**	**1.0000e-004**	**1.0700e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3053**	**0.3053**	**1.0000e-005**	**0.0000**	**0.3055**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8000e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.8000e-003**	**0.0168**	**0.0177**	**3.0000e-005**		**8.8000e-004**	**8.8000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.3481**	**2.3481**	**6.8000e-004**	**0.0000**	**2.3652**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.0000e-004	1.0700e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3053	0.3053	1.0000e-005	0.0000	0.3055
Total	**1.4000e-004**	**1.0000e-004**	**1.0700e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3053**	**0.3053**	**1.0000e-005**	**0.0000**	**0.3055**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Archit. Coating	0.1868					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**0.1874**	**3.8200e-003**	**4.5400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.2000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0339	0.0339	0.0000	0.0000	0.0339
Total	**2.0000e-005**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0339**	**0.0339**	**0.0000**	**0.0000**	**0.0339**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1868					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**0.1874**	**3.8200e-003**	**4.5400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.2000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0339	0.0339	0.0000	0.0000	0.0339
Total	**2.0000e-005**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0339**	**0.0339**	**0.0000**	**0.0000**	**0.0339**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0213	0.1440	0.2312	8.9000e-004	0.0684	8.4000e-004	0.0692	0.0184	7.9000e-004	0.0192	0.0000	81.6571	81.6571	3.5200e-003	0.0000	81.7451
Unmitigated	0.0213	0.1440	0.2312	8.9000e-004	0.0684	8.4000e-004	0.0692	0.0184	7.9000e-004	0.0192	0.0000	81.6571	81.6571	3.5200e-003	0.0000	81.7451

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	79.08	85.92	72.84	182,842	182,842
Total	79.08	85.92	72.84	182,842	182,842

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.560371	0.039285	0.190378	0.108244	0.016023	0.005202	0.023981	0.045200	0.002184	0.002561	0.005524	0.000326	0.000721

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6.6553	6.6553	6.7000e-004	1.4000e-004	6.7129
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6.6553	6.6553	6.7000e-004	1.4000e-004	6.7129
NaturalGas Mitigated	1.3200e-003	0.0113	4.7900e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0311	13.0311	2.5000e-004	2.4000e-004	13.1086
NaturalGas Unmitigated	1.3200e-003	0.0113	4.7900e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0311	13.0311	2.5000e-004	2.4000e-004	13.1086

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					

Apartments Low Rise	244194	1.3200e-003	0.0113	4.7900e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0311	13.0311	2.5000e-004	2.4000e-004	13.1086
Total		**1.3200e-003**	**0.0113**	**4.7900e-003**	**7.0000e-005**		**9.1000e-004**	**9.1000e-004**		**9.1000e-004**	**9.1000e-004**	**0.0000**	**13.0311**	**13.0311**	**2.5000e-004**	**2.4000e-004**	**13.1086**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	244194	1.3200e-003	0.0113	4.7900e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0311	13.0311	2.5000e-004	2.4000e-004	13.1086
Total		**1.3200e-003**	**0.0113**	**4.7900e-003**	**7.0000e-005**		**9.1000e-004**	**9.1000e-004**		**9.1000e-004**	**9.1000e-004**	**0.0000**	**13.0311**	**13.0311**	**2.5000e-004**	**2.4000e-004**	**13.1086**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	50594.2	6.6553	6.7000e-004	1.4000e-004	6.7129
Total		**6.6553**	**6.7000e-004**	**1.4000e-004**	**6.7129**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	50594.2	6.6553	6.7000e-004	1.4000e-004	6.7129
Total		**6.6553**	**6.7000e-004**	**1.4000e-004**	**6.7129**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Mitigated	0.1527	1.6700e-003	0.1273	8.0000e-005		5.9400e-003	5.9400e-003		5.9400e-003	5.9400e-003	0.5471	0.3703	0.9173	1.0200e-003	4.0000e-005	0.9535
Unmitigated	0.1527	1.6700e-003	0.1273	8.0000e-005		5.9400e-003	5.9400e-003		5.9400e-003	5.9400e-003	0.5471	0.3703	0.9173	1.0200e-003	4.0000e-005	0.9535

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0187					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1037					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0277	6.4000e-004	0.0381	8.0000e-005		5.4500e-003	5.4500e-003		5.4500e-003	5.4500e-003	0.5471	0.2247	0.7718	8.8000e-004	4.0000e-005	0.8045
Landscaping	2.6900e-003	1.0300e-003	0.0892	0.0000		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	0.1456	0.1456	1.4000e-004	0.0000	0.1491
Total	**0.1527**	**1.6700e-003**	**0.1273**	**8.0000e-005**		**5.9400e-003**	**5.9400e-003**		**5.9400e-003**	**5.9400e-003**	**0.5471**	**0.3703**	**0.9173**	**1.0200e-003**	**4.0000e-005**	**0.9535**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0187					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1037					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0277	6.4000e-004	0.0381	8.0000e-005		5.4500e-003	5.4500e-003		5.4500e-003	5.4500e-003	0.5471	0.2247	0.7718	8.8000e-004	4.0000e-005	0.8045
Landscaping	2.6900e-003	1.0300e-003	0.0892	0.0000		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	0.1456	0.1456	1.4000e-004	0.0000	0.1491
Total	**0.1527**	**1.6700e-003**	**0.1273**	**8.0000e-005**		**5.9400e-003**	**5.9400e-003**		**5.9400e-003**	**5.9400e-003**	**0.5471**	**0.3703**	**0.9173**	**1.0200e-003**	**4.0000e-005**	**0.9535**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.0315	0.0256	6.2000e-004	1.8544
Unmitigated	1.0315	0.0256	6.2000e-004	1.8544

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.781848 / 0.492904	1.0315	0.0256	6.2000e-004	1.8544
Total		**1.0315**	**0.0256**	**6.2000e-004**	**1.8544**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.781848 / 0.492904	1.0315	0.0256	6.2000e-004	1.8544
Total		**1.0315**	**0.0256**	**6.2000e-004**	**1.8544**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.1205	0.0662	0.0000	2.7760
Unmitigated	1.1205	0.0662	0.0000	2.7760

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5.52	1.1205	0.0662	0.0000	2.7760
Total		**1.1205**	**0.0662**	**0.0000**	**2.7760**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5.52	1.1205	0.0662	0.0000	2.7760
Total		**1.1205**	**0.0662**	**0.0000**	**2.7760**

Appendix D

Watson Heritage Consulting, *Historic Resource Evaluation of 2420 Chestnut Street*

October 2020

Historic Resource Evaluation
2420 Chestnut Street
Oakland, CA

Prepared for:
Lamphier-Gregory
1944 Embarcadero
Oakland, CA 94606

Prepared by:
Watson Heritage Consulting
Mill Valley, CA
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October 5, 2020 (draft)
October 27, 2020 (final)

Table of Contents

Executive Summary

This Historic Resource Evaluation (HRE) was prepared by Shayne Watson of Watson Heritage Consulting, at the request of Lamphier-Gregory, Oakland, CA. The HRE presents an overview history of 2420 Chestnut Street (subject property) and an evaluation of the property's potential historic significance, as defined in the California Environmental Quality Act (CEQA) Statutes and Guidelines.

Methodology

Because of restrictions associated with Covid-19, Watson Heritage Consulting conducted a virtual site visit to the subject property using Google Earth Pro and Google Maps. Also because of Covid-19 shutdowns, research on the building was limited to the following online archives and data repositories: Oakland and San Francisco Public Libraries (maps and city directories); Ancestry.com; Newspapers.com, Newspaper Archive, and San Francisco Chronicle Archive (via SFPL). City of Oakland Historic Preservation Planner Betty Marvin provided some background information on the property, including construction date and some of the property owners.

Findings

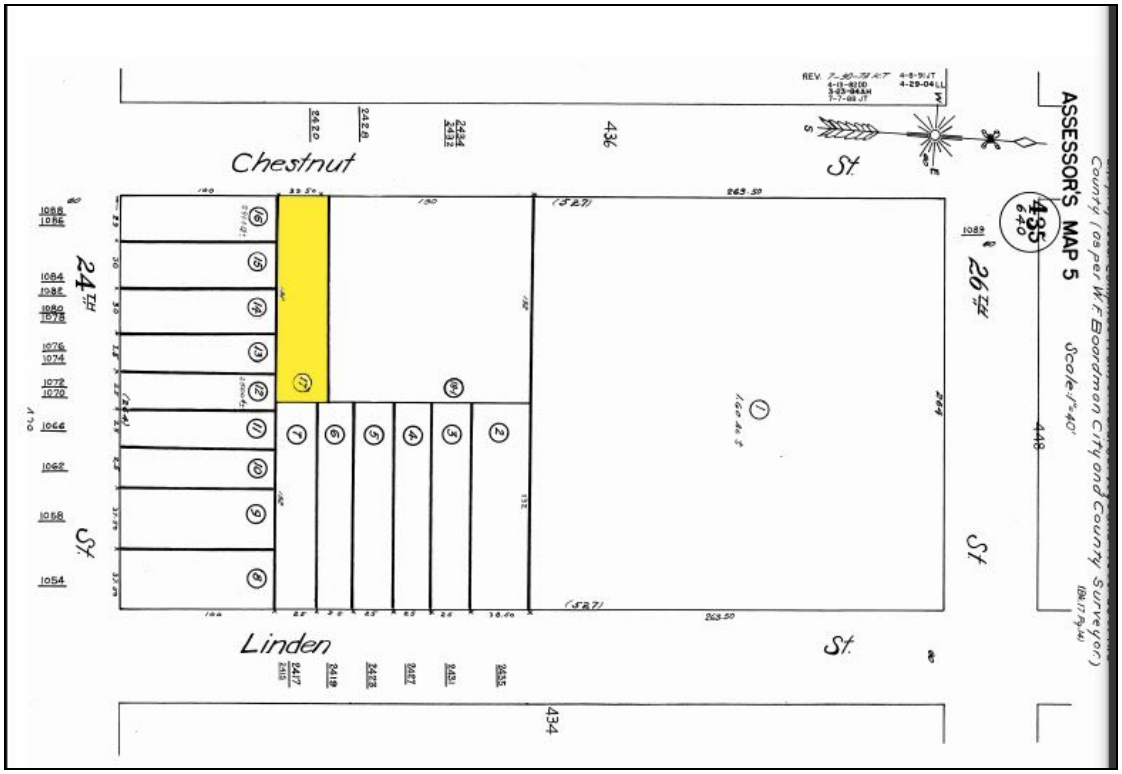
The property at 2420 Chestnut Street does not appear to be individually eligible for the CRHR under any of the four significance criteria. The property is rated by the City of Oakland as Dc3: Minor Importance-Representative example / not in a historic district. The Dc3 rating puts the property into the category of Potential Designated Historic Properties (PDHPs). Properties with contingency ratings (the "c" in Dc3) are classified as PDHPs to highlight their value as restoration opportunities.

Introduction

Property Overview

The subject property is composed of a two-unit residential building located at 2420 Chestnut Street in West Oakland. The Assessor's Parcel Number (APN) is 5-435-17. The building was constructed c. 1887-1888.

The subject property is a one-story-over-basement residence with a roughly rectangular footprint. The walls are wood clapboard siding attached horizontally. The roof is hipped with a small, front-facing gable over the front porch. The roof is covered with composition shingles. A porch spans the width of the symmetrical facade. The main entrance door is flanked by pairs of wood-framed, one-over-one, double-hung windows. Windows on secondary facades visible from the public right-of-way appear to be wood-framed, one-over-one, double-hung windows. Ornamentation includes scroll-sawn brackets at the corners of porch columns and decorative molding at the cornice line.



Parcel Map. The highlighted parcel marks the location of 2420 Chestnut Street. Source: Alameda County Assessor's Office, edited by author, 2020.

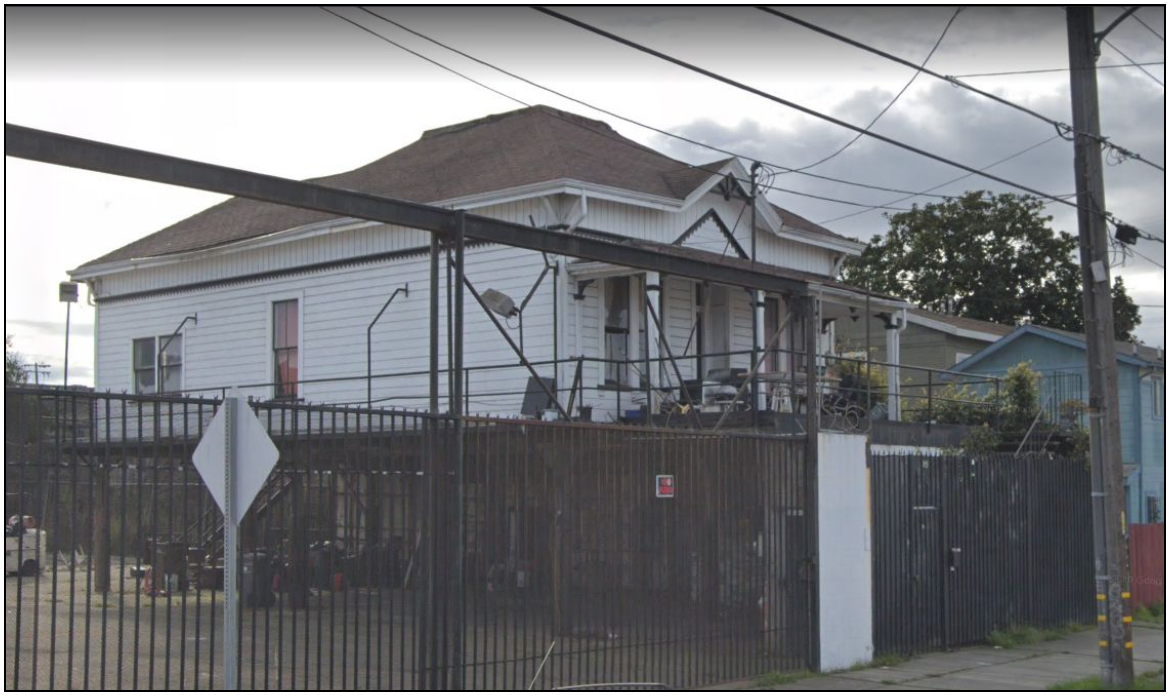
Current Historic Status

The City of Oakland has rated the house at 2420 Chestnut Street Dc3: Minor Importance-Representative example / not in a historic district. The Dc3 rating puts the property into the category of Potential Designated Historic Properties (PDHPs). Properties with contingency ratings (the “c” in Dc3) are classified as PDHPs to highlight their value as restoration opportunities.

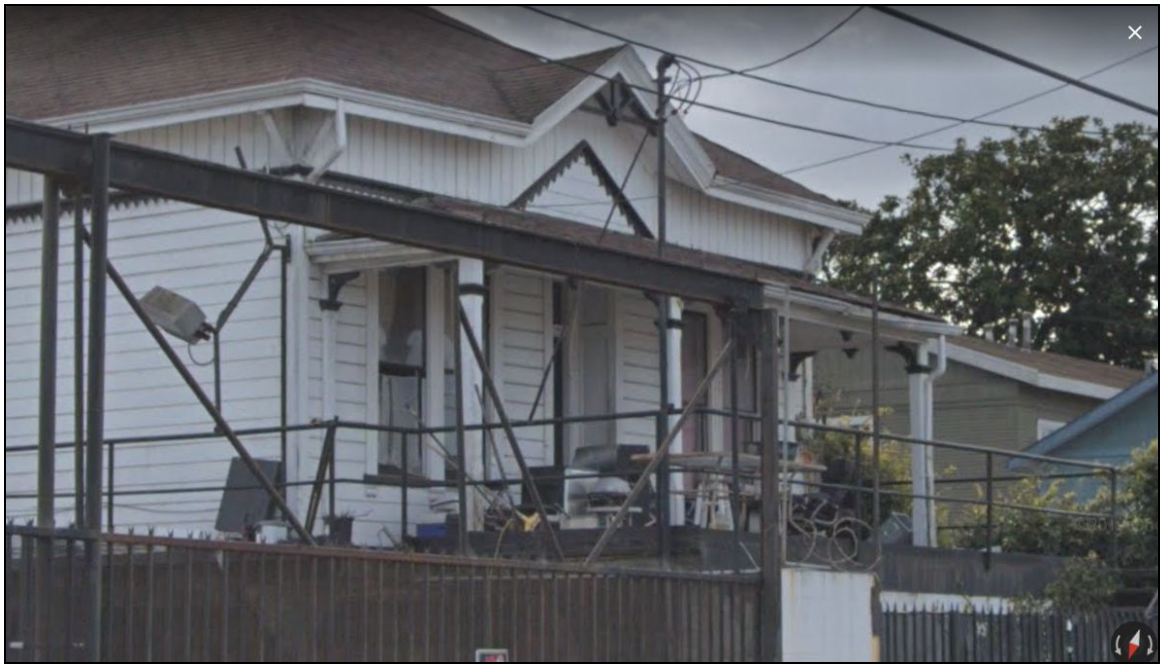
Site Photographs

2420 Chestnut Street (middle right) as viewed from 24th Street. Source: Google, February 2019.

2420 Chestnut Street (middle left) looking south from Chestnut Street. Source: Google, February 2019.



North facade, 2420 Chestnut Street. Source: Google, February 2019.



West facade, 2420 Chestnut Street. Source: Google, February 2019.

West facade, 2420 Chestnut Street. Source: Google, February 2019.

South facade, 2420 Chestnut Street. Source: Google, February 2019.

Site/Building History

The house at 2420 Chestnut Street was constructed c. 1887-1888, according to City of Oakland planner Betty Marvin.[1] The subject building first appears on Sanborn Fire Insurance Company maps in 1902 and again in 1912, c. 1945, and 1952. Comparing the historic Sanborn maps to a current aerial photograph shows that the building's footprint has remained largely unchanged since at least 1902.

Building permits for the subject property were not available due to Covid-19 closures. Alterations visible at the exterior include:

- Building appears to be raised on piers with addition of access stairs;
- Addition at southwest corner (compare Sanborn maps to 2020 Google aerial in following section);
- Addition of tall, metal fence around property perimeter.

Relevant Historic Context

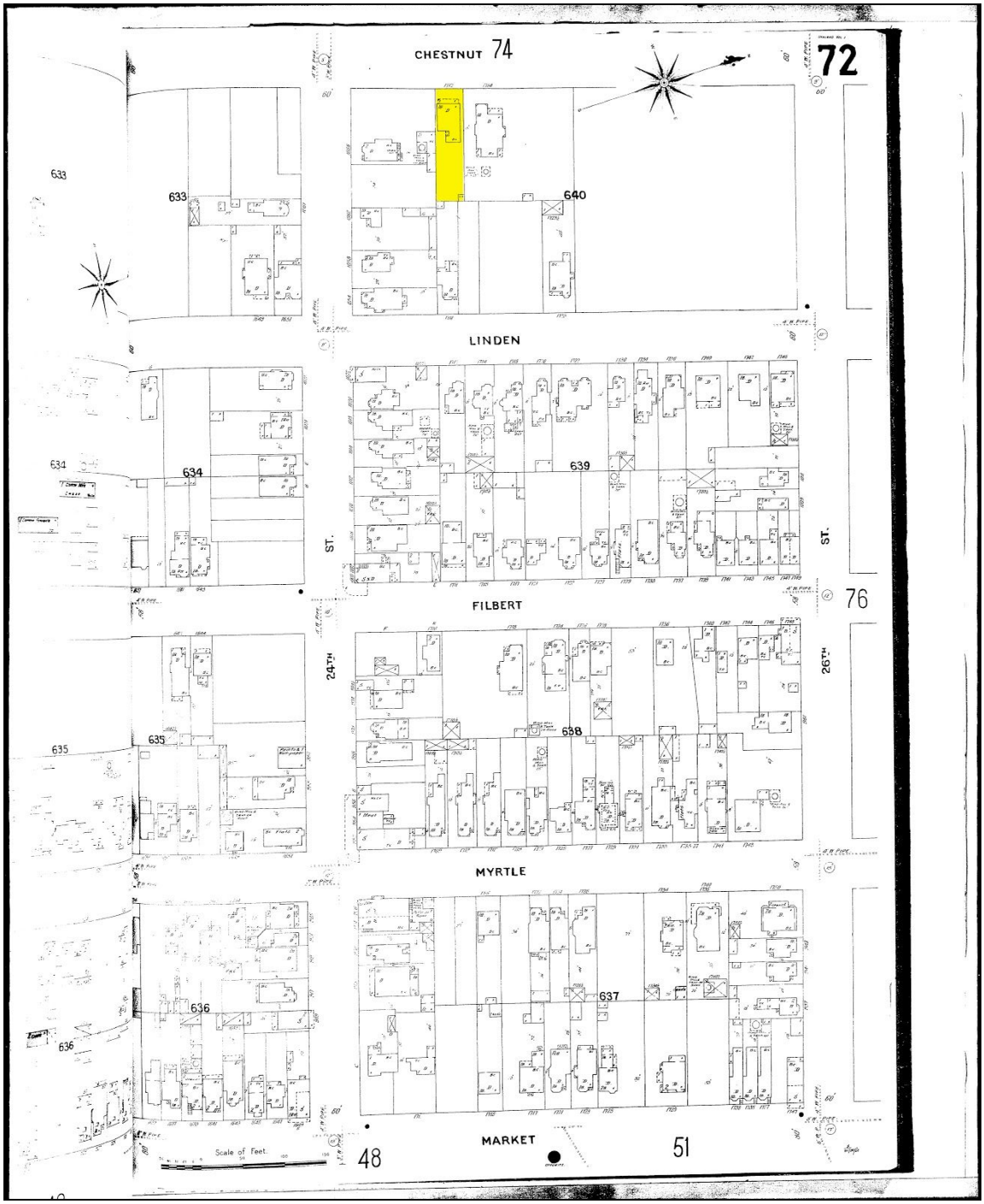
Victorian-Era Single-Family Residences (1880 - 1910)[2]

Victorian-era, wood-frame, single-family residences are predominantly one and two stories and display irregular massing with a vertical emphasis. Many have complex roof forms composed of hipped, gable and cross-gable sections, while others have the false fronts typical of Italianate row houses. Their front facades are usually asymmetrical and feature elements such dominant front-facing gables, bay windows, and prominent partial- or full-width one-story porches.

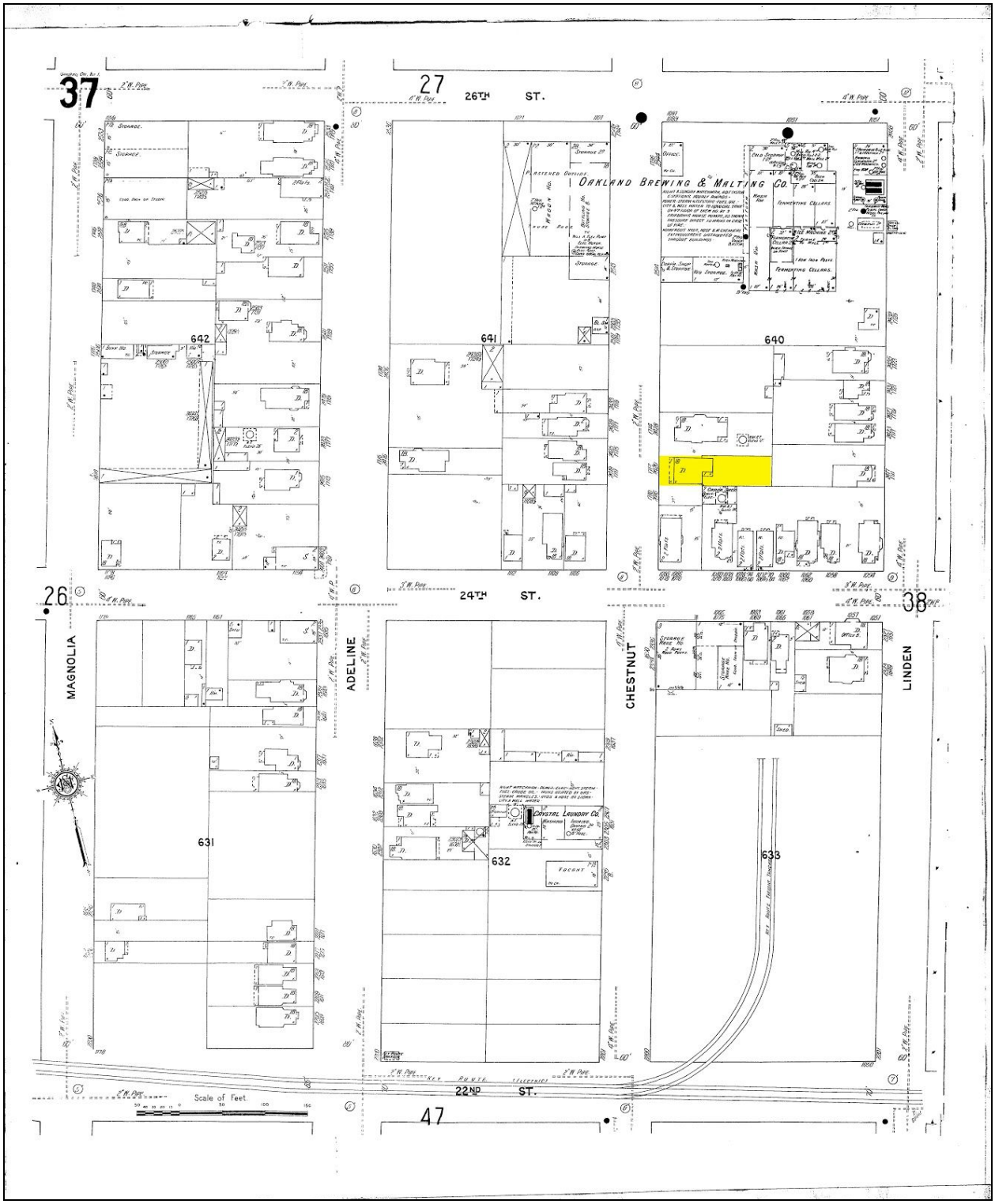
Most are wood-framed structures clad in horizontal wood siding, with texture added through decorative patterned shingles. Common architectural ornament includes scroll-sawn brackets in singles or pairs, turned wood elements, cornice returns, paneled fascia boards, and Classical molding at eaves and window trim. The windows are typically wood-frame with double-hung sash. Windows with two-over-two divided lights and semicircular or segmentally arched tops are also present. Stylistically, the residences are examples of the Italianate, Stick, Vernacular Victorian, and Queen Anne styles.

[1] Email from Betty Marvin, City of Oakland to Shayne Watson, July 24, 2020.
[2] This context is excerpted from Architecture+History, LLC and Watson Heritage Consulting, "Draft Downtown Oakland Specific Plan Historic Building Typology Study," prepared for the City of Oakland, August 2019, 5-7.

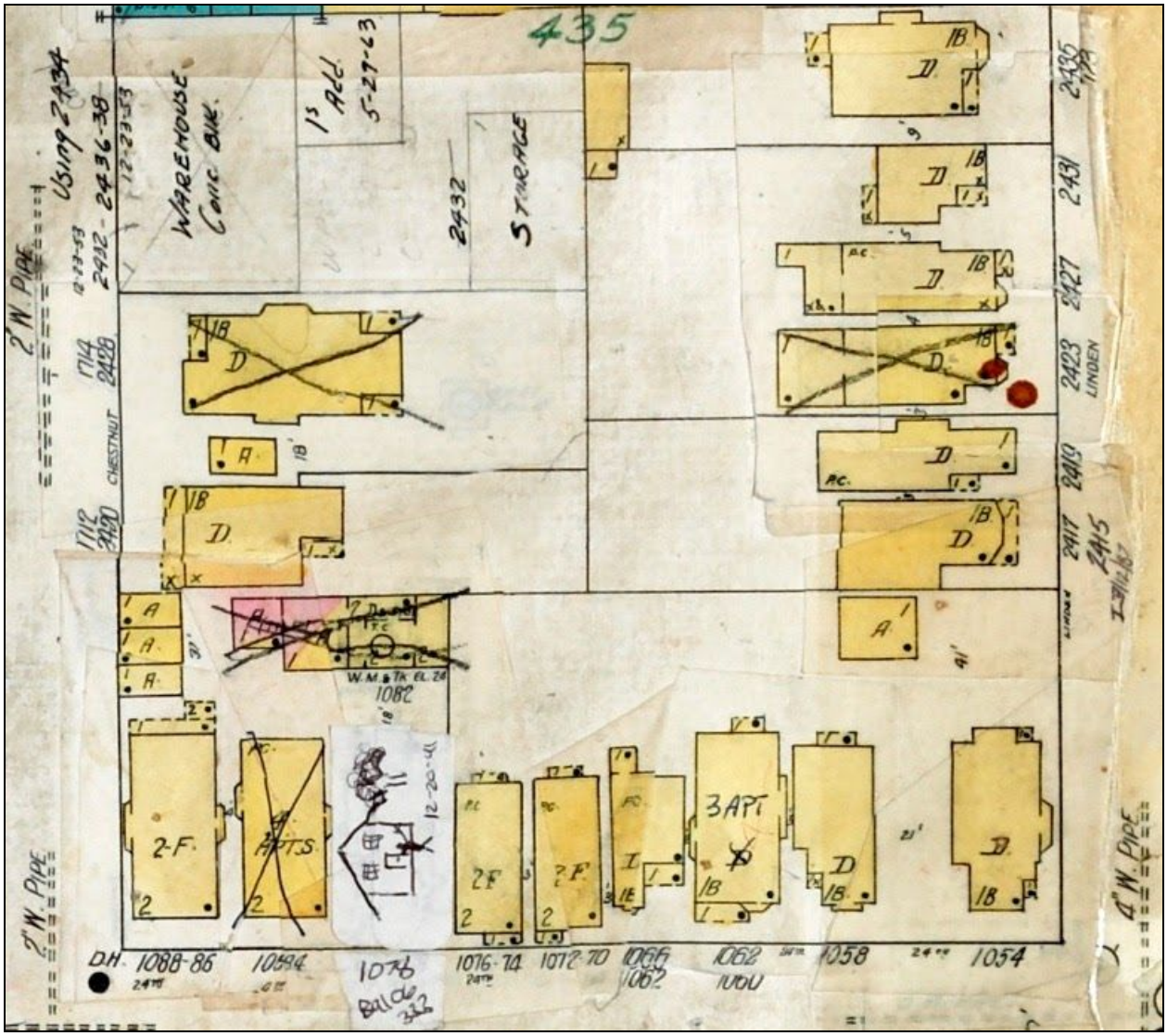
Historic Maps and Photographs



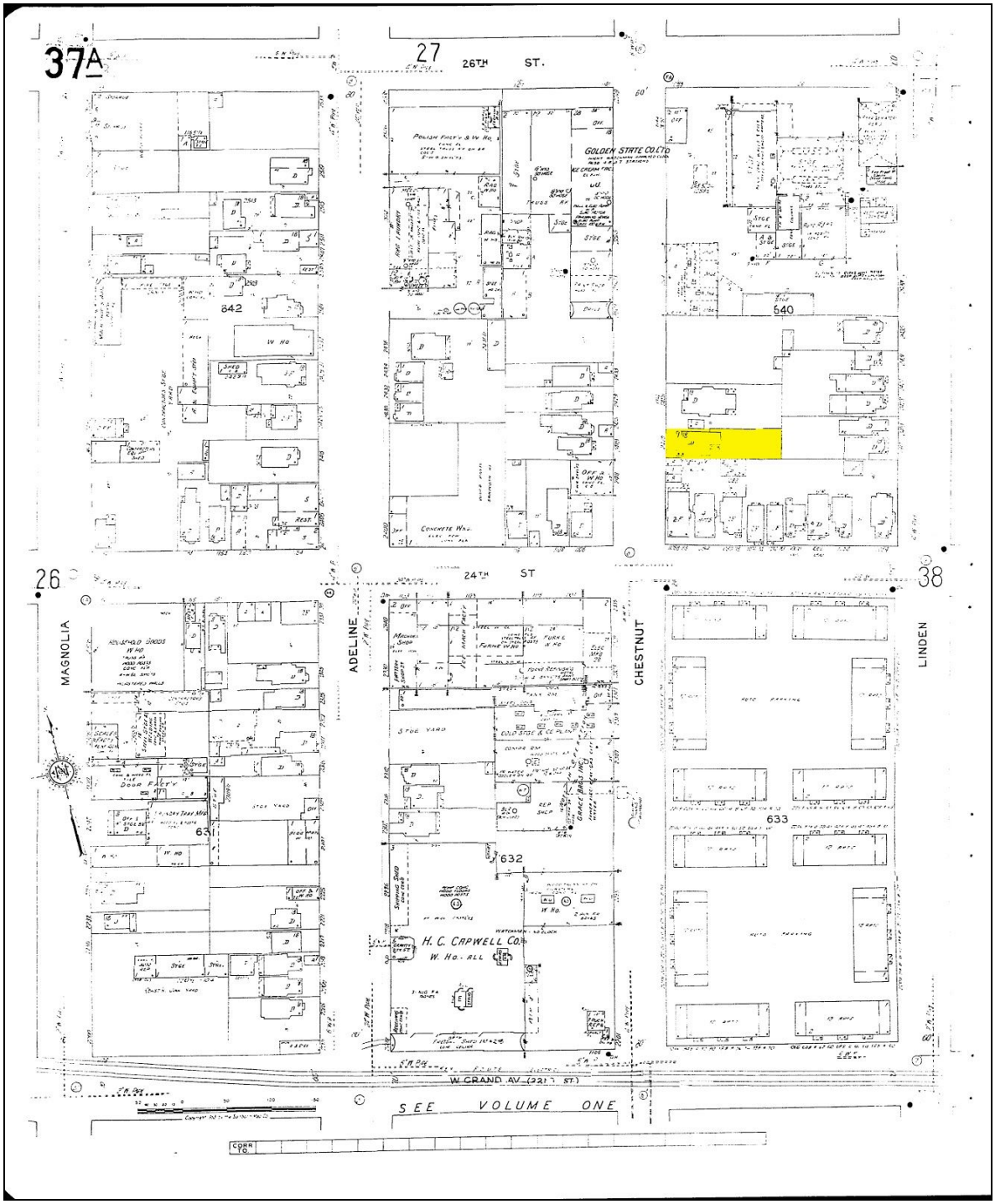
1902 Sanborn Fire Insurance Company map. Yellow highlighting marks location of 2420 Chestnut Street. Source: San Francisco Public Library, edited by author, 2020.



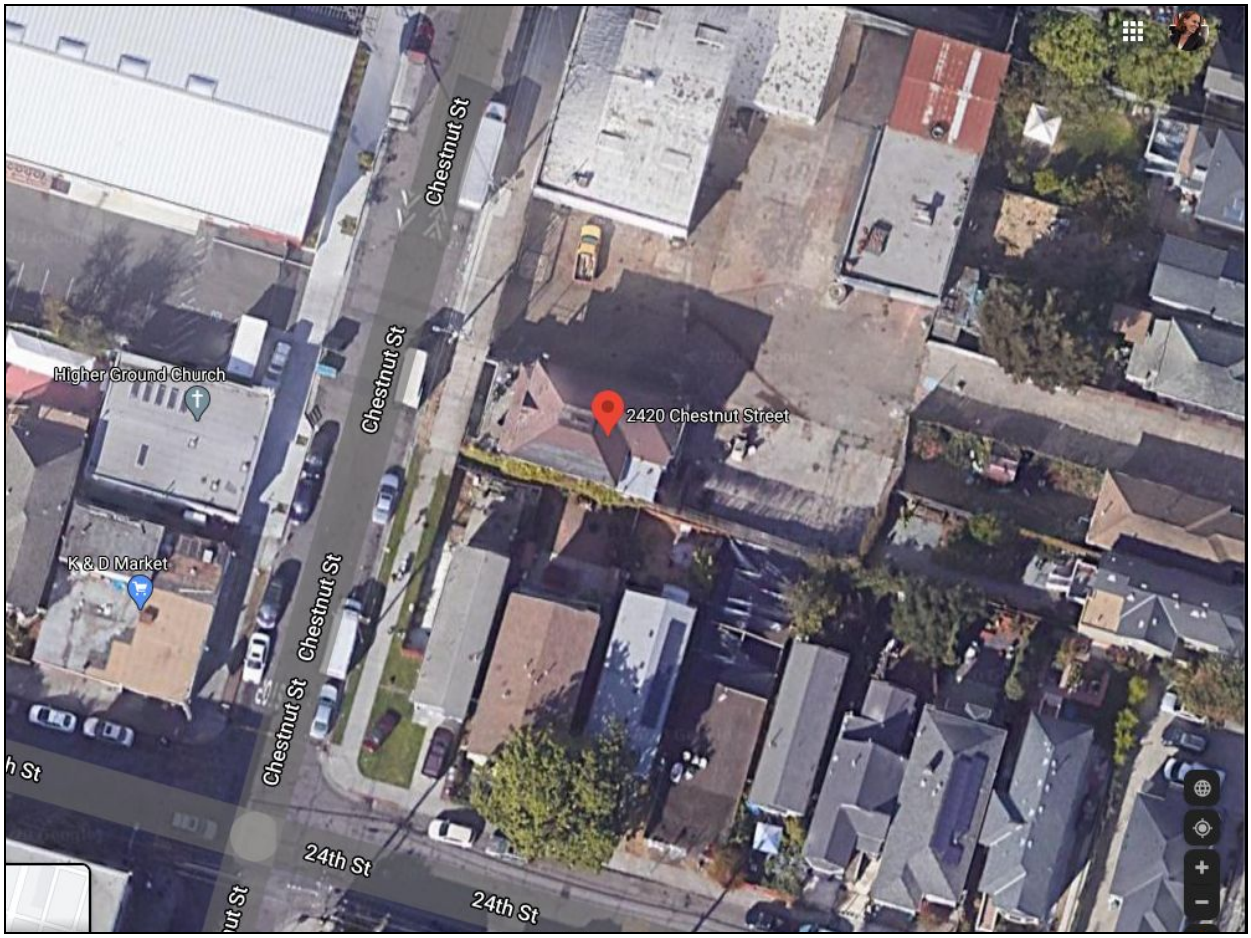
1912 Sanborn Fire Insurance Company map. Yellow highlighting marks location of 2420 Chestnut Street. Source: San Francisco Public Library, edited by author, 2020.



Circa 1945 Sanborn Fire Insurance Company map. 2420 Chestnut Street is at middle left. Source: City of Oakland.



1952 Sanborn Fire Insurance Company map. Yellow highlighting marks location of 2420 Chestnut Street. Source: San Francisco Public Library, edited by author, 2020.



2020 aerial photograph of 2420 Chestnut Street. Source: Google, 2020.

Owner/Occupant History

The house's original owners likely were James and Mary White. The 1880 census shows James and Mary White and their children living at 1711 Chestnut Street.[3] (The house's address was 1712 Chestnut before being changed to 2420 Chestnut c. 1912. It's not known if 1711 Chestnut was an earlier address for the subject property or a totally different house.) Both James and Mary were born in Ireland c. 1819. They married in 1853. James became a U.S. citizen in Massachusetts in 1854. In 1880, James was a laborer. His son, James Joseph (J.J.), 15 at the time, was also a laborer. James White Sr. died in August 1890 at the age of 71.

After James Sr.'s death, his son, J.J. White, took ownership of the house. The 1900 census shows J.J. White and his family owning and living in the subject property. Born in Massachusetts in 1865, J.J. was married to Mary Agnes White, born in Maine in 1865. J.J. was a bricklayer. Living nextdoor to the Whites at 1714 Chestnut was Michael E. White, presumably J.J.'s brother, born in Massachusetts in 1858 and also a bricklayer. J.J's widowed mother lived with Michael White's family. In 1903, James was a bricklayer. He died in 1906 at the age of 41.[4]

After the death of J.J. White, his son, James Russell White, took over the property. James, an electrician, and his family lived at 2420 Chestnut through at least 1918.[5]

Beginning around 1922, Patrick Henry and Maud "Marie" Oakes purchased the house at 2420 Chestnut Street. Patrick, a machinist for a steel company in 1920, was born in California c. 1882. Marie was born in California c. 1893.[6] The Oakes family made the news in 1938 when their son, Joseph H. Oakes (18), ran away with his girlfriend and neighbor, Natsue Kinera (13), to get married; the *San Francisco Chronicle* headline reads "'East-West' Romance Fizzles."[7] The Oakes lived at 2420 Chestnut Street through c. 1944, according to census data, city directories, and a historic newspaper article announcing "owner moving at once."[8]

Owners after 1944 are not known due to limited availability of resources at the Oakland Public Library and City of Oakland, both currently closed due to Covid-19. The few owners/occupants

[3] Ancestry.com. *1880 United States Federal Census* [database on-line]. Lehi, UT, USA: Ancestry.com Operations Inc, 2010.
[4] Ancestry.com. *California, Death Index, 1905-1939* [database on-line]. Provo, UT, USA: Ancestry.com Operations, Inc., 2013.
[5] Ancestry.com. *U.S., World War I Draft Registration Cards, 1917-1918* [database on-line]. Provo, UT, USA: Ancestry.com Operations Inc, 2005.
[6] Ancestry.com. *1910 United States Federal Census* [database on-line]. Lehi, UT, USA: Ancestry.com Operations Inc, 2006.
[7] "'East-West Romance Fizzles," *San Francisco Chronicle*, July 2, 1938, 2.
[8] "Miscellaneous For Sale," *Oakland Tribune*, September 18, 1944, 16.

who appeared in online public records searches were short-term tenants and not recognizable as significant individuals.

California Register of Historical Resources Significance Evaluation

The California Register of Historical Resources (CRHR) is an inventory of significant architectural, archaeological, and historical resources in the State of California. Resources can be listed in the CRHR through a number of methods. State Historical Landmarks and National Register-listed properties are automatically listed in the CRHR. Properties can also be nominated to the CRHR by local governments, private organizations, or citizens. The evaluative criteria used by the CRHR for determining eligibility are closely based on those developed by the National Park Service for the National Register of Historic Places (NRHP).

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.

In addition to meeting the applicable eligibility criteria, a property must retain historic integrity, which is defined in National Register Bulletin 15 as the "ability of a property to convey its significance" (National Park Service 1990). In order to assess integrity, the National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess certain aspects of integrity, which are defined in the following manner in *National Register Bulletin 15*:

1. Location – the place where the historic property was constructed or the place where the historic event occurred;

2. Design – the combination of elements that create the form, plan, space, structure, and style of a property;

3. Setting – the physical environment of a historic property;

4. Materials – the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property;

5. Workmanship – the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;

6. Feeling – a property's expression of the aesthetic or historic sense of a particular period of time;

7. Association – the direct link between an important historic event or person and a historic property.

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 does not meet NRHP criteria may still be eligible for listing in the CRHR.

California Register Individual Eligibility Evaluation

CRHR Criterion 1

The residence at 2420 Chestnut Street does not appear to be associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage. The subject property is not individually eligible for the CRHR under Criterion 1.

CRHR Criterion 2

As presented in Owner/Occupant History, the residence at 2420 Chestnut Street does not appear to be associated with the lives of persons important in our past. The subject property is not individually eligible for the CRHR under Criterion 2.

CRHR Criterion 3

As noted in Site/Building History, the original building permit for this property was not available, and historical background research for this report did not reveal the building's architect or builder. Based on available data and a virtual property survey, this building is a highly intact example of a Victorian-era residence in West Oakland, but the property does not rise to the level of significance required for individual eligibility under CRHR Criterion 3.

CRHR Criterion 4

Eligibility evaluation under CRHR Criterion 4 is beyond the scope of this report.

Historic District Evaluation

A historic district evaluation is beyond the scope of this report.

Integrity Evaluation

Integrity evaluations are not required for properties determined to be ineligible for the CRHR.

Conclusion

The property at 2420 Chestnut Street does not appear to be individually eligible for the CRHR under any criteria. The property is rated by the City of Oakland as Dc3: Minor Importance-Representative example / not in a historic district. The Dc3 rating puts the property into the category of Potential Designated Historic Properties (PDHPs). Properties with contingency ratings (the “c” in Dc3) are classified as PDHPs to highlight their value as restoration opportunities.

Bibliography

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Ancestry.com
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- Census data
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City of Oakland
- Construction data
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Appendix E

Rockridge Geotechnical, *Preliminary Geotechnical Study*

March 2019

ROCKRIDGE GEOTECHNICAL

March 22, 2019
Project No. 19-1656

Mr. Casey Husband
Riaz Capital
2744 East 11th Street
Oakland, California 94601

Subject: Preliminary Geotechnical Study
Proposed Townhouse Buildings
2432 Chestnut Street
Oakland, California

Dear Mr. Husband:

This letter presents the results of the preliminary geotechnical study performed by Rockridge Geotechnical, Inc. in support of the due diligence evaluation of the property at 2432 Chestnut Street in Oakland, California. The subject property is located on the eastern side of Chestnut Street, between 26th Street to the north and 24th Street to the south, as shown on the attached Site Location Map, Figure 1.

The site is T-shaped and comprised of three adjoining parcels with maximum dimensions of 163.5 by 264 feet. The site is currently occupied by a commercial building and parking lot. We understand plans are to demolish the existing improvements and construct new three-story townhouse buildings across the site.

SCOPE OF SERVICES

Our preliminary geotechnical study was performed in accordance with our proposal dated March 4, 2019. The objectives of our study were to evaluate subsurface conditions at the site and develop preliminary conclusions and recommendations regarding the geotechnical aspects of the proposed project. A subsurface investigation was not performed for this study. For our study, we reviewed available geotechnical data of the surrounding area in our files to develop preliminary conclusions and recommendations for the following:

- soil and groundwater conditions at the site
- regional seismicity and seismic hazards
- appropriate foundation type for the proposed buildings
- foundation design parameters

- floor slabs
- 2016 California Building Code (CBC) seismic design recommendations.

DATA REVIEW

For our preliminary geotechnical study, we reviewed available subsurface information in our files of the site vicinity. Specifically, we reviewed the following geotechnical reports:

- *Report, Geotechnical Consultation, Vincent Academy Charter School, 2501 Chestnut Street, Oakland, California,* prepared by Rockridge Geotechnical, Inc. and dated March 11, 2014.
- *Report, Preliminary Geotechnical Investigation, Proposed Affordable Housing Development, 26th and Chestnut Streets, Oakland, California,* prepared by Treadwell & Rollo, Inc. and dated November 27, 2000 (T&R 2000).
- *Report, Geotechnical Investigation, Chestnut Court Hope VI Development, Oakland, California,* prepared by Treadwell & Rollo, Inc. and dated January 15, 2001 (T&R 2001).

The approximate locations of these project sites are shown on Figure 1.

ANTICIPATED SUBSURFACE CONDITIONS

The site is underlain by Holocene-age alluvial fan and fluvial deposits (Qhaf), as shown on the Regional Geologic Map, Figure 2. We anticipate the native alluvial fan and fluvial deposits may be overlain by several feet (i.e. 2 to 4 feet) of fill at localized locations or across the entire site. We anticipate the fill to be undocumented, heterogenous, and varies from poorly to well-compacted.

Based on the results of borings and cone penetration tests (CPTs) performed at nearby sites, we anticipate the native soil underlying the fill, where present, likely consists of medium stiff to hard clay with variable sand content; the clay is likely interbedded with occasional layers of medium dense clayey sand. The near-surface clay is likely moderately to highly expansive[1].

Groundwater was measured at depths of approximately 10 to 15 feet below the ground surface (bgs) in borings and CPTs advanced in the site vicinity. We reviewed the report Seismic Hazard Zone Report (2003) prepared by the California Geological Survey (CGS) for the Oakland West 7.5-Minute Quadrangle. The report indicates an historic high groundwater level at the site vicinity of about 7 feet bgs. The depth to groundwater is expected to vary several feet seasonally, depending on rainfall amounts.

---

[1] Expansive soil undergoes large volume changes with changes in moisture content (i.e. it shrinks when dried and swells when wetted).

REGIONAL SEISMICITY

The major active faults in the area are the Hayward, San Andreas, San Gregorio, and Calaveras, faults. These and other faults in the region are shown on Figure 3. For these and other active faults within a 50-kilometer radius of the site, the distance from the site and estimated mean characteristic Moment magnitude[2] [Working Group on California Earthquake Probabilities (WGCEP, 2008) and Cao et al. (2003)] are summarized in Table 1.

TABLE 1
Regional Faults and Seismicity

Fault Segment	Approximate Distance from Site (km)	Direction from Site	Mean Characteristic Moment Magnitude
Total Hayward	5.7	East	7.00
Total Hayward-Rodgers Creek	5.7	East	7.33
Mount Diablo Thrust	22	East	6.7
N. San Andreas - Peninsula	23	West	7.23
N. San Andreas (1906 event)	23	West	8.1
Total Calaveras	24	East	7.03
N. San Andreas - North Coast	26	West	7.51
Green Valley Connected	27	East	6.80
San Gregorio Connected	30	West	7.50
Rodgers Creek	33	Northwest	7.07
West Napa	39	North	6.70
Greenville Connected	40	East	7.00
Monte Vista-Shannon	42	South	6.50
Great Valley 5, Pittsburg Kirby Hills	44	East	6.70

[2] Moment magnitude is an energy-based scale and provides a physically meaningful measure of the size of a faulting event. Moment magnitude is directly related to average slip and fault rupture area.

Since 1800, four major earthquakes have been recorded on the San Andreas Fault. In 1836, an earthquake with an estimated maximum intensity of VII on the Modified Mercalli (MM) scale occurred east of Monterey Bay on the San Andreas Fault (Toppozada and Borchardt 1998). The estimated Moment magnitude, Mw, for this earthquake is about 6.25. In 1838, an earthquake occurred with an estimated intensity of about VIII-IX (MM), corresponding to an Mw of about 7.5. The San Francisco Earthquake of 1906 caused the most significant damage in the history of the Bay Area in terms of loss of lives and property damage. This earthquake created a surface rupture along the San Andreas Fault from Shelter Cove to San Juan Bautista approximately 470 kilometers in length. It had a maximum intensity of XI (MM), an Mw of about 7.9, and was felt 560 kilometers away in Oregon, Nevada, and Los Angeles. The most recent earthquake to affect the Bay Area was the Loma Prieta Earthquake of 17 October 1989 with an Mw of 6.9. This earthquake occurred in the Santa Cruz Mountains about 94 kilometers southwest of the site.

In 1868, an earthquake with an estimated maximum intensity of X on the MM scale occurred on the southern segment (between San Leandro and Fremont) of the Hayward Fault. The estimated Mw for the earthquake is 7.0. In 1861, an earthquake of unknown magnitude (probably an Mw of about 6.5) was reported on the Calaveras Fault. The most recent significant earthquake on this fault was the 1984 Morgan Hill earthquake (Mw = 6.2).

The U.S. Geological Survey's 2014 Working Group on California Earthquake Probabilities has compiled the earthquake fault research for the San Francisco Bay area in order to estimate the probability of fault segment rupture. They have determined that the overall probability of moment magnitude 6.7 or greater earthquake occurring in the San Francisco Region during the next 30 years (starting from 2014) is 72 percent. The highest probabilities are assigned to the Hayward Fault, Calaveras Fault, and the northern segment of the San Andreas Fault. These probabilities are 14.3, 7.4, and 6.4 percent, respectively.

SEISMIC HAZARDS

Because the project site is in a seismically active region, we evaluated the potential for earthquake-induced geologic hazards including ground shaking, ground surface rupture, liquefaction,[3] lateral spreading,[4] and cyclic densification[5]. The discussion in the following

---

[3] Liquefaction is a phenomenon where loose, saturated, cohesionless soil experiences temporary reduction in strength during cyclic loading such as that produced by earthquakes.

[4] Lateral spreading is a phenomenon in which surficial soil displaces along a shear zone that has formed within an underlying liquefied layer. Upon reaching mobilization, the surficial blocks are transported downslope or in the direction of a free face by earthquake and gravitational forces.

[5] Cyclic densification is a phenomenon in which non-saturated, cohesionless soil is compacted by earthquake vibrations, causing ground-surface settlement.

paragraphs is preliminary and seismic hazards should be re-evaluated based on a site-specific geotechnical investigation.

Ground Shaking

The seismicity of the site is governed by the activity of the Hayward Fault, although ground shaking from future earthquakes on other faults, including the San Andreas, San Gregorio, and Calaveras faults, will also be felt at the site. The intensity of earthquake ground motion at the site will depend upon the characteristics of the generating fault, distance to the earthquake epicenter, and magnitude and duration of the earthquake. We judge that strong to very strong ground shaking could occur at the site during a large earthquake on one of the nearby faults.

Ground Surface Rupture

Historically, ground surface displacements closely follow the trace of geologically young faults. The site is not within an Earthquake Fault Zone, as defined by the Alquist-Priolo Earthquake Fault Zoning Act, and no known active or potentially active faults exist on the site. We therefore conclude the risk of fault offset at the site from a known active fault is very low. In a seismically active area, the remote possibility exists for future faulting in areas where no faults previously existed; however, we conclude the risk of surface faulting and consequent secondary ground failure from previously unknown faults is also very low.

Cyclic Densification

Seismically induced compaction or cyclic densification of non-saturated sand (sand above the groundwater table) caused by earthquake vibrations may result in differential settlement. We anticipate the soil above the groundwater at the site to be predominantly clay which is not susceptible to cyclic densification due to its cohesion. In addition, where loose fill is present at the site, we anticipate the loose fill will be reworked/recompacted during construction of the proposed improvements. Therefore, we preliminarily conclude the potential for ground surface settlement resulting from cyclic densification at the site is very low.

Liquefaction and Associated Hazards

Liquefaction is a phenomenon in which saturated soil temporarily loses strength from the build-up of excess pore water pressure, especially during earthquake-induced cyclic loading. Soil susceptible to liquefaction includes loose to medium dense sand and gravel, low-plasticity silt, and some low-plasticity clay deposits. Flow failure, lateral spreading, differential settlement, loss of bearing strength, ground fissures and sand boils are evidence of excess pore pressure generation and liquefaction.

The site is located within a zone of liquefaction potential as shown on the map titled *State of California Seismic Hazard Zones, Oakland West Quadrangle, Official Map*, prepared by the

California Geological Survey (CGS), dated February 14, 2003 (Figure 4). CGS has provided recommendations for procedures and report content for site investigations performed within seismic hazard zones in Special Publication 117 (SP-117), titled *Guidelines for Evaluating and Mitigating Seismic Hazard Zones in California*, dated September 11, 2008. SP-117 recommends subsurface investigations in mapped liquefaction hazard zones be performed using rotary-wash borings and/or cone penetration tests (CPTs).

The nearby borings and CPTs by T&R (2000 and 2001) indicate the soil underlying the site vicinity is predominantly cohesive material which is not susceptible to liquefaction. There are thin lenses of medium dense clayey sand underlying the site that are susceptible to pore pressure build-up during a major earthquake; however, because these lenses appear to be thin and discontinuous, we judge pore pressure build-up will not result in noticeable ground surface settlement at the site (i.e. on the order of 1/4 inch or less), and we judge the overall risk of liquefaction or liquefaction-induced ground failure is low.

PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our study, we preliminarily conclude the primary geotechnical concerns for the proposed buildings are: (1) the potential presence of moderately to highly expansive near-surface soil, and (2) providing adequate foundation support. These and other geotechnical issues as they pertain to the proposed development are discussed in the remainder of this section.

Expansive Soil

Expansive near-surface soil is subject to volume changes during seasonal fluctuations in moisture content. These volume changes can cause movement and cracking of foundations, slabs and pavements. We anticipate the near-surface clay is moderately to highly expansive. If expansive soil will be present at subgrade level beneath improvements, the proposed improvements (i.e. foundations, floor slabs, and pavements) should be designed and constructed to mitigate the effects of the expansive soil. In general, the effects of expansive soil can be mitigated by moisture-conditioning the expansive soil, providing non-expansive fill below interior and exterior slabs, and either supporting foundations below the zone of severe moisture change or by providing a stiff, shallow foundation that can limit deformation of the superstructure as the underlying soil shrinks and swells.

Foundation and Settlement

In developing our preliminary conclusions and recommendations below, we assumed any undocumented fill beneath the proposed buildings will be overexcavated and recompacted during site grading and building pad subgrade preparation.

We anticipate the soil underlying the site has moderate strength and relatively low compressibility. If the proposed buildings will be constructed at-grade, we preliminarily conclude the proposed buildings may be supported on individual spread footings at interior column locations and continuous, deepened perimeter footings. The perimeter footings should be deepened to act as barriers to reduce the potential for moisture change beneath the slab-on-grade floors.

Footings should bottom on firm native soil and/or engineered fill. Continuous footings should be at least 16 inches wide and isolated spread footings should be at least 24 inches wide. Perimeter footings should be bottomed at least 30 inches below the lowest adjacent outside grade. The perimeter footing embedment depth may be decreased by six inches where pavement, concrete flatwork, or an existing building is adjacent to the new building. Interior footings should extend at least 24 inches below the bottom of the capillary moisture break. Spread footings may be preliminarily designed using an allowable bearing pressure of 3,000 pounds per square foot (psf) for dead-plus-live loads; this allowable bearing pressure may be increased by one-third for total design loads, which include wind or seismic forces. The allowable bearing pressures for dead-plus-live and total loads include factors of safety of at least 2.0 and 1.5, respectively.

Lateral loads may be resisted by a combination of passive pressure on the vertical faces of the footings and friction between the bottoms of the footings and the supporting soil. To compute lateral resistance, we recommend using an equivalent fluid weight of 260 pounds per cubic foot (pcf); the upper foot of soil should be ignored unless confined by a slab or pavement. Frictional resistance should be computed using a base friction coefficient of 0.30. The passive pressure and frictional resistance values include a factor of safety of at least 1.5 and may be used in combination without further reduction.

We estimate total settlement of the proposed buildings supported on properly designed and constructed footings will be less than 3/4 inch and differential settlement will be on the order of 1/2 inch across a horizontal distance of 30 feet.

Footing excavations should be free of standing water, debris, and disturbed materials prior to placing concrete. The bottoms and sides of the footing excavations should be moistened following excavation and maintained in a moist condition until concrete is placed. If the foundation soil dries during construction, the footing will eventually heave, which may result in cracking and distress. We recommend rat slabs consisting of at least two inches of controlled low-strength material (CLSM) be placed in the bottoms of the footings to protect them from drying out, softening from ponding water and/or disturbance from foot traffic during construction. We should check footing excavations prior to placement of the rat slabs. The CLSM used to construct the rat slabs should have a 28-day unconfined strength of 100 pounds

per square inch (psi) and should be poured within two days of footing excavation. The rat slab thickness may be counted as part of the minimum footing embedment.

Floor Slabs

The concrete slab-on-grade floors for the proposed buildings may consist of a conventional slabs-on-grade, provided the upper 12 inches of the slab subgrade (measured below the capillary moisture break) consists of non-expansive fill such as Class 2 aggregate base or lime-treated onsite soil.

Where water vapor transmission through the slab is considered detrimental, we recommend installing a capillary moisture break and water vapor retarder beneath the floor slab (above the 12-inch-thick non-expansive fill layer). A capillary moisture break consists of at least four inches of clean, free-draining gravel or crushed rock. The particle size of the capillary break material should meet the gradation requirements presented in Table 2.

TABLE 2
Gradation Requirements for Capillary Moisture Break

Sieve Size	Percentage Passing Sieve
1 inch	90 – 100
3/4 inch	30 – 100
1/2 inch	5 – 25
3/8 inch	0 – 6

The vapor retarder should meet the requirements for Class B vapor retarders stated in ASTM E1745. The vapor retarder should be placed in accordance with the requirements of ASTM E1643. These requirements include overlapping seams by six inches, taping seams, and sealing penetrations in the vapor retarder.

Concrete mixes with high water/cement (w/c) ratios result in excess water in the concrete, which increases the cure time and can result in excessive vapor transmission through the slab. Where the concrete is poured directly over the vapor retarder, we recommend the w/c ratio of the concrete not exceed 0.45. Water should not be added to the concrete mix in the field. If necessary, workability should be increased by adding plasticizers. In addition, the slab should be properly cured. Before floor coverings are placed, the contractor should check that the concrete surface and the moisture emission levels (if emission testing is required) meet the manufacturer's requirements.

Seismic Design

For design in accordance with the 2016 CBC, we recommend Site Class D be used. The latitude and longitude of the site are 37.8174° and -122.2818°, respectively. Hence, in accordance with the 2016 CBC, we preliminarily recommend the following:

- S_S = 1.701g, S_1 = 0.672g
- S_{MS} = 1.701g, S_{M1} = 1.009g
- S_{DS} = 1.134, S_{D1} = 0.672g
- Seismic Design Category D for Risk Categories I, II, and III.

FINAL GEOTECHNICAL INVESTIGATION

A site-specific geotechnical investigation should be performed to further evaluate subsurface conditions and provide final conclusions and recommendations regarding the geotechnical aspects of the project.

We trust this letter provides the information you need. If you have any questions, please call.

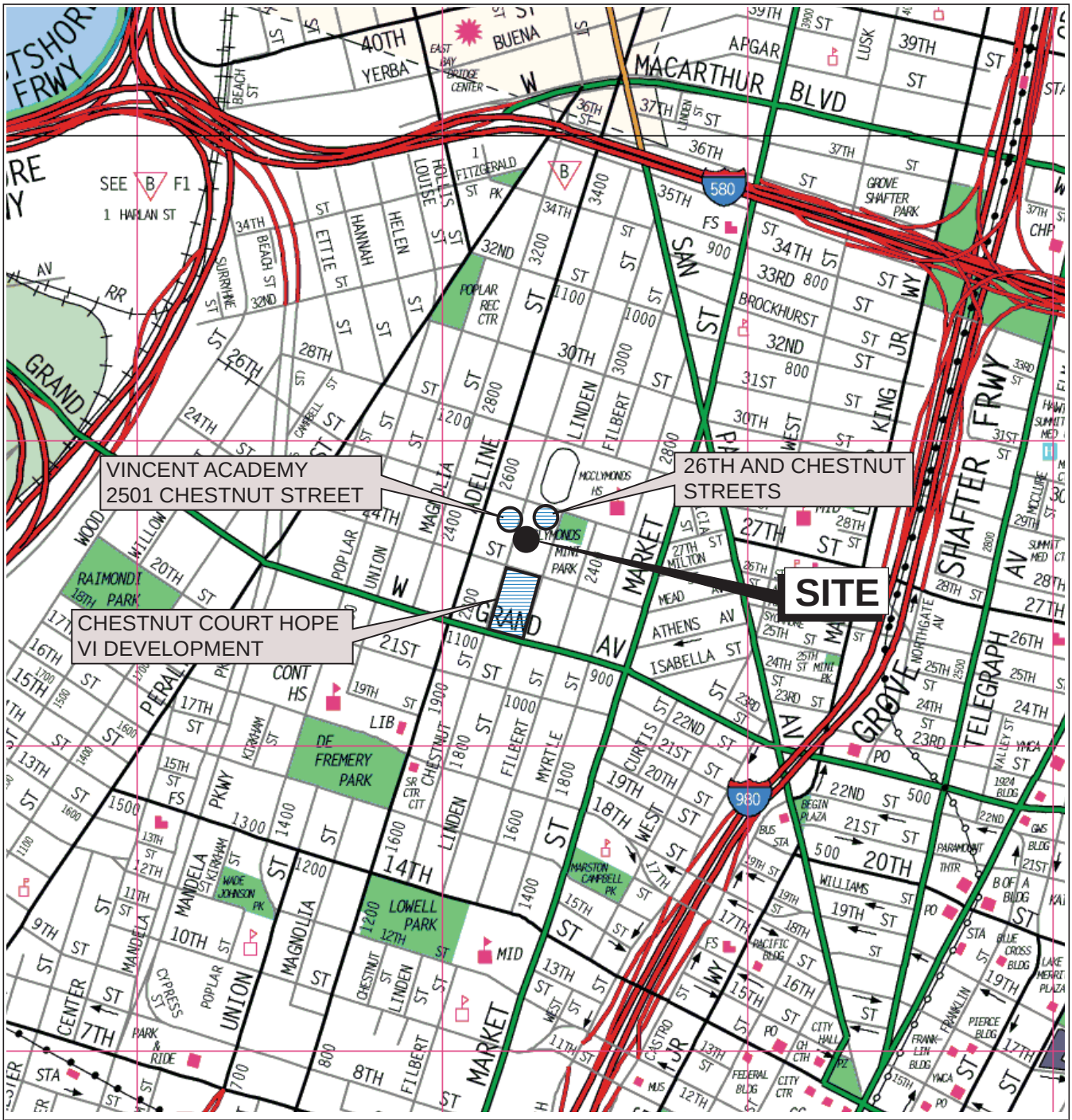
Sincerely yours,
ROCKRIDGE GEOTECHNICAL, INC.

Linda H. J. Liang, P.E., G.E.
Associate Engineer

Craig S. Shields, P.E., G.E.
Principal Geotechnical Engineer

Attachments:

Figure 1 - Site Location Map
Figure 2 – Regional Geologic Map
Figure 3 – Regional Fault Map
Figure 4 – Seismic Hazard Zones Map



Base map: The Thomas Guide
Alameda County

EXPLANATION

Previous geotechnical investigations performed in the site vicinity by Rockridge Geotechnical, Inc. or others

N

0 1/4 1/2 Mile

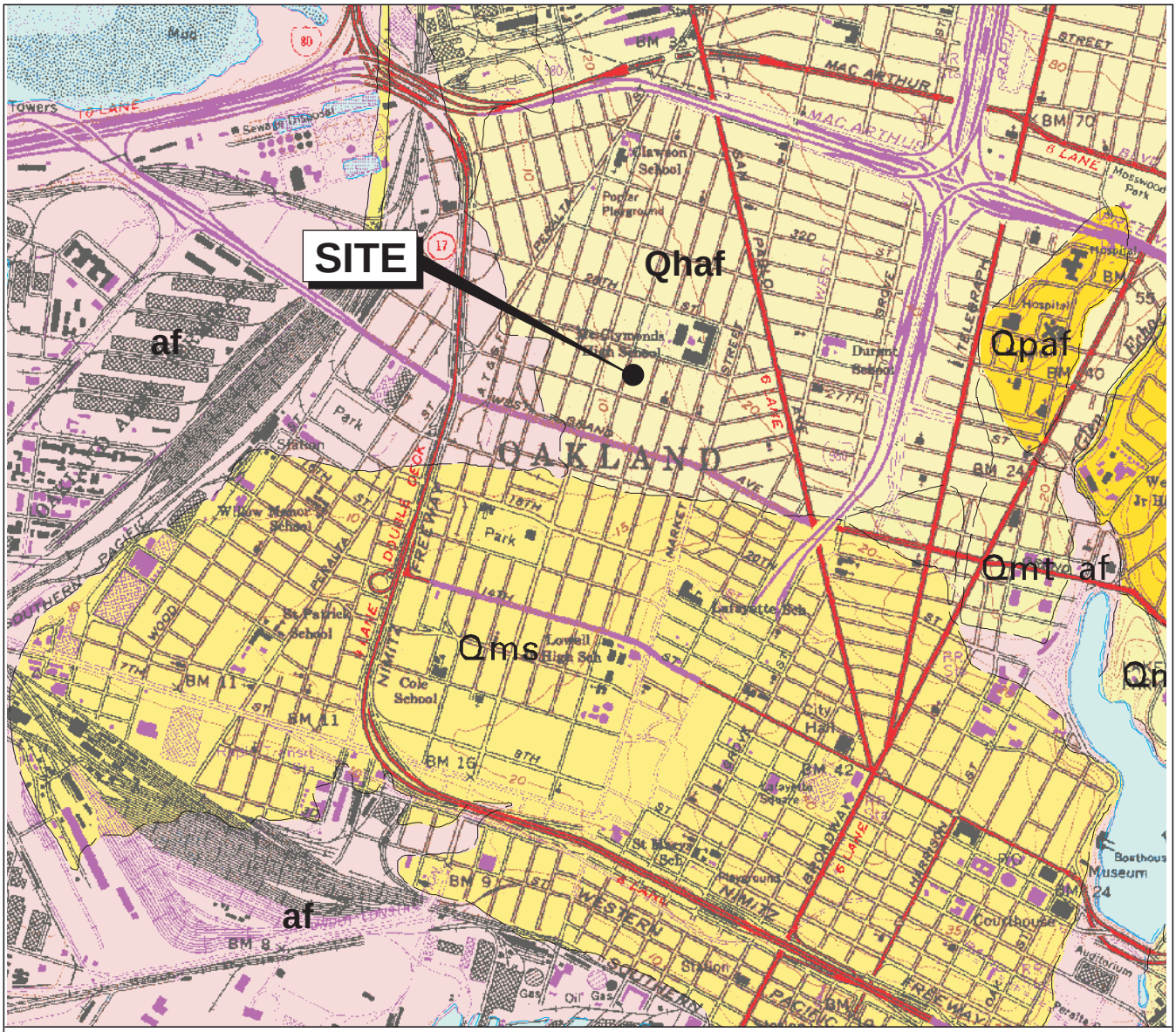
Approximate scale

2432 CHESTNUT STREET
Oakland, California

SITE LOCATION MAP

ROCKRIDGE GEOTECHNICAL

Date 03/21/19	Project No. 19-1656	Figure 1



Base map: USGS MF 2342, Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California (Graymer, 2000).

EXPLANATION

- Contact - Depositional or intrusive contact, dashed where approximately located, dotted where concealed
- Fault - Dashed where approximately located, small dashed where inferred, dotted where concealed, queried where locations is uncertain
- Reverse or thrust fault - Dotted where concealed
- Anticline -Shows fold axis, dotted where concealed
- Syncline
- 35 Strike and dip of bedding
- Overturned bedding
- Flat bedding
- Vertical bedding
- 35 Strike and dip of foliation
- Vertical foliation
- 35 Strike and dip of joints in plutonic rocks
- Vertical joint

af	**Artificial fill (Historic)**
Qhaf	**Alluvial fan and fluvial deposits (Holocene)**
Qms	**Merrit sand (Holocene and Pleistocene)**
Qpaf	**Alluvial fan and fluvial deposits (Pleistocene)**
Qmt	**Marine terrace deposits (Pleistocene)**

N

0 1,000 2,000 Feet

Approximate scale

2432 CHESTNUT STREET
Oakland, California

ROCKRIDGE GEOTECHNICAL

REGIONAL GEOLOGIC MAP

Date 03/21/19	Project No. 19-1656	Figure 2

Base Map: U.S. Geological Survey (USGS), National Seismic Hazards Maps - Fault Sources, 2008.

EXPLANATION

- Strike slip
- Thrust (Reverse)
- Normal

N

0 5 10 Miles

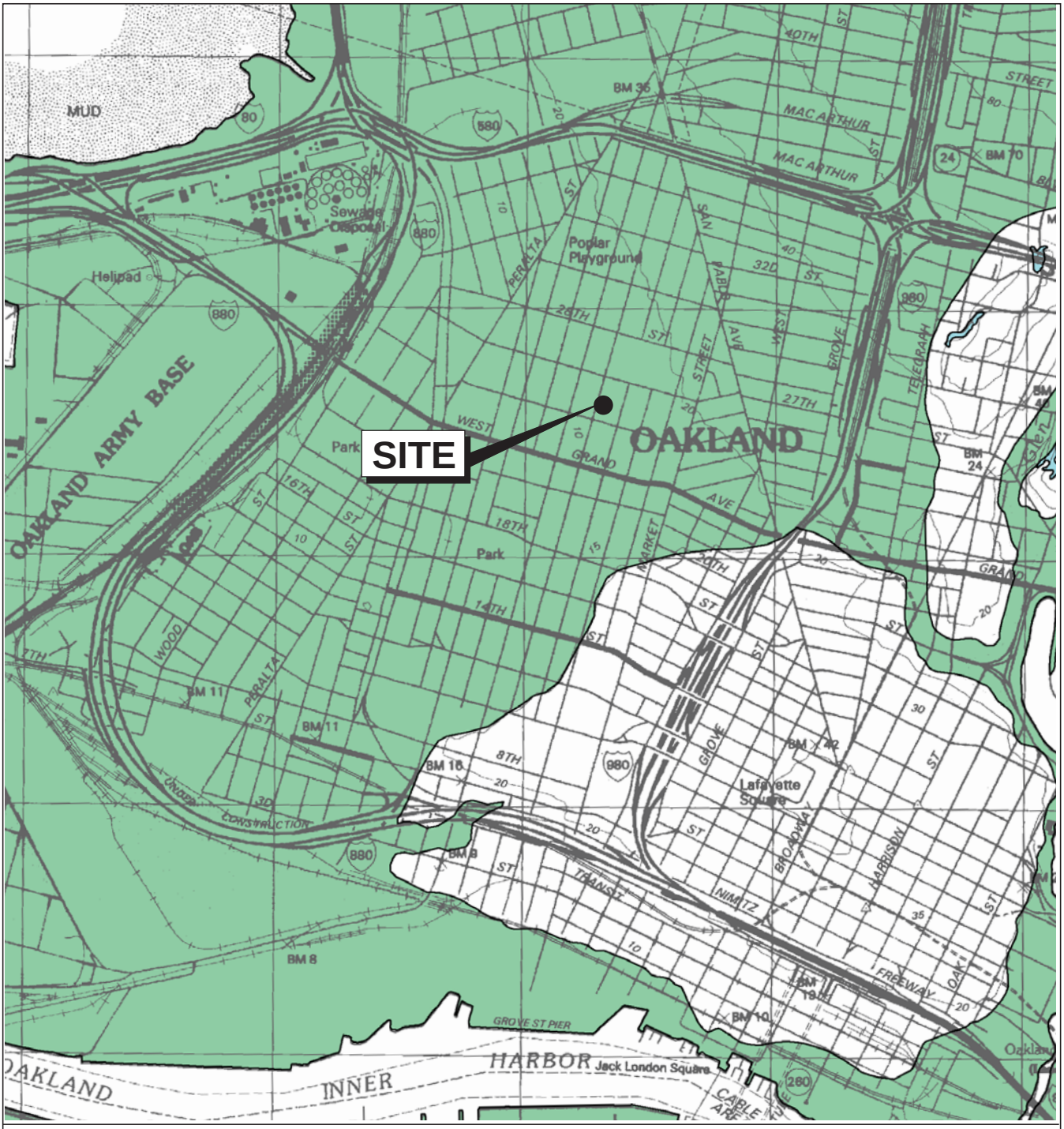
Approximate scale

2432 CHESTNUT STREET
Oakland, California

ROCKRIDGE GEOTECHNICAL

REGIONAL FAULT MAP

Date	Project No.	Figure
03/21/19	19-1656	3



EXPLANATION

Liquefaction; Areas where historic occurence of liquefaction, or local topographic, geological, geotechnical, and subsurface water conditions indicate a potential for permanent ground displacements.

Earthquake-Induced Landslides; Areas where previous occurence of landslide movement, or local topographic, geological, geotechnical, and subsurface water conditions indicate a potential for permanent ground displacements.

0 2,000 4,000 Feet

Approximate scale

Reference:
State of California "Seismic Hazard Zones"
Oakland West Quadrangle.
Released on February 14, 2003

2432 CHESTNUT STREET
Oakland, California

ROCKRIDGE GEOTECHNICAL

SEISMIC HAZARDS ZONE MAP

Date 03/21/19	Project No. 19-1656	Figure 4

Appendix F

Lamphier-Gregory, *GHG Reduction Plan Calculations*

October 2020

Appendix F: GHG Reduction Plan Calculations

GHG Emissions Increase - with natural gas use

Natural Gas Tankless Hot Water

175	therms/unit/year
24	# of heaters, at 2 units per apartment, 12 apartments
4,200	total therms/year
100,000	BTUs per therm
420,000,000	total BTUs
1,000	kBTUs, as used in CalEEMod
420,000	kBTUs total for tankless hot water heaters
18,629	kBTUs = 1 MTCO2e (based on CalEEMod avg.)
22.55	**MTCO2e for natural gas water heater system**

Comparable Electric Tankless Hot Water

0.000293	kWh per BTU
0.293071	kWh per kBTU
123,090	comparable kWh for same energy demand as gas (assume same UEF of 0.96)
7,537	kWhs = 1 MTCO2e (based on CalEEMod average)
16.3	**MTCO2e for electric water heater system**
6.21	**difference in MTCO2e/yr GHG with gas versus electric**

GHG Reductions - per proposed GHG Reduction Plan

Electric Car

Baseline = EF x VMT x C

where:

EF = emission factor for gasoline engine = 255.5 (per CalEEMod worksheet, tab 'vehicleEF')
VMT = 365 days/year x 7.5 VMT per person (for TAZ 989 - see TIS)
C = conversion factor (grams to MT) = 10E-6

Baseline GHG = 255.5 365 7.5 1.00E-05 6.99

Electric = Utility x 1/FE x VMT x ER x C

where:

Utility = carbon intensity of PG&E electrical source= 290
FE = current passenger vehicle fuel economy = 27.5
VMT = 365 days/year x 7.5 VMT per person (for TAZ 989 - see TIS)
ER = Energy ratio = 33.4 kWh per gallon of gasoline
C = conversion factor = 1/2,204x10E3

Electric GHG = 290 0.0364 2738 33.4 4.5E-06 4.375

GHG Reduction % = 1- Mitigated Emissions / Baseline Emissions

1 - 4.37 / 6.99 = **37.45%**

GHG Reduction:

81.74	MTCO2e of mobile source emission, Project (per CalEEMod)
12	/ by total cars per Project
6.81	MTCO2e / car
37.45%	x % GHG reduction for electric car (per above)
2.54	MTCO2e reduction, per car
2	number of electric cars
5.09	MTCO2e reduction for electric cars
0.82	unbundle parking = 1% reduction in VMT = 1% reduction in mobile source GHG emissions
0.82	bike repair shop = 1% reduction in VMT = 1% reduction in mobile source GHG emissions
6.72	**Total MTCO2e Reduction per GHG Reduction Plan**

Appendix G

RMD Environmental Solutions, *Corrective Action Plan (CAP)*

August 5, 2019

CORRECTIVE ACTION PLAN

2420 & 2432 Chestnut Street and 2423 Linden Street
Oakland, California

01-DAL-001

Prepared For:

Mr. Bruce L. Hammon
Dalzell Corporation
2138 Stone Valley Road
Alamo, California 94607

Prepared By:

RMD ENVIRONMENTAL SOLUTIONS
609 Gregory Lane, Suite 200
Pleasant Hill, California 94553

August 5, 2019

Prepared By:

Kirsten Duey
Principal Engineer

Reviewed By:

Donald W. Moore, P.G.
Principal Geologist

REGISTERED GEOLOGIST
DONALD W. MOORE
No. 6197
Exp. 8/31/19
STATE OF CALIFORNIA

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LIST OF ACRONYMS

µg/L	micrograms per liter
µg/kg	micrograms per kilogram
µg/m^3	micrograms per cubic meter
ACDEH	Alameda County Department of Environmental Health
amsl	above mean sea level
bgs	below ground surface
CAP	Corrective Action Plan
CDIP	Corrective Action Design and Implementation Plan
COPC	chemicals of potential concern
CSM	conceptual site model
DCE	dichloroethane
EBMUD	East Bay Municipal Utilities District
EPA	Environmental Protection Agency
ESLs	environmental screening levels
GPR	Ground penetrating radar
LOP	Local Oversight Program
MCL	maximum contaminant levels
MRL	Method reporting limit
ppmv	Parts per million by volume
PID	photo-ionization detector
PCE	tetrachloroethene
PCBs	Polychlorinated biphenyls
PVC	poly vinyl chloride

LIST OF ACRONYMS

RMD	RMD Environmental Solutions, Inc.
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SVOCs	Semi-volatile organic compounds
SRS	Sensitive Receptor Survey
TPHbo	Total petroleum hydrocarbons as bunker oil
TPHd	Total petroleum hydrocarbons as diesel
TPHg	Total petroleum hydrocarbons as gasoline
TPHmo	Total petroleum hydrocarbons as motor oil
TCE	trichloroethene
UST	underground storage tank
VOC	volatile organic compound(s)

EXECUTIVE SUMMARY

On behalf of Dalzell Corporation (Dalzell, Property Owner), RMD Environmental Solutions, Inc. (RMD) is submitting this Corrective Action Plan (CAP) for the property located at 2420 and 2432 Chestnut Street and 2423 Linden Street in Oakland, California (the Site, Figure 1-1).

The Property Owner is in contract with a Riaz Capital (Riaz) who intends to purchase the Site for redevelopment into residential housing. The redevelopment plan includes the following design concepts as shown in Appendix A:

- Demolition of all existing structures prior to redevelopment;
- Twelve, 3-story residential units with a shared open space;
- Slab on grade foundation;
- No sub-grade parking, parking lifts, or elevators.

This CAP presents the proposed corrective actions to address subsurface contamination during site redevelopment and prior to occupancy along with a Data Gap Investigation Workplan (Workplan) to address areas of concern discussed with the Alameda County Department of Environmental Health (ACDEH).

The Site consists of three parcels currently developed with an elevated residential dwelling, two vacant warehouse structures, a canopy area, and paved/asphalt areas. Dalzell is the most recent commercial/industrial operator at the Site. Dalzell's operations included fabricating steel structures, acoustical silencers, and mechanical plumbing devices, between 1974 and 2017. Prior to Dalzell's occupancy, historic operations at the warehouse portion of the property included a cabinet shop, plaster storage, irrigation supply company and elevator company

Site investigations were initiated in January 2019, associated with due diligence on behalf of Riaz. The investigations consisted of soil, sub-slab vapor, and grab groundwater sampling in addition to exploratory borings in the southeast corner of the property where former underground storage tanks (USTs) were located. The Property Owner reported that the USTs were never operated. Data indicated up to 7,258 micrograms per cubic meter (µg/m^3) of tetrachloroethene (PCE) in sub-slab vapor and a maximum concentration of 24 micrograms per liter (µg/L) in groundwater. Trichloroethene (TCE) was detected in sub-slab vapor at concentrations up to 23 µg/m^3 and in groundwater at concentrations of up to 7.6 µg/L. The distribution of TCE and assumed groundwater

flow direction suggest that TCE in groundwater may be originating from an off-Site source that is migrating beneath the Site.

A Conceptual Site Model (CSM) was developed as a representation of the characteristics of the Site to demonstrate the possible and confirmed relationship(s) between the source(s) of contamination, pathways, and receptors. Potential receptor scenarios were identified as current/future resident and current/future outdoor construction worker. Site-specific screening levels were developed for soil, soil vapor, and groundwater based on the identified exposure pathways and environmental screening levels published by the San Francisco Bay Area Regional Water Quality Control Board (January 2019). The screening levels were used to evaluate the Site investigation data, to identify COPCs, and to determine if further action is warranted to evaluate potential health impacts from exposure to Site-related constituents.

Based on results of the CSM and the site investigations conducted to date, the following data gaps were identified with input from ACDEH:

- Lateral and vertical characterization of soil vapor beneath the Site.
- Collection of soil data in the vicinity of observation boring T5.
- Completion of an underground utility survey to verify locations of potential soil vapor conduits beneath the Site.
- Characterization of shallow soil across the Site to evaluate potential exposure to future construction workers and adjacent properties during site grading/soil disturbance as part of the upcoming Site redevelopment.
- Additional groundwater characterization with three on-Site groundwater monitoring wells to confirm results of previous grab groundwater sampling and determine Site-specific groundwater flow direction. If needed, collection of off-Site grab groundwater samples to provide lateral definition of the PCE plume.

The Workplan has been included as Appendix B to address the above items.

A corrective action approach is proposed for the Site to address subsurface contamination during site redevelopment and prior to occupancy. Based on Site conditions and planned redevelopment activities, source removal via excavation is the presumptive corrective action for removing chemicals of concern. In addition, a monitored natural attenuation (MNA) program for groundwater and a vapor mitigation system will be implemented to address residual contamination

in groundwater and soil vapor, if required following source removal. The conceptual remedial approach is presented in this CAP. Following results of the Data Gap Investigation, a Corrective Action Design Implementation Plan (CDIP) will be prepared which provides details of proposed excavation, vapor mitigation system, and MNA program. Details of the MNA program will initially be included in the Data Gap Investigation Report (after monitoring wells are installed and baseline data is obtained).

A schedule for implementation is provided in Section 6 of this document. As discussed during previous meetings with Alameda County Department of Environmental Health (ACDEH), RMD intends to complete the Data Gap Investigation in parallel with ACDEH's CAP review and public comment period. We are therefore requesting ACDEH comments to our Data Gap Investigation Workplan by August 19, 2019. The schedule provided in Section 6 includes ACDEH CAP approval by September 30, 2019 that is consistent with the transaction schedule between the Property Owner and Riaz.

1.0 INTRODUCTION

This Corrective Action Plan (CAP) has been prepared by RMD Environmental Solutions, Inc. (RMD), on behalf of Dalzell Corporation (Dalzell, Property Owner) for the property located at 2420 and 2432 Chestnut Street and 2423 Linden Street in Oakland, California (the Site, Figure 1-1). The Site consists of three adjacent rectangular parcels totaling approximately 0.57-acres, currently developed with an elevated residential dwelling (currently occupied), two industrial buildings (vacant), canopy area, and associated paved areas.

The Property Owner is in contract with Riaz Capital, Inc. (Riaz) to purchase the Site for redevelopment into residential housing. A preliminary plan provided by Riaz is provided in Appendix A. The redevelopment plan includes the following design concepts:

- Demolition of all existing structures prior to redevelopment;
- Twelve, 3-story residential units with a shared open space;
- Slab on grade foundation;
- No sub-grade parking, parking lifts, or elevators.

This CAP presents the proposed corrective actions to address subsurface contamination prior to occupancy. Environmental activities are being conducted at the Site under the supervision of the Alameda County Department of Environmental Health's (ACDEH) Local Oversight Program for Hazardous Materials Releases (LOP), under case number RO0003369. The CAP includes: a Site description, summary of investigations, conceptual site model (CSM), data gap analysis and Data Gap Investigation Workplan (Workplan) in Appendix B, and the recommended corrective action approaches.

1.1 CAP Organization

The CAP is organized into the following sections:

- Section 2.0: Site Description: Provides a summary of the Site background information and property history, brief descriptions of the hydrogeologic conditions, surface water features, regional groundwater use, and sensitive receptor survey results.
- Section 3.0: Summary of Investigations: Provides a summary of previous subsurface investigations conducted to date.

- Section 4.0: Data Evaluation: Provides an exposure pathway evaluation, rationale and derivation of soil, soil-vapor, and groundwater screening levels, a comparative analysis of historic data to applicable screening levels, and a data gap analysis. A Data Gap Investigation Workplan is referenced and provided as Appendix B.
- Section 5.0: Selected Corrective Actions: Presents the preferred corrective action alternative based on our evaluation and experience and the proposed scope of work.
- Section 6.0: Schedule. Provides a summary of implementation tasks and time schedule.
- Section 7.0: References. Provides citations to the documents referenced in this CAP.

2.0 SITE DESCRIPTION

The Site consists of three adjacent rectangular parcels totaling approximately 0.57-acres of land. A land survey showing existing conditions is provided is Appendix C, summarized as follows:

- 2432 Chestnut Street, APN 005-0435-018-0. The parcel is currently developed with a vacant, one-story industrial building with loft, a one-story warehouse with canopy, and associated paved area. This area is referred to throughout this CAP as the Northern Parcel.
- 2420 Chestnut Street, APN 005-0435-017. The parcel is developed with an occupied residential dwelling elevated on steel pier foundations and associated paved areas. This area is referred to throughout this CAP as the Southern Parcel.
- 2423 Linden Street, APN 005-0435-005. The parcel is undeveloped with an asphalt surface. This area is referred to throughout this CAP as the Eastern Parcel.

A Site Plan is provided as Figure 2-1. Plans by Riaz include demolishing all existing structures prior to property redevelopment.

The property is relatively level and lies at an elevation of approximately 14 to 16 feet above mean sea level (amsl) (Basics, 2018). The Site is bordered by Chestnut Street on the west, two story residential parcels to the south and east, and Linden Apartments on the north.

2.1 Historical Site Uses and Areas of Concern

Based on information provided in the Phase I, historic site use consists of the following:

Year	Southern Parcel (2420 Chestnut St)	Northern Parcel (2432 Chestnut St)	Eastern Parcel (2423 Linden St)
1902	Residential	Residential with basement in southwestern portion of parcel (permit to demolish in 1970)	Residential
Mid 1960s		Current "L" shaped structure constructed.	
Mid 1950s through 1970s		Various commercial tenants until 1990s (cabinet shop, plaster storage, irrigation supply company, elevator company)	Permit to demolish residential structure in 1970
1974 – 2017		Dalzell Corporation (construction contractor)	Vacant - undeveloped
Current		Vacant, developed with structures constructed in 1950s	

Dalzell is the most recent commercial/industrial operator at the Site. Dalzell's operations included fabricating steel structures, acoustical silencers, and mechanical plumbing devices, between the years of 1974 and 2017. Site features during their tenure included an industrial building with a maintenance area, two former UST areas, a warehouse with an adjacent canopy, surface drain(s) and an oil/water separator.

The Site Plan (Figure 2-1) provides locations of the features described below.

- An underground storage tank (UST), located along the south side of Warehouse 1 was reportedly removed from the site around 1980.
- An industrial, L-shaped building (identified as Warehouse 1 on Figure 2-1) is located on the northwestern portion of the Site. The industrial building is segregated into office space, warehouse area (primarily used for general storage), maintenance area, and two lofts. Visual observations did not indicate any floor drains or sumps. A bathroom is located along the eastern wall of the building. According to the property owner, the sewer lateral runs from the bathroom, toward Chestnut Street at the approximate location shown on Figure 2-1. Prior operations in this building included a cabinet shop and plaster storage (Basics, 2018).
- A warehouse (identified as Warehouse 2 on Figure 2-1) with an adjacent canopy is located on the northeastern portion of the Site. Warehouse 2 during Dalzell's operation was primarily used for steel fabrication. Visual observations did not indicate any floor drains or sumps. No underground utilities appear to be located under this building.
- Stormwater Drains. One stormwater drain was observed along the western side of the property, northwest of the residence. Two other drains were located in the central portion of the property near the oil/water separator. According to the property owner, surface water entered the two centrally located drains and clean water was periodically pumped through an underground line which is open to the curb along Chestnut Street. Free product/oily water was removed from the oil/water separator as needed and disposed of offsite.

A former UST area, dispenser pad, and piping trench is located in the southern portion of the Site. According to the Property Owner, the UST and piping was never used. In the late 1970s (around 1979 according to the Property Owner), UST(s) were installed in this area however never used. The USTs were unearthed, cut up, disposed of in the former UST pit, and the area was subsequently backfilled.

2.2 Nearby Properties

The general area surrounding the property is developed industrial, commercial, and residential. The subject site is zoned Mixed Housing 2 (RM-2) (Basics, 2018). A site vicinity map is provided as Figure 2-2. Single family , two-story homes are located to the south and east of the Site. To the north of the Site are Linden Court Apartments, with underground parking. Linden Court Apartments are owned by Bridge Housing Corporation (BRIDGE). According to a phone interview between Ms. Kirsten Duey (RMD) and Ms. Katherine Fleming (BRIDGE) on July 8, 2019, no dewatering is required as a result of the underground parking structure. RMD was unable to obtain elevation details of the underground parking structure from BRIDGE. West of the site, beyond Chestnut Street is Vincent Academy, a K-5 charter school. The Vincent Academy property was previously under San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) oversight and received closure in 2015. Subsurface contaminants at this property included benzene, diesel, gasoline, heating/fuel oil, and lead.

2.3 Utilities

Utilities including water, electric, natural gas, and sewage service are publicly supplied. Underground services for natural gas, water, and sanitary sewer traverse the sidewalk and Chestnut Street along the west side of the Site and the East side of the Site along Linden Street. The land survey map in Appendix C provides locations of underground utilities near the Site, which are also shown as approximate locations on Figure 2-1.

A 2,000-amp transmission line runs underground at the approximate location shown on Figure 2-1. The transmission line provides service to an electrical panel located on the outer wall of the northeast warehouse, which served aboveground electrical in the warehouse.

A sewer lateral is routed under the L-shaped warehouse at the approximate location shown on Figure 2-1. Water and electrical supplies the warehouse in above-ground piping.

The location of the underground utility lateral which services the residence is unknown at the time of this report preparation. However, as shown in Appendix C, the sewer line and water risers are located along the south side of the building. It can reasonably be assumed that these utilities run underground near the southern property line toward the main beneath Chestnut Street.

No obvious signs of electrical transformers were noted on the property (Basics, 2018).

2.4 Geologic and Hydrogeologic Setting

The Site is located within the East Bay Plain Groundwater Basin, within the Coast Ranges Geomorphic province. The regional geology is composed of Holocene alluvial and fluvial deposits containing unconsolidated and interbedded clays, silts, sands and gravels underlain by Jurassic, Cretaceous and Tertiary-age bedrock units of the Franciscan Complex and Great Valley sequence (RWQCB, 1999). The Hayward Fault is located approximately one mile to the east-northeast. The Site is located within the Oakland Sub-Area of the San Francisco Basin portion of the East Bay Plain (RWQCB, 1999). Water supply wells in the Oakland Sub-Area groundwater basin have been constructed within the alluvial and fluvial deposits at depths of approximately 200 feet below ground surface (bgs). The topographic slope of the Site is to the west toward San Francisco Bay. Regionally, the ground water flow direction is to the west in the direction of the San Francisco Bay. Flow direction and velocity are also influenced by buried stream channels that typically are oriented from east to west. The nearest surface water body is the San Francisco Bay located approximately 1.21 miles northwest of the Subject Property.

Shallow sediments beneath the site predominantly consist of fine-grained silty clay, sandy clay, clayey silt, silt, and clay, with coarse grained material encountered in thin lenses. Based on boring logs from previous investigations conducted at the Site, localized subsurface geology consists of fine-grained materials (silty sandy clay, clayey silt, gravelly sandy clay, clayey sandy silt, or silty clay), with coarse-grained material encountered in thin lenses.

Based on previous subsurface investigations at the Vincent Academy (formerly Linden Lofts) site (located at 2499 Chestnut Street, approximately 70 feet to the west of the subject Site), groundwater has been encountered between depths of roughly 7.6-8.8 feet bgs. Historically, first-encountered groundwater beneath the Site was noted in soil borings at depths ranging from approximately 7.9 to 22.3 feet bgs.

2.5 Regional Groundwater Use

As described in the RWQCB's East Bay Plain Groundwater Basin Beneficial Use Evaluation Report, Alameda and Contra Costa Counties (RWQCB, 1999), the largest and deepest wells in this area historically pumped 1 to 2 million gallons per day at a depth greater than 200 feet bgs. Upland areas historically had shown little groundwater potential beyond single family use. Overall, sustainable yields are low due to low recharge potential. In 1996, Regional Board Staff reviewed the General Plans for the City of Oakland and determined that the City of Oakland did not have any

plans to develop local groundwater resources for drinking water purposes, because of existing or potential saltwater intrusion, contamination, or poor or limited quantity. Since 1929 the East Bay Municipal Utility District (EBMUD) has been providing imported water to the East Bay from Pardee Reservoir on the Mokelumne River in the Sierra Nevada Mountains. The reservoir provided a high-quality, reliable supply that eliminated the need for local groundwater wells.

2.6 Sensitive Receptor Survey

A sensitive receptor survey (SRS) was completed within 0.5-mile radius of the Site during the preparation of this CAP. The SRS included a search of available databases of potential receptors (e.g. surface water bodies, production wells, schools, child care facilities, elderly care facilities, and hospitals). The results of the SRS are provided below and illustrated on Figure 2-3.

- Surface Water: There are no bodies of surface water within half a mile of the Site.
- Production Wells: Several sources were reviewed to evaluate the location and construction of water and oil and/or gas production wells near the Site:
    - RMD reviewed the Department of Water Resources (DWR) well completion report database;
    - RMD reviewed the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) website and map database; and
    - RMD reviewed the Draft Phase I Environmental Site Assessment (ESA) that was prepared by Basics Environmental dated December 14, 2018.

  There are no production wells located within half a mile of the Site.
- Schools: RMD identified the following schools within a half mile of the Site:
    - Vincent Academy
      2501 Chestnut Street, Oakland
    - Ralph J. Bunche Academy
      1240 18th Street, Oakland
    - McClymonds High School
      2607 Myrtle Street, Oakland
    - Oakland Head Start
      1058 West Grand Avenue, Oakland

- **Child Care Facilities**: RMD identified the following child care facilities within a half mile of the Site:
    - Mayari's Playhouse
      875 19th Street, Oakland
    - Daycare We Care
      1131 24th Street #213, Oakland
    - Boys & Girls Clubs of Oakland
      920 24th Street, Oakland
    - YMCA
      756 21st Street, Oakland
    - Saint Andrews Mbc Child Care Educational Program
      2608 West Street, Oakland
    - EurAupair Au Pair Program
      1002 28th Street, Oakland
- **Elderly Care Facilities**: RMD identified the following elderly care facilities within a half mile of the Site:
    - West Oakland Senior Center
      1724 Adeline St, Oakland, CA 94607
- **Hospitals**: There are no hospitals within a half mile of the Site.

3.0 SUMMARY OF INVESTIGATIONS

Previous Site investigations were reported in January and April 2019, associated with transactional due diligence on behalf of Riaz. The investigations consisted of soil, sub-slab vapor, and grab groundwater sampling in addition to exploratory borings in the southeast corner of the property. Investigation activities were documented in the following reports.

- Limited Subsurface Investigation Report, January 2019. P&D Environmental, Inc.
- Limited Subsurface Investigation Report (B9 through B11, SG1 through SG6, UST Pit Observation), April 24, 2019. P&D Environmental, Inc.

Results are presented on Tables 3-1 through 3-10, Figures 3-1 through 3-4, and briefly summarized below. The purpose of the sections that follow is to provide a brief summary and results of historic sampling conducted to date. Evaluation and further discussion of the data with respect to applicable ESLs, areas of concern, and a data gap analysis is provided later, in Section 4 of this document.

3.1 Soil Sampling

Prior investigation activities were reported in January and April 2019 and included the collection of eighteen soil samples on-Site at depths ranging from 4.5 feet bgs to 11 feet below ground surface (bgs). A summary of soil sampling activities and results are provided below.

January 2019:

Borings	B1 through B8
Depth	4.5 to 11 feet bgs
Sampling Methodology	Geoprobe direct push methods with a macrocore barrel sampler lined with PVC sleeves.
Laboratory Analysis	All samples analyzed for: • Total petroleum hydrocarbons as gasoline (TPHg) (Environmental Protection Agency [EPA] Method 5030/Modified 8015) • Total petroleum hydrocarbons as diesel (TPHd), total petroleum hydrocarbons as bunker oil (TPHbo), and total petroleum hydrocarbons as motor oil (TPHmo) (EPA Method 5030/Modified 8015) • Volatile organic compounds (VOCs) (EPA Method 8260B) Samples from 4.5 feet depth were additionally analyzed for: • Semi-volatile organic compounds (SVOCs) (EPA Method 8270C) • CAM 17 Metals (EPA Method 6020) B4 samples additionally analyzed for polychlorinated biphenyls (PCBs) (EPA Method 8082). 9.5 feet bgs samples at B4 and B6 additionally analyzed for SVOCs (EPA Method 8270C).

Results	• Strong petroleum odor and elevated photoionization detector (PID) reading at B8 (approx. 11 feet bgs). No other PID readings were noted as elevated. • Presence of gravel and large concrete slab at B5 suggests possible UST pit. • Petroleum range hydrocarbons were reported at samples collected from B4 (9.5 feet bgs) and B8 (11 feet bgs) only. The maximum concentrations of TPHg, TPHd, TPHbo, and TPHmo were 220 milligrams per kilogram (mg/kg), 13 mg/kg, 51 mg/kg, and 55 mg/kg, respectively. • VOCs were reported at samples collected from B2 (4.5 feet bgs), B4 (4.5 feet bgs) and B8 (11 feet bgs) only. Ethylbenzene, xylenes, naphthalene, n-butyl benzene, sec-butyl benzene, isoproplybenzene, 4-isopropy toluene, n-Propyl benzene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene were reported at relatively low concentrations (see Tables 3-1 and 3-2) • SVOCs reported above laboratory MRLs consisted of benzo (a) anthracene, 1,1-biphenyl, bis (2-ethylhexyl) adipate, bis (2-ethylexyl) phalate, 2-chlorophenol, di-n-butyl phthalate, phenanthracene, and phenol. Concentrations were reported at relatively low concentrations (see Table 3-3). • PCBs were not detected above their respective laboratory MRLs from the two samples collected. • CAM 17 metals were reported with maximum concentrations provided in parenthesis. Arsenic (7.6 mg/kg), barium (1,700 mg/kg), beryllium (0.54 mg/kg), cadmium (0.58 mg/kg), chromium (53 mg/kg), cobalt (35), copper (23 mg/kg), lead (13 mg/kg), mercury (0.98 mg/kg), molybdenum (2.0 mg/kg), nickel (100 mg/kg), vanadium (52 mg/kg), and zinc (60 mg/kg). (See Table 3-4).

April 2019:

Borings	B9 through B11
Depth	4.5 feet bgs
Sampling Methodology	Geoprobe direct push methods with a macrocore barrel sampler lined with PCV sleeves.
Laboratory Analysis	All samples analyzed for: • TPHg (EPA Method 5030/Modified 8015) • TPHd, TPHbo, and TPHmo (EPA Method 5030/Modified 8015) • VOCs (EPA Method 8260B)
Results	TPHg, TPHd, TPHbo, TPHmo, and VOCs were not detected above their respective laboratory MRLs in any sample collected.

3.2 Sub-Slab Vapor Sampling

Historical investigation activities completed in April 2019 included the collection of six sub-slab vapor samples in the Former Maintenance Area located within Warehouse 1. A summary of sub-slab vapor sampling activities and results are provided below.

April 2019:

Locations	VP1 through VP6
Depth	2 inches below building slab
Sampling Methodology	Summa cannisters. Helium shroud for leak detection.
Laboratory Analysis	All samples analyzed for: • TPHg (EPA Method TO-3) • VOCs (EPA Method TO-15) • Fixed Gases and Helium (ASTM1946-90)
Results	• TPHg and tetrachloroethene (PCE) were detected above their laboratory MRLs in all samples collected at maximum concentration of 2,500 micrograms per cubic meter (µg/m^3) and 7,258 µg/m^3, respectively, reported in the sample collected from VP3. • Trichloroethene (TCE) was detected in four of the six samples collected at a maximum concentration of 41.7 µg/m^3 in the sample collected from VP-3. • Other VOCs detected above their respective MRL include freon 11, freon 12, acetone, Isopropyl alcohol, methylene chloride, 1,1,1-trichloroethane, methyl ethyl ketone, carbon disulfide, acetonitrile, styrene, hexane, cyclohexane, toluene, 2,2,4-trimethylpentane, ethanol, benzene, methyl tert-butyl ether, ethylbenzene, and xylene. (See Table 3-5 and 3-6) • Helium (leak detector) was detected in one of the six samples at a concentration of 0.21µg/m^3. The calculated leak ratio where helium was detected is 0.98%, which is considered acceptable. Oxygen and carbon dioxide were detected at maximum concentrations of 19% at VP5 and 1.5% at VP4, respectively.

3.3 Groundwater Sampling

Historical investigation activities completed in January and April 2019 included the collection of eleven groundwater samples on-Site. A summary groundwater sampling activities and results are provided below.

January 2019:

Borings	B1 through B8
Depth	First encountered groundwater – 7.9 to 22 feet bgs
Sampling Methodology	Geoprobe direct push methods. Sample collection through temporary 2-inch slotted polyvinyl chloride (PVC) pipe with peristaltic pump. (B7 and B8 allowed to recharge overnight due to slow recharge).
Laboratory Analysis	All samples analyzed for: • TPHg (EPA Method 5030/Modified 8015) • TPHd, TPHbo, and TPHmo (EPA Method 5030/Modified 8015) • VOCs (EPA Method 8260B) Sample from B4 additionally analyzed for: • SVOCs (EPA Method 8270C)
Results	• TPHg was detected above the laboratory MRL in one of eight samples (B5-W) at a concentration of 110 micrograms per liter (µg/L). TPHd, TPHbo, and TPHmo were detected above their laboratory MRLs in four of eight samples collected at maximum concentrations of 270, 550, and 580 µg/L, respectively, in the sample collected from B5. • Methyl tert-butyl ether (MtBE) was not detected above the laboratory MRL in any of the samples collected.

	• Benzene, toluene, ethylbenzene, and toluene were detected in the sample collected at B5 at concentrations of 0.51, 5.7, 1.9, and 17µg/L, respectively. • PCE, TCE, and cis-1,2-dichloroethene (cis-1,2-DCE) were detected above their respective laboratory MRLs in three of eight samples collected at a maximum concentration of 24 µg/L (B2), 7.6 µg/L (B7), and 4.5 µg/L (B7), respectively. 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene were detected above their respective laboratory MRL in one sample (B6) at concentrations of 3.4 µg/L, and 1.2 µg/L, respectively. No other VOCs were detected above their laboratory MRLs. • SVOCs consisting of bis (2-ethylexyl) phthalate, diethyl phthalate, and di-n-butyl phthalate were detected in the sample collected from B4 relatively low concentrations (see Table 3-9).

April 2019:

Borings	B9 through B11
Depth	First encountered groundwater – 11.0 to 21.5 feet bgs
Sampling Methodology	Geoprobe direct push methods. Sample collection through temporary 2-inch slotted PVC pipe with peristaltic pump.
Laboratory Analysis	All samples analyzed for: • TPHg (EPA Method 5030/Modified 8015) • TPHd, TPHbo, and TPHmo (EPA Method 5030/Modified 8015) • VOCs (EPA Method 8260B)
Results	• TCE and cis-1,2-DCE were detected in two of three samples at maximum concentrations of 4.9 µg/L (B11) and 3.2 µg/L (B11), respectively. • No other VOCs or TPH compounds were not detected above their respective laboratory MRLs in any sample collected.

3.4 UST Exploration

During a January 2019 Site investigation performed by P&D Environmental Inc. (P&D), a limited ground penetrating radar (GPR) survey was conducted to evaluate the presence of UST(s). Buried piping was identified in the piping trench and five buried anomalies were identified in the south east corner of the property. Boring B5, advanced in the area, revealed gravel fill between 4.5 and 14.5 feet bgs. In April 2019, Dalzell performed UST exploration activities, under observation of P&D, in the area where the GPR anomalies were found and in the vicinity of the former UST that was reportedly removed in 1980. Results were provided in an April 24, 2019 letter report and summarized in the following paragraph.

In April 2019, twenty-nine 30" x 30" areas were cut in the concrete slab at the locations indicated on Figure 3-4. At each location, exploratory borings were advanced to up to 13 feet bgs. Table 3-10 summarizes the total depths explored at each location and the field observations recorded. P&D reported that no detectable discoloration, odors, or PID values were identified at any of the

locations with the exception of T5, where strong petroleum hydrocarbon odor, discolored soil, and PID readings of 115 to 194 parts per million by volume (ppmv) were encountered between depths of 10 and 13 feet bgs. As indicated on Table 3-4, several locations could not be investigated below a depth of approximately 4 to 8 fee bgs due to the presence of large slabs of broken concrete (P&D, April 24, 2019). The maximum depth explored at each location is also indicated on Figure 3-4. Field observations indicated the presence of fiberglass fragments and gravel fill in several locations (Table 3-10). These findings are consistent with the property owner's account that tanks were previously cut up and disposed of in this area.

4.0 DATA EVALUATION

Investigations have revealed the presence of VOCs, including PCE, in soil, subslab vapor and groundwater at the Site. The assessment of the potential risks to human health and the environment associated with the presence of contaminants at the Site required the development of an exposure pathway evaluation and CSM, a screening level assessment comparing the Site data with applicable environmental screening levels (ESLs) and a data gap analysis to identify the need for additional characterization in consultation with ACDEH. Based on the CSM, screening level assessment, and data gap analysis and ACDEH discussions, additional investigations are needed to characterize nature and extent of contaminants in soil, groundwater and soil gas. The current data set is sufficient for preparation of this CAP and the additional data collected will be used to refine the scope of the CDIP. Details of the data evaluation are provided below.

4.1 Exposure Pathway Evaluation

An exposure pathway evaluation was completed to assess the potential impacts to human health and the environment (Figure 4-1). The following hypothetical human receptors were identified based on proposed activities that could possibly result in direct or indirect contact with Site-related chemicals, and anticipated land use:

- Hypothetical Construction/Utility Trench Worker Receptor; and
- Hypothetical Resident Receptor.

During redevelopment of the Site, construction/utility trench worker receptors may be directly exposed to soil, and although unlikely (see Section 1.0 regarding conceptual redevelopment plans which do not involve sub-grade parking, lifts, or elevators), exposure to groundwater was also considered.

The exposure pathways assumed to be complete and significant for the hypothetical construction/utility trench worker receptor are:

- Incidental ingestion of soil;
- Dermal contact with soil; and
- Inhalation of vapors volatilizing from soil and/or groundwater to outdoor air.

The exposure pathways assumed to be complete and significant for the hypothetical resident receptor are:

- Incidental ingestion of soil;
- Dermal contact with soil; and
- Inhalation of vapors volatilizing from soil and/or groundwater to indoor air.

4.2 Screening Level Assessment

Based on the identified exposure pathways, screening levels were identified for chemicals in soil, soil gas and groundwater. Chemical-specific screening levels were developed from ESLs published by SFBRWQCB (January 2019). The SFBRWQCB are intended to be conservative and the presence of a chemical at concentrations below the corresponding ESL can be assumed to not pose a significant threat to human health and the environment. While a chemical may be measured at concentrations above the SFBRWQCB, it does not necessarily indicate adverse effects on human health or the environment are occurring, rather that additional evaluation is warranted. In developing the ESLs, the Regional Water Board has considered exposure pathways to humans, aquatic receptors, and terrestrial receptors. ESLs that are applicable to the Site and retained for consideration are discussed in the following sections.

4.2.1 Identification of Screening Levels

Soil Screening Levels

Future planned redevelopment of the Site will include residential buildings and a shared open space. Direct contact with soil was included as a potential exposure pathway. Based on the anticipated future residential land use with a shared open space, Table 4-1 provides a summary the applicable soil ESLs for subsurface chemicals historically detected in at least one soil sample collected from the Site. As indicated on Table 4-1, the following soil ESLs were considered:

- **Direct Contact Exposure Pathways.** Potentially complete direct contact exposure pathways include ingestion, dermal contact, and inhalation. Table 4-1 provides the most conservative ESL direct contact value based on residential and construction worker exposure scenarios.
- **Terrestrial Habitat.** Table 4-1 provides the most conservative terrestrial habitat ESL, considering significantly and minimally vegetated areas.

- **Protection of Groundwater Exposure Pathway.** The City of Oakland does not have any plans to develop local groundwater resources for drinking water purposes, because of existing or potential saltwater intrusion, contamination, or poor or limited quantity (Section 2.5). However, as a conservative measure leaching ESLs for both a non-drinking water resource and a drinking water resource were considered, and values are included on Table 4-1.
- **Residential Odor Nuisance.** Table 4-1 provides the published ESL for potential odor nuisance conditions.

The final soil screening level for each constituent was selected by choosing the lowest value based on the above scenarios, shown on Table 4-1 in the last column.

Soil Vapor Screening Levels:

Based on the anticipated future residential land use, Table 4-2 provides a summary the applicable soil vapor ESLs for subsurface chemicals historically detected in at least one soil vapor sample collected from the Site. As indicated on Table 4-2, the following soil vapor ESLs were considered:

- **Subslab/Soil Gas Vapor Intrusion based on Residential Exposure**. For residential exposure to account for potential human health risk from direct exposure to contaminated indoor air, where the volatile contamination originates from a subsurface source.
- **Subslab Odor Nuisance Levels.** Table 4-2 provides the published ESL for potential odor nuisance conditions.

The final soil vapor screening level for each constituent was selected by choosing the lowest value based on the above scenarios, shown on Table 4-2 in the last column

Groundwater Screening Levels:

As described previously, the City of Oakland does not have any plans to develop local groundwater resources for drinking water purposes, because of existing or potential saltwater intrusion, contamination, or poor or limited quantity. However, as a conservative measure ESLs considering groundwater as a drinking water resource were retained as an applicable ESL. Based on the anticipated future residential land use, and considering groundwater as a potential drinking water resource, Table 4-3 provides a summary of applicable groundwater ESLs for subsurface chemicals historically detected in at least one groundwater sample collected from the Site. As indicated on Table 4-3, the following groundwater ESLs were considered:

- **Maximum contaminant levels (MCLs)**, which are health protective drinking water standards to be met by public water systems. The MCL value shown in Table 4-3, is the SFBRWQCB's

MCL Priority value, which factors in California MCLs, public health goals, and notification levels

- **Groundwater Vapor Intrusion based Residential Exposure**. For residential exposure to account for potential volatilization of chemicals from groundwater to indoor air and subsequent direct exposure to indoor air via the inhalation exposure pathway.
- **Odor Nuisance Levels,** to account for potential odor nuisance conditions based on drinking water and non-drinking water pathways.

The final groundwater screening level for each constituent was selected by choosing the lowest value based on the above scenarios, shown on Table 4-3 in the last column

4.2.2 Comparative Analysis

Historical analytical results were compared with the final screening levels identified in Tables 4-1 through 4-3. Final screening levels are included on the analytical summary tables (Tables 3-1 through 3-10) and values which exceed applicable screening levels are shaded in grey. Results are summarized as follows:

Soil

Soil samples have been collected from the Site and analyzed for TPHg, TPHd, TPHmo, VOCs, SVOCs, and metals. Analytical data meets applicable ESLs with the following exceptions:

- At location B-8, petroleum constituents (TPHg, ethylbenzene, and naphthalene exceeded ESLs at the deepest location sampled (11 feet bgs). Field personnel noted a petroleum hydrocarbon odor and positive PID measurements were recorded on the B-8 boring log from approximately 9 to 12 feet bgs.
- No chlorinated VOCs were detected in any of the samples collected.
- All SVOCs were below ELSs with the exception of phenol. In samples collected from four borings, phenol was reported at a maximum concentration of 0.55 mg/kg compared to the ESL of 0.16 mg/kg (RMD notes that the data was "B" flagged by the laboratory which

indicates that phenol was also detected in the laboratory blank). The phenol ESL of 0.16 mg/kg is based on the leaching ESL for drinking water[1].

- One soil sample contained barium above its ESL (B6 at 4.5 feet bgs contained 1,700 mg/kg barium compared to the ESL of 390 mg/kg). One soil sample contained cobalt above its ESL (B4 at 4.5 feet bgs contained 35 mg/kg cobalt compared to its ESL of 23 mg/kg).

Based on this data, the chemicals of potential concern (COPCs) in soil are as follows:

- TPHg
- Ethylbenzene
- Naphthalene
- Phenol
- Barium
- Cobalt

Soil Vapor

Subslab vapor samples have been collected from the Site and analyzed for TPHg and VOCs (including naphthalene). All vapor samples to date have been collected from the Former Maintenance Area in Warehouse 1. All samples analyzed exceeded ELS for TPHg and PCE. Three of the four samples also contained TCE above its ESL.

Based on this data, the chemicals of potential concern (COPCs) in soil vapor are shown below, however RMD acknowledges that the dataset is limited in Site-wide distribution and additional soil vapor data collection is required for the CDIP.

- TPHg
- PCE
- TCE

Groundwater

Groundwater samples have been collected from the Site and analyzed for TPHg, TPHd, TPHmo, and VOCs. One sample (B4) was additionally analyzed for SVOCs. A comparison of analytical data to applicable ESLs indicates the following:

- Samples collected along the eastern portion of the site (B10, B11, B3, and B6) contained low concentrations of TCE that are above its ESL. Based on the assumed groundwater flow

[1] The next lowest ESL for phenol is 9.4 mg/kg which is based on terrestrial habitat. All reported phenol concentrations were well below 9.4 mg/kg.

direction toward the north-northwest, and considering the TCE distribution, it appears that an offsite TCE plume may have migrated beneath the property (Figure 3-3). No other constituents were reported at these locations above ESLs.

- PCE was detected slightly above its ESL at three locations (B1, B2, and B5, Figure 3-3). PCE in groundwater at B3, combined with soil vapor data from this area, suggest a localized PCE source beneath Warehouse 1.
- Petroleum constituents (TPHg, TPHd, and/or benzene) slightly exceeded ESLs at B5 and B8. These locations are located in the former suspected UST Area 1 and the nearest groundwater sample collected in the assumed downgradient direction.
- As noted previously, soil samples from the property contained concentrations of the SVOC, phenol, which exceeded its ESL based on the groundwater leaching pathway. One groundwater sample (B4) was analyzed for SVOCs. Phenol concentrations in B4 were not detected above its laboratory reporting limit of 0.021 µg/L, which is below is groundwater ESL of 5 µg/L.

Based on this data, the chemicals of potential concern (COPCs) in groundwater are as follows:

- TPHg
- TPHd
- Benzene
- PCE
- TCE
- cis-1,2-DCE[Note 1]
- trans-1,2-DCE[Note 1]
- vinyl chloride[Note 1]

[Note 1]Not detected in samples, however, retained as COPCs because it is a breakdown product of PCE.

4.3 Data Gap Analysis

Prior analytical data was evaluated, considering the known property use/areas of concern and results of the CSM. Results are provided in Table 4-4. In summary, the following data gaps were identified:

- Lateral and vertical characterization of soil vapor beneath the property.
- Collection of soil data in the vicinity of observation boring T5.
- Completion of an underground utility survey to verify locations of potential soil vapor conduits beneath the property.

- Characterization of shallow soil across the property to evaluate potential exposure to future construction workers and adjacent properties during site grading/soil disturbance as part of the upcoming property redevelopment.
- Additional groundwater characterization with three on-Site groundwater monitoring wells to confirm results of previous grab groundwater sampling and determining Site-specific groundwater flow direction. If needed, collection of off-Site grab groundwater samples to provide lateral definition of the PCE plume.

4.3.1 Data Gap Investigation

Investigations will be conducted on-Site (Figures 4-3 and 4-4), with potential step-out locations off-Site to further characterize the soil, soil gas, and groundwater conditions. A Data Gap Investigation Workplan detailing the proposed scope of work is provided in Appendix B. The findings from the investigation will be incorporated into the Data Gap Investigation Report prepared under the supervision of a California Professional Geologist for submittal to the ACDEH.

5.0 SELECTED CORRECTIVE ACTIONS

Corrective actions are required to remediate and mitigate COPCs to the extent feasible to address the long-term protection of human health and environment. Based on Site conditions and planned redevelopment activities, source removal via excavation is the presumptive remedy for effectively reducing chemicals of concern (CalEPA, 2010). In addition, a monitored natural attenuation (MNA) program for groundwater and a vapor mitigation may be implemented to address residual contamination in groundwater and soil vapor, if required following source removal. The supporting rationale for the selected technologies is provided below.

5.1 Soil/Source Area Excavation

Soil beneath the Site is associated with releases of petroleum constituents and chlorinated VOCs above applicable screening levels. Excavation can remove soil-containing COPC above their respective ESLs. The final excavation limits will be based on confirmation sampling results and/or physical limitations, e.g., building foundations. Based on the identified criteria, the remedial goal for source area soil are the ESLs provided in Table 4-1 for unrestricted use.

Soil that is determined to be within a "source area" will be excavated using hydraulic earthmoving equipment. The excavation equipment will be operated by a California Class A Hazardous Waste licensed contractor. The excavation will be advanced vertically and horizontally based on real-time field measurements of VOCs in excavation sidewalls using a PID, physical limitations, and post-excavation soil sample analytical data. Soil vapor data collected during the Data Gap Investigation will also be considered to determine the proposed excavation areas. Areas with elevated soil vapor that are attributed to soil matrix impacts (and not due to volatilization from groundwater), will be considered for excavation, even if soil concentrations meet ESLs.

Based on data collected to date, at least one soil source area is present (located beneath Warehouse 1) near the Former Maintenance Area. Data collected during the Data Gap Investigation will be evaluated for indications of additional on-Site source areas. Following results of the Data Gap Investigation, a CDIP will be prepared which details the planned excavation activities (Section 5.4).

5.2 Vapor Intrusion Mitigation

A vapor barrier will be used to control vapor intrusion, if required based on results of the data gap investigation, under the footprint of the applicable future residential buildings. Subslab monitoring ports will be installed through the first-floor building slab to monitor subslab vapor concentrations over time and pressure gradients where appropriate. In addition, indoor air sampling will be conducted to document the effectiveness of the vapor barrier to control vapor intrusion prior to occupation. Details of the vapor barrier design and associated monitoring program will be included in the CDIP.

5.3 Monitored Natural Attenuation

Monitored natural attenuation processes include a variety of physical, chemical, or biological processes that, under favorable conditions, reduce the mass, toxicity, mobility, volume, or chemical concentrations in soil, soil vapor, or groundwater. Based on the groundwater sampling conducted to date, chemical concentrations in groundwater beneath the Site are relatively low (below, or slightly above their respective MCLs[2]) and do not warrant active remediation. An MNA program will be implemented to monitor the effectiveness of natural biological, chemical, and physical processes to reduce VOCs in groundwater over time. As discussed in the Workplan (Appendix B) a monitoring well network will be installed at the Site. Data collected from the monitoring well network will be used to:

- Evaluate existing VOC concentrations in groundwater (historic data was collected using grab groundwater sampling methodologies);
- Verify and monitor groundwater flow direction beneath the Site;
- Determine whether offsite sampling and/or monitoring is warranted;

[2] Although Vapor Intrusion (VI) ESLs for groundwater have been considered in the development of groundwater screening levels (Table 4-3), MCLs have been referenced in this argument to determine whether active groundwater remediation is warranted. Use of groundwater VI ESLs has been included in the data gap evaluation to consider when/where soil vapor data collection efforts are required. However, based on RMD's experience, considering the depth to groundwater and site lithology (predominantly fine-grained units), the groundwater VI ESLs may be overly conservative as a trigger level to determine when active groundwater remediation is warranted. This assumption will be verified during the data gap investigation as the site-specific vertical attenuation of VOCs is measured.

- Assess the origin (onsite or offsite) of the TCE detected in groundwater in the eastern portion of the property; and
- Evaluate natural attenuation of VOCs over time and ensure restoration of potential beneficial use is achievable within a reasonable amount of time.

The proposed MNA program will be detailed in the Data Gap Investigation Report following Workplan implementation.

5.4 Corrective Action Design and Implementation Plan

A CDIP will be prepared following regulatory approval and public comment of the CAP, following completion of the data gap investigation, and prior to corrective action implementation.

The CDIP will include details of the proposed source removal excavation activities, including:

- Grading and removal of subsurface debris (i.e. concrete or undocumented fill), required for geotechnical considerations as part of property redevelopment
- Confirmation sampling plan
- Erosion, dust, and odor control measures (which will consider results of the shallow soil sampling detailed in the Site Investigation Workplan)
- Air monitoring plan
- Soil disposal and transportation procedures
- General excavation procedures
- Contingency measures for discovery of unexpected underground structures
- Backfilling of excavation
- Site security and access

In addition, the CDIP will include details of the vapor barrier design and associated monitoring plan and the MNA plan (the proposed MNA plan will also be included in the Data Gap Investigation Report, as mentioned in Section 5.3).

The CDIP will be prepared under the supervision of a California Professional Geologist for submittal to the ACDEH. Implementation of the CDIP will be the responsibility of the current Property Owner.

5.5 CDIP Completion Report

Following completion of the corrective actions a Completion Report will be prepared that details the CPIP implementation activities. The report will include:

- Introduction and executive summary; including corrective actions, and any changes to the corrective action design or field activities;
- Field data sheets with all observations (i.e., notes, charts, sketches, or photographs), air monitoring results, and a record of field and/or laboratory tests;
- Details of the activities, including soil excavation areas, vapor barrier installation, soil disposal documentation, post-excavation soil sample results, sample locations, laboratory data certificates, and copies of the chain-of-custody forms; and
- Summary of deviations from the CDIP.

The CDIP Completion Report will be prepared under the supervision of a California Professional Geologist, with appropriate qualifications for submittal to the ACDEH for review and approval.

6.0 SCHEDULE

The project schedule through submittal of the CDIP is provided below.

Task	Estimate Start Date	Estimated Completion Date
Submittal of CAP with Data Gap Investigation Workplan	__	August 5, 2019
ACDEH Comments to Data Gap Investigation Workplan	August 5, 2019	August 19, 2019
RMD Completion of Data Gap Investigation	August 26, 2019	September 27, 2019
ACDEH CAP Review/Public Comment Period & Response	August 5, 2019	September 27, 2019
ACDEH CAP Approval	__	September 30, 2019
Preparation and Submittal of Data Gap Investigation Report and Proposed MNA Program	September 30, 2019	October 18, 2019
Submittal of CDIP	__	Within 60 days of obtaining foundation and grading plans from Riaz

7.0 REFERENCES

Basics Environmental (Basics), 2018. Phase I Environmental Site Assessment. December 14.

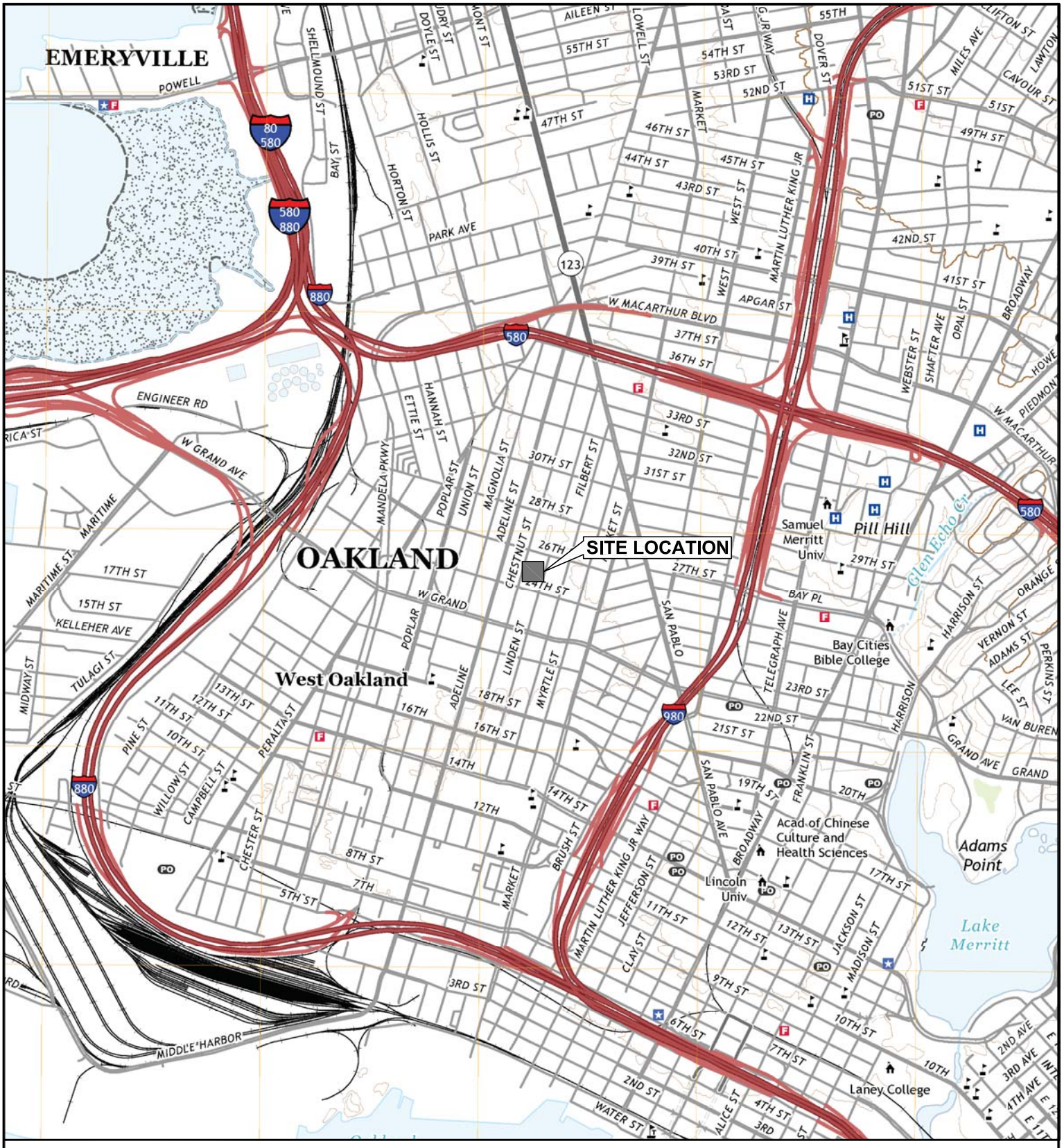
California Regional Water Quality Control Board, San Francisco Bay Region (CRWQCB-SFBR), 2019. Updated Environmental Screening Levels (ESLs). January 24.

P&D Environmental, Inc. (P&D), 2019a. Limited Subsurface Investigation Report. January 30.

P&D, 2019b. Limited Subsurface Investigation Report. April 24.

Regional Water Quality Control Board (RWQCB), 1999. East Bay Plain Groundwater Basin Beneficial Use Evaluation Report, Alameda and Contra Costa Counties. June.

FIGURES



SCALE 1:24000

1 MILE 1/2 0

7000 FEET 6000 5000 4000 3000 2000 1000 0 1000

RMD ENVIRONMENTAL SOLUTIONS

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

SITE LOCATION MAP

N

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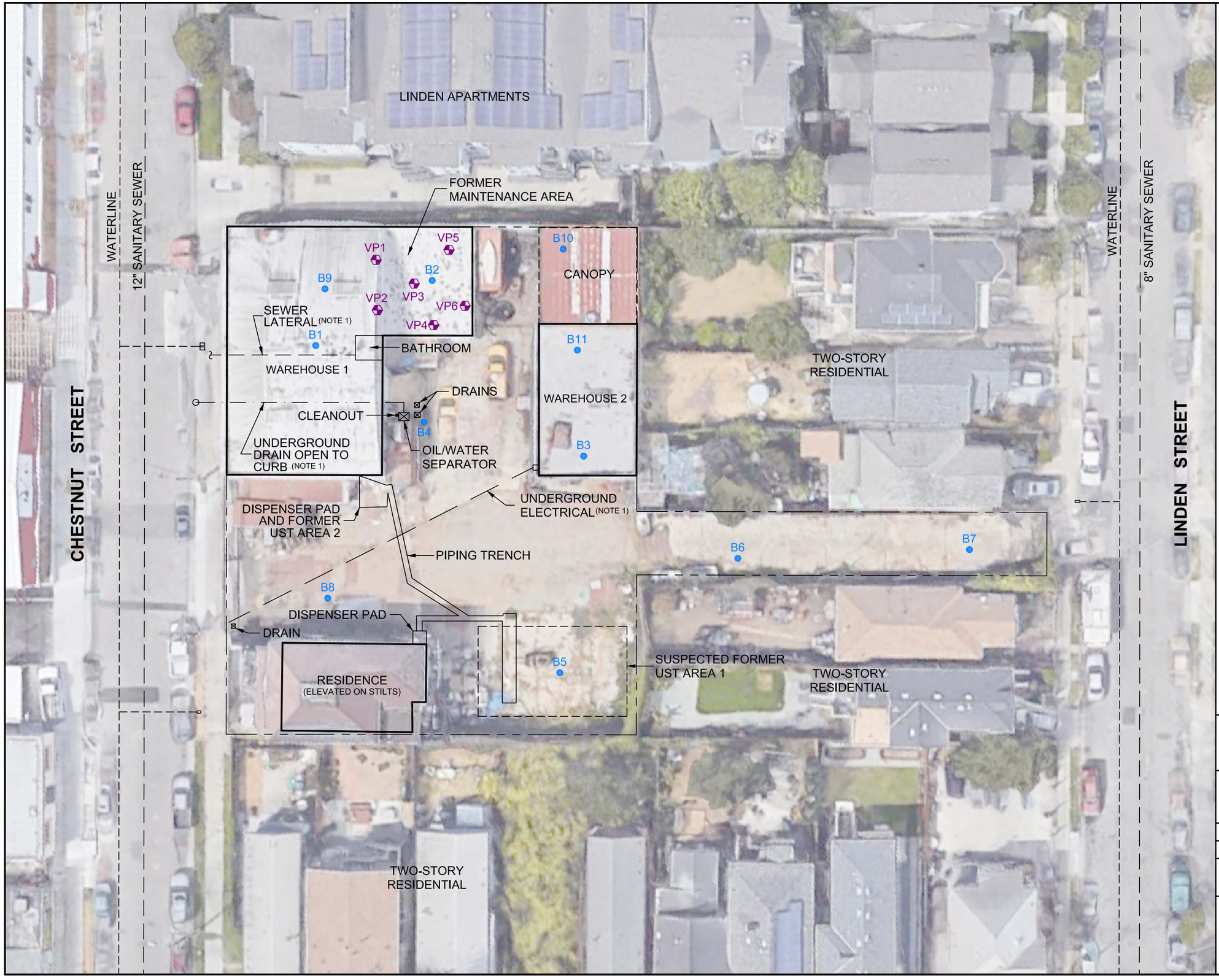
01-DAL-001	08/2019	BCD	KR

Base map from USGS 7.5 minute
Oakland West (dated 2018)
California topographic quadrangle

FIGURE 1-1

2432-SLM.dwg



LEGEND

- B11 — HISTORICAL SOIL AND GRAB GROUNDWATER SAMPLE LOCATION (APPROXIMATE)
- VP6 — SUB SLAB VAPOR PIN LOCATION (APPROXIMATE)
- SUSPECTED FORMER UST AREAS & AREAS OF 4/15/19 INVESTIGATION (29 BORINGS UP TO 13 FEET BELOW GROUND SURFACE DEEP)(SEE FIGURE 3-4)

NOTE:

1. Underground utility locations shown are approximate and need to be confirmed with underground utility survey.

SITE PLAN WITH HISTORICAL SAMPLE LOCATIONS

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

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0 30 60
HORIZONTAL SCALE IN FEET

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FIGURE 2-1

N

2432-Base.dwg

LEGEND

- SCHOOL
- COMMERICAL / INDUSTRIAL
- SINGLE FAMILY HOMES
- APARTMENTS

SITE VICINITY MAP

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
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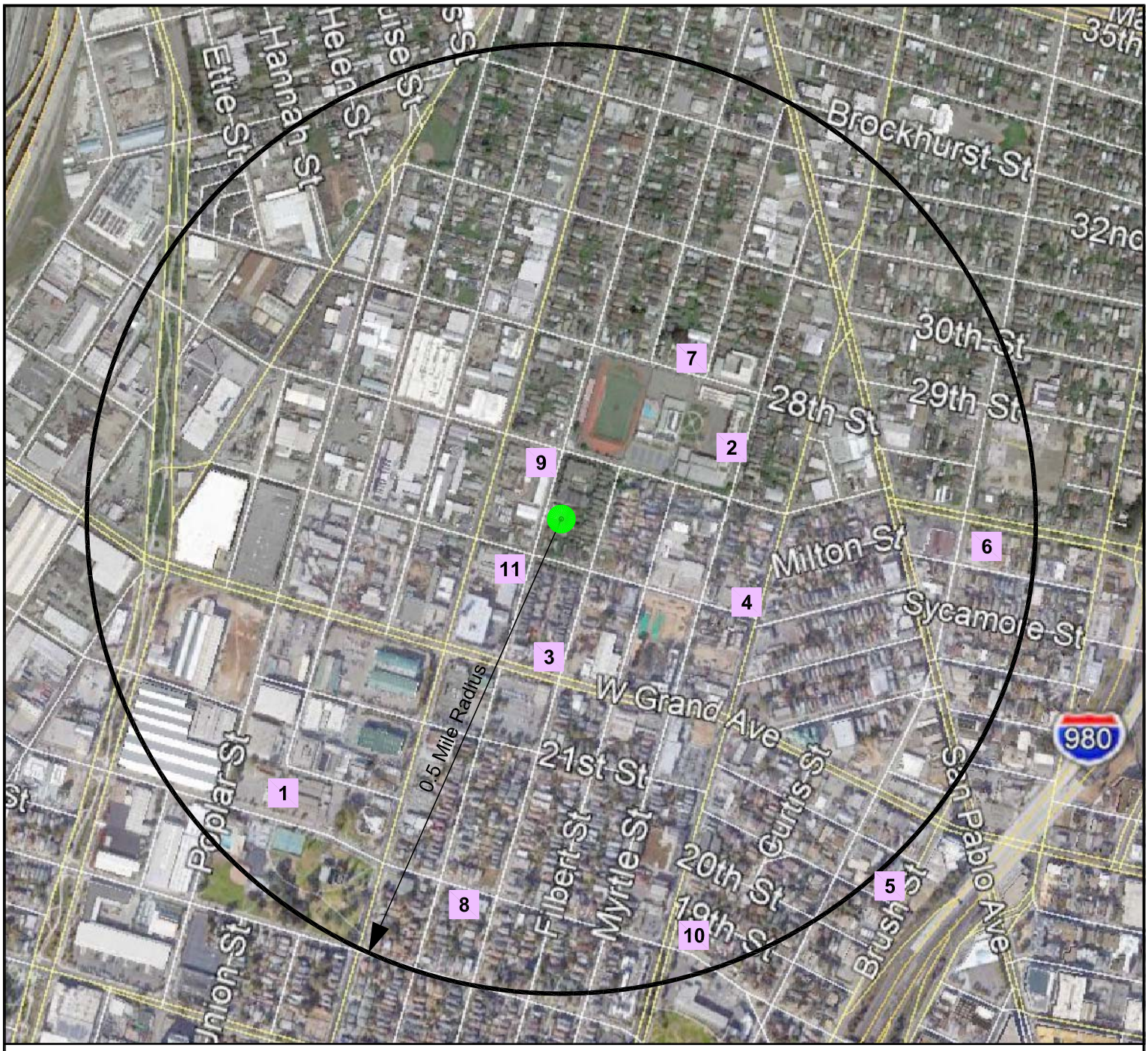
0 80 160
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 2-2

N

2432-VCM.dwg



LEGEND

2432 Chestnut Street

1 — Schools
Ralph J. Bunche Academy
1240 18th St, Oakland, CA 94607

2 — McClymonds High School
2607 Myrtle St, Oakland, CA 94607

3 — Oakland Head Start
1058 West Grand Avenue, Oakland, CA 94607

4 — Child Care Facilities
Boys & Girls Clubs of Oakland
920 24th St, Oakland, CA 94607

5 — YMCA
756 21st St, Oakland, CA 94612

6 — St Andrews Mbc Child Care Educational Program
2608 West St, Oakland, CA 94612

7 — EurAupair Au Pair Program
1002 28th St, Oakland, CA 94608

8 — Elderly Care Facilities
West Oakland Senior Center - 1724 Adeline St, Oakland, CA 94607

9 — Vincent Academy
2501 Chestnut St, Oakland, CA 94607

10 — Mayari's Playhouse
875 19th St, CA 94607

11 — Daycare We Care
1131 24th St. #213, Oakland, CA 94607

RMD ENVIRONMENTAL SOLUTIONS

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

POTENTIAL SENSITIVE RECEPTOR SURVEY MAP

N

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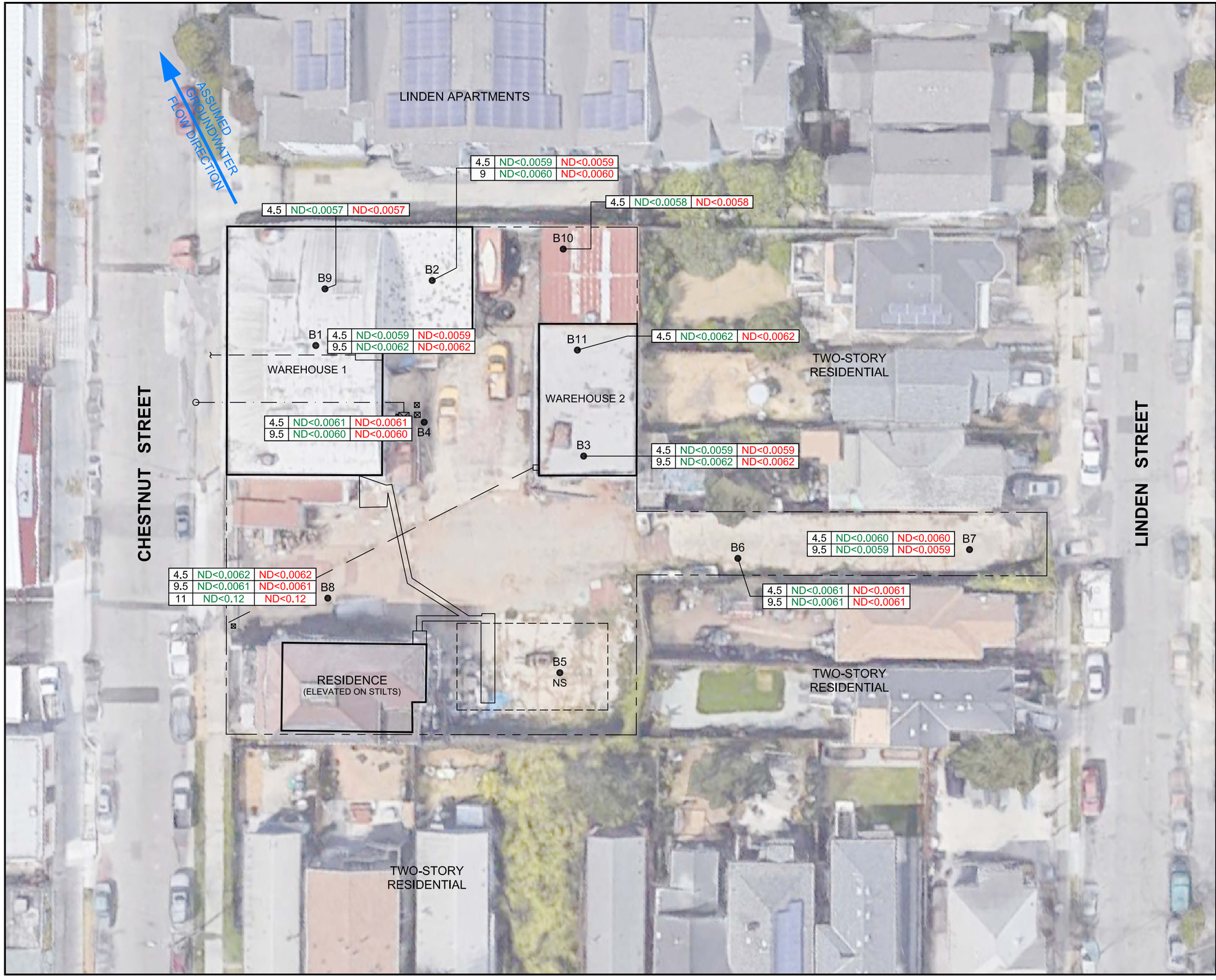
01-DAL-001	08/2019	BCD	KD

0 800 1600
HORIZONTAL SCALE IN FEET

FIGURE 2-3

2432-PSRS.dwg



LEGEND

B11 ●	HISTORICAL SOIL AND GRAB GROUNDWATER SAMPLE LOCATION (APPROXIMATE)
⌐ ¬ ⌊ ⌋	SUSPECTED FORMER UST AREA & AREA OF 4/15/19 INVESTIGATION (21 BORINGS UP TO 13 FEET BELOW GROUND SURFACE DEEP)
PCE	TETRACHLOROETHENE
TCE	TRICHLOROETHENE

4.5	ND<0.0059	ND<0.0059
9.5	ND<0.0059	ND<0.0059

- TCE CONCENTRATION
- PCE CONCENTRATION
- DEPTH FEET BELOW GROUND SURFACE

ND	NOT DETECTED ABOVE INDICATED REPORTING LIMIT
NS	NOT SAMPLED

NOTES:

1. SITE FEATURE LABELS AND HISTORICAL SAMPLE LOCATIONS ARE PROVIDED ON FIGURE 2-1 (SITE PLAN)
2. CONCENTRATIONS ARE REPORTED IN mg/kg. SAMPLES COLLECTED JANUARY 8 & 9, 2019 AND MARCH 28, 2019.

PCE AND TCE CONCENTRATIONS IN SOIL

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

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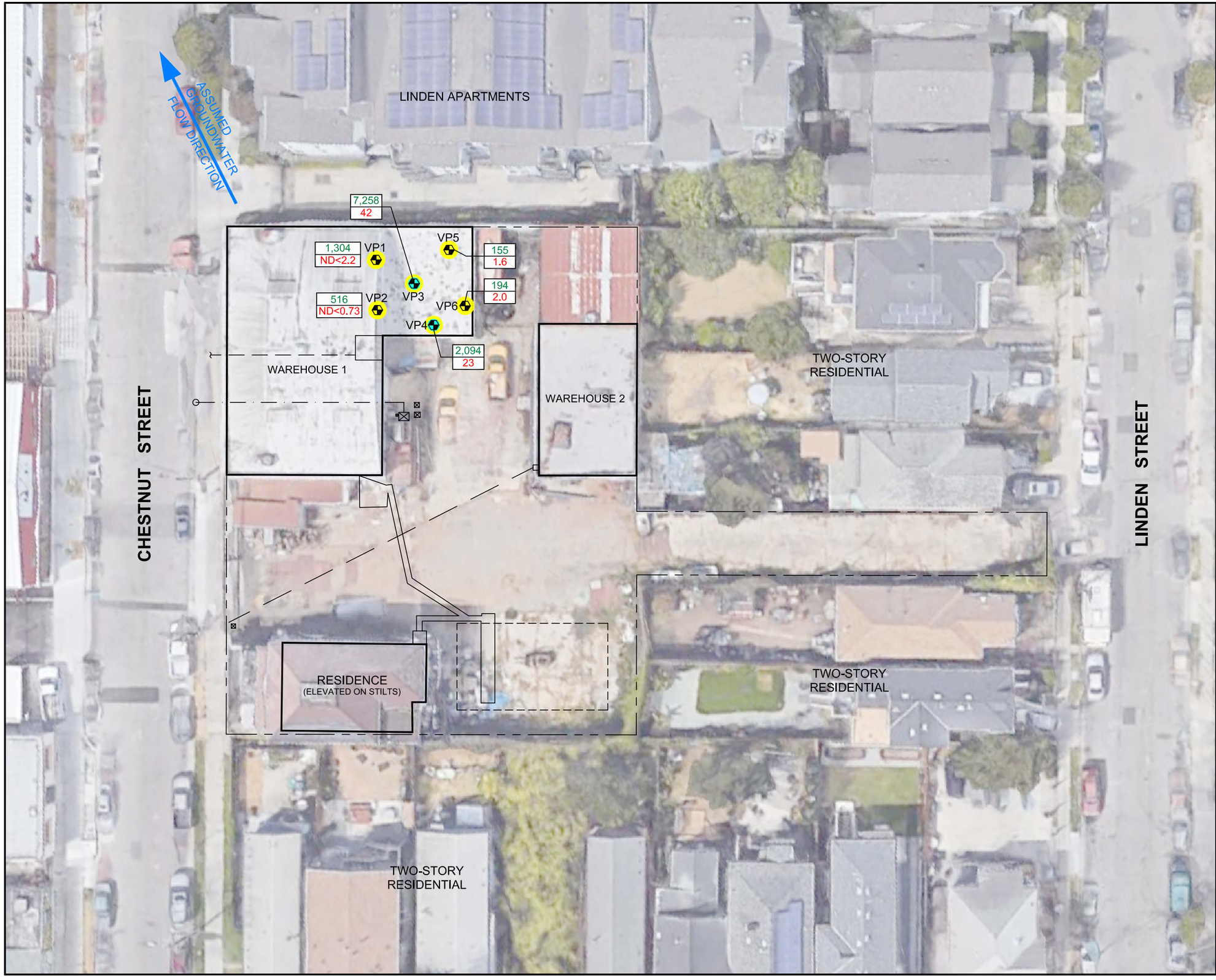
0 30 60
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 3-1

N

2432-Data.dwg



LEGEND

VP6	SUB SLAB VAPOR PIN LOCATION (APPROXIMATE)
	SUSPECTED FORMER UST AREA & AREA OF 4/15/19 INVESTIGATION (21 BORINGS UP TO 13 FEET BELOW GROUND SURFACE DEEP)
PCE	TETRACHLOROETHENE
TCE	TRICHLOROETHENE
2,094 / 23	PCE CONCENTRATION / TCE CONCENTRATION
	LOCATION EXCEEDS PCE SUBSLAB SCREENING LEVELS
	LOCATION EXCEEDS TCE SUBSLAB SCREENING LEVELS
ND	NOT DETECTED ABOVE INDICATED REPORTING LIMIT

NOTES:

1. SITE FEATURE LABELS AND HISTORICAL SAMPLE LOCATIONS ARE PROVIDED ON FIGURE 2-1 (SITE PLAN)
2. CONCENTRATIONS ARE REPORTED IN µg/m³ BASED ON SUBSLAB VAPOR SAMPLES COLLECTED 4/2/2019.

PCE AND TCE CONCENTRATIONS IN SUBSLAB VAPOR

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

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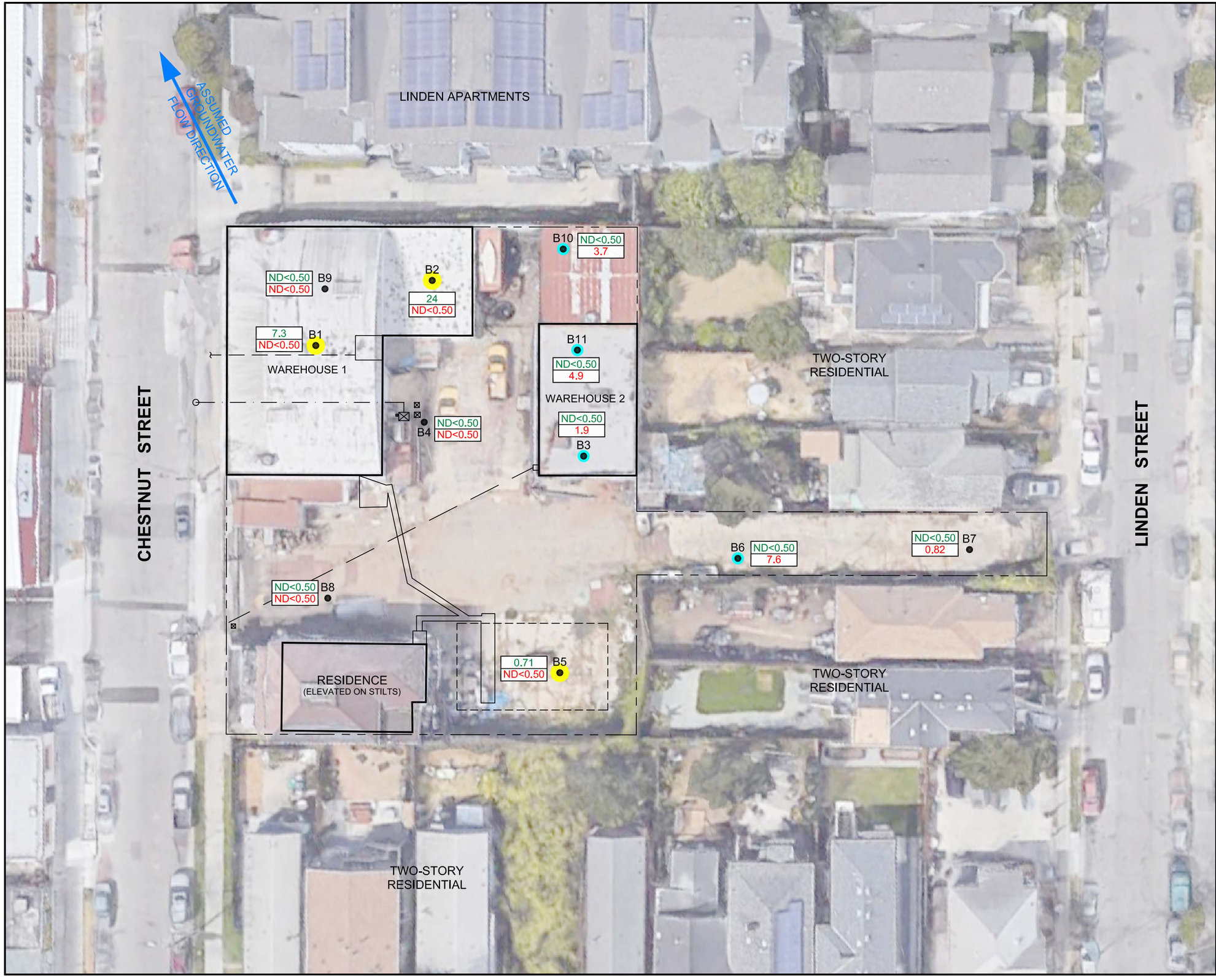
0 30 60
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 3-2

N

2432-Data.dwg



LEGEND

B11 ●	HISTORICAL SOIL AND GRAB GROUNDWATER SAMPLE LOCATION (APPROXIMATE)
⌐ ¬ ⌐ ¬	SUSPECTED FORMER UST AREA & AREA OF 4/15/19 INVESTIGATION (21 BORINGS UP TO 13 FEET BELOW GROUND SURFACE DEEP)
PCE	TETRACHLOROETHENE
TCE	TRICHLOROETHENE
7.3	PCE CONCENTRATION
<0.50	TCE CONCENTRATION
●	LOCATION EXCEEDS PCE GROUNDWATER SCREENING LEVELS
●	LOCATION EXCEEDS TCE GROUNDWATER SCREENING LEVELS
ND	NOT DETECTED ABOVE INDICATED REPORTING LIMIT

NOTES:

1. SITE FEATURE LABELS AND HISTORICAL SAMPLE LOCATIONS ARE PROVIDED ON FIGURE 2-1 (SITE PLAN)
2. CONCENTRATIONS ARE REPORTED IN µg/L BASED ON GRAB GROUNDWATER SAMPLES COLLECTED 1/9/2019 AND 3/28/2019.

PCE AND TCE CONCENTRATIONS IN GROUNDWATER

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
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0 30 60
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 3-3

N

2432-Data.dwg

LEGEND

B3	HISTORICAL SOIL AND GRAB GROUNDWATER SAMPLE LOCATION (APPROXIMATE)
	SUSPECTED FORMER UST AREAS & AREAS OF 4/15/19 INVESTIGATION (29 BORINGS UP TO 13 FEET BELOW GROUND SURFACE DEEP)
T21	30"x30" CUTOUT IN CONCRETE & BORING ADVANCED (APRIL 2019)
(13)	MAXIMUM DEPTH EXPLORED IN FEET BELOW GROUND SURFACE
	NO NON-NATIVE MATERIAL OBSERVED IN BORING
	GRAVELLY FILL WITH CONCRETE, CLAY PIPE AND/OR FIBERGLASS FRAGMENTS OBSERVED IN BORING
UST	UNDERGROUND STORAGE TANK
PID	PHOTOIONIZATION DETECTOR
ppm	PARTS PER MILLION

NOTE:

1. Underground utility locations shown are approximate and need to be confirmed with underground utility survey.
2. Ust Exploratory Investigation conducted by P&D Environmental, Inc.

UST EXPLORATORY INVESTIGATION

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

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01-DAL-001	08/2019	BCD	KR

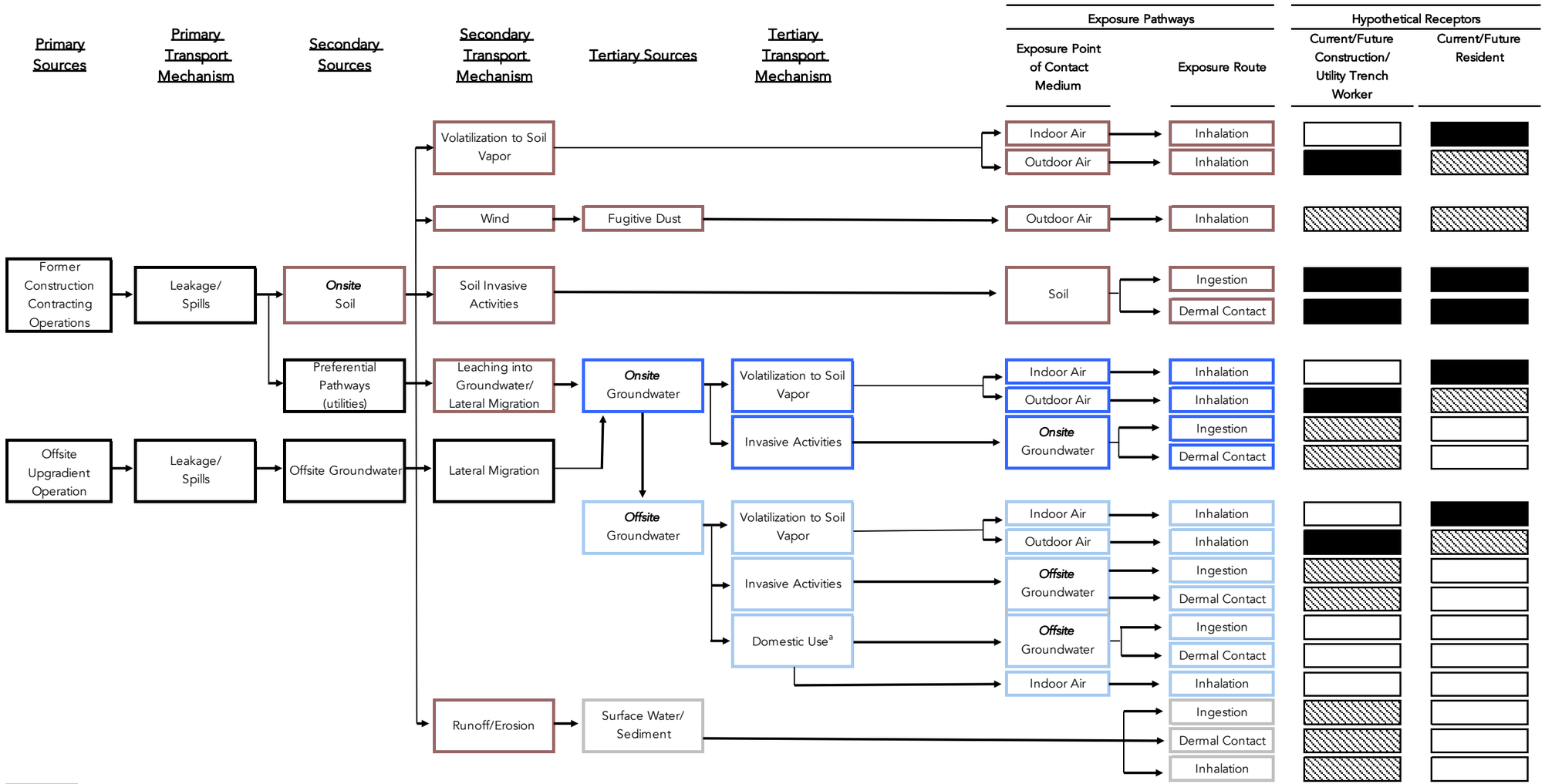
0 10 20
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 3-4

N

2432-UEI.dwg



CSM components related to soil.

CSM components related to onsite groundwater.

CSM components related to offsite groundwater.

CSM components related to surface water.

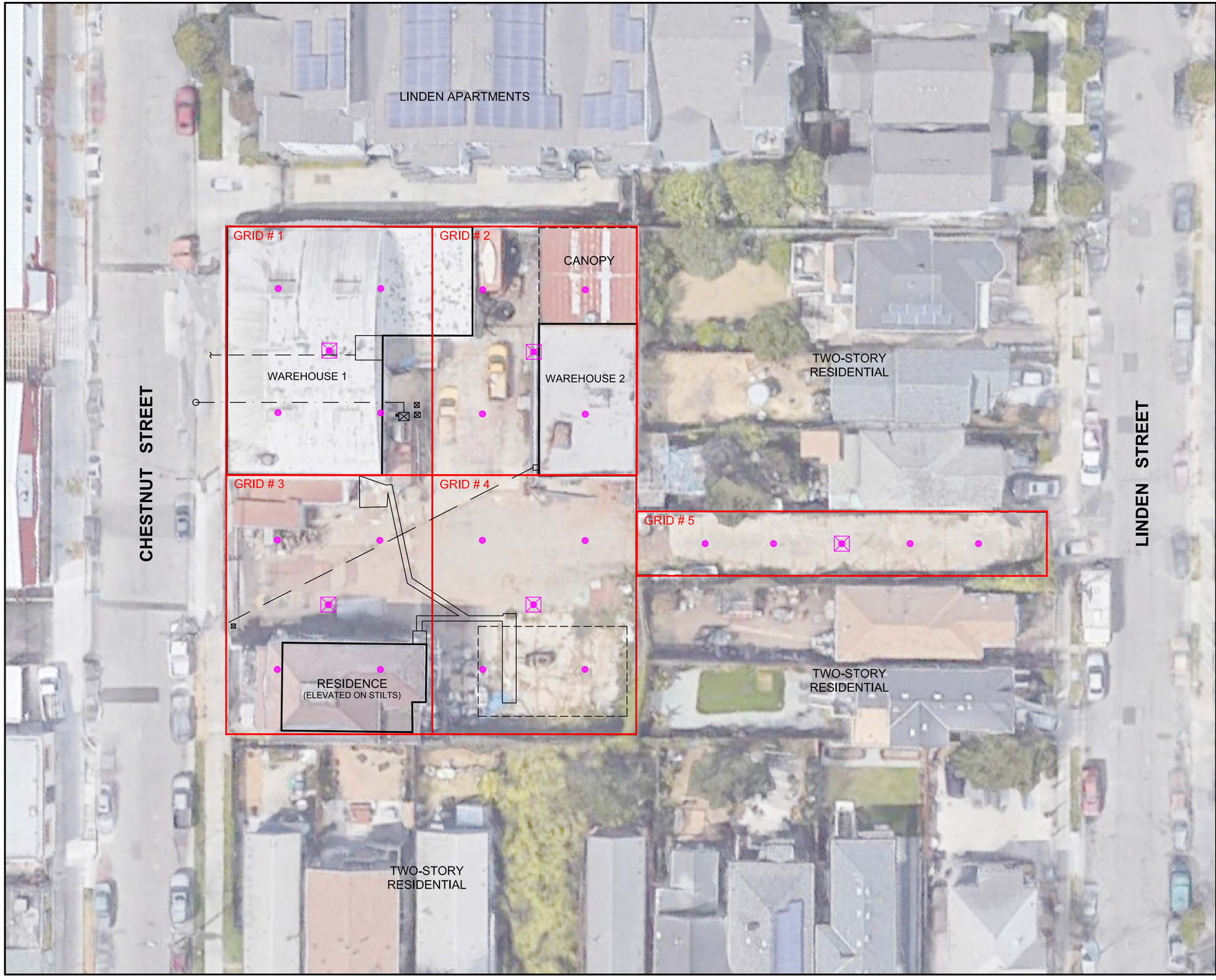
Receptor likely to be exposed via this route, so pathway is considered potentially complete.

Receptor may be exposed via this route, so pathway is considered potentially complete; however, pathway is considered minor.

Pathway is incomplete, no further evaluation required.

[a] Shallow groundwater is not currently used and is not likely to be developed for beneficial use.

2420 & 2432 Chestnut Street and 2423 Linden Street Oakland, California			CONCEPTUAL SITE MODEL		
PROJECT NO.	DATE	DRAWN BY	APPROVED BY	RMD ENVIRONMENTAL SOLUTIONS 609 GREGORY LANE, SUITE 200 PLEASANT HILL, CA 94523	FIGURE 4-1
01-DAL-001	07/10/19	KD	KD		



LEGEND

- SUSPECTED FORMER UST AREAS & AREAS OF 4/15/19 INVESTIGATION (29 BORINGS UP TO 13 FEET BELOW GROUND SURFACE DEEP)
- PROPOSED COMPOSITE SAMPLE LOCATION (5 POINT) @ 0.5 ft. bgs. (APPROXIMATE LOCATION)
- ONE DISCREET SAMPLE FROM 0.5ft. bgs WILL BE ANALYZED FROM EACH OF THE FIVE GRID AREAS. THE DISCREET SAMPLE LOCATION WILL BE BASED ON THE LOCATION WITH THE HIGHEST PID READING WITHIN THE SAMPLE GRID
- COMPOSITE SAMPLE GRID AREA
- ft. bgs. — FEET BELOW GROUND SURFACE

NOTES:

1. SITE FEATURE LABELS AND HISTORICAL SAMPLE LOCATIONS ARE PROVIDED ON FIGURE 2-1 (SITE PLAN)
2. COMPOSITE SAMPLES WILL BE ANALYZED FOR CAM 17 METALS (6020), TOTAL PETROLEUM HYDROCARBONS (8015), AND ASBESTOS (OSHA METHOD ID-191).
3. DISCRETE SAMPLES WILL BE ANALYZED FOR VOLATILE ORGANIC COMPOUNDS (VOCS 8260B), AND SEMI-VOLATILE ORGANIC COMPOUND (8270C).

PROPOSED SHALLOW SOIL SAMPLE LOCATIONS

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	08/2019	BCD	KR

0 30 60
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 4-2

N

2432-PSVP.dwg

LEGEND

B11	HISTORICAL SOIL AND GRAB GROUNDWATER SAMPLE LOCATION (APPROXIMATE)
VP6	SUB SLAB VAPOR PIN LOCATION (APPROXIMATE)
	SUSPECTED FORMER UST AREAS & AREAS OF 4/15/19 INVESTIGATION (29 BORINGS UP TO 13 FEET BELOW GROUND SURFACE DEEP)
SVP-1	PROPOSED SOIL VAPOR MONITORING POINT (~5 ft. bgs.)
SVP-6	PROPOSED DUAL NESTED SOIL VAPOR MONITORING POINT (~5 ft. bgs. & 9 ft.bgs.)
MW-1	PROPOSED GROUNDWATER MONITORING WELL
ft. bgs.	FEET BELOW GROUND SURFACE

NOTES:

1. SITE FEATURE LABELS AND HISTORICAL SAMPLE LOCATIONS ARE PROVIDED ON FIGURE 2-1 (SITE PLAN)

PROPOSED SOIL VAPOR POINT AND GROUNDWATER MONITORING WELL LOCATIONS

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	08/2019	BCD	KR

0 30 60
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 4-3

N

2432-PSVP.dwg

TABLES

Table 3-1
Summary of Soil Analytical Results - Petroleum Hydrocarbons and VOCs
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Boring ID	Sample Depth (feet bgs)	Date	TPH-G (mg/Kg)	TPH-D (mg/Kg)	TPH-MO (mg/Kg)	TPH-BO (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl-benzene (mg/Kg)	Total Xylenes (mg/Kg)	PCE (mg/Kg)	TCE (mg/Kg)	cis-1,2-DCE (mg/Kg)	trans-1,2-DCE (mg/Kg)	Vinyl Chloride (mg/Kg)	Carbon Tetrachloride (mg/Kg)	Naphthalene (mg/Kg)	Other VOCs
Final Screening Level [Note 1]			100	260	100	--	0.025	3.2	0.43	2.1	0.08	0.085	0.19	0.65	0.0015	0.011	0.042	
B1	4.5	1/9/2019	ND<1.2	ND<1.2	ND<5.9	ND<5.9	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	Note 2
	9.5	1/9/2019	ND<1.2	ND<1.2	ND<5.9	ND<6.2	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	
B2	4.5	1/9/2019	ND<1.2	ND<1.2	ND<5.9	ND<5.9	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	
	9	1/9/2019	ND<1.2	ND<1.2	ND<5.9	ND<6.0	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	
B3	4.5	1/9/2019	ND<1.2	ND<1.2	ND<5.9	ND<5.9	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	
	9.5	1/9/2019	ND<1.2	ND<1.2	ND<5.9	ND<6.2	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	
B4	4.5	1/8/2019	ND<1.2	ND<1.2	ND<5.9	ND<6.1	ND<0.0061	ND<0.0061	ND<0.0061	0.037	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	
	9.5	1/8/2019	ND<1.2	9.9	55	51	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	
B6	4.5	1/8/2019	ND<1.2	ND<1.2	ND<5.9	ND<6.1	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	
	9.5	1/8/2019	ND<1.2	ND<1.2	ND<5.9	ND<6.1	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	
B7	4.5	1/8/2019	ND<1.2	ND<1.2	ND<5.9	ND<6.0	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	
	9.5	1/8/2019	ND<1.2	ND<1.2	ND<5.9	ND<5.9	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	
B8	4.5	1/8/2019	ND<1.2	ND<1.2	ND<5.9	ND<6.2	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	
	9.5	1/8/2019	ND<1.2	ND<1.2	ND<5.9	ND<6.1	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	
	11	1/8/2019	220 B	13	ND<5.9	15	ND<0.12	ND<0.12	0.60	0.72	ND<0.12	ND<0.12	ND<0.12	ND<0.12	ND<0.12	ND<0.12	0.74	
B9	4.5	3/28/2019	ND<1.1	ND<1.1	ND<5.7	ND<5.7	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	
B10	4.5	3/28/2019	ND<1.2	ND<1.2	ND<5.8	ND<5.8	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	
B11	4.5	3/28/2019	ND<1.2	ND<1.2	ND<6.2	ND<6.2	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	

Notes:

Shaded data exceeds Final Screening Levels

[Note 1] Final Screening levels are based on the lowest applicable SFBRWQCB ESL value. See Table 4-1.

[Note 2] Refer to Table 3-2 for maximum reported concentrations of "Other VOCs". Other VOCs were reported by the laboratory at cocentrations that were either below ESLs or reported contituents do not have ESLs associated with them and are not expected to be regulatory drivers for investigation or remediation.

bgs	Below ground surface.
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board.
ESL	Environmental Screening Level.
ND<0.010	Particular analyte not detected above laboratory reporting limit.
B	The same analyte is found in the associated blank.
mg/Kg	Milligrams per kilogram.
--	No published value.
VOCs	Volatile Organic Compounds.
TPH-G	Total Petroleum Hydrocarbons as Gasoline.
TPH-D	Total Petroleum Hydrocarbons as Diesel.
TPH-MO	Total Petroleum Hydrocarbons as Motor Oil.
TPH-BO	Total Petroleum Hydrocarbons as Bunker Oil.
PCE	Tetrachloroethene.
TCE	Trichloroethene.
DCE	Dichloroethene.

Table 3-2
Maximum Concentrations of Other VOC Constituents Detected in Soil
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Analyte	Maximum Detected Concentration *(mg/Kg)*	Final Screening Levels [Note 1] *(mg/Kg)*
Isopropylbenzene	0.25	--
4-Isopropyltoluene	0.15	--
n-Butylbenzene	0.71	--
sec-Butylbenzene	0.19	--
n-Propylbenzene	1.0	--
1,2,4-Trimethylbenzene	2.6	--
1,3,5-Trimethylbenzene	0.16	--

Notes:

[Note 1] Final Screening Levels are based at the lowest value applicable SFBRWQCB ESLs. See Table 4-1.

-- No published value.
mg/Kg Milligrams per kilogram.
SFBRWQCB San Francisco Bay Regional Water Quality Control Board.
ESL Environmental Screening Level.

Table 3-3
Summary of Soil Analytical Results - SVOCs
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Boring ID	Sample Depth (feet bgs)	Date	Benzo (a) anthracene (mg/Kg)	1,1 - Biphenyl (mg/Kg)	Bis (2-ethylhexl) Adipate (mg/Kg)	Bis (2-ethylhexl) Phthalate (mg/Kg)	2-Chlorophenol (mg/Kg)	Di-n-Butyl Phthalate (mg/Kg)	Phenanthracene (mg/Kg)	Phenol (mg/Kg)	Other SVOCs
Final Screening Levels [Note 1]			0.63	0.42	--	0.80	0.012	--	--	0.16	
B1	4.5	1/9/2019	ND<0.0059	ND<0.015	0.26 J	0.011	ND<0.0059	0.0056	ND<0.0059	0.25 B	See Note 2
	9.5	1/9/2019	NA								
B2	4.5	1/9/2019	ND<0.0059	ND<0.015	ND<0.59	0.0044 J	ND<0.0059	0.0027	ND<0.0059	0.063 B	
	9	1/9/2019	NA								
B3	4.5	1/9/2019	ND<0.0059	0.0028 J	ND<0.59	0.013	ND<0.0059	0.0031	ND<0.0059	0.018 B	
	9.5	1/9/2019	NA								
B4	4.5	1/8/2019	0.0054 J	0.0031 J	ND<0.61	0.0049 J	ND<0.0061	ND<0.0031	ND<0.0061	0.16 B	
	9.5	1/8/2019	ND<0.0060	0.0035 J	ND<0.60	ND<0.0060	0.0024 J	ND<0.0030	ND<0.0060	0.11 B	
B6	4.5	1/8/2019	ND<0.0061	0.0038 J	ND<0.61	0.0058 J	0.0027 J	0.0029 J	ND<0.0061	0.55 B	
	9.5	1/8/2019	ND<0.0059	ND<0.015	ND<0.59	0.011	ND<0.0059	0.0056	ND<0.0059	0.25 B	
B7	4.5	1/8/2019	ND<0.0060	0.0029 J	ND<0.60	ND<0.0060	ND<0.0060	ND<0.0030	0.00086 J	0.0036 JB	
	9.5	1/8/2019	NA								
B8	4.5	1/8/2019	ND<0.0062	ND<0.016	ND<0.62	ND<0.0062	ND<0.0062	ND<0.0031	0.00090 J	0.010 B	
	9.5	1/8/2019	NA								
	11	1/8/2019	NA								
B9	4.5	3/28/2019	NA								
B10	4.5	3/28/2019	NA								
B11	4.5	3/28/2019	NA								

Notes:
Shaded values exceed the Final Screening levels.

[Note 1] Final Screening Levels are based on the lowest value of applicable SFBRWQCB ESLs. See Table 4-1.

[Note 2] Refer to laboratory report for full analyte list. No other SVOCs were reported above laboratory detection limits.

SFBRWQCB	San Francisco Bay Regional Water Quality Control Board.	"- -"	No published value.
ESL	Environmental Screening Level.	NA	Not analyzed.
ND<0.010	Particular analyte not detected above laboratory reporting limit.	B	Analyte detected in the associated Method Blank and in the sample.
mg/Kg	Milligrams per kilogram.	J	The reported concentration is an estimated value.
SVOCs	Semi Volatile Organic Compounds.	bgs	Below ground surface.

Table 3-4
Summary of Soil Analytical Results - Metals
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Boring ID	Sample Depth (feet bgs)	Date	Arsenic[Note 4] (mg/Kg)	Barium (mg/Kg)	Beryllium (mg/Kg)	Cadmium (mg/Kg)	Chromium [Note 3] (mg/Kg)	Cobalt (mg/Kg)	Copper (mg/Kg)	Lead (mg/Kg)	Mercury (mg/Kg)	Molybdenum (mg/Kg)	Nickel (mg/Kg)	Selenium (mg/Kg)	Thallium (mg/Kg)	Vanadium[Note 4] (mg/Kg)	Zinc (mg/Kg)
Final Screening Levels [Note 1]			0.067	390	5.0	1.9	160	23	180	32	13	6.9	130	2.4	0.78	18	340
Bay Area Background Metals in Soil [Note 2]			24	410	1.0	5.6	120	25	63	24	0.42	4.8	272	4.9	10	90	140
B1	4.5	1/9/2019	6.9	240	ND<0.50	ND<0.25	46	19	18	8.2	0.061 B	0.70	44	ND<0.50	ND<0.50	52	45
B2	4.5	1/9/2019	3.7	87	ND<0.50	ND<0.25	42	5.5	14	5.5	0.087 B	ND<0.50	47	ND<0.50	ND<0.50	32	35
B3	4.5	1/9/2019	5.0	80	0.54	ND<0.25	44	11	17	7.1	0.098 B	0.54	72	ND<0.50	ND<0.50	37	43
B4	4.5	1/8/2019	7.6	350	0.53	0.50	48	35	23	13	ND<0.050	2.0	100	ND<0.50	ND<0.50	47	50
	9.5	1/8/2019	2.0	170	ND<0.50	ND<0.25	50	4.7	12	2.9	ND<0.050	ND<0.50	53	ND<0.50	ND<0.50	26	27
B6	4.5	1/8/2019	6.0	1,700	ND<0.50	0.58	53	15	20	12	ND<0.050	1.3	92	ND<0.50	ND<0.50	43	55
B7	4.5	1/8/2019	5.5	230	0.52	ND<0.25	52	10	23	5.4	ND<0.050	0.87	100	ND<0.50	ND<0.50	41	60
B8	4.5	1/8/2019	2.1	120	ND<0.50	ND<0.25	48	8.9	15	4.5	ND<0.050	ND<0.50	49	ND<0.50	ND<0.50	35	43

Notes:
Samples analyzed using USEPA Method SW6020.
Shaded values exceed the Final Screening Levels or background concentrations. Arsenic, and vanadium exceded the ESLs however do not exceed background levels.
[Note 1] Final Screening Levels are based on the lowest value of applicable SFBRWQCB ESLs. See Table 4-1.
[Note 2] Lawrence Berkeley National Laboratory, Analysis of Background Distributions of Metals in Soil at Lawrence Berkeley National Laboratory, Table 5. Revised April 2009.
[Note 3] ESL value shown is for total chromium.
[Note 4] Vanadium and Arsenic concentrations were compared to the published background values for soil in the Bay Area, instead of ESLs

bgs	Below ground surface.
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board.
ESL	Environmental Screening Level.
ND<0.50	Particular analyte not detected above laboratory reporting limit.
mg/Kg	Milligrams per kilogram.
B	Analyte detected in the associated Method Blank and in the sample.

Table 3-5
Summary of Subslab Vapor Analytical Results - TPHg and VOCs
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Sample ID	Sample Depth (feet bgs)	Date Sampled	TPH-G ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethylbenzene ($\mu g/m^3$)	Total Xylenes ($\mu g/m^3$)	MTBE ($\mu g/m^3$)	PCE ($\mu g/m^3$)	TCE ($\mu g/m^3$)	cis-1,2-DCE ($\mu g/m^3$)	trans-1,2-DCE ($\mu g/m^3$)	Vinyl Chloride ($\mu g/m^3$)	Carbon Tetrachloride ($\mu g/m^3$)	Naphthalene ($\mu g/m^3$)	Other VOCs
Final Screening levels [Note 1]			100	3.2	10,000	37	440	360	15	16	280	2,800	0.32	2.2	2.8	
VP1	Subslab	4/2/2019	570	ND<1.27	1.88	ND<1.71	ND<1.76	ND<1.48	1,304	ND<2.16	ND<1.60	ND<1.62	ND<1.03	ND<2.55	ND<2.17	See Note 2
VP2	Subslab	4/2/2019	300 J	0.431 J	1.38	ND<0.592	0.815	ND<0.511	516	ND<0.727	ND<0.553	ND<0.560	ND<0.356	ND<0.882	ND<0.751	
VP3	Subslab	4/2/2019	2,400	1.37	2.51	ND<1.71	ND<1.76	ND<1.48	7,258	39.9	ND<1.60	ND<1.62	ND<1.03	ND<2.55	ND<2.17	
VP3 DUP	Subslab	4/2/2019	2,500	ND<2.19	3.22	ND<2.94	ND<3.02	ND<2.54	5,426	41.7	ND<2.75	ND<2.78	ND<1.77	ND<4.38	ND<3.73	
VP4	Subslab	4/2/2019	930	ND<1.27	2.23	ND<1.71	ND<1.76	1.74	2,094	23.4	ND<1.60	ND<1.62	ND<1.03	ND<2.55	ND<2.17	
VP5	Subslab	4/2/2019	250 J	0.534	2.20	0.376	1.473	ND<0.296	155	1.55	ND<0.320	ND<0.324	ND<0.206	ND<0.510	ND<0.434	
VP6	Subslab	4/2/2019	760	ND<1.27	2.87	ND<1.71	1.70	ND<1.48	194	2.02	ND<1.60	ND<1.62	ND<1.03	ND<2.55	ND<2.17	

Notes:

Shaded values exceed the Final Screening Levels.

Hatched cells are below laboratory reporting limits. Reporting limits are above the ESLs.

Note 1 Final Screening Levels are based on the lowest value of applicable SFBRWQCB ESLs. See Table 4-2.

Note 2 Refer to Table 3-6 for maximum reported concentrations of "Other VOCs". Other VOCs were reported by the laboratory at concentrations that were either reported below ESLs or the continuents do not have ESLs associated with them and are not expected to be regulatory drives for investigation or remediation.

$\mu g/m^3$	Micrograms per cubic meter.
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board.
ESL	Environmental screening level.
J	The reported concentrations is an estimated value.
ND<1.27	Not detected above the indicated laboratory reporting limit.
TPH-G	Total Petroleum Hydrocarbon as Gasoline.
VOCs	Volatile organic compounds.
PCE	Tetrachloroethene.
TCE	Trichloroethene.
DCE	Dichloroethene.
MTBE	Methyl tert-butyl ether.

Table 3-6

Maximum Concentrations of Other VOC Constituents Detected in Subslab Vapor

2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street

Oakland, California

Analyte	Maximum Detected Concentration ($\mu g/m^3$)	Final Screening Levels [Note 1] ($\mu g/m^3$)
Acetone	16.2	3.1E+04
Acetonitrile	2.68	--
Acrolein	0.237	--
2-Butanone (MEK)	1.08	3.2E+04
Carbon disulfide	2.39	--
Cyclohexane	1.86	--
Ethanol	14.2	--
Trichlorofluoromethane (Freon 11)	9.42	--
Dichlorodifluoromethane (Freon 12)	2.99	--
Heptane	1.02	--
n-Hexane	3.23	--
Methylene chloride	11.9	34
Isopropyl alcohol/2-Propanol	137	--
Propene	0.228	--
Styrene	0.530	1.4E+03
1,1,1-Trichloroethane	17.7	3.5E+04
2,2,4-Trimethylpentane	2.77	--

Notes:

[Note 1] Final Screeing Levels are based on the lowest value of applicable SFBRWQCB ESLs. See Table 4-2.

-- No published value.

VOCs Volatile Organic Compounds.

$\mu g/m^3$ Micrograms per cubic meter.

SFBRWQCB San Francisco Bay Regional Water Quality Control Board.

ESL Environmental Screening Level.

Table 3-7
Summary of Subslab Vapor Analytical Results - Fixed Gases
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Sample ID	Sample Date	Depth (feet bgs)	Notes	Helium in Sample (%)	Average Helium Under Shroud (%)	Leak Ratio[1] (%)	Carbon Dioxide (%)	Methane (%)	Oxygen (%)
VP1	4/2/19	Subslab		<0.19	21.8	- -	1.1	NA	17
VP2	4/2/19	Subslab		<0.19	23.5	- -	1.4	NA	16
VP3	4/2/19	Subslab		<0.21	25.4	- -	0.90	NA	16
	4/2/19	Subslab	Duplicate	<0.20	25.4	- -	0.90	NA	16
VP4	4/2/19	Subslab		<0.20	22.1	- -	1.5	NA	17
VP5	4/2/19	Subslab		<0.20	22.6	- -	<0.20	NA	19
VP6	4/2/19	Subslab		0.21	21.5	0.98	0.68	NA	17

Notes:
Fixed gases analyzed by ASTM Method D-1946.
[1]Estimated leak ratio (%) = [Concentration of Helium in Sample (%)] / [Concentration of Helium in Shroud (%)] X100.

bgs	below ground surface.
NA	Not analyzed.
ppmv	parts per million by volume.
%	Percent.
<0.11	Not detected at or above the indicated laboratory reporting limit of 0.11 %.
--	Not calculated, helium not detected in sample.

Table 3-8
Summary of Grab Groundwater Sample Analytical Results - Petroleum Hydrocarbons and VOCs
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Boring ID	Sample Depth (feet bgs)	Date	TPH-G (µg/L)	TPH-D (µg/L)	TPH-MO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)	Carbon Tetrachloride (µg/L)	Naphthalene (µg/L)	Other VOCs
Final Screening Levels[Note 1]			100	100	--	0.42	40	3.5	20	0.64	1.2	6	10	0.0086	0.061	0.17	
B1-W		1/9/2019	ND<50	140	100	ND<0.50	ND<0.50	ND<0.50	ND<0.50	7.3	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	See Note 2
B2-W		1/9/2019	ND<50	ND<36	ND<77	ND<0.50	ND<0.50	ND<0.50	ND<0.50	24	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
B3-W		1/9/2019	ND<50	ND<36	ND<77	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.9	2.1	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
B4-W		1/8/2019	ND<50	61	95	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
B5-W		1/8/2019	110	270	580	0.51	5.7 B	1.9	17	0.71	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
B6-W		1/8/2019	ND<50	ND<36	ND<77	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	7.6	4.5	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
B7-W		1/9/2019	ND<50	ND<36	ND<77	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.82	1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
B8-W		1/9/2019	ND<50	100	130	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
B9-W		3/28/2019	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
B10-W		3/28/2019	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	3.7	2.2	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
B11-W		3/28/2019	ND<50	ND<50	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	4.9	3.2	ND<0.50	ND<0.50	ND<0.50	ND<0.50	

Notes:
Shaded values exceed the Final Screening Levels.
Hatched cells are below laboratory reports limits. Reporting limit is above applicable ESL.

Note 1 Final Screening Levels are based on the lowest value of applicable SFBRWQCB ESLs. See Table 4-3.

Note 2 Refer to Table 3-9 for maximum reported concentrations of "Other VOCs". Other VOCs wre reported by the laboratory at concentrations that were either reported below ESLs or the constituents do not have ESLs associated with them and are not expected to be regulatory drivers for investigation or remediation.

-- No published value.
SFBRWQCB San Francisco Bay Regional Water Quality Control Board.
ESL Environmental Screening Level.
ND<0.50 Particular analyte not detected above laboratory reporting limit.
B The same analyte is found in the associated blank.
µg/L Micrograms per liter.
VOCs Volatile Organic Compounds.
TPH-G Total Petroleum Hydrocarbons as Gasoline.
TPH-D Total Petroleum Hydrocarbons as Diesel.
TPH-MO Total Petroleum Hydrocarbons as Motor Oil.
PCE Tetrachloroethene.
TCE Trichloroethene.
DCE Dichloroethene.

Table 3-9

Maximum Concentrations of Other Constituents Detected in Grab Groundwater

2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street

Oakland, California

Analyte	Maximum Detected Concentration	Final Screening Levels [Note 1]
	(µg/L)	*(µg/L)*
VOCs		
1,2,4-Trimethylbenzene	3.4	--
1,3,5-Trimethylbenzene	1.2	--
SVOCs		
Bis (2-ethylhexyl) Phthalate	0.051	--
Di-n-butyl Phthalate	0.11	--
Diethyl Phthalate	0.10	--

Notes:

[Note 1] Final Screening Levels are based on the lowest value of applicable SFBRWQCB ESLs. See Table 4-3.

-- No published value.

µg/L Micrograms per liter.

SFBRWQCB San Francisco Bay Regional Water Quality Control Board.

ESL Environmental Screening Level.

Table 3-10
Summary of Underground Storage Tank Soil Boring Observations
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Boring ID	Total Depth (feet bgs)	Date	Material Identified	Other Observations
T1	13	04/15/19	No non-native material found.	No hydrocarbon odor.
T2	13	04/15/19	No non-native material found.	No hydrocarbon odor.
T3	13	04/15/19	No non-native material found.	No hydrocarbon odor.
T4	13	04/15/19	No non-native material found.	No hydrocarbon odor.
T5	13	04/15/19	No non-native material found.	10 - 13 feet bgs: strong hydrocarbon odor. PID: 115 - 194 ppm
T6	13	04/15/19	0 - 2 feet bgs: brown gravelly clay fill 2 - 12 feet bgs: gravel fill 12 - 13 feet bgs: brown clay	No hydrocarbon odor.
T7	13	04/15/19	0 - 2 feet bgs: brown gravelly clay fill 2 - 12 feet bgs: gravel fill 12 - 13 feet bgs: brown clay	No hydrocarbon odor.
T8	3	04/15/19	0 - 3 feet bgs: gravel fill	Refusal at 3 feet bgs, no hydrocarbon odor.
T9	13	04/15/19	0 - 12 feet bgs: gravel fill 12 - 13 feet bgs: brown clay	No hydrocarbon odor.
T10	13	04/15/19	0 - 2.5 feet bgs: dark brown clay fill 2.5 - 12 feet bgs: gravel fill 12 - 13 feet bgs: brown clay	No hydrocarbon odor.
T11	4	04/15/19	0 - 2 feet bgs: brown gravelly clay fill 2 - 4 feet bgs: gravel fill with concrete	Refusal at 4 feet bgs, no hydrocarbon odor.
T12	5	04/15/19	0 - 5 feet bgs: dark brown gravelly clay fill with concrete fragments	Refusal at 5 feet bgs, no hydrocarbon odor.
T13	7	04/15/19	0 - 7 feet bgs: brown gravelly clay fill with concrete fragments	Refusal at 7 feet bgs, no hydrocarbon odor.
T14	8	04/15/19	0 - 7 feet bgs: brown gravelly clay fill with concrete fragments. 7 - 8 feet bgs: gravel fill	Refusal at 8 feet bgs, no hydrocarbon odor.
T15	13	04/15/19	0 - 8 feet bgs: dark brown gravelly clay fill 8 - 12 feet bgs: gravel fill 12 - 13 feet bgs: brown clay	
T16	3	04/15/19	0 - 3 feet bgs: dark brown gravelly clay fill with concrete fragments.	Refusal at 3 feet bgs, no hydrocarbon odor.
T17	5	04/15/19	0 - 2 feet bgs: dark brown gravelly fill with concrete fragments 2 - 5 feet bgs: gravel fill with fiberglass fragments	Refusal at 5 feet bgs, no hydrocarbon odor.
T18	13	04/15/19	0 - 12 feet bgs: gravel fill with fiberglass fragments 12 - 13 feet bgs: brown clay	No hydrocarbon odor.

Table 3-10
Summary of Underground Storage Tank Soil Boring Observations
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Boring ID	Total Depth (feet bgs)	Date	Material Identified	Other Observations
T19	13	04/15/19	0 - 12 feet bgs: gravel fill with fiberglass fragments 12 - 13 feet bgs: brown clay	No hydrocarbon odor.
T20	13	04/15/19	0 - 12 feet bgs: gravel fill 12 - 13 feet bgs: brown clay	No hydrocarbon odor.
T21	3	04/15/19	0 - 3 feet bgs: dark brown gravelly clay fill with concrete fragments	No hydrocarbon odor.
T22	5	04/15/19	0 - 5 feet bgs: brown gravelly clay fill with concrete and clay pipe fragments	Refusal at 5 feet bgs, no hydrocarbon odor.
T23	4	04/15/19	0 - 4 feet bgs: brown gravelly clay fill with concrete fragments	Refusal at 4 feet bgs, no hydrocarbon odor.
T24	4.5	04/15/19	0 - 4.5 feet bgs: brown gravelly clay fill with concrete fragments	Refusal at 4.5 feet bgs, no hydrocarbon odor.
T25	5	04/15/19	0 - 5 feet bgs: gravelly sand fill with concrete fragments	Refusal at 5 feet bgs, no hydrocarbon odor.
T26	0.5	04/15/19	Piping at 0.5 feet bgs.	No hydrocarbon odor.
T27	6	04/15/19	0 - 6 feet bgs: brown fine grained sand fill	No hydrocarbon odor.
T-28	6	04/15/19	0 - 6 feet bgs: brown fine grained sand fill	No hydrocarbon odor.
T-29	4	04/15/19	No non-native material found.	No hydrocarbon odor.

T28
bgs Below ground surface.

Table 4-1
Soil Screening Levels
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Chemical	SFBRWQCB ESL - Residential Direct Exposure	SFBRWQCB ESL - Terrestrial Habitat	SFBRWQCB ESL - Leaching to Groundwater, Drinking Water	SFBRWQCB ESL - Leaching to Groundwater, Non-drinking Water	SFBRWQCB ESL - Residential Odor Nuisance	Final Screening Level
	(mg/Kg)					
Volatile Organic Compounds						
TPH-G	430	120	1,100	4,900	100	100
TPH-D	260	260	1,100	7,300	500	260
TPH-MO	12,000	1,600	--	--	100	100
Benzene	0.33	60	0.025	0.025	500	0.025
Toluene	1,100	140	3.2	10	500	3.2
Ethyl- benzene	5.9	90	0.43	0.43	500	0.43
Total Xylenes	580	55	2.1	10	500	2.1
PCE	0.59	4.5	0.08	0.08	500	0.08
TCE	0.95	8.1	0.085	0.085	500	0.085
cis-1,2-DCE	19	84	0.19	1.6	100	0.19
trans-1,2-DCE	130	84	0.65	14	500	0.65
Vinyl Chloride	0.0083	4.3	0.0015	0.0015	500	0.0015
Carbon Tetrachloride	0.1	7.3	0.011	0.011	500	0.011
Naphthalene	3.8	0.75	0.042	1.2	500	0.042
Isopropylbenzene	--	--	--	--	--	--
4-Isopropyltoluene	--	--	--	--	--	--
n-Butylbenzene	--	--	--	--	--	--
sec-Butylbenzene	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--
1,2,4-Trimethylbenzene	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--
Semi-Volatile Organic Compounds						
Benzo (a) anthracene	1.1	0.63	10	10	500	0.63
1,1 -Biphenyl	47	--	0.42	4.2	500	0.42
Bis (2-ethylhexl) Adipate	--	--	--	--	--	--
Bis (2-ethylhexl) Phthalate	39	0.8	190	640	500	0.8
2-Chlorophenol	390	2.0	0.012	0.12	100	0.012
Di-n-Butyl Phthalate	--	--	--	--	--	--
Phenanthracene	--	--	--	--	--	--
Phenol	23,000	9.4	0.16	18	500	0.16
Metals						
Arsenic	0.067	25	--	--	--	0.067
Barium	15,000	390	--	--	--	390
Beryllium	16	5.0	--	--	--	5.0
Cadmium	78	1.9	--	--	--	1.9
Chromium [Note 1]	--	160	--	--	--	160
Cobalt	23	50	--	--	--	23
Copper	3,100	180	--	--	--	180
Lead	80	32	--	--	--	32
Mercury	13	15	--	--	500	13
Molybdenum	390	6.9	--	--	--	6.9
Nickel	820	130	--	--	--	130
Selenium	390	2.4	--	--	--	2.4
Thallium	0.78	1.8	--	--	--	0.78
Vanadium	390	18	--	--	--	18
Zinc	23,000	340	--	--	--	340

Notes:
Concentrations in milligrams per kilogram (mg/Kg).
SFBRWQCB ESL = San Francisco Bay Regional Water Quality Control Board Environmental Screening Level
-- = no established value
[Note 1] ESL value shown is for total chromium.

TPH-G	Total Petroleum Hydrocarbons as Gasoline.
TPH-D	Total Petroleum Hydrocarbons as Diesel.
TPH-MO	Total Petroleum Hydrocarbons as Motor Oil.
PCE	Tetrachloroethene.
TCE	Trichloroethene.
DCE	Dichloroethene.

References:
San Francisco Bay Regional Water Quality Control Board, Environmental Screening Level, Revised January 24, 2019.

Table 4-2

Soil Vapor Screening Levels

2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street

Oakland, California

Analyte	SFBRWQCB ESL - Residential Vapor Intrusion	SFBRWQCB ESL - Odor Nuisance	Final Screening Level
	($\mu g/m^3$)		
Acetone	1,100,000	31,000	31,000
Acetonitrile	--	--	--
Acrolein	--	--	--
Benzene	3.2	4,900	3.2
2-Butanone (MEK)	170,000	32,000	32,000
Carbon disulfide	--	--	--
Carbon Tetrachloride	2.2	63,000	2.2
Cyclohexane	--	--	--
Dichlorodifluoromethane (Freon 12)	--	--	--
cis-1,2-DCE	280	--	280
trans-1,2-DCE	2,800	67,000	2,800
Ethanol	--	--	--
Ethylbenzene	37	2,000	37
Heptane	--	--	--
n-Hexane	--	--	--
Isopropyl alcohol/2-Propanol	--	--	--
Methylene chloride	34	560,000	34
MTBE	360	530	360
Naphthalene	2.8	440	2.8
Propene	--	--	--
Styrene	31,000	1,400	1,400
PCE	15	32,000	15
Toluene	10,000	30,000	10,000
TPH-G	20,000	100	100
TCE	16	1,400,000	16
1,1,1-Trichloroethane	35,000	65,000	35,000
Trichlorofluoromethane (Freon 11)	--	--	--
2,2,4-Trimethylpentane	--	--	--
Vinyl Chloride	0.32	770,000	0.32
Total Xylenes	3,500	440	440

Notes:

SFBRWQCB ESL = San Francisco Bay Regional Water Quality Control Board Environmental Screening Level.

Concentrations in micrograms per cubic meter ($\mu g/m^3$).

-- = no established value.

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

PCE = Tetrachloroethene.

TCE = Trichloroethene.

DCE = Dichloroethene.

MTBE = Methy tert-butyl ether.

References:

San Francisco Bay Regional Water Quality Control Board, Environmental Screening Level, Revised January 24, 2019.

Table 4-3
Groundwater Screening Levels
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Analyte	MCL	SFBRWQCB ESL - Residential Vapor Intrusion	SFBRWQCB ESL - Odor Nuisance, Drinking Water	SFBRWQCB ESL - Odor Nuisance, Non-drinking Water	Final Screening Level
	(µg/L)				
TPH-G	760	--	100	5,000	100
TPH-D	200	--	100	5,000	100
TPH-MO	--	--	--	--	--
Benzene	1.0	0.42	170	20,000	0.42
Toluene	40	1,200	40	400	40
Ethyl- benzene	30	3.5	30	300	3.5
Total Xylenes	20	390	20	5,300	20
PCE	5.0	0.64	170	3,000	0.64
TCE	5.0	1.2	310	100,000	1.2
cis-1,2-DCE	6.0	49	--	--	6.0
trans-1,2-DCE	10	220	260	2,600	10
Vinyl Chloride	0.5	0.0086	3,400	34,000	0.0086
Carbon Tetrachloride	0.5	0.061	520	5,200	0.061
Naphthalene	0.17	4.6	21	210	0.17

Notes:
SFBRWQCB ESL = San Francisco Bay Regional Water Quality Control Board Environmental Screening Level.
Concentrations in micrograms per liter (µg/L).
-- = no established value.
MCL = Maximum contaminant level.
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.
PCE = Tetrachloroethene.
TCE = Trichloroethene.
DCE = Dichloroethene.

References:
San Francisco Bay Regional Water Quality Control Board, Environmental Screening Level, Revised January 24, 2019.

Table 4-4
Data Gap Analysis
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

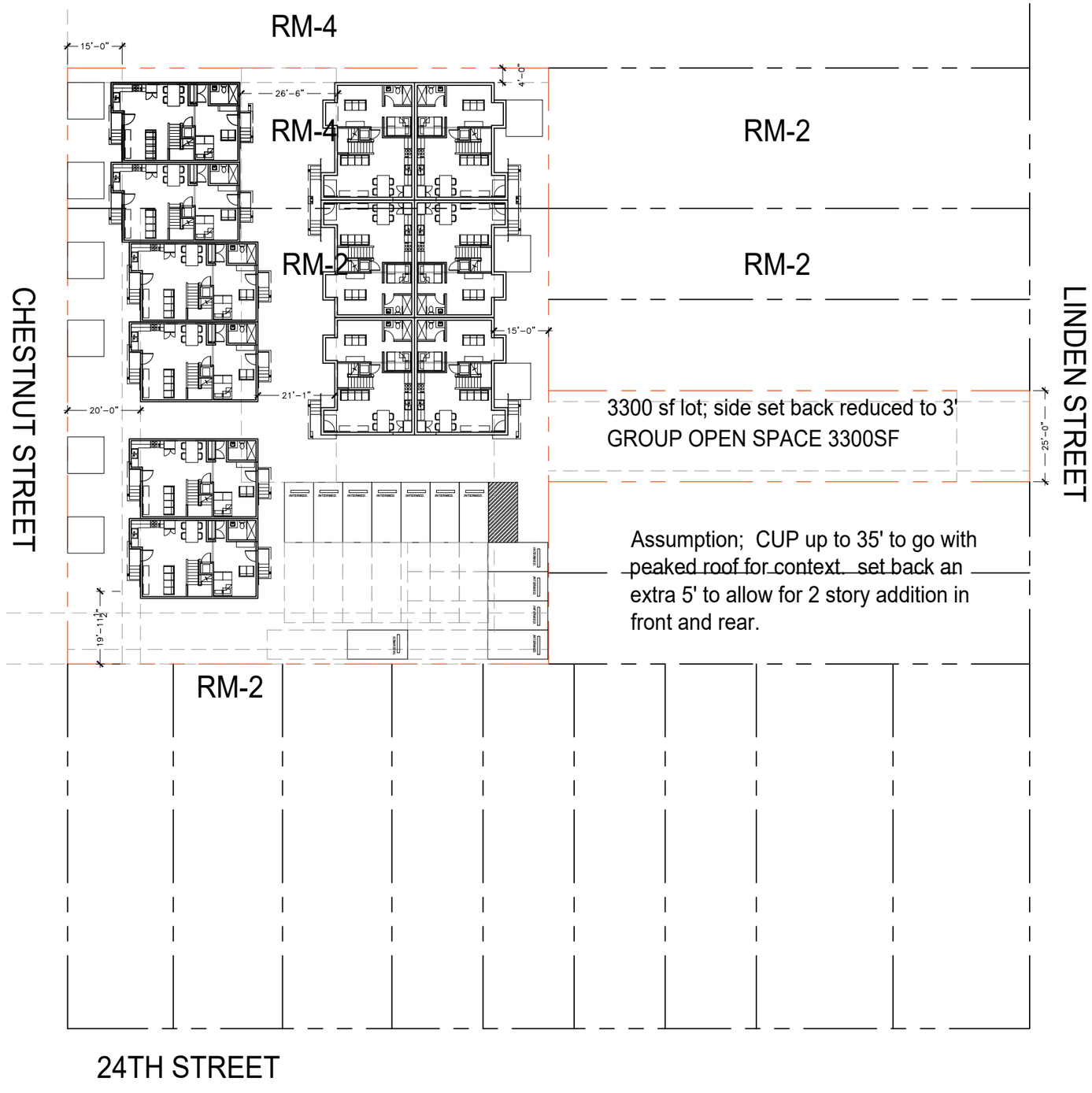
Area of Concern	Historical Borings	Historical Analytical Data Collected			Data Gap	Proposed Sample(s)[Note 1]
		Soil	Soil Vapor	Groundwater		
Suspected Former UST Area 1	Observation Borings T1 - T25	Visual Observation/Odor Screening with confirmation PID measurement	--	--	Presence of low concentration of petroleum consistuents and PCE in groundwater warrants collection of soil vapor data. Field observations at T-5 warrant additional data collection.	SVP-5 at former T-5 location. Collect vadose zone soil samples and soil vapor samples for laboratory analysis.
	B5	Gravel encountered from 4.5 - 9.5 feet bgs. No soil sample was collected.	None	TPH and VOCs		
Former UST Area 2, Two Former Dispenser Pad Areas and Former Piping Trench	Observation Borings T26 through T29	Visual Observation/Odor Screening with confirmation PID measurement	--	--	No field evidence of impacts near dispenser pad south of warehouse. Consider soil vapor data collection near both dispenser pads.	SVP-3 and SVP-10. Collect soil vapor samples for labotatory analysis. Soil samples if warranted based on visual observations.
Warehouse 1/Maintenance Area	B1, B2, B9	B1 and B2 (4.5 ft bgs) - TPH, VOCs, SVOCs, and Metals; B1 and B2 (9.5 ft bgs) - TPH and VOCs B9 (4.5 ft bgs) - TPH and VOCs	--	TPH and VOCs	Vapor data from VP points suggests source near VP3. Lateral and vertical delineation of vapor needed. For groundwater, see below regarding groundwater (Site Wide Groundwater Area of Concern)	Soil vapor probes SVP-6 and SVP-7 (install two locations with dual nested probes to evaluate souce depth). Collect soil samples during SVP installation. Include contingency for step out locations based on data.
	VP1 through VP6	--	VOCs and TPH	--		
Warehouse 2 and Canopy	B3, B10, B11	B3 (4.5 ft bgs) TPH, VOCs, SVOCs, and Metals; B3 (9.5 ft bgs) - TPH and VOCs; B10 and B11 (4.5 ft bgs) - TPH and VOCs	None	TPH and VOCs	Presence of low concentration of TCE in groundwater warrants collection of soil vapor data.	SVP-1 and SVP-2. Collect soil vapor samples for labotatory analysis. Soil samples if warranted based on visual observations.
Sump/Oil Water Separator	B4	B4 (4.5 ft bgs and 9.5 ft bgs) - TPH, VOCs, SVOCs, PCBs, and Metals	None	TPH, VOCs, and SVOCs	Neither groundwater data nor soil data suggest a historical release. No further investigation required.	None
Sewer Line/Underground Utility Conduits	B1, B4 and B8 near utility conduits	B1 (4.5 ft bgs) - TPH, VOCs, SVOCs, and Metals; B1 (9.5 ft bgs) - TPH and VOCs B4 (4.5 and 9.5 ft bgs) - TPH, VOCs, SVOCs, PCBs, and Metals; B8 (4.5 ft bgs) - TPH, VOCs, SVOCs, and Metals; B8 (9.5 ft bgs) - TPH and VOCs	None	B1 and B8 - TPH and VOCs; B4 - TPH, VOCs, and SVOCs	Utility Survey needed to verify locations of underground utilities. Soil vapor data near utility conduits should be considered.	Site is relatively small and exising historical borings, in addition to new SVP-4 and SVP-9 may be adequate. Additional soil vapor locations will be considered pending results of underground utility survey and results of additional data collection efforts.
Undeveloped Lot	B6, B7	B6 and B7 (4.5 ft bgs) - TPH, VOCs, SVOCs, and Metals; B6 and B7 (9.5 feet bgs) - TPH and VOCs	None	TPH and VOCs	Presence of low concentration of petroleum consistuents and TCE in groundwater warrants collection of soil vapor data. For groundwater, see below regarding groundwater (Site Wide Groundwater Area of Concern)	SVP-8. Collect soil vapor samples for labotatory analysis. Soil samples if warranted based on visual observations.
Shallow Soil	None below 4.5 ft bgs	None below 4.5 ft bgs	Not Applicable	Not Applicable	Characterize shallow soil across the Site in preparation for redevelopment. ACDEH requires lead and asbestos characeterization in shallow soil due to former demolition of structures.	Shallow soil sampling grid across site.
Sitewide Groundwater	B1 through B11	Not Applicable	Not Applicable	All locations, TPH and VOCs; B4 additionally analyzed for SVOCs	Local groundwater flow direction unconfirmed. TCE concentrations along east side of site suggest possible offsite TCE source. Groundwater monitoring well network required to determine flow direction and monitor TPH and VOC concentrations over time. Offsite contingency offsite step out location(s) should be included, pending results of data.	MW-1 through MW-3 with contingency step-outs if needed.

Notes:
[Note 1] See Figures 4-2 and 4-3 for proposed sample locations.
TPH Total petroleum hydrocarbons
VOCs Volatile organic compounds
SVOCs Semi-volatile organic compounds
PCBs Polychlorinated biphenyls
UST Underground Storage Tank

TPHg, TPHd, TPHmo in soil and groundwater analyzed using USEPA Method 8015B.
TPHg, TPHd, TPHmo in soil vapor analyzed using USEPA Method TO-3.
VOCs in soil and groundwater samples analyzed using USEPA Method 8260B.
VOCs in soil vapor samples analyzed using USEPA Method TO-15.
SVOCs in soil and groundwater analyzed using US EPA Method 8270C.
PCBs in soil and groundwater analyzed using USEPA Method 8082.

APPENDIX A

Preliminary Redevelopment Plan



2432 CHESTNUT
12 UNITS

ZONING: RM-2
1 UNIT/1500SF
LOT AREA 16,500 = 11
FRONT SET BACK 20'
SIDE SET BACK 3/4/5'
REAR SETBACK 15'
HEIGHT: 30' WITH PITCHED ROOF
GROUP OPEN SPACE 300SF/UNIT
(100 IF PRIVATE, BUT STILL NEED 100 SF/UNIT GROUP)

ZONING: RM-4
1 UNIT/1,100SF
LOT AREA 5080 = 4
FRONT SET BACK 15'
SIDE SET BACK 4
REAR SETBACK 15'
HEIGHT: 35' WITH PITCHED ROOF
GROUP OPEN SPACE 175SF/UNIT
(100 IF PRIVATE, BUT STILL NEED 75 SF/UNIT GROUP)

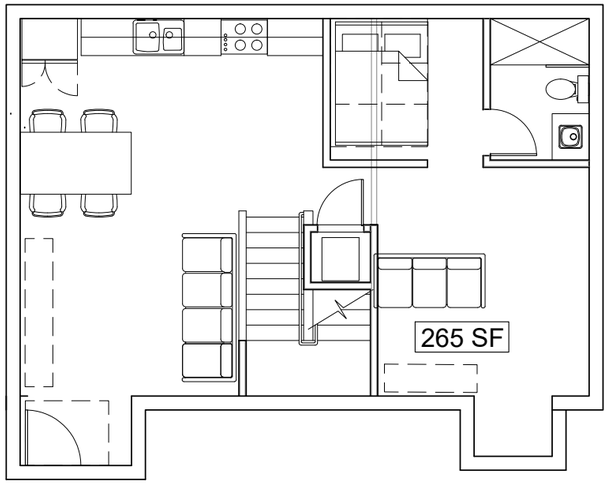
SCALE: 1/32" = 1'-0"

2432 CHESTNUT

PLANS
07.12.2019

ARCHITECT
LEVY DESIGN PARTNERS INC
90 South Park
San Francisco
CA 94107

LEVY DESIGN PARTNERS INC
90 SOUTH PARK / SAN FRANCISCO / CA 94107 / T/ 415.777.0561 F / 415.777.5117



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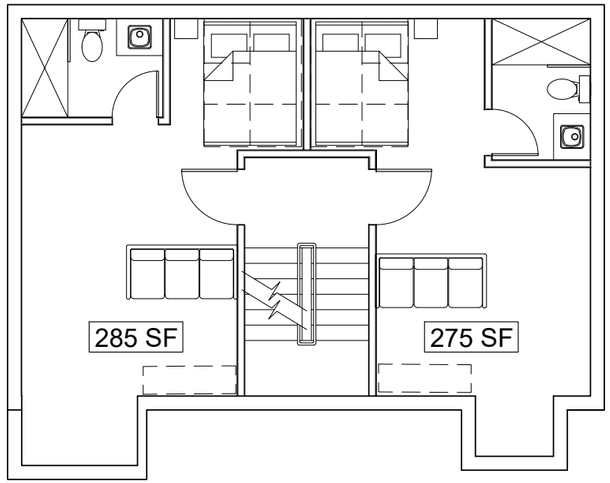
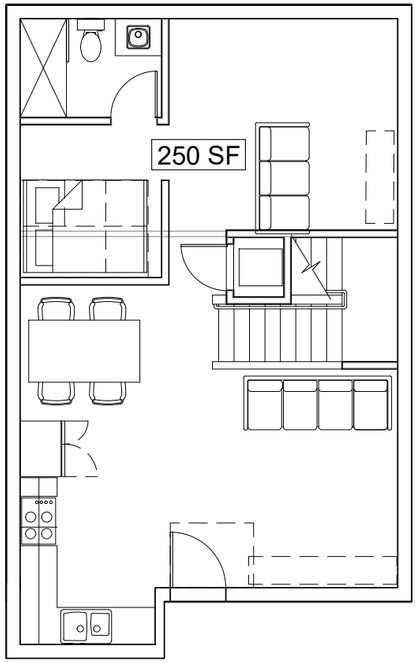


FLOORS: 02 & 03

2 UNIT B

3/16"=1'-0"



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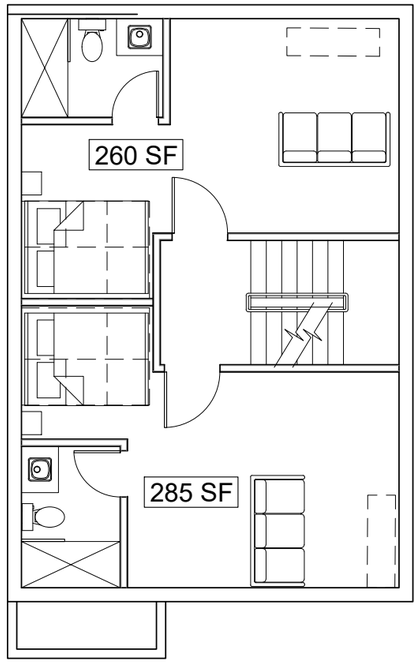

FLOORS: 02 & 03

1 UNIT A

3/16"=1'-0"

LEVY DESIGN PARTNERS INC
90 South Park
San Francisco
CA 94107

2432 CHESTNUT

UNITS PLANS
07.12.2019

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APPENDIX B

Data Gap Investigation Workplan

August 5, 2019

Mr. Andrew York
Alameda County Department of Environmental Health
Local Oversight Program
1131 Harbor Bay Parkway
Alameda, California 94502

Subject: **Data Gap Investigation Workplan**
2420 & 2432 Chestnut Street and 2432 Linden Street
Oakland, California

Dear Mr. York:

On behalf of the Property Owner, RMD Environmental Solutions, Inc. (RMD) has prepared this *Data Gap Investigation Workplan* (Workplan) for the property located at 2420 & 2432 Chestnut Street and 2432 Linden Street in Oakland, California (the Site, Figure 1). The objectives, scope of work, and schedule are provided in the sections that follow.

OBJECTIVES

The objective of the scope of work proposed herein is to:

- Characterize the nature and extent of volatile organic compounds (VOCs) in soil vapor;
- Install a groundwater monitoring well network that can be used to determine the groundwater flow direction and gradient beneath the Site, and monitor VOC concentrations over time; and
- Characterize chemicals of potential concern (COPC) in shallow soil at the Site to sufficiently support dust control mitigation efforts and off-Site soil disposal during planned property redevelopment.

Further rationale for the proposed scope of work is provided in the Corrective Action Plan (CAP, RMD, August 5, 2019). The proposed scope of work to meet these objectives is provided in the following section.

SCOPE OF WORK

The following scope of work is proposed:

- Installation, development, and sampling of three on-Site groundwater monitoring wells;
- Installation and sampling of eight soil vapor monitoring points and three nested soil vapor monitoring points;
- Advancing 25 shallow soil borings to a depth of 0.5 feet below ground surface (bgs). Five 5-point composite samples and five discrete samples will be collected at a depth of approximately 0.5 feet bgs; and
- Contingency step-out soil vapor locations as required based on data.

Proposed soil vapor monitoring points and groundwater monitoring well locations are illustrated on Figure 2 and soil sample locations are shown on Figure 3. Further details are provided as follows.

PREFIELD ACTIVITIES

Prior to initiating field work, RMD will perform the following pre-field activities:

- Approval of this Work Plan will be obtained from the Alameda County Department of Environmental Health (ACDEH);
- The Site-specific health and safety plan (HASP) will be updated as necessary in accordance with OSHA regulations 29 CFR 1910.120 and CalOSHA regulations 8 CCR 5192;
- Permits will be obtained from the ACDEH;
- The proposed drilling locations will be marked with white paint and Underground Service Alert of Northern California (USA) will be notified at least 48 hours prior to drilling to mark underground utilities in the proposed drilling area;
- A private utility locator will be retained to clear the proposed drilling locations of underground utilities and other possible subsurface obstructions; and
- The ACDEH, and other necessary parties will be notified of proposed field activities at least three days prior to initiating field work.

The proposed well field activities are presented below.

INSTALLATION OF GROUNDWATER MONITORING WELLS

RMD will supervise the drilling, soil sampling, and installation of three groundwater monitoring wells (MW-1 through MW-3) at the approximate locations shown on Figure 2. Well installation will be completed using a drill rig equipped with 8-inch diameter hollow-stem augers and operated by a California C-57 licensed drilling contractor. Each boring will be advanced to approximately 20 feet bgs. Continuously logged soil cores will be visually classified in accordance with the Unified Soil Classification System (USCS) and screened for volatile organics using a calibrated hand-held photoionization detector (PID). The results of the PID screening and field observations will be used to select soil samples for laboratory analysis (i.e., the sample locations with the highest PID readings and/or staining at each boring will be submitted for laboratory analysis). Alternatively, RMD will collect soil samples for chemical analysis from approximately 10 feet bgs from each location if PID readings or field observations do not exhibit impact. Soil samples will be collected in stainless steel sleeves, sealed with Teflon™ tape, capped with plastic, labeled, sealed in a Ziploc bag, and immediately placed in a chilled cooler for delivery to a California-certified laboratory.

All soil samples will be analyzed for:

- Total petroleum hydrocarbons (TPH) gasoline (g), TPH diesel (d), and TPH motor oil (mo) (Environmental Protection Agency [EPA] Method Modified 8015);
- VOCs (EPA Method 8260B);
- Semi Volatile Organic Compounds (SVOCs, EPA Method 8270); and
- CAM 17 Metals (EPA Method 6020).

Each groundwater monitoring well will consist of 2-inch diameter Schedule 40 poly vinyl chloride (PVC) blank and screened (0.010-inch slot) casing. The screened intervals are expected to extend from approximately 5 to 20 feet bgs. Actual well construction will be based on field observations.

The filter pack surrounding the screened portion of the well casing will consist of #2/12 Monterey sand poured through the auger into the annular space between the well casing and the borehole wall. The filter pack surrounding the screened casing in each monitoring well will extend from the total borehole depth to approximately 1-foot above the top of screen. Each well will be surged during the emplacement of the filter pack to reduce the potential for bridging. The annular seal above the filter pack will consist of a minimum of 2 feet of bentonite chips poured

through the auger (and then hydrated), followed by grout installed via tremie-pipe to approximately 1-foot bgs. Surface completion will consist of a flush-mounted, traffic-rated, well box set in concrete to grade at each well location. Proposed monitoring well construction details are summarized in Table 1.

MONITORING WELL DEVELOPMENT

Each monitoring well will be developed a minimum of 72 hours after installation. Monitoring wells will be gauged and then developed to produce representative water quality samples. Well development will consist of surging and bailing techniques and will continue until groundwater is reasonably free of sediment and/or at least 10 well casing volumes of water have been removed. Standard water quality parameters will be recorded on field forms.

MONITORING WELL SURVEY

A California-licensed land surveyor will survey and assign each monitoring well location unique, grid-based coordinates, within a minimum horizontal accuracy of +/- 0.05 feet. The North American Datum, 1983 (NAD83) geographic coordinate datum will be referenced. Well casing and groundwater elevations will use the North American Vertical Datum of 1988 (NAVD88) as the vertical datum and will be recorded to a minimum accuracy of +/- 0.01-foot elevation.

BASELINE MONITORING AND SAMPLING

The Site monitoring wells will be gauged for water level as measured from the top of casing. After the water level survey is conducted, the groundwater monitoring wells will be purged and sampled. Low-flow procedures, using a peristaltic pump equipped with dedicated or disposable polyethylene tubing, will be utilized to purge each well. During purging, water parameters including pH, temperature, conductivity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) will be monitored to note stabilization of each parameter and ensure that representative groundwater is entering the well.

After purging, groundwater samples will be collected using dedicated tubing or similar equipment. Samples will be slowly decanted into laboratory provided containers appropriate for the requested analysis. The containers will be capped, labeled, and placed on ice for transport to a certified laboratory for the following analysis:

- TPHg, TPHd, and TPHmo (EPA Modified 8015);
- VOCs (EPA Method 8260B);

- SVOCs (EPA Method 8270); and
- CAM 17 Metals (EPA Method 6020).

SOIL-VAPOR POINT INSTALLATION

Proposed soil vapor points are shown on Figure 2. Eight soil vapor points and three dual nested soil vapor points will be installed at the approximate locations shown on Figure 3. Borings for the installation of soil vapor points will be advanced using a hand-auger to the target depth. RMD will install eight soil-vapor points at a depth of five feet bgs and three dual nested soil-vapor points at depths of five and nine feet bgs. The annulus surrounding the implant will be filled with #2/12 Monterey sand to six inches above and below the implant, followed by a layer of dry granulated bentonite up to 1-foot thick, and hydrated bentonite chips to near ground surface. The depth of dry and hydrated bentonite chips may be adjusted in the field in order to fill the borehole with hydrated bentonite across the fill/native transition. The soil-vapor monitoring points will be constructed using 1/4 -inch diameter Teflon™ tubing, fitted with a vapor probe implant installed at the target depth with a three-way valve at the surface. Following installation, the soil-vapor monitoring points will be allowed to equilibrate for a period of at least 48 hours prior to sampling. Proposed well construction details are summarized in Table 1.

Each soil-vapor monitoring point will be sampled in accordance with the Department of Toxic Substances Control (DTSC) / Regional Water Quality Control Board (RWQCB) *Advisory – Active Soil Gas Investigations* document dated July 2015 (Advisory). In accordance with the Advisory, a shut-in test and leak test will be conducted prior to sampling. A laboratory-supplied helium shroud will be used to conduct a leak test at each sample location and approximately 20 percent helium will be monitored and maintained during the sample collection process. Soil-vapor samples will be collected from each location in SUMMA™ canisters, labeled, handled under standard chain of custody (COC) protocols, and transported to a State-certified laboratory. The samples will be analyzed for VOCs using USEPA Method TO-15, helium and oxygen using modified ASTM Method D-1946. One duplicate sample will be collected for laboratory analysis. Soil vapor samples will not be collected if more than ½ inch of precipitation has occurred during the prior five days prior to the scheduled sampling event. All work will be performed under direction of a geologist or engineer, licensed in California.

SOIL SAMPLING

Proposed soil boring locations were developed using a grid approach across the entire Site. The Site was separated into five sample grid areas (Grid Area #1 through Grid Area #5). One 5-point composite sample and one discrete soil will be collected from each Grid Area at a depth of approximately 0.5 feet bgs. Sample Grid Areas and proposed soil boring locations are illustrated on Figure 3.

Soil borings will be advanced at five locations within each grid area (Figure 3) using a hand auger or other hand tools to a depth of 0.5 feet bgs and soil samples will be collected with a 2-inch drive sampler in clean 6-inch stainless steel tubes. The end of each sample sleeve will be covered with Teflon™ sheeting, capped with plastic end caps, labeled with a unique sample number, date of collection and sample location and depth, and placed in an ice-filled cooler. Soil samples will be screened in the field for VOCs using a calibrated PID. Approximately 20 grams of unsaturated soil will be placed in a self-sealing plastic bag to allow the pore space to volatilize. The headspace in the plastic bag will then be monitored for VOCs with the PID.

Selected discrete soil samples (the soil sample with the highest PID readings within each Grid Area) will be collected using laboratory supplied containers and analyzed for:

- VOCs (EPA Method 8260B); and
- SVOCs (EPA Method 8270C); and

The five samples from each grid area will be composited by the laboratory and analyzed for:

- TPHg, TPHd, and TPHmo (EPA Method Modified 8015);
- CAM 17 Metals (EPA Method 6020); and
- Asbestos (OSHA Method ID-191).

All samples will be immediately placed on ice (water-based) in an insulated cooler and submitted under strict chain-of-custody control to a State certified laboratory.

CONTINGENT SOIL VAPOR AND/OR GROUNDWATER SAMPLING

Results of the initial soil vapor investigation and baseline groundwater sampling data will be reviewed and compared against the Site Environmental Screening Levels (ESLs) provided in the CAP. The results will be reviewed to determine if the nature and extent of VOCs in soil vapor have been defined or if additional step out/contingent locations will be necessary. If contingent

soil vapor points or groundwater samples are necessary, RMD proposes that the contingent points be installed under the capacity of this Workplan, with the condition that at least 2 weeks prior to conducting fieldwork RMD will provide the ACDEH with a brief email summarizing the proposed step out/contingent sample locations. The email will include the following:

- Table comparing soil vapor and/or investigation results to applicable ESLs;
- Figure illustrating contaminants detected above their respective ESLs; and
- Figure illustrating the proposed contingent sample point locations and sample depth.

Following concurrence and/or comments from ACDEH, contingent sampling activities will be completed as described in the previous section of this Workplan.

INVESTIGATION-DERIVED WASTE HANDLING

Investigation-derived waste (IDW) will consist of soil cuttings, monitoring well purge water, and decontamination water. IDW will be stored on-Site in properly labeled 55-gallon drums pending waste characterization profiling. Following waste characterization profiling, IDW will be disposed of in accordance with applicable laws and regulations.

REPORTING

A *Data Gap Investigation Report* (Report) will be submitted to the ACDEH following the completion of investigation activities. The Report will describe field activities, summarize results, and provide conclusions and recommendations.

SCHEDULE

A schedule for the activities proposed in this Workplan is provided below. The anticipated schedule assumes that ACDEH approval is received by August 19, 2019.

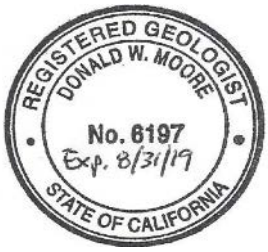
- August 2019 - Permitting and pre-field activities.
- September 2019 – Data gap investigation field activities: soil sampling, soil vapor point installation, groundwater monitoring well installation, development, survey, and monitoring and sampling activities.
- October 2019 – Submittal of Report to ACDEH.

CLOSURE

If you have any questions or require additional information, please do not hesitate to call Kirsten Duey at (925) 683-8177.

Sincerely,

RMD ENVIRONMENTAL SOLUTIONS, INC.



Greg McIver
Principal Scientist

Donald W. Moore, P.G.
Principal Geologist

ATTACHMENTS

Figure 1 – Site Plan

Figure 2 –Proposed Vapor Point and Groundwater Monitoring Well Locations

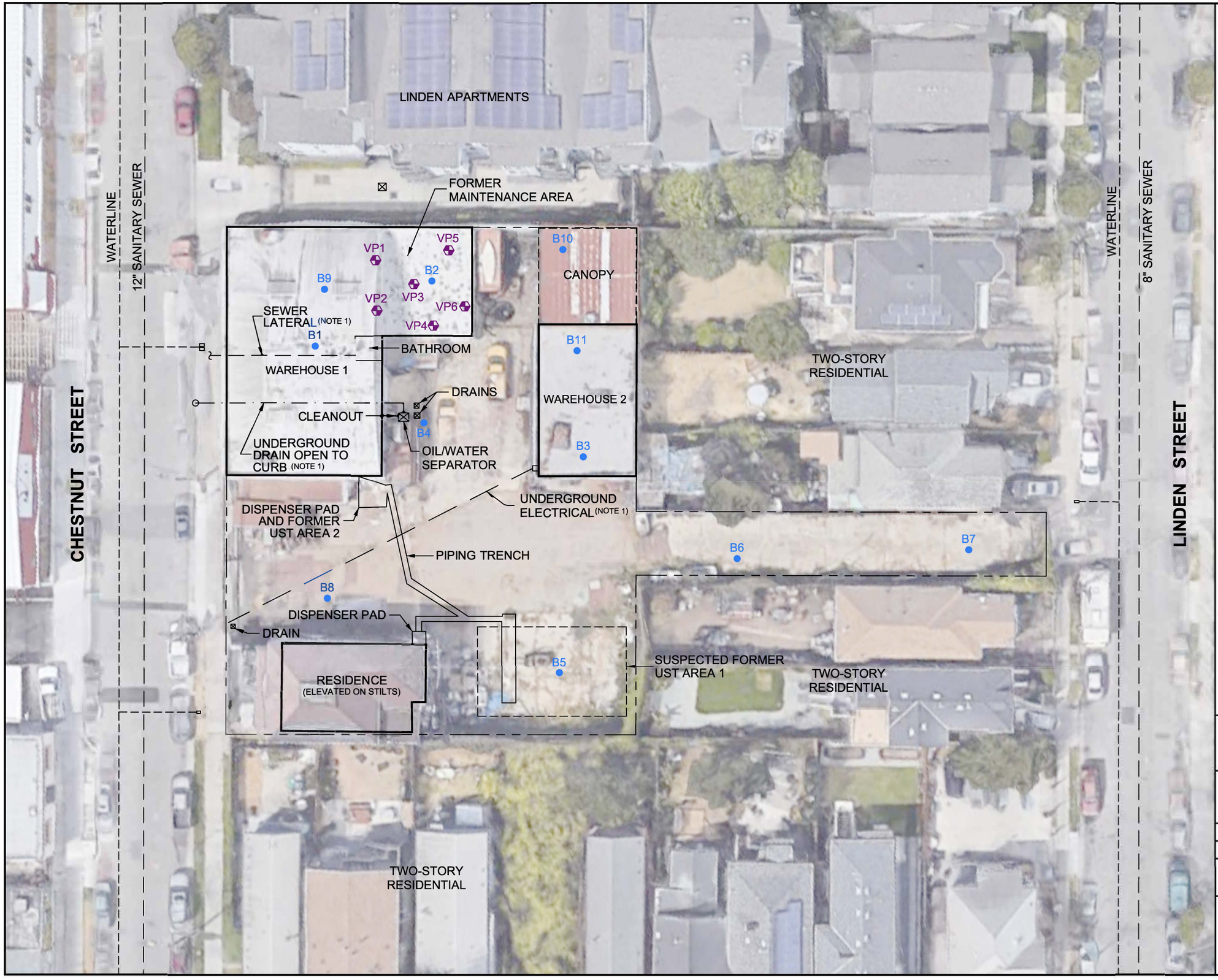
Figure 3 –Proposed Shallow Soil Sample Locations

Table 1 – Proposed Monitoring Well Construction Details

LIMITATIONS

This document was prepared for the exclusive use of the Property Owner and the ACDEH for the express purpose of complying with a client- or regulatory directive for environmental investigation or restoration. RMD has used professional judgment to present the findings and opinions of a scientific and technical nature. The opinions expressed are based on the conditions of the Site existing at the time of the field investigation, current regulatory requirements, and any specified assumptions. The presented findings and recommendations in this report are intended to be taken in their entirety to assist the Property Owner and ACDEH personnel in applying their own professional judgment in making decisions related to the property. No warranty or guarantee, whether expressed or implied, is made with respect to the data or the reported findings, observations, conclusions, and recommendations.

FIGURES



LEGEND

- B11 — HISTORICAL SOIL AND GRAB GROUNDWATER SAMPLE LOCATION (APPROXIMATE)
- VP6 — SUB SLAB VAPOR PIN LOCATION (APPROXIMATE)
- SUSPECTED FORMER UST AREAS & AREAS OF 4/15/19 INVESTIGATION (29 BORINGS UP TO 13 FEET BELOW GROUND SURFACE DEEP)(SEE FIGURE ?)

NOTE:

1. Underground utility locations shown are approximate and need to be confirmed with underground utility survey.

SITE PLAN

2432 CHESTNUT STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	07/2019	BCD	KR

0 30 60
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 1

N

2432-Base.dwg

LEGEND

B11	HISTORICAL SOIL AND GRAB GROUNDWATER SAMPLE LOCATION (APPROXIMATE)
VP6	SUB SLAB VAPOR PIN LOCATION (APPROXIMATE)
	SUSPECTED FORMER UST AREAS & AREAS OF 4/15/19 INVESTIGATION (29 BORINGS UP TO 13 FEET BELOW GROUND SURFACE DEEP)
SVP-1	PROPOSED SOIL VAPOR MONITORING POINT (~5 ft. bgs.)
SVP-6	PROPOSED DUAL NESTED SOIL VAPOR MONITORING POINT (~5 ft. bgs. & 9 ft.bgs.)
MW-1	PROPOSED GROUNDWATER MONITORING WELL
ft. bgs.	FEET BELOW GROUND SURFACE

NOTES:

1. SITE FEATURE LABELS AND HISTORICAL SAMPLE LOCATIONS ARE PROVIDED ON FIGURE 2-1 (SITE PLAN)

PROPOSED SOIL VAPOR POINT AND GROUNDWATER MONITORING WELL LOCATIONS

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	08/2019	BCD	KR

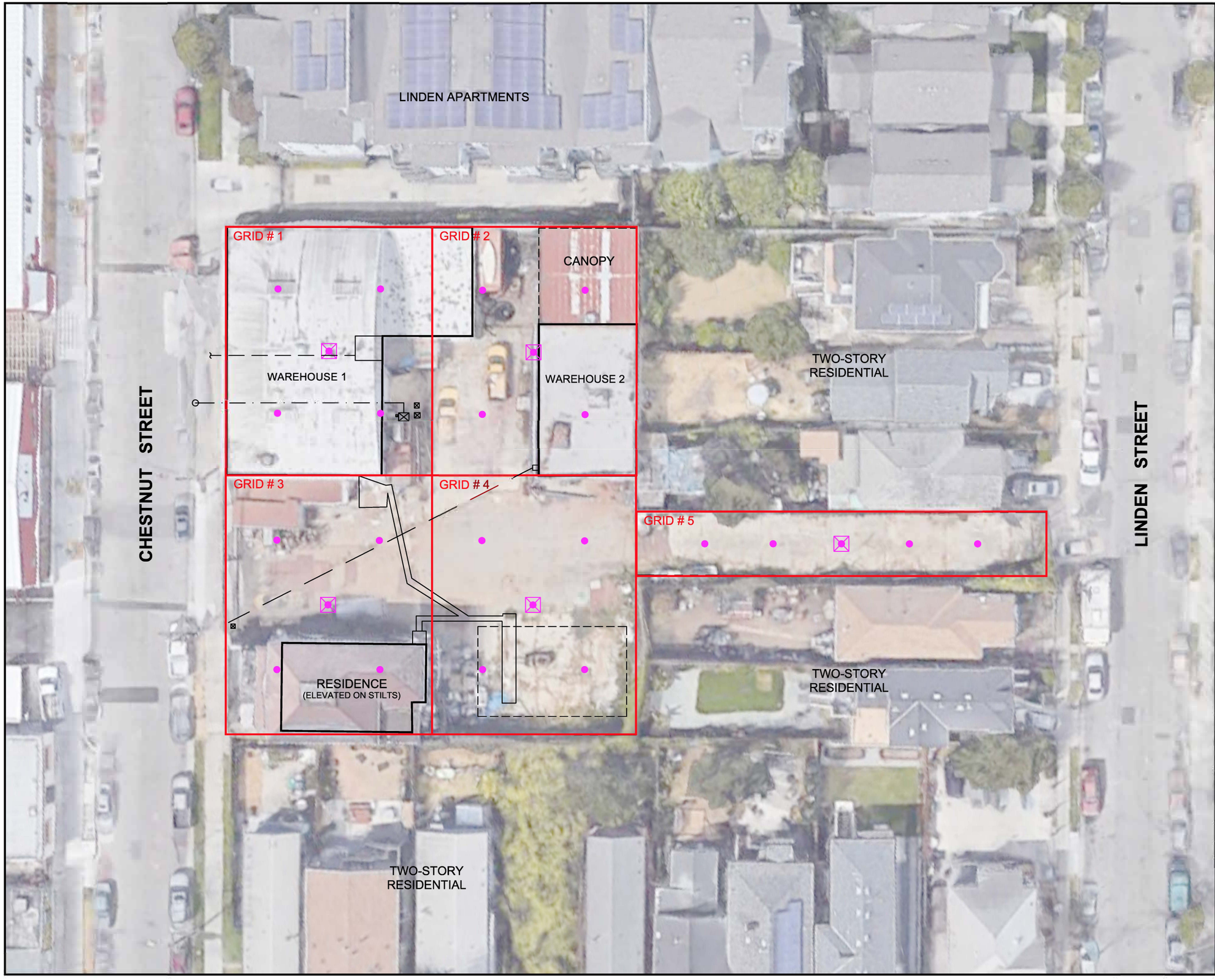
0 30 60
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 2

N

2432-PSVP.dwg



LEGEND

- SUSPECTED FORMER UST AREAS & AREAS OF 4/15/19 INVESTIGATION (29 BORINGS UP TO 13 FEET BELOW GROUND SURFACE DEEP)
- PROPOSED COMPOSITE SAMPLE LOCATION (5 POINT) @ 0.5 ft. bgs. (APPROXIMATE LOCATION)
- ONE DISCREET SAMPLE FROM 0.5ft. bgs WILL BE ANALYZED FROM EACH OF THE FIVE GRID AREAS. THE DISCREET SAMPLE LOCATION WILL BE BASED ON THE LOCATION WITH THE HIGHEST PID READING WITHIN THE SAMPLE GRID
- COMPOSITE SAMPLE GRID AREA
- ft. bgs. — FEET BELOW GROUND SURFACE

NOTES:

1. SITE FEATURE LABELS AND HISTORICAL SAMPLE LOCATIONS ARE PROVIDED ON FIGURE 2-1 (SITE PLAN)
2. COMPOSITE SAMPLES WILL BE ANALYZED FOR CAM 17 METALS (6020), TOTAL PETROLEUM HYDROCARBONS (8015), AND ASBESTOS (OSHA METHOD ID-191).
3. DISCRETE SAMPLES WILL BE ANALYZED FOR VOLATILE ORGANIC COMPOUNDS (VOCS 8260B), AND SEMI-VOLATILE ORGANIC COMPOUND (8270C).

PROPOSED SHALLOW SOIL SAMPLE LOCATIONS

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	08/2019	BCD	KR

0 30 60
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 3

N

2432-PSVP.dwg

TABLE

Table 1

Proposed Groundwater Monitoring Well and Soil Vapor Probe Construction Details [Note 1]

2420 2432 Chestnut Street and 2423 Linden Street

Oakland, California

Well ID	Casing Diameter (inches)	Screen Slot Size (inches)	Concrete Finish (feet bgs)	Bentonite Grout (feet bgs)	Bentonite Chips (feet bgs)	Filter Pack Interval (feet bgs)	Screen Interval (feet bgs)	Total Depth (feet bgs)
Monitoring Well Locations								
MW-1	2	0.010	0 - 1	1 - 2	2 - 4	4 - 20	5 - 20	20
MW-2	2	0.010	0 - 1	1 - 2	2 - 4	4 - 20	5 - 20	20
MW-3	2	0.010	0 - 1	1 - 2	2 - 4	4 - 20	5 - 20	20
Soil Vapor Probe Locations								
Probe ID	Tubing Diameter (inches)	Probe Diameter (inches)	Concrete Finish (feet bgs)	Bentonite Grout (feet bgs)	Bentonite Chips (feet bgs)	Filter Pack Interval (feet bgs)	Probe Depth (feet bgs)	Total Depth (feet bgs)
SVP-1	0.25	0.25	0 - 1	1 - 3	3 -4	4 - 5	4.5	5
SVP-2	0.25	0.25	0 - 1	1 - 3	3 -4	4 - 5	4.5	5
SVP-3	0.25	0.25	0 - 1	1 - 3	3 -4	4 - 5	4.5	5
SVP-4	0.25	0.25	0 - 1	1 - 3	3 -4	4 - 5	4.5	5
SVP-5	0.25	0.25	0 - 1	1 - 3	3 -4	4 - 5	4.5	5
SVP-6	0.25	0.25	0 - 1	1 - 3	3 - 4 and 5-8	4 - 5 and 8 -9	4.5 and 8.5	9
SVP-7	0.25	0.25	0 - 1	1 - 3	3 - 4 and 5-8	4 - 5 and 8 -9	4.5 and 8.5	9
SVP-8	0.25	0.25	0 - 1	1 - 3	3 - 4 and 5-8	4 - 5 and 8 -9	4.5 and 8.5	9

Notes:

bgs = Below ground surface.

MSL = mean sea level

[Note 1] Actual well construction details may be modified based on field observations.

RMD ENVIRONMENTAL SOLUTIONS

APPENDIX C

Site Land Survey – Existing Conditions

Appendix H

RMD Environmental Solutions, *Corrective Action Design and Implementation Plan (CAIP)*

March 26, 2020

CORRECTIVE ACTION DESIGN AND IMPLEMENTATION PLAN

2420 & 2432 Chestnut Street and 2423 Linden Street
Oakland, California
Alameda County Assessor Parcel Numbers
5-435-5, 5-435-17, and 5-435-18-1
Case No. RO0003369
Geotracker Global ID No. T10000013059

Prepared For:

Mr. Bruce L. Hammon
Dalzell Corporation
2138 Stone Valley Road
Alamo, California 94607

Prepared By:

RMD ENVIRONMENTAL SOLUTIONS
609 Gregory Lane, Suite 200
Pleasant Hill, California 94553

March 26, 2020

Kirsten Duey
Principal Engineer

Andrew H. Campbell, P.E.
Principal Engineer

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LIST OF ACRONYMS

µg/L	micrograms per liter of water
ACDEH	Alameda County Department of Environmental Health
ASTM	American Society for Testing and Materials
bgs	below ground surface
CAIP	Corrective Action Design and Implementation Plan
CAP	Corrective Action Plan
COPC	chemicals of potential concern
CQA	construction quality assurance
CY	cubic yards
DCE	dichloroethene
DTSC	California Environmental Protection Agency, Department of Toxic Substances
EBMUD	East Bay Municipal Utilities District
EPA	Environmental Protection Agency
ESLs	environmental screening levels
Ft	feet
MNA	monitored natural attenuation
NFPA	National Fire Protection Association
OWS	oil/water separator
Pa	Pascals (a unit of pressure or vacuum)
PCE	tetrachloroethene
PE	Professional Engineer
PID	photo-ionization detector

LIST OF ACRONYMS

psf	pounds per square foot
PVC	poly vinyl chloride
QC	quality control
RMD	RMD Environmental Solutions, Inc.
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SF	square feet
SGMP	Soil and Groundwater Management Plan
SMP	Site Management Plan
TCE	trichloroethene
TPHd	total petroleum hydrocarbons as diesel
TPHg	total petroleum hydrocarbons as gasoline
tsf	tons per square foot
UST	underground storage tank
VIMS	vapor intrusion mitigation system
VMEC	vapor mitigation engineering control
VOC	volatile organic compound(s)

EXECUTIVE SUMMARY

On behalf of Dalzell Corporation (Dalzell, Property Owner), RMD Environmental Solutions, Inc. (RMD) is submitting this Corrective Action Design and Implementation Plan (CAIP) for the property located at 2420 and 2432 Chestnut Street and 2423 Linden Street in Oakland, California (the Site, Figure 1-1).

The Property Owner is in contract with Risa Investments, LLC and/or assigns (Risa), who is evaluating the purchase of the Site for redevelopment into residential housing. The redevelopment plan includes the following design concepts as shown in Appendix A:

- Demolition of all existing structures prior to redevelopment;
- Twelve, 3-story residential units with a shared open space;
- One, single-story building with a community room and storage/maintenance space;
- Slab on grade foundation; and
- No sub-grade parking, parking lifts, or elevators.

This CAIP explains the details of the proposed corrective actions provided in the Corrective Action Plan (CAP), dated August 5, 2019 (RMD, 2019) and the Data Gap Investigation Report and Addendum to Corrective Action Plan (CAP Addendum; RMD, 2020).

Subsurface media is impacted with volatile organic compounds (VOCs) and metals which require mitigation. The CAP and CAP Addendum presented a conceptual strategy to address subsurface contamination. In summary, proposed corrective actions consist of the following:

- Source area excavation;
- Engineering controls consisting of:
    - The use of an engineered vapor intrusion mitigation system (VIMS) and associated monitoring program to address vapor intrusion concerns related to residual VOCs in the subsurface, and
    - Consolidation and capping of shallow metals -impacted soil;
- Administrative controls consisting of:
    - A Health and Safety Plan;

- A Construction Soil and Groundwater Management Plan; and
- A long-term Site Management Plan.

The CAP proposed a long-term groundwater monitored natural attenuation (MNA) program, if warranted, based on results of the recent data gap Investigation (RMD, 2020). As presented in Section 4 of this report, the data gap investigation results indicate that impacts to groundwater due to historical releases from the Site are not present at levels that require active remediation or long-term, ongoing monitoring. RMD proposes collecting an additional round of groundwater samples in Quarter 2, 2020 to evaluate data during the wet season, when the groundwater surface elevation is likely to be higher compared to when the monitoring well samples were previously collected (September 2019). Pending evaluation of those results, RMD proposes the MNA program is not warranted.

Dalzell is requesting Alameda County Department of Environmental Health (ACDEH) review and approve this document within 30 days. After ACDEH has approved this CAIP, a redevelopment project construction and reporting schedule will be submitted for ACDEH review. The reporting schedule will include the target dates for the following submittals and milestones, required under this CAIP:

- Soil Excavation Corrective Action Implementation Report documenting completion of the activities proposed herein;
- Health and Safety Plan;
- Vapor Intrusion Mitigation System CAIP;
- Remedial Action Implementation Report, including documentation of disposal or consolidation and capping of shallow metals-impacted soil and a Record Report of Construction for Hardscape Cap; and
- Long Term Site Management Plan.

Upon completion of the above submittals and milestones, it is anticipated that ACDEH will provide the responsible party with a no further action letter or similar, allowing residential land use in accordance with the Long Term Site Management Plan.

1.0 INTRODUCTION

Dalzell Corporation (Dalzell, Property Owner) retained RMD Environmental Solutions, Inc. (RMD) to prepare this Corrective Action Design and Implementation Plan (CAIP) for the property located at 2420 and 2432 Chestnut Street and 2423 Linden Street in Oakland, California (the Site, Figure 1-1). The Site consists of three vacant adjacent rectangular parcels totaling approximately 0.57-acres, currently developed with an elevated residential dwelling, two industrial buildings, canopy area, and associated paved areas (Figure 1-2).

The Property Owner is in contract with with Risa Investments, LLC and/or assigns (Risa), who is evaluating purchasing the Site for redevelopment into residential housing. A preliminary plan provided by Risa is provided in Appendix A. Figure 1-3 shows the existing groundwater and soil vapor well locations overlaid on a simple schematic of the future building footprints, landscape, and hardscape areas. The redevelopment plan includes the following design concepts:

- Demolition of all existing structures prior to redevelopment;
- Twelve, 3-story residential units with a shared open space;
- One, single-story building with a community room and storage/maintenance area;
- Slab on grade foundations; and
- No sub-grade parking, parking lifts, or elevators.

A Corrective Action Plan (CAP), submitted to Alameda County Department of Environmental Health (ACDEH) on August 5, 2019 proposed corrective actions, contingent upon completion of a data gap investigation. Data gap investigation activities have been completed and are documented in the Data Gap Investigation Report and Addendum to Corrective Action Plan (CAP Addendum, RMD, 2020). A Fact Sheet was mailed to community members summarizing the project and providing notification of a 30-day public comment period for the CAP, with the public comment period ending October 18, 2019. Based on discussion with ACDEH, no public comments were received.

This CAIP explains the methods for implementation of the proposed corrective actions identified in the CAP and CAP Addendum. Proposed corrective actions consist of the following:

- Source Area Excavation;

- Vapor intrusion mitigation through use of an engineered vapor intrusion mitigation system (VIMS) and associated monitoring program;
- Consolidation and capping of shallow cobalt and lead impacted soil;
- Administrative controls through use of a Health and Safety Plan (HASP), Construction Soil and Groundwater Management Plan (Construction SGMP) and a long-term Site Management Plan (SMP); and
- Monitored natural attenuation (MNA) for groundwater if warranted. As discussed in Section 4, RMD proposes collecting an additional round of groundwater samples in Quarter 2, 2020 to evaluate data during the wet season and confirm that an MNA program (included in the CAP as a possible corrective action) is not warranted.

1.1 CAIP Summary and Organization

This CAIP presents the detailed methods for implementation of proposed corrective actions for ACDEH review and approval prior to implementation. This report is organized into the following sections:

- Section 2.0: Source Area Excavations. Provides details of the proposed excavation and associated groundwater removal activities proposed for suspected source areas identified in the CAP Addendum.
- Section 3.0: Engineering Controls. Provides details of consolidation and capping activities, including management of soil in landscape/non-hardscape areas. Section 3 also summarizes the planned VIMS. Engineering details of the VIMS will be provided separately in a Vapor Mitigation Engineering Control (VMEC) CAIP after building design plans have been finalized.
- Section 4.0: Groundwater Monitoring. The CAP proposed a long-term MNA program for groundwater if warranted based on results of the data gap investigation. Section 4 provides a summary of chemicals of potential concern (COPC) concentrations in groundwater, incorporating results of the data gap investigation, and rationale for why long-term MNA is not warranted. A round of groundwater sampling during Q2 2020 is proposed to evaluate groundwater concentrations during the wet season, when groundwater levels are expected to be higher. If concentrations are consistent with the 2019 data, an MNA program will not

be warranted and the groundwater monitoring wells will be destroyed, with concurrence from ACDEH.

- Section 5.0: Administrative Controls. Presents the details of the Construction SGMP. The Construction SGMP identifies procedures to be administered during property redevelopment and source area excavation activities, identified in Section 2. The proposed SGMP is included in this CAIP as Appendix B. The excavation contractor will prepare a Site-specific Health and Safety Plan in accordance with Section 2.3 of the SGMP. A long-term SMP, to be administered following property redevelopment, will be submitted separately for ACDEH review and approval to ensure that future construction activities do not interfere with engineering and administrative controls against exposure.
- Section 6.0: Reporting. Summarizes reporting activities required under this CAIP.
- Section 7.0: References. Provides citations to the documents referenced.

2.0 SOURCE AREA EXCAVATIONS

Localized excavations are proposed to remediate suspect source areas impacted with volatile organic compounds (VOCs) and petroleum hydrocarbons. Based on the investigation history and the CAP Addendum, the following suspected VOC and/or hydrocarbon source areas are present in the subsurface:

1. Underneath Warehouse 1, located in the northwest portion of the Site, based on soil vapor and groundwater data;
2. In the suspected former UST area located in the southern portion of the Site, based on field observations at test pit T5 during the April 2019 investigation (summarized in the CAP) and soil vapor concentrations reported from samples collected from probe SVP-5; and
3. In the former dispenser pad area based on soil vapor concentrations reported in samples collected from probe SVP-10.

Excavations to remove these potential source areas are shown on Figures 2-1 and 2-2, and Table 2-1 and are summarized as follows:

- **Excavation 1** is comprised of the upper five feet of soil in an approximate 25 foot (ft) by 40 ft area beneath the northern portion of Warehouse 1, where elevated VOCs were reported in soil vapor. In addition, a sub-excavation of an approximate 15 ft by 15 ft area surrounding SVP-6 (or the highest noted photoionization detector (PID) reading to be collected at the floor of the five ft excavation) will be further extended to approximately three feet below first encountered groundwater to provide access for groundwater removal and discharge to the sanitary sewer or off-Site disposal. The groundwater volume will equal whichever of the following occurs first:
    - Three pore volumes; or
    - The volume that the excavation can yield during eight hours of steady pumping.

  Soil samples will be collected from the sidewalls and base of the excavations as further detailed in Section 2.4.1.
- **Excavation 2** is comprised of the sewer lateral and surrounding soil underneath Warehouse 1 (shown adjacent to SVP-9). An approximate 2-foot margin of soil will be excavated with the sewer lateral (under and surrounding all sides). The lateral's invert is assumed to lie at three

feet below ground surface (bgs) but could be deeper. Soil samples will be collected from the base of the excavation as further detailed in Section 2.4.1.

- **Excavation 3** is comprised of an oil/water separator (OWS), its underground piping, and surrounding soil underneath Warehouse 1 (shown south of SVP-9). The invert of the underground piping is assumed to lie at three feet bgs but could be deeper. The bottom of the OWS is unknown however is expected to be deeper than three feet bgs. An approximate 2-foot margin of soil will be excavated with these features (under and surrounding all sides). Soil samples will be collected from the base of the excavation as further detailed in Section 2.4.1
- **Excavation 4** is comprised of the southwest corner of the suspected underground storage tank (UST) pit, where a strong odor was observed during 2019 test pit activities. An approximate 15 ft by 15 ft area will be excavated surrounding former Test Pit T5[1] to approximately three feet below first encountered groundwater to address impacts observed from 10 to 13 feet bgs (strong hydrocarbon odors and PID readings ranging from 115 to 194 parts per million [ppm]). Three pore volumes of groundwater (approximately 4,545 gallons using the same assumptions as Excavation 1) OR the recharge volume from eight hours will be pumped from this excavation pit for treatment and discharge to the sanitary sewer. Soil samples will be collected from the sidewalls of the excavation as further detailed in Section 2.4.1.
- **Excavation 5** is comprised of the former dispenser area, where elevated VOCs were reported in SVP-10. An approximate 15 ft by 15 ft area will be excavated to approximately five feet bgs. Soil samples will be collected from the sidewalls and base of the excavation as further detailed in Section 2.4.1.
- **Excavation 6** is comprised of shallow soil in defined areas of the property designated for landscaping. The upper two feet of soil in these designated areas (referred to as Grids 1, 2, and 5) are presumed to be impacted with lead and will be excavated and replaced with clean soil in landscape areas or utility trenches. Planned landscape areas appear on Figure 2-2 and the preliminary redevelopment plan provided in Appendix A. Excavated lead-impacted soil will either be off-hauled or consolidated and capped on-Site as further detailed in Section 3.1.

[1] Test pit activities and results were documented in the CAP (RMD, 2019)

At Excavations 1 through 5, further excavation step-out will be considered based on field observations and/or based on the analytical results of the soil samples, further discussed in Section 2.4.1.

2.1 General Excavation Procedures

Excavation activities will be conducted using conventional earthmoving equipment (e.g., track- or tire-mounted excavators). Specific equipment selection, the details of cave-in protection systems (e.g., benching, sloping, or shoring), and the means to implement the soil excavation will be at the discretion of the selected excavation contractor. Noted exceptions are as follows:

- Excavation 1 will require shoring along its northern face, even where the depth is only five feet, to stabilize the soil prism between the excavation wall and the retaining wall on the property to the north.
- The shallow portion of Excavation 4 will require shoring on its eastern and northern faces where it passes through loose gravel placed as backfill from the former UST excavation.

All excavation and earthwork conducted as part of implementation of corrective actions or as part of redevelopment construction activities will be conducted in accordance with the requirements of the SGMP. The SGMP includes procedures and protocols to control and limit potential on-Site and off-Site exposure to contaminated environmental media during excavation and earth-moving activities. These procedures and protocols include contingency measures in the event that excavation or earthmoving activities reveal unexpected conditions.

2.2 Prefield Activities

Prior to the initiation of excavation fieldwork, the following activities will be performed in accordance with the SGMP.

1. The excavation contractor will prepare a Site-specific Health and Safety Plan in accordance with Section 2.3 of the SGMP.
2. Community protection from potential fugitive emissions during earth work at the Site will be reviewed with the excavation contractor in accordance with Sections 2.4 and 10 of the SGMP.
3. The SGMP will be reviewed by the excavation contractor, any associated subcontractors, and by contractors who may disturb soil at the Site. The Agreement and Acknowledgement

Statement provided in Appendix A of the SGMP will be signed by the excavation contractor, any associated subcontractors, and by contractors who may disturb soil at the Site in accordance with Section 2.5 of the SGMP.

4. Notification will be provided to the ACDEH in accordance with Section 3.1 of the SGMP.
5. The ACDEH contact information will be provided to the excavation contractor and will be posted in an accessible and suitable location at the Site in accordance with Section 3.1.3 of the SGMP.
6. Underground Service Alert notification for underground utility locating and other agency notifications will be made, as appropriate, in accordance with Section 5.4 of the SGMP.
7. Existing groundwater monitoring wells and soil vapor wells will be destroyed in accordance with procedures described below in Section 2.3.

2.3 Well Abandonment

Currently, there are thirteen on-Site soil vapor probes (single depth SVP-1 through SVP-4, SVP-9, and SVP-10; dual-nested SVP-6 through SVP-8) and three on-Site groundwater monitoring wells (MW-1 through MW-3). In addition, seven VaporPins™ are installed beneath the Warehouse 1 slab. All 23 locations will be demolished in accordance with Alameda County Public Works Agency requirements and Alameda County Ordinance No. 73-68[2]. As discussed in Section 4.0, MW-1 through MW-3 will be abandoned and are not planned for replacement if year 2020 sampling and analysis concentrations are consistent with the historical data collected from these locations, with concurrence from ACDEH. A new soil vapor and/or subslab vapor monitoring network, designed for the new property development, will be included in the VIMS CAIP (discussed in Section 3.2).

Well and soil vapor probe destruction permits[3] will be obtained from Alameda County Public Works Agency prior to mobilization. A California C57-licensed driller will destroy all groundwater monitoring wells. In accordance with California Department of Water Resources Regulations, the driller will perforate the casing. The upper 20 feet of well casings or tubes will be filled with a 95% cement/5% bentonite slurry, from the bottom upwards, by tremie pipe (to the extent practicable) and under pressure. The upper five feet of casing will be removed and backfilled to the surface with 95% cement/5% bentonite.

[2]https://static1.squarespace.com/static/57573edf37013b15f0435124/t/580e35f6893fc048dbc54c65/1477326327775/Amended+Ordinance+No+73-68.pdf
[3] https://www.acpwa.org/drilling-and-wells-permit

A copy of the "Report of Completion" (Water Well Driller's Report, Department of Water Resources) required by California Water code Section 13751, will be submitted within thirty (30) calendar days of destruction. This report will document that the work was completed in accordance with the Well Standards and all additional permit conditions.

Consistent with Alameda County Public Works Agency permit requirements, soil vapor probes will be abandoned by filling the tubing with pancake-batter consistency bentonite. In areas where soil vapor probes are located within a planned excavation area footprint, the probes will be completely removed using the earthwork equipment, if approved by Alameda County Public Works Agency.

2.4 Excavation Field Procedures

As indicated previously, shoring will be required at Excavation #1 because the excavation will extend to the parcel's northern property line and at Excavation #4 because the expected gravel fill on the east face[4] will be a Type C soil. Based on a review of logs, the native soil meets the definition of at least a Type B per Appendix A to California Code of Regulations, Title 8, §1541.1. In a March 2019 geotechnical engineering study, Rockridge Geotechnical preliminarily indicated a soil bearing capacity of 3,000 pounds per square foot, or 1.5 tons per square foot (tsf). On that basis and because the soil is clay or sandy clay, the construction contractor's certified Competent Person could determine that it meets Type A criteria.

With the Competent Person's approval, excavations of five feet depth or less can use vertical sidewalls. Where the excavations exceed five feet in depth, excavation walls will be either shored or sloped from the ground surface to the target depth with a slope of 1H:1V outside of the excavation footprint. If the Competent Person determines that the soil is Type A, then the sidewall slope can increase to ¾H:1V. Since none of the excavations exceed 20 feet in depth, sloping or benching designs will not require the approval of a California-registered professional engineer (PE). However, depending on their designs, PE approval may be required for specific shoring systems.

The excavated volume of soil from Excavations #1 through #5 will be approximately 508 cubic yards (Table 2-1) plus whatever amount is necessary to accommodate protective side-wall slopes. Soil from Excavations #1 through #5 will be loaded directly from the area of excavation into trucks or stockpiled prior to for removal from the Site. Due to the heavy weight of wet or moist clay (wet or

[4] Excavation 4 surrounds former Test Pit T5. Test Pit T5 contained native material, however test pits located east of T5 were contained gravel fill to approximately 12 feet bgs (documented in the CAP, RMD, 2019).

moist soils are anticipated as a result of dust suppression measures), haul trucks will most likely be weight-limited and not volume-limited. If each truck has a 20-ton payload, then the excavated volume will require at least 46 truckloads. The actual truckload count will depend on loading efficiency and any increases to the excavation sizes.

Shallow lead impacted soil from Excavation 6 (an estimated 247 cubic yards outside of the Excavation #1 through #5 footprints, Table 2-2) will be used as backfill in capped areas as discussed in Section 3.1 or will be managed for off-Site disposal consistent with soil from Excavations #1 through #5.

During excavation, the following activities will be performed in accordance with the SGMP.

1. The existing perimeter fence will be maintained and access will be restricted to authorized personnel in accordance with Section 5.1 of the SGMP.
2. Procedures for handling, staging, and disposal of contaminated soil and groundwater in accordance with Section 9 of the SGMP.
3. Dust and odor control and suppression measures in accordance with Section 10 of the SGMP;
4. Air and dust monitoring requirements in accordance with Section 10.2 of the SGMP; and
5. Storm water management policies in accordance with Section 11 of the SGMP.
6. Unexpected conditions encountered during excavation will result in notification to the Owner, cordoning the area with caution tape, and evaluation of the conditions in accordance with Sections 4.4, 6.2, and Section 7 of the SGMP.
7. Spill response will be performed in accordance with Section 9.6 of the SGMP.
8. Notification will be provided to the ACDEH within 24 hours of a release or spill, and in the event of the discovery of unknown conditions in accordance with Section 3.1.1 of the SGMP.
9. Record keeping and reporting will be performed in accordance with Section 3.3 of the SGMP.

Additionally, verification sampling, excavation dewatering, soil and groundwater disposal, and excavation backfilling will be performed as described below.

2.4.1 Confirmation Sampling and Analysis

Post-excavation confirmation soil samples will be collected from Excavations #1 through #5 to document post-excavation soil concentrations and to verify that sufficient removal of impacted soil has occurred.

For Excavations #1 through #5, sidewalls and pit bottoms will initially be screened based on field observations (stained or odorous soil) and using a PID. As an initial screening approach, PID readings will be collected as soil is excavated, measured directly above soil in the bucket. Soil samples will be collected at a minimum frequency as indicated in the paragraph below and will be placed in a self-sealing plastic bag to allow the pore space to volatilize. The headspace in the plastic bag will then be monitored for VOCs with the PID.

For excavations of the sewer lateral and piping associated with the sewer pipe and OWS (Excavations #2 and #3), confirmation samples from only the excavation bottom will be collected (unless field observations indicated sidewall sampling is warranted). For Excavations #1, #4, and #5, confirmation samples will be collected from the sidewalls and the excavation base (except in areas where the excavations extend into groundwater). Confirmation samples will be collected for laboratory analysis from 1) excavation sidewalls at mid-depth and at 20-foot intervals along the perimeter of the excavated area, and 2) from the bottom of the excavated area (if not extending into groundwater) at 20-ft intervals. If field screening results suggest suspected soil contamination, soil sample locations will be targeted in those areas. In the absence of field indicators suggesting suspected contamination, confirmation samples will be collected from the center point of each target area. In summary, it is expected that the following minimum number of confirmation samples will be collected during excavation activities:

Excavation ID	Estimated Footprint (ft x ft)	Estimated Depth (ft)	Number of Initial Sidewall Samples	Number of Initial Base Samples
1	25 x 40	5	6	1
Sub	15 x 15	13[Note 1]	0	0
2	5 x 50	5	0	2
3	5 x 65	5	0	2
4	15 x 15	13[Note 1]	4	0
5	15 x 15	5	4	1

[Note 1] Assumes a groundwater depth of 10 feet bgs.

Soil samples will be collected in clean, driven 6-inch brass or stainless steel tubes. The end of each sample sleeve will be covered with Teflon™ sheeting, capped with plastic end caps, labeled with a unique sample number, date of collection and sample location and depth, and placed in an ice-filled cooler. The samples will be transported to a California-certified environmental laboratory under a chain-of-custody document for analysis of the soil COPCs by the following methods:

- EPA 8015M: Total petroleum hydrocarbons as diesel (TPHd),
- EPA 8260B: VOCs and Total petroleum hydrocarbons as gasoline (TPHg),
- EPA 6020: Cobalt, and lead.

As discussed in Section 5.1 of the CAP, additional soil excavation will be considered at locations where post-excavation confirmation soil samples indicate that screening levels (identified in the CAP Addendum) have not been met. The excavation footprints will be expanded until subsequent verification sampling confirms that cleanup goals are met or until further excavation is no longer practicable, unless approved otherwise by ACDEH.

2.5 Excavation Dewatering

Dewatering from Excavations #1 and #4 will remove localized VOC contaminants in groundwater and in soil from the capillary fringe area. The dewatering volume will approximately equal three soil pore volumes of the saturated soil quantity removed from each excavation that is advanced into groundwater.

The volume will equal whichever of the following occurs first:

- Three pore volumes (approximately 4,545 gallons assuming a soil porosity of 0.3, saturated depth of 3 ft, and a 15 ft by 15 ft area), as follows:

$$V = 3 \times 15\ ft \times 15\ ft\ \times\ 3ft \times 0.3 \times 7.48 \frac{gallons}{ft^3} = 4{,}545\ gallons$$

or

- The volume that the excavation can yield during eight hours of steady pumping.

Note that the gravel backfill in the former UST pit adjacent to Excavation #4 may release extra water if the excavation extends into the former tank pit backfill and the groundwater level is higher than 12 feet bgs (the depth of backfill based on prior test pit results). It is not the intent of this CAIP to

dewater the entire former tank pit area. The dewatering volume of Excavation #4 will be limited to approximately 4,545 gallons.

A pneumatic diaphragm pump or a trash pump will transfer water directly from the bottom of the excavation to one or more covered tanks located at the surface. Temporary storage will conform to section 9.5 of the SGMP.

2.6 Soil and Groundwater Transportation and Disposal

2.6.1 Soil

Off-Site transportation and disposal of excavated soil will be managed as follows.

1. Soil will be characterized for off-Site disposal in accordance with Section 9.1 of the SGMP.
2. Stockpiled soil will be managed in accordance with Section 9.2 of the SGMP.
3. Decontamination of equipment and personnel will be performed to prevent residual contamination from leaving the Site and to minimize the spread of contaminated soil in accordance with Section 9.3 of the SGMP.
4. Soil will be hauled from the Site in accordance with procedures and the Transportation Plan identified in Section 9.4 of the SGMP.
5. Traffic entering and leaving the Site during removal of impacted soil will be managed using a flagman or comparable excavation contractor personnel, in accordance with Section 5.2 of the SGMP.
6. Spills will be managed in accordance with Section 9.6 of the SGMP.
7. Haulers will be required to have an Emergency Spill Contingency Plan to ensure that all drivers and dispatchers know their responsibilities in the unlikely event that an accidental spill occurs while transporting contaminated material off-Site in accordance with Section 9.6 of the SGMP.
8. Record keeping and reporting related to soil off-haul will be performed in accordance with Section 3.3 of the SGMP.

2.6.2 Groundwater

The City of Oakland does not allow the discharge of contaminated groundwater to their storm drain system. Groundwater disposal options include 1) discharge to the sanitary sewer discharge under

permits from the East Bay Municipal Utility District (EBMUD) and the City of Oakland or 2) off-Site disposal at a permitted disposal facility. It is expected that the groundwater will be discharged to the sanitary sewer under permits from EBMUD and the City of Oakland.

Management of groundwater discharged to the sanitary sewer will be as follows:

1. Applications for a Special Discharge Permit shall be submitted to EBMUD a minimum of ten working days prior to the date of the discharge. (As a practical matter, EBMUD may need six weeks.) No discharge shall proceed prior to issuance of the Special Discharge Permit, completion of any required site inspections, and approval by EBMUD staff.
2. The City of Oakland will require the following permits:
    a. Temporary Discharge to Sanitary Sewer System Permit,
    b. Sewer Connection Permit, and
    c. Obstruction Permit[5], if blocking or obstructing any street parking, curb/gutter, sidewalk, or traffic lane.
3. All discharged water must pass through an appropriate flow-measurement device.
4. The wastewater must be discharged through a side sewer (Ordinance, Title II, Section 2, d). The discharge of wastewater directly into a manhole or other opening in the community sewer system is prohibited, except for sewer construction and maintenance by public agencies. Special Discharge Permits may authorize direct discharge into a manhole or other opening if alternative means of discharge are unavailable.
5. Prior to discharge, a three-point composite sample will be obtained from the tanked water at the top, middle, and bottom to comply with EBMUD special discharge permit requirements. The sample will be labeled and handled under standard chain-of-custody (COC) protocols and transported to a State-certified laboratory. The laboratory will analyze the samples by the methods appearing in Table 2-3. EBMUD may require additional analyses based on the Site history and location.

If groundwater is disposed of at a disposal facility in lieu of (or addition to) sanitary sewer discharge, management and transportation of groundwater from the Site will be performed in accordance with Sections 8 and 9 of the SGMP.

[5] https://www.oaklandca.gov/services/obstruction-permit-traffic-control-plan-not-required

Record keeping and reporting related to groundwater discharged or removed from the Site such as manifests or flow meter totalizer logs will be performed in accordance with Section 3.3 of the SGMP.

2.7 Excavation Backfill and Soil Import

Following the completion of excavation of soil, shallow excavated areas will be backfilled and compacted using a combination of suitable imported and on-Site material. Figure 2-3 shows the backfill plans for Excavations 1 through 6.

2.7.1 Backfill Types

Backfill types will consist of the following:

- For excavation areas which extend below the water table backfill will consist of imported, crushed, washed, ¾-inch gravel to approximately 1-foot above the water table. A layer of permeable geotextile will be placed atop the gravel before backfilling the excavation to grade.
- For the area of Excavations #1 through #5 that will be capped with a building or hardscape, they may be backfilled with either soil from Excavation 6[6], and/or clean, imported soil. This applies to elevations at least one 1-foot above the water table to the elevation of the finished subgrade.
- For the area of Excavations #1 through #5 that are within future landscape areas, they may be backfilled with either 1) soil from Excavation 6[6], and/or 2) clean, imported soil with the requirement that the top 2 feet (at minimum) will be filled with clean, imported soil. This applies to elevations at least one 1-foot above the water table to the elevation of the finished subgrade.
- All utility trenches will be backfilled with clean, imported fill.
- None of the soil from Excavations # 1 through 5 may be used as backfill.

[6] Soil from excavation 6 is shallow, lead-impacted soil which may be consolidated and capped as discussed further in Section 3.1

2.7.2 Volumes

Excavation volume estimates are included on Tables 2-1 and 2-2. Assuming none of the excavations are expanded a total of 755 cubic yards of soil will be excavated (Table 2-1). Approximately 247 cubic yards will be excavated from Excavation #6 and may be used as backfill under future building and hardscape areas, as indicated above in Section 2.7.1.

2.7.3 Compaction

The project's geotechnical engineering report (Rockridge Geotechnical, 2019) does not specify compaction requirements for backfill. The report indicates, "Spread footings may be preliminarily designed using an allowable bearing pressure of 3,000 pounds per square foot (psf) for dead-plus-live loads…" Therefore, backfill shall be compacted enough to attain this minimum strength requirement. In the absence of geotechnical engineering recommendations, all backfill shall be compacted in maximum 6-inch lifts to a minimum of 95% of maximum dry density as determined by a Modified Proctor Test (ASTM D1557) for each soil type, with moisture content within 2% of optimum.

2.7.4 Suitability Characterization

Backfill shall be free of deleterious material such as construction debris, trash, and/or organic matter such as roots, leaves, branches, or other plant matter.

ACDEH's technical memorandum "Soil Import/Export Characterization Requirements" (ACDEH, 2019) governs reused import soil, other than gravel, from locations other than a verified clean retail outlet. It does not apply to export soil from the Site, since none will be exported to another site for reuse.[7] Imported soil, other than crushed rock, pea gravel, recycled concrete, or flowable material must meet these characterization requirements, which include the following:

- Assessment of Potentially Suitable Fill Material Sources through research of the fill material source site,
- Evaluation of Fill Material Suitability by soil sampling and laboratory analysis then compared to environmental screening levels, and

[7] If Risa identifies a willing recipient of the soil that is otherwise designated for landfill disposal, then this ACDEH guidance would apply to export soil.

- **ACDEH Suitability Determination** based on submittal of a technical report signed and sealed by a professional geologist or engineer.

During the import of material to the Site, procedures for mitigating the spread of contaminated soil will be performed in accordance with Section 9.3 of the SGMP. Record keeping and reporting related to import of material to the Site such as bills of lading will be performed in accordance with Section 3.3 of the SGMP.

3.0 ENGINEERING CONTROLS

Engineering controls will consist of the installation of a VIMS in conjunction with off-Site disposal or on-Site consolidation and capping of cobalt and lead impacted soil. Each of these is discussed below.

3.1 Consolidation and Capping

In areas with elevated cobalt or lead, utility trenches and non-hardscaped areas will be excavated, and soil will either be 1) off-hauled or 2) reused on-Site under building foundations or hardscape areas outside of utility trenches. Soil impacted with lead or cobalt[8] above screening levels are present in the areas identified as Grids 1, 2, and 5 on Figure 2-2. Grids 3 and 4 did not exhibit metal impacts above applicable screening levels (refer to Data Gap Investigation Report and Addendum to Corrective Action Plan, dated March 26, 2020) and shallow soil. Landscape areas in Grids 1, 2 and 5 are referred to as Excavation #6, detailed previously in Section 2, Table 2-2, and Figure 2-2. Soil that is excavated as part of Excavation #6 may be consolidated and used as backfill (conditions specified in Section 2.7.1) under capped areas. Soil excavated from utility trenches from Grids 1, 2 and 5 must also be consolidated to be considered for backfill[9] under capped areas.

Capped areas at the Site consist of:

- The first-floor building concrete floor slab,
- Hardscape areas, such as parking lots and sidewalks, and
- A minimum of two feet of clean import soil in landscape areas.

[8] Soil with cobalt above screening levels is localized to two soil samples (B4 and MW-1) at depths at or below 4.5 feet bgs. These three locations will be capped with future buildings DMA-1 and DMA-2and the presence of localized cobalt is not considered to be drivers for mitigation or corrective actions. However, inclusion of this chemicals has been included to encompass all metals reported above ESLs in soil.

[9] With the exception of Excavation #4 and #5 footprints, soil removed from utility trenches in Grids 3 and 4 may be used as backfill at the Site and do not require capping unless field observations suggest the presence of contamination.

Figure 2-2 shows the planned landscape areas that will excavated to a minimum of two feet bgs (Excavation #6) and backfilled with a minimum of two feet of clean import soil, unless sampling supports a shallower depth (with acceptance from ACDEH). Future utility trenches have not yet been designed, however soil excavated from utility trenches within Grids 1, 2, and 5 will be treated similar to the landscape areas (excavated soil will be consolidated and capped or off-hauled and the trenches will be backfilled with clean imported fill).

Landscaped areas will consist of a minimum of two feet of clean fill placed atop native soil. The landscaped areas will constitute a vegetated soil cover or cap. The CAP Addendum indicated that the lead impacts were encountered in the top six inches of soil. Soil samples from 4½ feet deep exhibited lead below screening levels. It is expected that the lead impacted soil is limited to depths less than 2 feet bgs, however RMD acknowledges that the sampling data has not been collected to confirm the vertical extent of lead soil shallower than 4 ½ feet bgs. Consequently, unless sampling confirms that the extent of metals-impacted soil has been removed during excavation of the two feet of soil from Excavation 6, non-biodegradable geotextile fabric or orange safety grid fencing will be placed onto the Site soil surface beneath each non-hardscaped area as an excavation marker. Procedures associated with work below the excavation marker will be identified in the SMP.

Soil from Excavation #6 (and soil excavated from utility trenches in Grids 1, 2, and 5) will be offhauled or used as backfill under capped areas from Excavations #1 through #5. Backfill profile details are provided in Figure 2-3.

During a phone conference on March 18, 2020, ACDEH requested information regarding the planting and potential root ball depths for the proposed landscape areas. Planned landscape details are provided in the figures provided in Appendix A. According to Risa's landscape design, all trees and plants will be planted with less than two feet of excavation as measured from the top of grade. Roots of mature trees (refer to Appendix A for locations) may grow deeper than two feet bgs however if future tree removal is required, excavation can be avoided by grinding out the stump and roots to a depth of less than 24 inches. It is not necessary to remove roots deeper than two feet bgs. Details for ongoing, long-term management of landscape areas will be included in the SMP.

A Soil Excavation Corrective Action Implementation Report (Soil Excavation Report) will document the installed landscape plan and will identify areas where residual lead remains

present in soil under the clean fill cap. The Soil Excavation Report will be submitted to ACDEH within 90 days following completion of activities (Section 6). As mentioned previously, non-biodegradable geotextile fabric or orange safety grid fencing will be placed onto the Site soil surface beneath each non-hardscaped area as an excavation marker in areas where soil above screening levels remain in place.

3.2 Vapor Intrusion Mitigation System

Figure 1-3 shows where shallow[10] soil vapor samples have historically exceeded VOC vapor intrusion ESLs. Following the implementation of Excavations 1 through 5, soil vapor concentrations in a portion or all of these areas may drop to levels that meet ESLs. However, unless further sampling can demonstrate a reduction in soil vapor concentrations, it is assumed that the Site will pose a low vapor intrusion risk warranting a VIMS. It is assumed that the VIMS will meet ACDEH's expectations for a medium-risk site. The VIMS will be designed to mitigate potential vapor intrusion and associated potential inhalation exposure and will include a vapor barrier and a vapor collection system with passive vent system.

Design elements will include the following:

- A 60 mil vapor barrier compatible with PCE, TCE, and petroleum hydrocarbon constituents.
- The vapor collection system will consist of a minimum 6-inch layer of washed ¾ inch gravel beneath the vapor barrier with horizontal segments of perforated PVC converging on a vertical riser pipe extending above the roof. The vapor collection system should either dilute sub-slab vapors to below soil gas screening levels or induce a sub-slab vacuum of at least 1 pascal (Pa) and no more than 50 Pa to avoid backdrafting of combustion appliances inside the building.
- A contingency will be included for converting the passive sub-slab vapor collection and ventilation system to active if VOC concentrations beneath the liner pose an unacceptable risk. Conversion of the system from passive to active will involve the addition of first using a wind turbine and second, if the wind turbine is unsuccessful, an electric fan.

[10] At locations with nested probes (SVP-6, SVP-7, and SVP-8), the data from the shallowest soil vapor probe was considered.

- Vapor migration controls (e.g. trench dams; dry utility plugs; wet utility sealants), including the following:
    - Trench plugs or dams will prevent preferential vapor migration in utility trenches. Utility trench dams should be constructed of bentonite-soil mixture, or sand-cement slurry (or equivalent) in all utility trenches that are backfilled with sand or other permeable material for new or replacement utility lines (such as water, sewer, phone, electrical, and cable). These dams should extend at least three feet from the perimeter of the structure and from at least six inches above the bottom of the perimeter footing to the base of the trench.
    - Internal plugs at the interior termination of dry utilities passing through the vapor barrier and open to soil vapors will prevent the soil vapors from flowing to the interior of the building. These seals should consist of closed cell polyurethane foam or other inert gas-impermeable material. They should extend a minimum of six conduit diameters or six inches, whichever is greater, into the conduit. Wye seals should not be used for main electrical feed lines. Seals in electrical conduits should comply with the appropriate sections of the National Electrical Code (NFPA 70) as presented in Article 500 Hazardous (Classified) Locations Class I, II, and III, Divisions 1 and 2.
    - Wet utilities such as sewers and drain lines will include vapor traps to prevent vapor migration through them.
- Design of a VIMS sub-slab monitoring network consisting of probes beneath the vapor barrier to measure vacuum and sample sub-slab vapor concentrations.

3.2.1 VIMS CAIP

Engineering details of the VIMS system will be provided separately to ACDEH in a VIMS CAIP after building design plans have been finalized. The VIMS CAIP will include the following:

- VIMS Basis of Design (BOD) Report which documents present the assumptions, considerations, design criteria, basic rational and logic, and engineering calculations that serve as the basis for the design of engineering controls.
- A set of construction plans and specification for the VIMS.

- A VIMS environmental monitoring plan which includes a sub-slab vapor probe monitoring system and source area design plan.
- A VIMS Construction Quality Assurance Quality Control (CQA/QC) Plan that includes the procedures used for verification of VIMS construction in accordance with the VIMS design.
- A VIMS Performance Verification Sampling and Reporting Plan to include:
    - VIMS monitoring procedures.
    - VIMS monitoring frequency.
    - Analysis to be performed for performance evaluation samples.
    - Criteria for amendments to the VIMS based on the performance monitoring results.
    - Record keeping and reporting requirements.

Prior to initiation of foundation construction for the Project, the VIMS CAIP must be approved by ACDEH.

4.0 GROUNDWATER MONITORING

Groundwater data has been collected from eleven on-Site (B1 through B11) and five off-Site (SB1 through SB-5) borings and three on-Site groundwater monitoring wells (MW-1 MW-2, and MW-3). Analytical data is summarized in the CAP Addendum. A summary of COPC[11] concentrations in groundwater are as follows:

Table 1: COPC Concentrations in Groundwater

COPC	Final Screening Level (µg/L)	Maximum Historical Concentration (µg/L)	Notes
TPHg	100	110 (on-Site)	TPHg was reported in sample B5 only, slightly above the final screening level, and not at levels that warrant further groundwater action based on the Low Threat Underground Storage Tank Closure Policy (LTCP) criteria considering Site conditions. The property downgradient from the Site (Vincent Academy) was closed by the Water Board in June 2015 with residual groundwater concentrations of 150 µg/L.
TPHd	100	270 (on-Site)	TPHd is not present at levels that warrant further groundwater action based on LTCP criteria and considering Site conditions.
Benzene	0.42	0.51 (on-Site) ND <0.006 (off-Site)	Benzene was reported at boring B5 only, slightly above the final screening level, and not at levels that warrant further groundwater action.
PCE	0.64	24 (on-Site) ND <0.006 (off-Site)	PCE concentrations above screening levels are localized and have not migrated off-Site[12] to a degree that warrants further off-Site investigation or action. The maximum concentration reported is relatively low and will attenuate over time, especially considering the effects of the planned excavation and dewatering activities. No further groundwater action is warranted. Vapor intrusion mitigation due to volatilization of PCE may be required based on evaluation of soil vapor data above the low concentration PCE groundwater plume.
TCE	1.2	7.6 (on-Site) 11 (off-Site)	TCE concentrations were reported at relatively low concentrations in both on-Site and off-Site wells. Based on the

[11] COPCs were identified in the Addendum. RMD, March 26, 2020.

[12] PCE has not been detected in samples collected from off-Site locations, however RMD acknowledges the potential for low concentrations of PCE in groundwater immediately beyond the northern property boundary, north/northwest of MW-1. Based on downgradient samples SB1, SB2, and SB6 off-Site concentrations of PCE in groundwater migrating from the Site, if present, are localized.

			distribution of TCE in groundwater, the TCE concentrations on the Site are due to migration from an upgradient source. No further groundwater action associated with the Site is warranted.
cis-1,2-DCE	6.0	4.5 (on-Site) ND <0.006 (off-Site)	cis-1,2-DCE was not reported above the final screening level from any on or off-Site location sampled. No further groundwater action is warranted.
trans-1,2-DCE	10	0.177 J (on-Site) ND <0.006 (off-Site)	trans-1,2-DCE was not reported above the final screening level from any on or off-Site location sampled. No further groundwater action is warranted.
Vinyl chloride	0.0086	ND< 0.0118 to <0.5 (on-Site and off-Site)	Vinyl chloride was not reported above the final screening level from any on or off-Site location sampled. No further groundwater action is warranted.

In summary, impacts to groundwater due to historical releases from the Site are not present at levels that require active remediation or long-term, ongoing monitoring. The potential for vapor intrusion mitigation due to the volatilization of PCE, TCE, or other VOCs can be evaluated using soil vapor data; therefore ongoing monitoring of groundwater at these low residual concentrations to assess vapor intrusion concerns is not warranted. Groundwater concentrations will be further reduced with the implementation of the source excavation and dewatering activities completed as part of the corrective actions.

Groundwater sampling from the three onsite monitoring wells occurred in September 2019. RMD proposes collecting an additional round of groundwater samples from MW-1, MW-2, and MW-3 in early Quarter 2, 2020 to evaluate data during the wet season, when the groundwater is likely to be higher. If concentrations are consistent with the historical data collected from these locations, the groundwater monitoring wells will be destroyed, with concurrence from ACDEH. RMD will submit a report documenting results of the groundwater sampling and proposed monitoring well demolition (or additional monitoring) by June 30, 2020.

5.0 ADMINISTRATIVE CONTROLS

Administrative controls are site-specific, non-engineered instruments that help to minimize the potential for exposure to contamination and protect the integrity of corrective action. They work by limiting land use, specifying site construction or operational requirements, and providing information that helps modify or guide human behavior.

Administrative controls consist of the following:

- A SGMP, including a Health and Safety Plan, during proposed excavation and property redevelopment construction; and
- An SMP that will document the purpose, location and details of land uses and all engineering controls to ensure that they remain functional and undisturbed.

5.1 Construction Soil and Groundwater Management Plan

Management of soil and groundwater during implementation of proposed corrective actions will be performed in accordance with procedures identified in the attached Soil and Groundwater Management Plan (SGMP) in Appendix B.

The SGMP describes the following tasks:

- Agency notification and reporting;
- Permitting;
- Site security;
- Traffic management;
- Soil and groundwater management (characterization, storage, and disposition);
- Decontamination;
- Dust control measures;
- Air monitoring; and
- Storm water management.

5.2 Site Management Plan

Prior to occupancy of the Site, a SMP will be developed and submitted to the ACDEH for review and approval. The SMP will be implemented as an administrative control. The elements of the SMP will include but not be limited to the following:

- Description and purpose of all engineering controls,
- Inspection requirements to document appropriate land use and the integrity of engineering controls,
- Procedures for penetrating and repairing soil caps,
- Procedures for penetrating and repairing the vapor barrier,
- Procedures for excavation beneath the vapor barrier and, if applicable, the excavation marker non-woven geotextile fabric,
- Procedures and frequency for monitoring VIMS performance parameters,
- Procedures and frequency for vapor monitoring associated with the VIMS,
- Criteria for changing the VIMS from a passive system to an active system, and
- Record keeping and reporting requirements associated with administration of the SMP.

6.0 REPORTING

Dalzell is requesting Alameda County Department of Environmental Health (ACDEH) review and approval of this document within 30 days. After ACDEH has approved this CAIP, a redevelopment project construction and reporting schedule will be submitted for ACDEH review. The reporting schedule will include the target dates for the following submittals and milestones, required under this CAIP:

- Quarter 2, 2020 Groundwater Monitoring Results and Request for Well Demolition (if supported by data) – June 30, 2020.
- Construction Soil and Groundwater Management Plan, including Health and Safety Plan – A minimum of 30 days prior to commencement of demolition.
- VIMS CAIP - A minimum of 90 days prior to foundation construction.
- Soil Excavation Corrective Action Implementation Report documenting soil excavation and construction of hardscape cap described herein - Within 90 days following completion of activities.
- SMP - Within 30 days of Site occupancy.
- VIMS Record Report of Construction and Performance Evaluation – As defined in VIMS CAIP.

Upon completion of the above submittals and milestones, it is anticipated that ACDEH will provide the responsible party with a no further action letter or similar, allowing residential land use in accordance with the SMP.

7.0 REFERENCES

Alameda County Department of Environmental Health, Local Oversight Program, (ACDEH) 2019. Soil Import/Export Characterization Requirements, August 9. (Latest revision, original issue August 1, 2018). Accessed at https://deh.acgov.org/landwater-assets/docs/LOP_Soil_Characterization_Requirements.pdf January 22, 2020.

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California Regional Water Quality Control Board, San Francisco Bay Region (CRWQCB-SFBR), 2019. Updated Environmental Screening Levels (ESLs). January 24.

Department of Toxic Substances Control, California Environmental Protection Agency (DTSC), 2011. Vapor Intrusion Mitigation Advisory, Final, Revision 1. October.

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P&D, 2019b. Limited Subsurface Investigation Report. April 24.

Regional Water Quality Control Board (RWQCB), 1999. East Bay Plain Groundwater Basin Beneficial Use Evaluation Report, Alameda and Contra Costa Counties. June.

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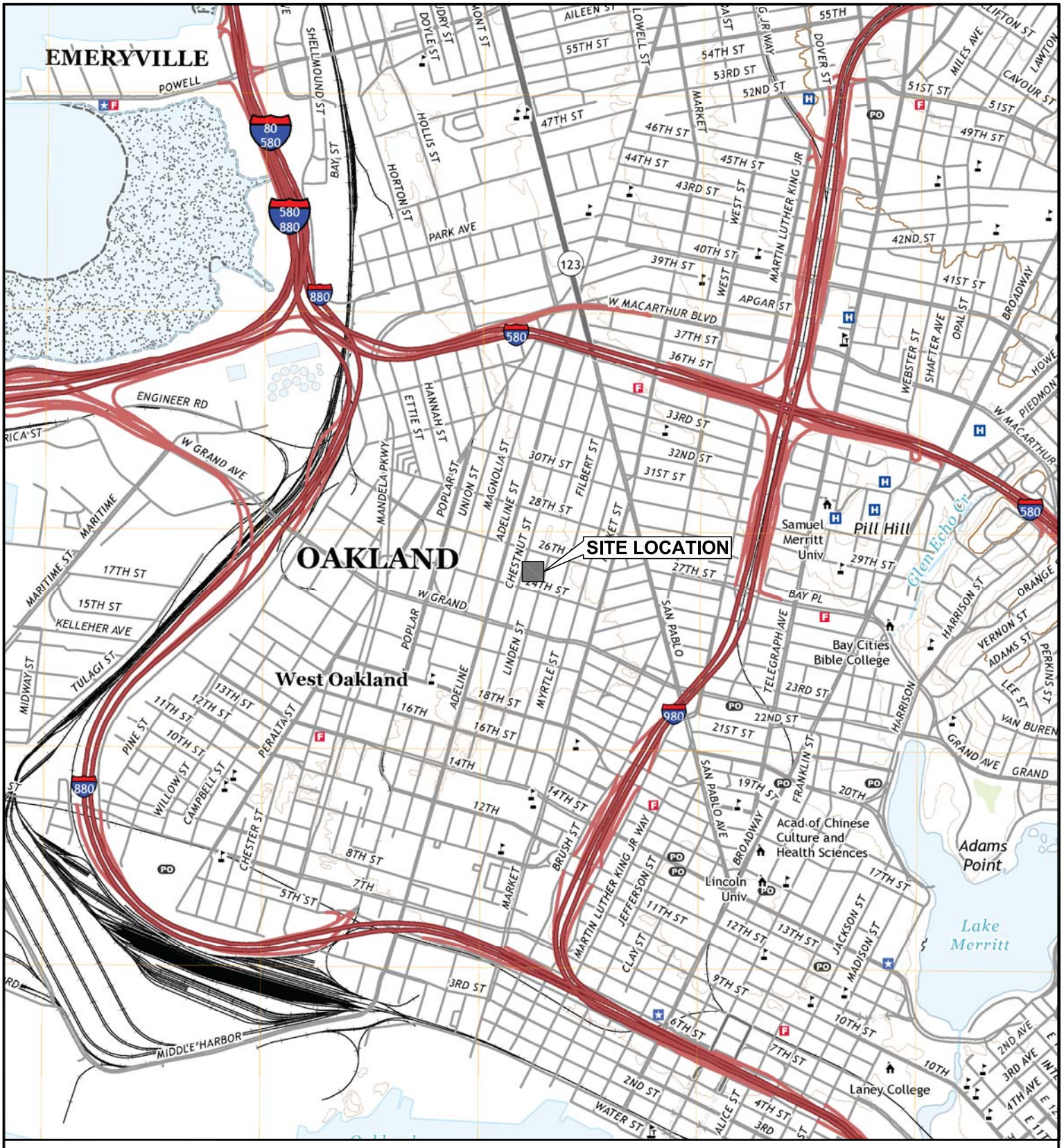
RMD, 2020, Data Gap Investigation Report and Addendum to Corrective Action Plan, 2420 & 2432 Chestnut Street and 2423 Linden Street, Oakland, California, March 26.

Rockridge Geotechnical, 2019. "Preliminary Geotechnical Study, Proposed Townhouse Buildings, 2432 Chestnut Street, Oakland, California," letter report from Craig S. Shields, G.E. and Linda H. J. Liang, G.E. to Mr. Casey Husband of Risa, March 22.

FIGURES



SCALE 1:24000

1 MILE 1/2 0

7000 FEET 6000 5000 4000 3000 2000 1000 0 1000

RMD ENVIRONMENTAL SOLUTIONS

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

SITE LOCATION MAP

N

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	08/2019	BCD	KR

Base map from USGS 7.5 minute
Oakland West (dated 2018)
California topographic quadrangle

FIGURE 1-1

2432-SLM.dwg

LEGEND

- SUSPECTED FORMER UST AREA
- SVP-1 — SOIL VAPOR MONITORING POINT
- MW-1 — GROUNDWATER MONITORING WELL
- SB-1 — OFFSITE GRAB GROUNDWATER SAMPLE LOCATION, DECEMBER 2019
- G1-1 — SHALLOW SOIL SAMPLE LOCATION
- B11 — HISTORICAL SOIL AND GRAB GROUNDWATER SAMPLE LOCATION (P&D ENVIRONMENTAL)
- VP6 — SUB SLAB VAPOR PIN LOCATION (APPROXIMATE)
- SITE BOUNDARY
- COMPOSITE SAMPLE GRID AREA

SITE PLAN WITH HISTORICAL SAMPLE LOCATIONS

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	03/2020	BCD	KD

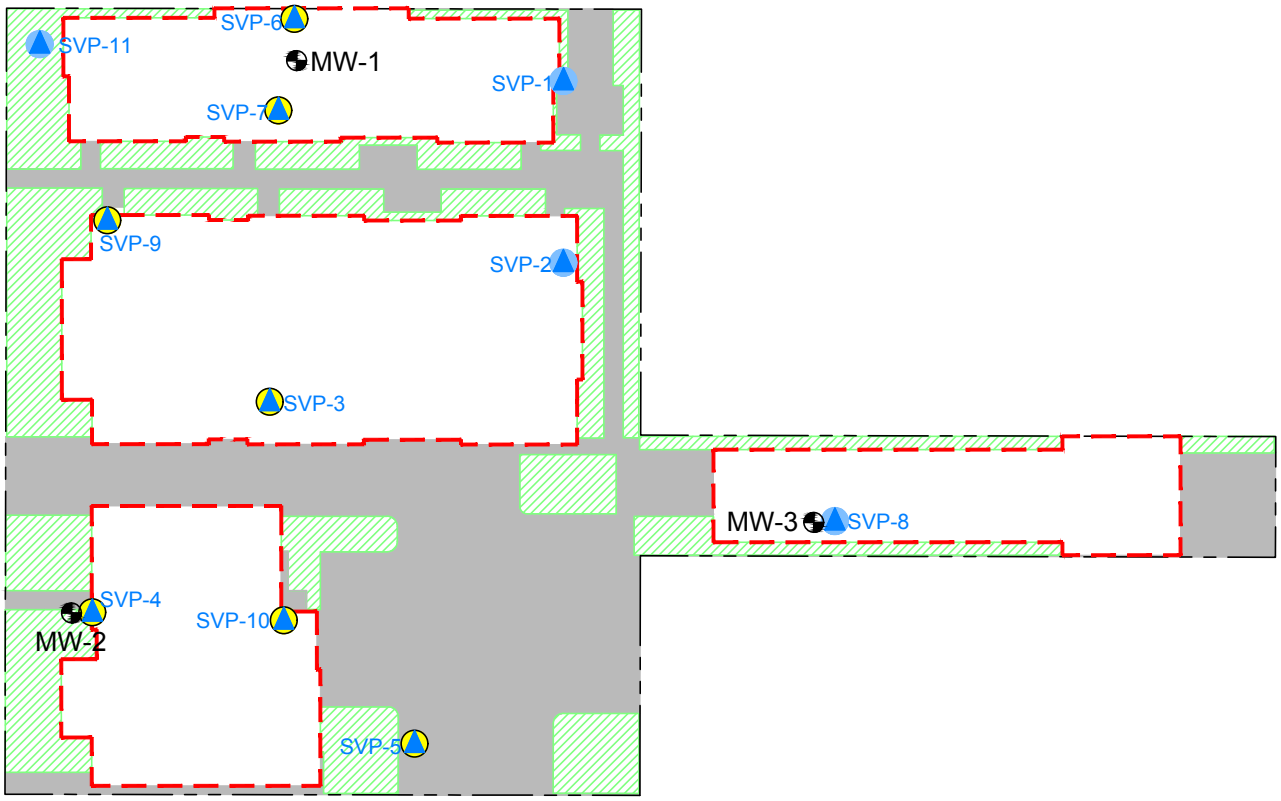
0 50 100
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 1-2

N

2432-PTB-DATA-2.dwg



LEGEND

SVP-1 ▲	SOIL VAPOR MONITORING POINT
MW-1 ◒	GROUNDWATER MONITORING WELL
ft. bgs.	FEET BELOW GROUND SURFACE
▨	FUTURE LANDSCAPE/FLOW THROUGH PLANTER
—·—	PROPERTY LINE
▬	HARDSCAPE
- - -	FUTURE BUILDING ENVELOPE
●	SHALLOW SOIL VAPOR CONCENTRATION DOES NOT EXCEED ENVIRONMENTAL SCREENING LEVEL
●	SHALLOW SOIL VAPOR CONCENTRATION EXCEEDS ENVIRONMENTAL SCREENING LEVEL

EXISTING WELL LOCATIONS OVERLAID ON FUTURE SITE LAYOUT

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

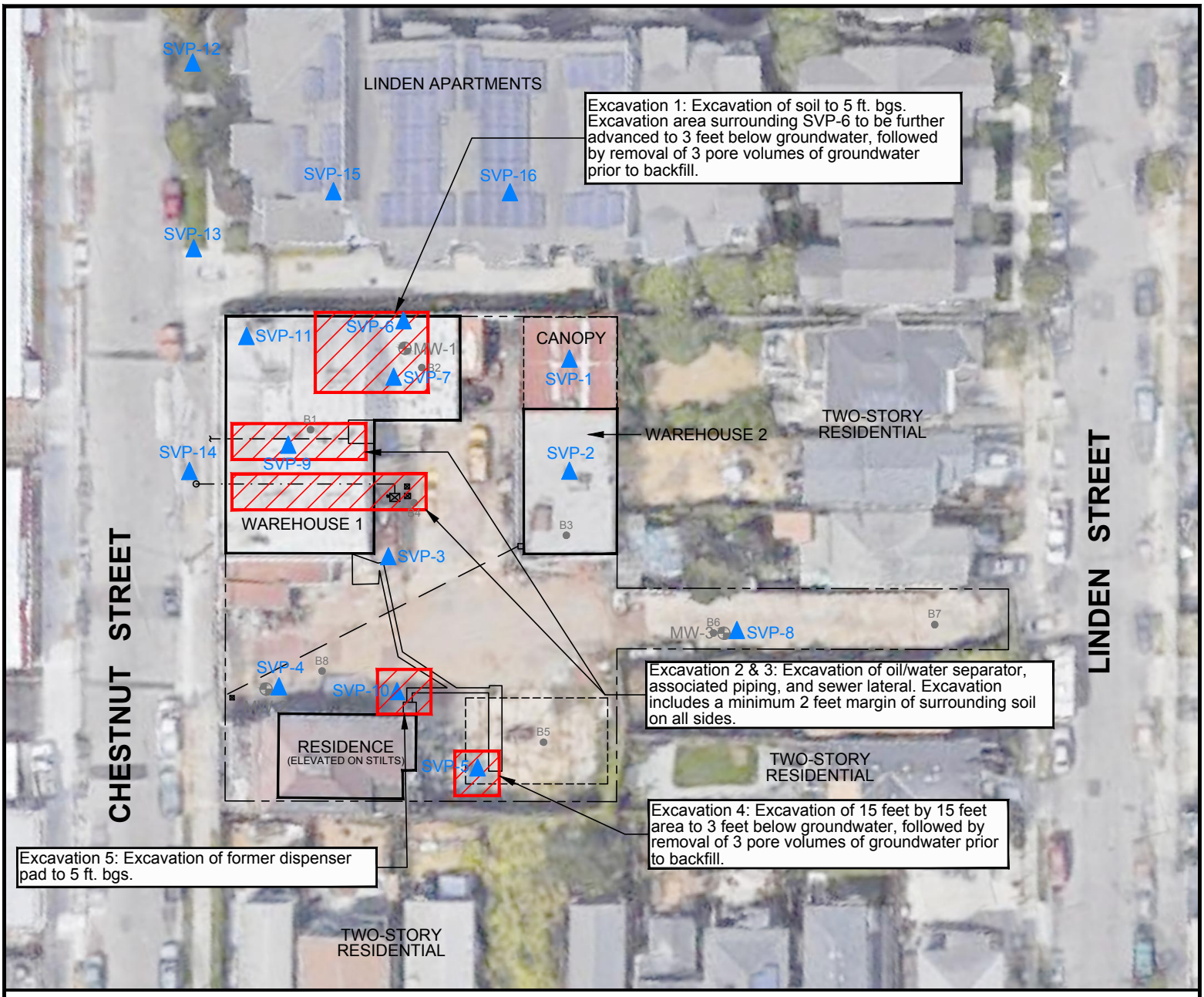
PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	03/2020	BCD	KD

0 40 80
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 1-3

N



LEGEND

- SUSPECTED FORMER UST AREA
- SVP-1 — SOIL VAPOR MONITORING POINT
- MW-1 — GROUNDWATER MONITORING WELL
- B1 — SOIL BORING LOCATION
- EXCAVATION AREA

NOTES:

1. CONCENTRATIONS SHOWN IN MICROGRAMS PER CUBIC METER (µg/m³).
2. PROPOSED EXCAVATIONS MAY BE MODIFIED AND FURTHER ADVANCED BASED ON FIELD OBSERVATIONS.

PROPOSED EXCAVATIONS #1 THROUGH #5, EXISTING SITE LAYOUT

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	02/2020	BCD	KD

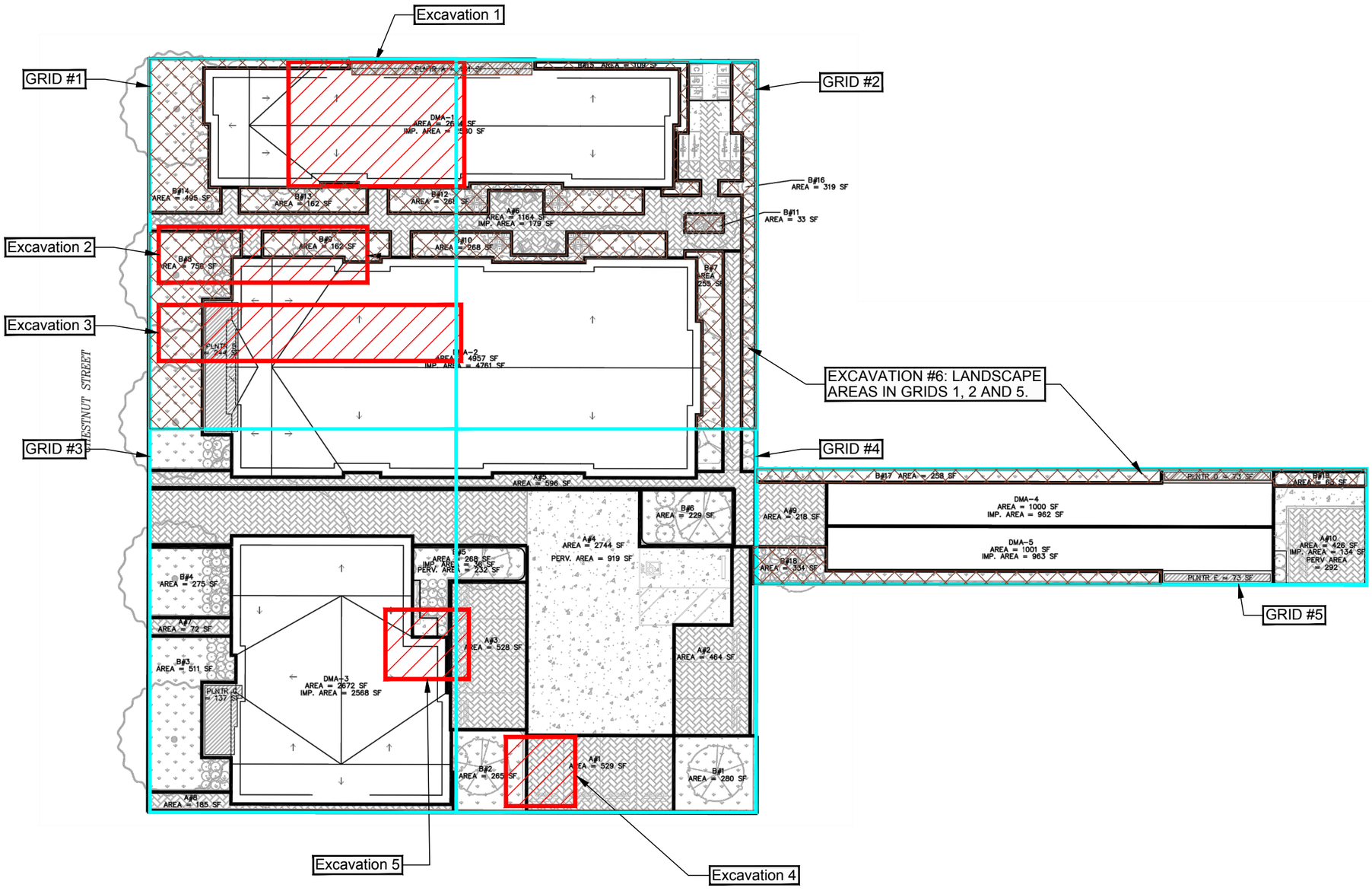
0 50 100
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 2-1

N

2432-PTB-PSAE.dwg



LEGEND

- COMPOSITE SAMPLE GRID AREA
- PROPOSED EXCAVATION AREA #1 THROUGH #5
- PROPOSED EXCAVATION AREA #6 THE UPPER 2 FEET OF EXCAVATION #6 WILL BE REMOVED AND REPLACED WITH CLEAN FILL FOR LANDSCAPING

PROPOSED EXCAVATIONS #1 THROUGH #6, FUTURE SITE LAYOUT

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	03/2020	BCD	KR

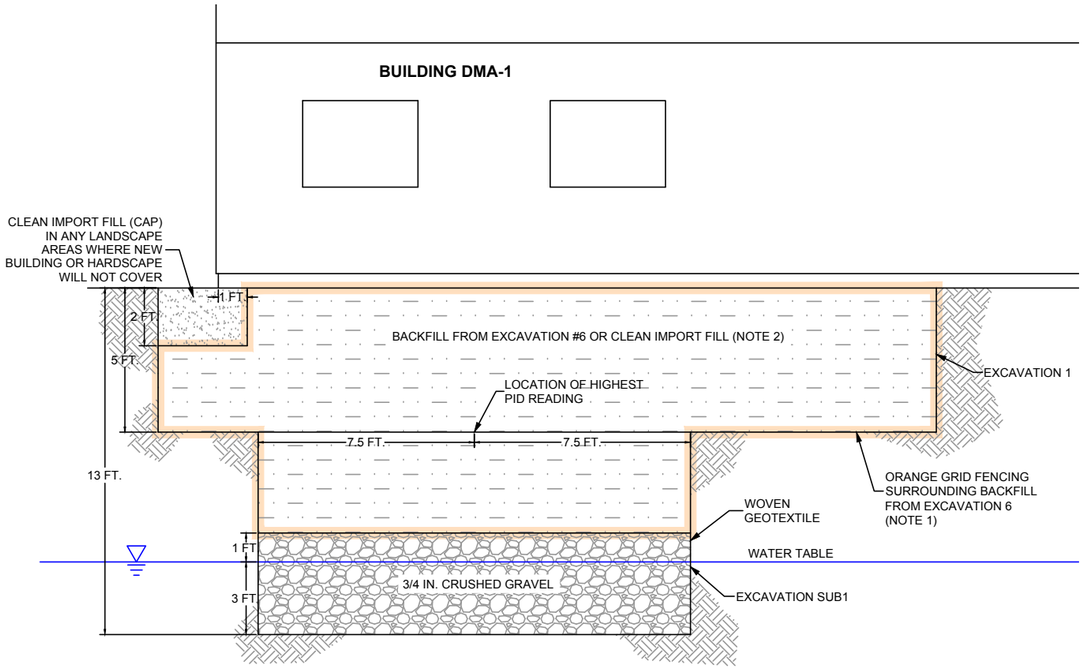
0 25 50
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

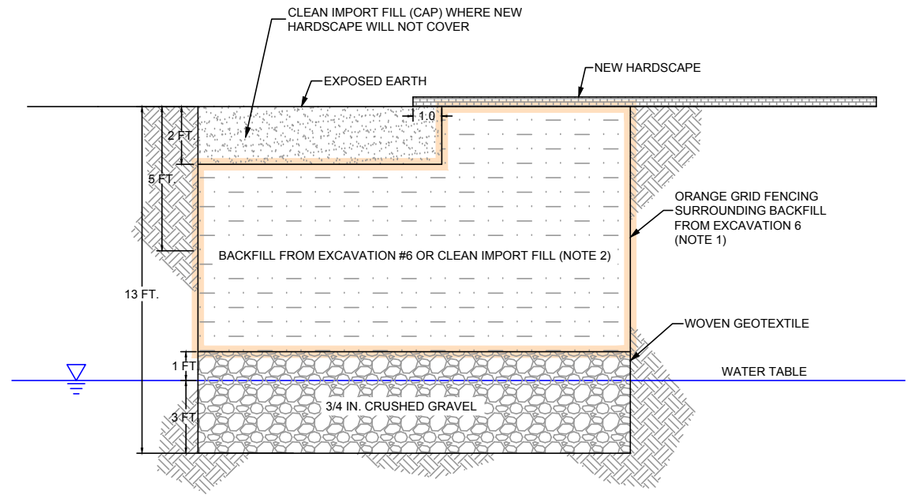
FIGURE 2-2

N

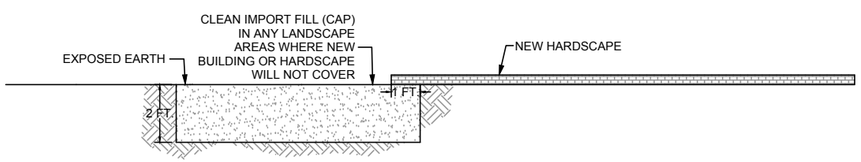
2432-6.1.dwg



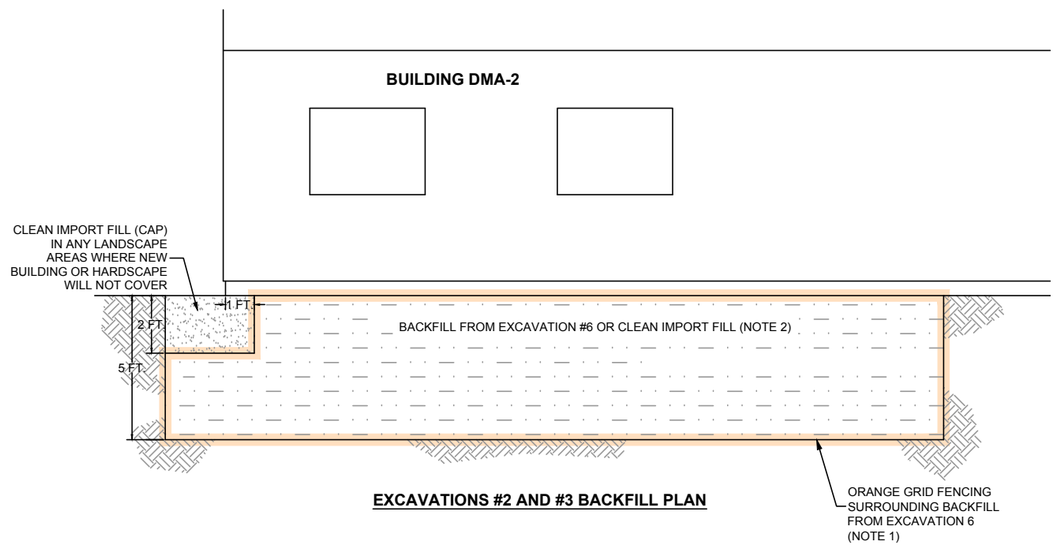
EXCAVATION #1 BACKFILL PLAN



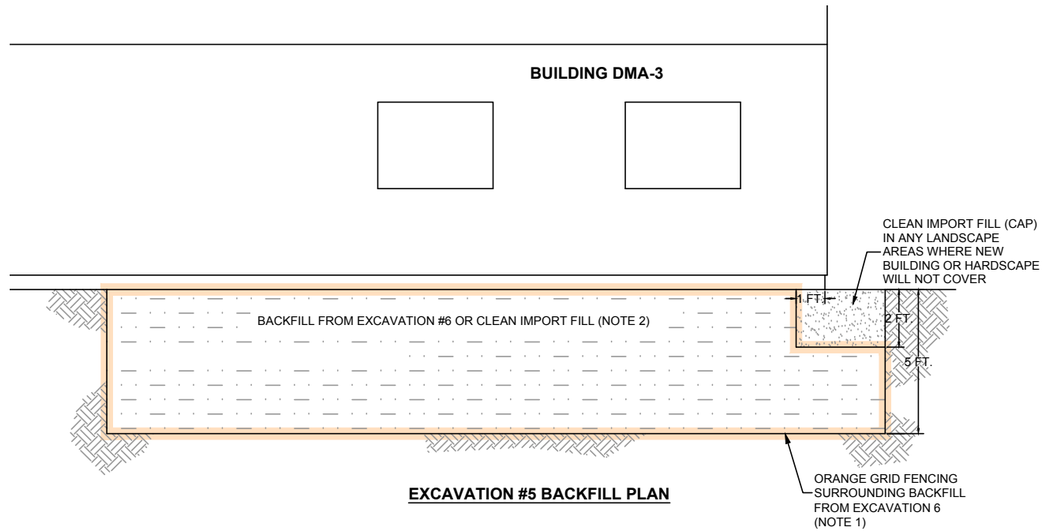
EXCAVATION #4 BACKFILL PLAN



EXCAVATION #6 BACKFILL PLAN



EXCAVATIONS #2 AND #3 BACKFILL PLAN



EXCAVATION #5 BACKFILL PLAN

NOTES:

1. ORANGE GRID FENCING IS NOT REQUIRED IF CLEAN IMPORT FILL IS USED.
2. COMPACT IN 6" LIFTS TO 95% (MODIFIED PROCTOR, ASTM D1557) +/-2% OPTIMUM MOISTURE CONTENT OR AS DIRECTED BY GEOTECHNICAL ENGINEER OF RECORD.
3. ALL LANDSCAPE AREAS WITHIN GRIDS 1, 2, AND 5 (REFER TO FIGURE 2-2) SHALL BE EXCAVATED EXCAVATED TO 2 FEET MINIMUM BELOW GRADE AND BACKFILLED WITH CLEAN IMPORT. A NON-BIODEGRADABLE, NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED ON THE NATIVE SOIL SURFACE AS AN EXCAVATION MARKER UNLESS SAMPLING CONFIRMS THE ABSENCE OF LEAD, AS DETERMINED BY A QUALIFIED ENVIRONMENTAL PROFESSIONAL.

EXCAVATION BACKFILL PROFILES

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	03/2020	BCD	KR

NOT TO SCALE

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 2-3

N

Excavation Profiles.dwg

TABLES

Table 2-1
Summary of Excavation Characteristics
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Excavation	Additional Activities or Notes	Confirmation Samples	Length (feet)	Width (feet)	Depth (feet bgs)	Soil Volume (yd^3)	Soil Mass for Disposal[Note 1] (tons)
1	Sub-excavation around SVP-6. Shore the north side to accommodate retaining wall.	Excavation Base & Sidewalls	25	40	5	185	338
Sub 1 (SVP-6)	Dewater 3 saturated volumes (est. 4,545 gallons)	NA (blocked by shoring and wet bottom)	15	15	13	67	122
2	Excavate to 2 feet beneath sewer line, assumed 3 feet bgs	Excavation Base	5	50	5	46	84
3	Excavate to 2 feet beneath OWS line, assumed 3 feet bgs	Excavation Base	5	65	5	60	110
4	Shore and dewater 3 saturated volumes (est. 4,545 gallons)	Excavation Sidewalls	15	15	13	108	197
5	Excavate former dispsenser pad area	Excavation Base & Sidewalls	15	15	5	42	76
6	Misc. Landscaped Areas	None	Varies - see Table 2-2			247	0[Note 2]
TOTAL						**755**	**926**

Notes:
yd^3 cubic yards
bgs below ground surface
NA not applicable
OWS oily water separator
[Note 1] Mass calculation assumes in situ soil density of 135 pounds per cubic foot (lbs/ft^3).
[Note 2] Assumes that soil from Excavation #6 is consolidated, reused as fill, and capped.

Table 2-2
Summary of Future Landscaped Area and Identification of Excavation #6 Areas
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Landscape Area ID[Note 1]	Total Area (ft^2)	Grid ID	Required Upper 2 ft Excavated?	Approximate % Within Excavation #1 through #5 Footprint	Excavation Depth (feet)	Excavated Soil Volume (yd^3)	Excavated Soil Volume Allowable for Backfill[Note 2] (yd^3)	Excavated Soil Mass Considered for Use as Backfill[Note 3] (tons)
Planter A	161	1 & 2	Yes	50	2	12	6	11
Planter B	244	1	Yes	50	2	18	9	16
Planter C	137	3	No	- -	- -	- -	- -	- -
Planter D	73	5	Yes	0	2	5	5	10
Planter E	73	5	Yes	0	2	5	5	10
B#1	280	4	No	- -	- -	- -	- -	- -
B#2	265	4	No	- -	- -	- -	- -	- -
B#3	511	3	No	- -	- -	- -	- -	- -
B#4	275	3	No	- -	- -	- -	- -	- -
B#5	268	3 & 4	No	- -	- -	- -	- -	- -
B#6	229	4	No	- -	- -	- -	- -	- -
B#7	255	2	Yes	0	2	19	19	34
B#8	758	1	Yes	50	2	56	28	51
B#9	162	1	Yes	75	2	12	3	5
B#10	268	1 & 2	Yes	0	2	20	20	36
B#11	33	2	Yes	0	2	2	2	4
B#12	268	1 & 2	Yes	0	2	20	20	36
B#13	162	1	Yes	0	2	12	12	22
B#14	495	1	Yes	0	2	37	37	67
B#15	109	2	Yes	0	2	8	8	15
B#16	319	2	Yes	0	2	24	24	43
B#17	258	5	Yes	0	2	19	19	35
B#18	334	5	Yes	0	2	25	25	45
B#19	63	5	Yes	0	2	5	5	9
TOTAL							**247**	**450**

Notes:
[Note 1] Refer to Redevelopment Plan for identification and locations of landscape areas.
[Note 2] Excavated Soil within the Footprints of Excavations 1 through 5 may not be allowed as backfill.
[Note 3] Mass calculation assumes in situ soil density of 135 pounds per cubic foot.
ft^2 = Square Feet
yd^3 = Cubic Yards

Table 2-3

EBMUD Sampling and Analysis Requirements for Sanitary Sewer Discharge

2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street

Oakland, California

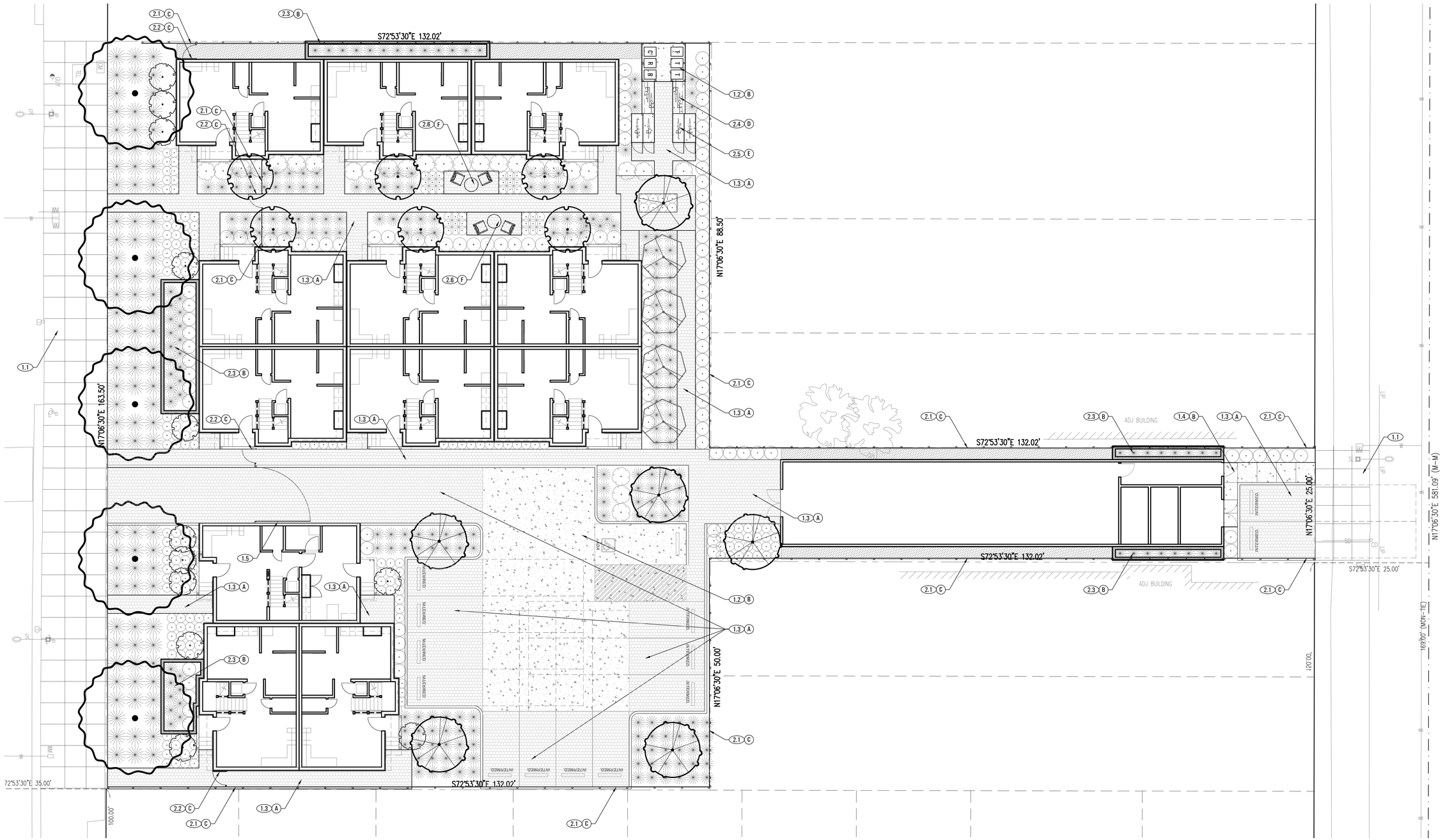
Parameter	Preservative	Maximum Hold Time	Method	Discharge Limit
Lead	HNO_3 to pH<2 Cool to 4° C	6 months	EPA 200.7 or 200.8	2 mg/L
Total Oil and Grease	HCl or H_2SO_4 to pH<2	28 days	1664 HEM	100 mg/L
Total Suspended Solids TSS, filtered with Whatman 934 AH Glass Microfiber filter, or equivalent	Cool to 4° C	7 days	STD 2540D	NA
Poly Chlorinated Biphenyls (PCBs)	Cool to 4° C	7 days until extraction; 40 days after extraction	EPA 608	0.17 mg/L
Total Identifiable Chlorinated Hydrocarbon (Volatile Organics)	HCl to pH<2, add ascorbic acid if Cl_2 is present. VOA vials, no headspace. Cool to 4° C	14 days	EPA 8260B	0.5 mg/L

Notes:

EBMUD	East Bay Municipal Utility District
° C	degrees Celcius
EPA	Environmental Protection Agency
STD	Standard
HEM	n-Hexane extractable materials
HNO_3	nitirc acid
HCl	hydrochloric acid
H_2SO_4	sulfuric acid
Cl_2	chloride
VOA	volatile organic analysis
mg/L	milligrams per liter
NA	not applicable

APPENDIX A

PRELIMINARY REDEVELOPMENT PLAN



LAYOUT LEGEND

- 1.1 CONCRETE PAVING IN RIGHT-OF-WAY.
- 1.2 CONCRETE PAVING IN DRIVE AISLE, ACCESSIBLE PARKING AREAS, TRASH AREA & BIKE PARKING AREA.
- 1.3 PERMEABLE PAVERS IN PARKING SPACES, COMMON WALKWAYS & PRIVATE PATIOS.
- 1.4 CONCRETE PAVING IN WALKWAYS.
- 1.5 DRIVEWAY GATES. SEE ARCH DWGS.
- 2.1 6' HIGH WOOD FENCE.
- 2.2 6' HIGH WOOD GATE.
- 2.3 CAST-IN-PLACE CONCRETE C.3 PLANTER.
- 2.4 SHORT-TERM BICYCLE PARKING BIKE RACK.
- 2.5 LONG-TERM BICYCLE PARKING BIKE LOCKER (PLACE ON CONCRETE PAD).
- 2.6 SITE FURNITURE IN GROUP OPEN SPACE.
- 2.7 4' HIGH WOOD TRASH SCREEN, SIMILAR TO WOOD FENCE.

MATERIALS LEGEND

- (A) PERMEABLE PAVERS IN DRIVE AISLE, AS MFRD BY ACKERSTONE (www.Ackerstone.com).
  MODEL: AQUA-VIA1. NOMINAL SIZE: 8cm x 4-3/8 x 8-3/4. COLOR: ANTIQUE PEWTER.
  FINISH: F.M. PATTERN: RUNNING BOND.
- (B) INTEGRAL CONCRETE COLOR FOR CONCRETE PARKING SPACES, WALKWAYS, PATIOS, WALLS AS MFRD BY DAVIS COLORS (800-356-4848). COLOR: PEWTER #860. FINISH: MEDIUM BROOM.
- (C) 6' HIGH FENCE & GATE; 4' HIGH TRASH SCREEN
  - FENCE POSTS: 4x4 PTDF, STAIN BLACK
  - FENCE SLATS: 1x6 COMPOSITE, STAIN WITH MESSMERS UV PLUS CLEAR STAIN
  - GATE SLAT: 1x6 COMPOSITE, STAIN WITH MESSMERS UV PLUS CLEAR STAIN
  - GATE HINGES: HEAVY DUTY, BLACK COLOR.
  - GATE HARDWARE, AS SPECIFIED BY ARCHITECT
- (D) SHORT-TERM BICYCLE PARKING BIKE RACK (1 REQUIRED, 2 PROVIDED)
  - AS MANUFACTURED BY THE PALMER GROUP, MOD NO WCROS-IG-P, BLACK.
- (E) LONG-TERM BICYCLE PARKING BIKE LOCKER (3 REQUIRED, 4 PROVIDED)
  - AS AVAILABLE AT THE PALMER GROUP, MOD NO BTWOL01M, BLACK, (76"W x 30"L x 47"H)
- (F) SITE FURNITURE (TO BE DETERMINED).

CFLA
74 Dudley Avenue
Piedmont, CA 94611
Telephone 510.601.8022
Email Chris@CFLA.biz
CRLA # 3557

2432 CHESTNUT STREET

OAKLAND, CA

REGISTERED LANDSCAPE ARCHITECT CHRISTOPHER FORD 3557 12.31.2019 09.25.2019 STATE OF CALIFORNIA

2432 CHESTNUT STREET

DATE	SET ISSUE
10-28-2019	PLANNING SUBMISSION

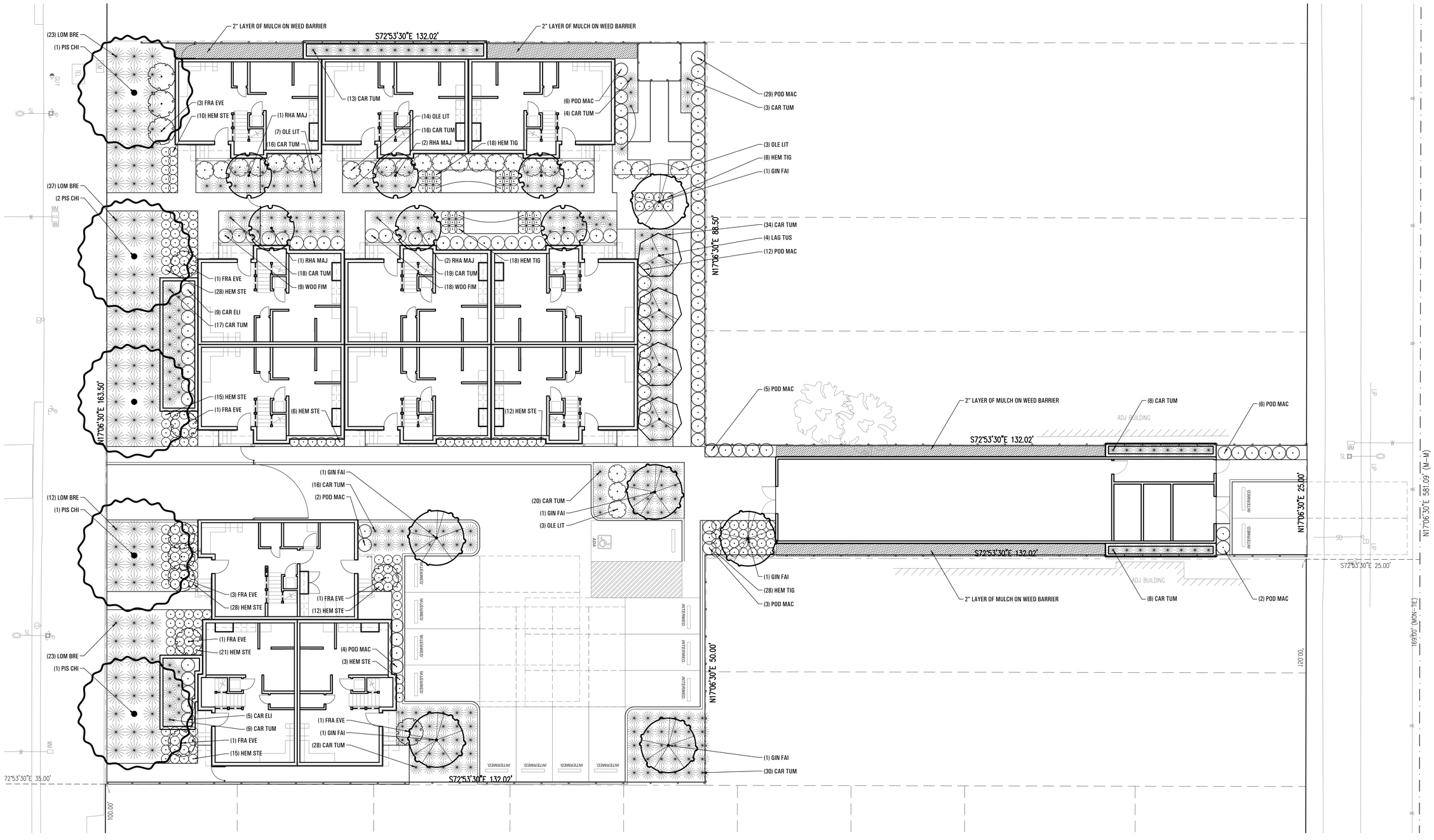
CONTACT: CHRIS FORD

If this print is not 24" x 36" it is a reduced print. Scale accordingly.

SCALE: 0 5' 10' 20'

SCHEMATIC LANDSCAPE PLAN

L1.1



PLANT LIST

TREES

SYMBOL	BOTANICAL	COMMON	SIZE	QUANTITY
GIN FAI	GINKGO BILOBA 'FAIRMONT'	FAIRMONT MAIDENHAIR TREE	24" BOX	6
LAG TUS	LAGERSTROEMIA INDICA 'TUSCARORA'	TUSCARORA CRAPE MYRTLE	24" BOX	4
RHA MAH	RHAPHIOLEPIS 'MAJESTIC BEAUTY'	MAJESTIC BEAUTY RHAPHIOLEPIS	24" BOX	6

SHRUBS / PERENNIALS / GRASSES

SYMBOL	BOTANICAL	COMMON	SIZE	QUANTITY
CAR ELI	CARPENTERIA CALIFORNICA 'ELIZABETH'	ELIZABETH' BUSH ANEMONE	5 GAL	14
CAR TUM	CAREX TUMILICOLA	BERKELEY SEDGE	1 GAL	260
FRA EVE	FRANGULA CALIFORNICA 'EVE CASE'	EVE CASE COFFEEBERRY	5 GAL	12
HEM STE	HEMEROCALLIS ' STELLA D'ORO'	YELLOW EVERGREEN DAYLILY	1 GAL	150
HEM TIG	HEMEROCALLIS 'TIGER TIME'	TIGER TIME EVERGREEN DAYLILY	1 GAL	72
LOM BRE	LOMONDRA LONGIFOLIA 'BREEZE'	DWARF MAT RUSH	1 GAL	85
OLE LIT	OLEA EUROPEA 'LITTLE OLLIE'	DWARF OLIVE	5 GAL	27
POD MAC	PODOCARPUS MACROPHYLLUS 'MAKI'	MAKI SHRUBBY YEW PINE	5 GAL	67
WOO FIM	WOODWARDIA FIMBRIATA	GIANT CHAIN FERN	5 GAL	18

PLANT NOTES

1 CONTACT LAND ARCH AT LEAST 48 HOURS IN ADVANCE OF PLANTING OPERATIONS TO SCHEDULE A PRE-PLANTING LAYOUT REVIEW MEETING. LAYOUT ALL PLANTS AS PER PLAN FOR LA APPROVAL PRIOR TO PLANTING.

2 INSTALL 2" DEEP LAYER OF MULCH IN PLANTING AREAS. MULCH SHALL BE "FOREST FLOOR", AS AVAILABLE AT AMERICAN SOIL & STONE, RICHMOND, CA (510.292.3000).

3 PROVIDE A 90-DAY MAINTENANCE PERIOD.

4 PROVIDE A ONE-YEAR PLANT GUARANTEE PERIOD.

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2432 CHESTNUT STREET

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SCALE:
0 5' 10' 20'

PLANTING PLAN

L2.1

APPENDIX B

CONSTRUCTION SOIL AND GROUNDWATER MANAGEMENT PLAN

CONSTRUCTION SOIL AND GROUNDWATER MANAGEMENT PLAN

2420 & 2432 Chestnut Street and 2423 Linden Street
Oakland, California
Alameda County Assessor Parcel Numbers
5-435-5, 5-435-17 and 5-435-18-1
Case No. RO0003369
Geotracker Global ID No. T10000013059

Prepared for:

Mr. Bruce L. Hammon
Dalzell Corporation
2138 Stone Valley Road
Alamo, California 94607

Prepared by:

RMD ENVIRONMENTAL SOLUTIONS
609 Gregory Lane, Suite 200
Pleasant Hill, California 94553

March 26, 2020

Kirsten Duey
Project Manager

Andrew H. Campbell, PE
Principal Engineer

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APPENDICES

1.0 INTRODUCTION

This Soil and Groundwater Management Plan (SGMP) has been prepared by RMD Environmental Solutions, Inc. (RMD) on behalf of Dalzell Corporation (Dalzell, Property Owner) for the property located at 2420 and 2432 Chestnut Street and 2423 Linden Street in Oakland, California (the Site, Figure 1-1) with Alameda County Assessor's Parcel Number 5-435-5, 5-435-17, and 5-435-18-1 (the Site). The Site consists of three adjacent rectangular parcels totaling approximately 0.57-acres, currently vacant and developed with an elevated residential dwelling, two industrial buildings, canopy area, and associated paved areas. This SGMP is required by Almeda County Department of Environmental Health (ACDEH) to address potential subsurface issues that may be encountered during construction of a future redevelopment project ("Project") by Dalzell or new property owner. This SGMP shall be administered during the following redevelopment activities: (1) demolition of the existing structures; (2) grading and soil excavation for utilities, and foundations; (3) soil excavation and dewatering conducted as part of the Corrective Action Design and Implementation Plan (CAIP) (4) construction of new 3-story residential units with a shared open space; and (5) any subsurface work at the Site.

1.1 Lead Regulatory Oversight Agency for Environmental Activities

Soil and groundwater beneath the Site have been impacted from historic land use practices. The ACDEH, Local Oversight Program (LOP) for Hazardous Materials Releases is the lead regulatory oversight agency for environmental activities at the Site under Site Cleanup Program Case (SCP) RO0003369 and Geotracker Global ID No. T10000013059. Due to the presence of soil and groundwater contamination at the Site corrective actions are necessary to safely prepare the Site for development. Corrective actions include:

- Source area excavation;
- Engineering controls consisting of:
    - The use of an engineered vapor intrusion mitigation system (VIMS) and associated monitoring program to address vapor intrusion concerns related to residual VOCs in the subsurface, and
    - Consolidation and capping of shallow metals -impacted soil;
- Administrative controls consisting of:
    - A Health and Safety Plan;

- A Construction Soil and Groundwater Management Plan; and
- A long-term Site Management Plan.

Further details are provided in the CAIP. A complete record of environmental conditions at the Site may be obtained through the State Water Resources Control Board's GeoTracker website.

https://geotracker.waterboards.ca.gov/profile_report?global_id=T10000013059

1.2 SGMP Purpose & Objectives

This SGMP is designed to provide the property owner and their construction contractors with requirements guidance for the proper handling and management of potentially contaminated soil and groundwater that may be encountered during excavation and redevelopment activities.

The goals of this SGMP are to provide detailed information regarding known environmental conditions at the Site and establish a decision-making structure to assist the construction team in the identification and management of contaminated media, when and if they are encountered. The objectives of this SGMP are as follows:

- Communicate information to Site construction workers about Site environmental conditions:
- Present protocols for appropriate community protection;
- Present guidelines for health and safety precautions for on-Site workers who may access soil or groundwater that could contain residual chemicals of concern;
- Present notification and reporting requirements;
- Present protocols for management of known contaminated soil or groundwater generated during Site redevelopment activities; and
- Present contingency procedures in the event that unanticipated chemically-affected soil or other subsurface features of environmental concern are encountered during earthwork or excavation activities.

2.0 RESPONSIBILITY FOR SGMP IMPLEMENTATION

Representatives for the property Owner will oversee implementation of the SGMP at the Site. A copy of this SGMP will be maintained at the Site at all times. The Owner and General Contractor(s) will make all third-party subcontractors working at the Site aware of the requirements of the SGMP and provide an electronic copy and hard-copy to all subcontractors that are performing activities covered by this SGMP and who may encounter suspect subsurface conditions during execution of their work.

The project Qualified Environmental Professional will be available to assist the Owner and contractors with the implementation of this SGMP when subsurface activities are being conducted in areas where contamination is known or suspected or when unknown conditions are encountered.

2.1 Activities Covered by the SGMP

The following activities constitute the work covered under this SGMP.

- **Subsurface Excavation, Construction, or Repair –** any activity occurring beneath the grade level of existing or future ground surface, including dewatering;
- **Utility Line Work –** any subterranean inspection, excavation, or repair of electrical, telephone, water, sanitary sewer or storm drains occurring within or outside of existing vaults (conducted prior to excavation); and
- **Other –** other subgrade activities not expressly listed above (e.g., deep landscaping work, sub-slab work, etc.).

The Site is exempt from the California Regional Water Quality Control Board's storm water Construction General Permit requirements because the total area of land disturbance is less than one acre.

2.2 Construction Team Contact Information

Prior to the initiation of construction activities that are covered under this SGMP, the Owner will confirm the Owner's project representative and project Qualified Environmental Professional. The current contacts are listed below. Regular and 24-hour emergency contact information for these individuals will be confirmed and updated as necessary. A project contact sheet will be provided to the General Contractor and posted in an accessible and suitable location at the Site.

Project Role	Company Name	Name	Contact Information
Owner Representative	Dalzell Corporation	Bruce L. Hammon	(510) 332-3860 dalzellblh@aol.com
General Contractor	To be Determined		
Qualified Environmental Professional	RMD Environmental Solutions, Inc.	Kirsten Duey	(925) 683-8177 kduey@rmdes.net

2.3 Worker Health and Safety

In addition to following the SGMP, each Contractor and subcontractor is responsible for the safety of its employees and Site visitors including but not limited to adherence to a health and safety plan and use of properly-trained personnel:

- **Preparation of a Site-Specific Health and Safety Plan (HASP).** A HASP will be prepared for the project in accordance with California Occupational Safety and Health Administration (CAL-OSHA) Construction Safety Orders within Title 8 of the California Code of Regulations (CCR). The General Contractor is responsible for notifying subcontractors and visitors of pertinent environmental conditions to ensure adequate protection for workers and visitors while on-Site. Subcontractors may either adopt the General Contractor's HASP or prepare their own HASP. In the event that unanticipated conditions occur at the Site, the HASP will be modified accordingly.
- **Use of Properly-Trained Personnel.** Each contractor engaged in contact and management of contaminated soil or groundwater will use properly trained personnel in accordance with 8 CCR and Code of Federal Regulations, Title 29, Part 1910.120 Hazardous Waste Operations and Emergency Response (HAZWOPER) standards.

2.4 Community Protection During Site Redevelopment

Land use in the vicinity of the Site is mixed commercial and residential. A map of Site and immediate vicinity is presented on Figure 2-1. During the development of the Site, the Owner and contractors will implement measures to control potential risks to the surrounding community from fugitive dust emissions. Section 10.0 below explains them further. These activities will be

implemented when there is the potential for exposed soil to affect the nearby community. It is anticipated that following placement of hardscapes and building pads, air monitoring will not be required as there will not be exposed soil surfaces with chemicals that exceed concentrations that pose a risk to human health or the environment.

2.5 Agreement and Acknowledgement Statement

Prior to commencement of any Site activities that disturb the ground surface, the General Contractor and subcontractors of the Owner will read this plan and sign the Agreement and Acknowledgement Statement (Appendix A) to certify that they have read, understood and agreed to abide by its provisions.

3.0 AGENCY NOTIFICATION & REPORTING REQUIREMENTS

The Owner will notify the ACDEH LOP and other agencies as applicable during Site development activities in accordance with the protocols described below.

3.1 ACDEH Notification

The Owner will notify the ACDEH LOP and the ACDEH Certified Unified Program Agency (CUPA) during Site redevelopment activities in accordance with the protocols below.

3.1.1 Twenty-four (24) Hour Notification

The ACDEH LOP will be notified within 24 hours of discovery if any of the following potentially hazardous conditions are encountered:

- Releases spills or releases of hazardous substances or petroleum hydrocarbons to soil or water that are considered, based on best professional judgement and/or physical evidence (including but not limited to olfactory, visual, field instrument, and lab data), to be an immediate threat to human health and the environment; and/or
- Discovery of unknown conditions (underground storage tanks (USTs), sumps, vaults, piping, etc.) or newly found contamination.

In the event of the discovery of USTs, vaults, hoists, or pipelines, the ACDEH CUPA must also be notified within 24 hours of the discovery.

3.1.2 Seventy-two (72) Hour Notification

The ACDEH LOP will be notified 72 hours in advance of ground disturbing activities in areas of known contamination or suspected contamination.

3.1.3 ACDEH LOP and CUPA Contact Information

The primary points of contact for the ACDEH LOP and CUPA are provided below. All agency notifications must be made by phone and email. An ACDEH contact sheet will be provided to the General Contractor and posted in an accessible and suitable location at the Site.

Drew York, ACDEH Local Oversight Caseworker	510-639-1276; andrew.york@acgov.org
Paresh Khatri, ACDEH Local Oversight Program Manager	510-777-2478; paresh.khatri@acgov.org
ACDEH CUPA	510-567-6700; dehalamedacers@acgov.org

3.2 Other Agency Notification

In addition to the ACDEH notification requirements discussed above, other agency notifications may be required. Contact information for other agency notifications that may be required is provided below. Prior to the initiation of construction activities that are covered under this SGMP, the Owner will confirm the contact information listed below. An agency contact sheet will be provided to the General Contractor and posted in an accessible and suitable location at the Site.

Conditions Posing an Immediate Threat. For life-threatening or serious hazardous materials incidents, the following number will be contacted immediately upon discovery.	
Local police, fire and rescue services	911
Releases to Water. For spills or releases of hazardous substances or petroleum hydrocarbons to surface water, the following agencies will be contacted immediately upon discovery.	
National Spill Response Center	(800) 424-8802
United States Coast Guard – San Francisco Sector (if spill is going to reach navigable waters)	(415) 399-3547
California Office of Emergency Services	(800) 852-7550; (916) 845-8911
California Regional Water Quality Control Board – San Francisco Bay Region	(510) 622-2300
Local Emergency Response Agency	911

Volatile organic compound (VOC)-Impacted Soil. If VOC-impacted soil is discovered during Site grading activities, the following agency will be notified.	
Bay Area Air Quality Management District (BAAQMD)	(415) 749-4990
Dust Complaints. For dust complaints during ground disturbing activities, the following agencies will be notified.	
City of Oakland Building Department	(510) 238-3381
BAAQMD	(415) 749-4990

3.3 Record Keeping & Reporting Requirements

All groundwater removal and soil excavation, disposal and import activities will be documented in daily field reports by the Contractor and/or Qualified Environmental Professional and will be kept at the Site and made available to ACDEH upon request. Documentation will include at a minimum the following, as applicable:

- **Groundwater –** volume of groundwater that is removed, characterization, treatment, and destination (transported to temporary holding tanks, used as dust suppression, and/or disposed of off-Site);
- **Underground Structures –** type, contents, characterization, and destination (abandoned in place or disposed of off-Site);
- **Impacted Soil –** origin, volume, characterization, and destination (transported to temporary soil locations within the Site, disposed of off-Site, and/or re-used on Site);
- **Imported Soil –** origin, volume, characterization, and destination (location on-Site);
- **Off-Site Disposal Records –** date, time, trucking company, driver and vehicles used for the trip, equipment decontamination and tarping, waste/material type, volume, copies of bills-of-lading, and hazardous waste manifests;
- **Dust Complaint Logs –** time, name and contact information, complaint description, earthwork activities associated with complaint, and measures taken to mitigate dust. Include any air monitoring results around the time of complaint; and
- **Analytical Reports –** copies of waste characterization laboratory analytical results.

Following completion of the work covered by this SGMP, the Qualified Environmental Professional will prepare a report for submittal to ACDEH that documents compliance with this

SGMP including soil and/or groundwater sampling, removal and management of unknown structures, chemical analysis and proper disposal of contaminated materials and soil import. The report will include at a minimum the information described in Section 3.3 above.

4.0 ENVIRONMENTAL SITE CONDITIONS

A summary of known environmental conditions in soil and groundwater is provided below. Tables and Figures summarizing historical soil, groundwater, and soil vapor data are provided in Appendix B.

4.1 Soil

- **Metal Impacts.** Lead exists at the Site in the shallow fill layer and has been detected at concentrations that exceed residential, commercial, and construction worker human health risk-based screening levels. Shallow soil from areas of the Site with elevated lead in non-hardscaped areas based on the redevelopment plans will be excavated and disposed of at an off-Site permitted landfill, and/or capped in place beneath the building foundation or hardscape. Cobalt exists at the Site above screening levels, localized to two soil samples (B4 and MW-1) at depths at or below 4.5 feet bgs. These two locations will be capped with future buildings DMA-1 and DMA-2.
- **Petroleum and VOC Impacts.** Elevated concentrations of petroleum-related and VOC compounds have been detected in Site soil. Based on the results of previous investigations, petroleum-related and/or VOC-impacted impacted soil may be encountered in near-surface soil during earthwork activities.

4.2 Groundwater

Groundwater has been encountered at depths of approximately 9 to 10 feet bgs. Petroleum hydrocarbons, associated VOCs (benzene, ethylbenzene, toluene, and total xylenes), and halogenated VOCs (including PCE, TCE, and cis-1,2-DCE) have been detected in groundwater beneath the Site. Groundwater flow direction in the area is toward the southwest.

4.3 Soil Vapor

Soil vapor is impacted with petroleum hydrocarbon as gasoline (TPH-g) and various VOCs (benzene, PCE, and chloroform) in excess of respective residential Tier 1 San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Environmental Screening Levels (ESLs).

4.4 Discovery of Unexpected Conditions

Due to historic Site use, redevelopment activities may reveal unexpected conditions such as previously unidentified areas of contamination or underground structures such as USTs, vaults, hoists, sumps, maintenance pits, pipelines, etc.

5.0 EXCAVATION PREFIELD ACTIVITIES

The pre-field activities include a description of planning and organizational aspects of soil excavation required for excavation to begin.

5.1 Site Security and Access

During remedial activities, the Site will be secured to provide protection and safety to on-Site personnel and equipment, and to prevent unauthorized access to areas of remedial activity. The perimeter of the Site is currently secured by a locked, chain link fence and/or buildings. Once the buildings are demolished, additional will be needed to secure the Site. The staging area and the work zones (i.e., any exclusion, decontamination, and support zones) shall be secured throughout the project. During non-working hours, the fencing will be fully closed and locked. During remedial activities, access will be restricted to authorized personnel only.

5.2 Traffic Control

Caution will be exercised during entrance and exiting of the work area to ensure safe and uninterrupted traffic flow. Entrance into and departure from the Site by trucks will be facilitated by a flagman, or comparable contractor personnel, as necessary. Once trucks have left the Site, they will follow specific haul routes to disposal facilities as described in the Transportation Plan, should one be required.

5.3 Excavation Permit

All necessary permits for removal activities, transportation, and/or air quality will be obtained prior to remediation. The permits will be kept on-Site and made available for inspection during working hours.

The procedures proposed for remediation activities will comply with federal, State and local rules and regulations, regardless of whether permit documents are required.

5.4 Notification and Utility Clearance

The Construction Contractor will notify the Bay Area Air Quality Management District (BAAQMD) of excavation activities at least five days prior to implementation. In addition, the Construction Contractor will also notify ACDEH of the soil excavation activities at least 72 hours prior to commencing work. The proposed excavation areas will be marked in white paint prior to

contacting Underground Service Alert (USA) at least 48 hours prior to excavating, as required by law. A private utility locating service will be contracted prior to conducting the field activities to mark and/or clear proposed excavation locations relative to the presence and/or marked locations of potential subsurface utilities.

6.0 SOIL MANAGEMENT

Potential future redevelopment activities may include grading or excavation of the Site (including the planned excavation areas identified in Figures 6-1 and 6-2. Site grading could include removing the top portion of Site material (pavement, fill material) and excavating soil in conjunction with installation of utility trenches, and/or building foundations. Any excess soil generated during grading may be temporarily stockpiled on-Site and either re-distributed for re-compaction on-Site as part of Site grading activities or transported off-Site for disposal.

All soil management and handling activities will be conducted in accordance with applicable federal, state, and local regulations. During implementation of the project other data may be collected for profiling purposes and to further refine the quantities and classification of potential waste materials that may be generated.

6.1 Excavation of Contaminated Soil

Shallow soil at the Site is impacted with lead, petroleum hydrocarbons and VOCs. Excavation of additional impacted soil will be conducted in the following general sequence. The expected personnel responsible for each bulleted item is shown in italics and parenthesis.

- Develop staging areas, access paths for equipment, work zones, and decontamination areas for use during handling of contaminated soil to reduce the potential of tracking waste off-Site. (*General Contractor*)
- Identify locations of perimeter air monitoring stations, as necessary, and begin monitoring to comply with BAAQMD regulations, the HASP, and the protocols in Section 10 of this SGMP. (*Qualified Environmental Professional*)
- Stockpile soil for characterization or direct load onto trucks or roll-off bins for appropriate off-Site disposal. (*General Contractor*)
- Characterize stockpiled soil by collecting samples using a pre-cleaned hand trowel and transferred into laboratory-supplied glass containers. Alternatively, samples will be collected using a pre-cleaned slide-hammer sampling tool fitted with a clean stainless steel sleeve. Sample frequency will be collected per disposal/accepting facility requirements. If soil is planned for reuse at another Site, characterization must be in accordance with the ACDEH LOP Soil Import/Export Characterization Requirements document, dated August 9, 2019, including any revisions or amendments. (*Qualified Environmental Professional*)

- Following soil sample collection, the containers will be labeled for identification and immediately placed in a chilled, thermally insulated cooler containing bagged ice or blue ice. The cooler containing the samples will then be delivered under chain-of-custody protocol to a state-certified laboratory. Composite samples will be submitted, at a minimum, for laboratory analysis for TPH (EPA Method 5030/Modified 8015), VOCs using U.S. EPA Test Method 8260B, and Title 22 metals using U.S. EPA Test Method 6010B and other constituents required as part of waste characterization testing for off-Site disposal. If necessary, extractable metals tests (i.e., leaching test including waste extraction test [WET] and/or toxicity characteristic leaching procedure [TCLP] procedures) will be conducted on the samples with elevated metals, PCE, or TCE concentrations to establish if the soil is hazardous based on their leaching characteristics. (*Qualified Environmental Professional*)

6.2 Contingency Measures for Previously Unidentified Suspect Soils

The following contingency measures will be implemented in the event that previously unidentified suspected chemically-affected soil is identified during Site excavation. All contingency measures will be conducted by HAZWOPER-trained environmental professionals in accordance with the HASP.

Additionally, the Qualified Environmental Professional will be present during excavation of the two suspected source areas, unless previously authorized by ACDEH, to monitor soil and soil vapor concentrations and in case unexpected contamination or subsurface structures are encountered.

6.2.1 Identification of Contaminated Soil

The Contractor will be instructed to report indicators of contaminated soil, in particular, petroleum hydrocarbons. The three primary physical indicators of petroleum-related contamination in soil include staining, sheen, and petroleum-like odor, as described below:

- **Staining:** Generally, soil that is impacted with petroleum hydrocarbons exhibits gray, black or green staining, although other contaminants and natural conditions may also cause staining.
- **Sheen:** Sheen is another indication of petroleum contamination. Soil exhibiting sheen may appear shiny and reflective. Sheens from heavily impacted soil may appear iridescent with rainbow-like colors.

- **Odor:** Soil impacted with petroleum products, VOCs, and other types of contamination may release vapors when exposed to the atmosphere. These vapors can be interpreted as an odor. Odor can be subjective, and inhalation of vapors from impacted soil is harmful to human health. Therefore, odor is considered an inadvertent field indicator and should not be used for continuous screening of soil.

If soil exhibiting evidence of contamination is encountered during excavation, the Contractor will cease excavation activities in the area and notify the Qualified Environmental Professional within 24 hours. The Contractor will not conduct any work in the area of concern or replace any known or suspected contaminated soil in the excavation area without prior approval by the ACDEH LOP.

6.2.2 Preliminary Assessment

Preliminary assessment of the previously unidentified suspect soil will include confirmation that access control measures installed by the General Contractor are adequate to provide necessary protection to on-Site workers and the public during the evaluation phase. Confirmation will consist of visual assessment of the installed barriers as well as monitoring of the air outside the control area.

Air sampling will be conducted around the perimeter of the secured area using a photoionization detector (PID) meter to measure VOCs in the breathing zone. If the air sampling suggests that the control measures are improperly positioned to provide necessary protection to on-Site workers, the barriers will be relocated as necessary.

The Qualified Environmental Professional will conduct a preliminary assessment to determine if the previously unidentified suspect soil is considered a significant risk to human health or the environment. If field observations suggest that the suspect conditions are de minimis and: (1) do not present a threat to human health or the environment; or (2) would generally not be subject of an enforcement action if brought to the attention of appropriate governmental agencies; then the Qualified Environmental Professional will terminate the contingency plan process and release the suspect areas to the General Contractor.

6.2.3 Evaluation of Previously Unidentified Suspect Soil

If conditions in the suspect area are not considered de minimis, the Qualified Environmental Professional will notify the ACDEH LOP on behalf of the Owner within 24-hours of discovery and

evaluate the nature and extent of the potentially chemically-affected soil in accordance with the protocols below.

- **In-Situ Soil Samples.** An in-situ soil sample will be collected from the same location and depth as the previously unidentified suspect soil and 1-foot below this depth. Additional samples will also be collected at the same depths at a minimum of four step-out locations to assess soil conditions around the suspect sample location. The four step-out locations will be located approximately 5 feet to the north, south, east, and west of the suspect sample location. Each sample will be collected using a pre-cleaned hand trowel and transferred into laboratory-supplied glass containers and observed for evidence of odors and staining and screened for VOCs using a PID. If any of the in-situ soil samples show evidence of odors and staining or VOCs are detected above 10 parts per million by volume (ppmv) then environmental sample(s) will be retained for analyses. All soil samples submitted for analysis for VOCs (U.S. EPA Method 8260B) will be collected in accordance with U.S. EPA Method 5035 using Terracore™ (or equivalent) samplers.
- **Stockpiled Soil Samples.** If previously unidentified suspect soil is stockpiled on-Site, samples will be obtained using a pre-cleaned hand trowel and transferred into laboratory-supplied glass containers. One 4-point composite sample will be collected for every 200 cubic yards of material generated per disposal/accepting facility requirements.
- **Laboratory Analysis.** Following soil sample collection, the containers will be labeled for identification and immediately placed in a chilled, thermally insulated cooler containing bagged ice or blue ice. The cooler containing the samples will then be delivered under chain-of-custody protocol to a state-certified laboratory. Discrete and composite samples will be submitted, at a minimum, for laboratory analysis of total petroleum hydrocarbons quantified as gasoline (TPHg) and VOCs by United States Environmental Protection Agency (U.S. EPA) Test Method 8260B; total petroleum hydrocarbons quantified as diesel (TPHd) and motor oil (TPHmo) by U.S. EPA Test Method 8015M; and Title 22 metals using U.S. EPA Test Method 6010B. Samples may also be analyzed for other constituents as determined by the Qualified Environmental Professional and the ACDEH LOP or as part of waste characterization testing for off-Site disposal. If necessary, extractable constituent tests (i.e., leaching test including citrate waste extraction test [WET] and/or toxicity characteristic leaching procedure [TCLP] procedures) will be conducted on the samples with elevated total metals, PCE, or TCE concentrations to establish if the soils are hazardous based on their leaching characteristics.

After the evaluation is complete, the Qualified Environmental Professional will provide the Owner, General Contractor, and the ACDEH LOP with conclusions regarding potential risks of the suspect material to human health and the environment as well as recommendations for proper removal and disposal of the affected soil. All soil removal work will be approved by the ACDEH LOP prior to implementation. If VOC-affected soil is encountered, notification will be provided to BAAQMD as required in the guidelines and notification requirements set by Regulation 8, Rule 40 of the BAAQMD Rules and Regulations for aeration of contaminated soil.

6.3 Reuse of Concrete & Soil Importation/Exportation

Reuse of crushed concrete, use of imported fill material, or export of excavated soil to a destination other than a permitted disposal facility will be characterized for approval by ACDEH prior to being placed at the Site or exported from the Site in accordance with the ACDEH LOP *Soil Import/Export Characterization Requirements* document, dated August 9, 2019, including any revisions or amendments and the New Jersey Department of Environmental Protection *Guidance for Characterization of Concrete and Clean Material Certification for Recycling* (updated January 12, 2010) .

7.0 CONTINGENCY MEAUSURES FOR DISCOVERY OF UNEXPECTED UNDERGROUND STRUCTURES

If any previously unidentified or unknown underground structures including tanks, vaults, sumps, containment structures, separators, or piping that has previously contained or has the potential to contain hazardous materials is encountered during Site grading activities, the ACDEH LOP and CUPA will be notified within 24-hours and consulted on appropriate next steps. USTs may be identified during grading and Site excavation activities by the presence of vent pipes that extend above the ground surface, product distribution piping that leads to the UST, fill pipes, backfill materials, or the underground structure itself. Other buried structures may not have features that extend above ground surface and could be discovered only after contact with construction equipment.

The removal or burying of any of these structures without prior acknowledgement and approval from ACDEH is prohibited. Discovered structures will be assessed as follows:

- The structure will be inspected to assess whether it contains any indication of chemical residuals or free-phase liquids other than water. This assessment will be conducted by the Qualified Environmental Professional and will be based on visual evidence and the results of vapor monitoring using a PID. Under no circumstances will any personnel enter an unknown subsurface structure at any time. If chemicals are not indicated within the structure by the above-referenced means and with ACDEH approval the structure may be removed or abandoned in place in a safe manner by the contractor;
- If liquids or solids are present within the structure, measures will be taken to contain the liquids to avoid spills to the subsurface. Samples will be collected and submitted to a California-certified laboratory for analysis. Liquids or solids may be temporarily drummed, or liquids may be collected by vacuum truck, while analysis is pending. Based on analytical results, the liquids or solids will be disposed of under the direction of the Qualified Environmental Professional in accordance with all applicable environmental laws and disposal requirements;
- If contaminated liquid or solids are present in the structure, the structure will be inspected for physical integrity following removal of the contaminated media. The Qualified Environmental Professional will document the results of this inspection, including an estimation of the volume and former use of the structure.

- If the physical inspection of the structure suggests that chemicals may have been released to the underlying soil additional environmental investigations of the underlying soil will be conducted to assess whether a release sufficient to warrant removal has occurred.
- If, based on the opinion of the Qualified Environmental Professional and ACDEH, it is assessed that the structure is intact, that subsurface releases of the chemicals to the underlying soils likely did not occur, and no free-phase liquids or chemical residues remain inside, removal of the structure may not be required for environmental reasons.
- Otherwise, with ACDEH approval, the structure will be excavated and disposed of at the direction of the Qualified Environmental Professional. Once the structure is removed, soil adjacent to and beneath the structure will be assessed for contamination through visual observation and organic vapor analysis and the results documented. If soil is determined to be "contaminated" with VOCs in the context of BAAQMD Rule 8-40, the appropriate response will be determined in consultation with ACDEH.

ACDEH may require further response actions based on the discovery of hazardous materials that pose an unreasonable risk to human health and safety or the environment.

8.0 GROUNDWATER MANAGEMENT

Groundwater at the Site is typically encountered at depths of approximately 9 to 11 feet bgs. Construction de-watering effluent, if generated, shall be pumped into holding tanks and sampled and analyzed for the parameters required for the selected discharge point, such as the storm drain or sanitary sewer. If dewatering effluent is to be discharged to the storm drain, a National Pollutant Discharge Elimination System (NPDES) permit will be obtained from the Regional Water Quality Control Board. If dewatering effluent is to be discharged to the City of Emeryville sanitary sewer system, permits will be obtained from East Bay Municipal Utility District (EBMUD).

Chemical testing will be performed in accordance with the receiving facility's requirements prior to discharge. If concentrations exceed the limits established for the discharge point, the dewatering effluent will either be (1) transported off-Site for disposal at a licensed disposal facility or (2) treated and discharged following sampling and analysis to confirm the success of treatment.

9.0 WASTE MANAGEMENT

9.1 Soil Characterization Prior to Off-Site Disposal

Soil that has been pre-characterized by in-situ soil testing and is intended for off-Site disposal can be loaded directly into trucks for transport to the receiving facility once the appropriate off-Site disposal location and permitting has been completed. Some soil may need to be placed in temporary on-Site stockpiles because: (1) they require further characterization prior to off-Site disposal; (2) short-term storage is necessary until haul trucks are available to transport the soil off-Site for disposal; or (3) the need for processing or sorting prior to landfilling. If soil is not adequately characterized to directly load and haul, then it may be necessary to stockpile and sample. Stockpiled soil will be characterized as required by the receiving facility.

9.2 Soil Stockpile Management

Soil that is placed in temporary stockpiles will be well maintained at all times to prevent run-on/run-off and fugitive dust emissions. All stockpiled soil will be placed on impermeable plastic sheeting (minimum 10-mil-thick) with a berm around the perimeter of the stockpile. The plastic sheeting and berm will prevent the runoff of soil and potential contaminants to surrounding areas. The berm will be constructed with hay bales, dimensional lumber, or other equivalent methods. The bottom plastic sheeting will be lapped over the berm materials, and the soil stockpile will be covered with plastic sheeting to prevent erosion or leaching of contaminants to underlying soil and prevent exposure to precipitation and wind. Plastic sheeting that covers the soil stockpile will be secured using sand bags or equivalent. Following removal, the soil stockpile area will be restored to a pre-stockpile condition. Residual plastic or debris will also be disposed of following stockpile removal.

9.3 Decontamination Procedures

In order to prevent residual contamination from leaving the Site by construction equipment and personnel during remedial excavation activities, the following decontamination procedures will be followed:

- Prior to loading excavated materials into trucks, plastic sheeting will be placed on the ground such that any spilled material will be prevented from contacting the ground surface. Upon completion of loading, any debris will be placed in the transportation vessel and the plastic sheeting will be reused or disposed.

- To minimize the spread of contaminated soil, equipment will be cleaned prior to movement out of active work zones. The equipment wheels/tires will be cleaned over plastic sheeting by means of shovels and stiff-bristled brooms or brushes until they are fully cleaned. Upon completion of cleaning, any debris will be placed in the appropriate transportation vessel and the plastic sheeting will be folded and disposed. Equipment exiting the Site will be inspected and logged for compliance with the Site decontamination requirements.
- Personal protective equipment, such as disposable coveralls, will be removed and discarded in the contamination reduction zone. In order to decontaminate reusable items such as work boots, a two-stage decontamination process will be used. This process will include washing in a detergent solution with a stiff-bristled brush and rinsing in clean water. The rinsate water will be distributed over contaminated soil (to be exported) for dust control purposes.

9.4 Off-Site Soil Disposal & Transportation Plan

Following acceptance of the excavated soil at an appropriate-licensed disposal facility, the soil will be loaded in licensed haul trucks (end-dumps or transfers) and transported off-Site following appropriate California and Federal waste manifesting procedures. The appropriate waste manifest documentation will be provided to truck drivers hauling the affected soil off-Site.

Transportation equipment will be chosen to safely transport the expected volumes of soil, taking into consideration the types of roads to be traveled and their loading capacity. Routine truck maintenance and repairs will be performed at the contractor's premises prior to picking up loads of waste material from the Site.

As each truck is filled, an inspection will be made to verify that the waste soil is securely covered, to the extent practicable, and that the tires of the haul trucks are reasonably free of accumulated soil prior to leaving the Site. During loading, dust and odor emissions will be monitored and mitigated as necessary (see section 10.1 below). During transportation, the hauling trucks will be equipped to fully cover all soil and debris, such as with a heavy tarpaulin. A street sweeper will be made available, as needed, to keep the loading area clean. The soil will be wetted, as necessary, to reduce the potential for dust generation during loading and transportation activities.

A detailed log of the loads hauled from the Site will be maintained. The log will include, at a minimum, the date and the time trucks were loaded and off-loaded, the destination, estimated

volume of the load, description of contents, name and signature of the hauler, and name and signature of the contractor's representative. The waste will be off-loaded for treatment or disposal in a manner consistent with current Federal, State, and local regulations. Shipments of hazardous waste will be tracked with the appropriate hazardous waste manifests.

9.4.1 Off-Site Disposal Facilities

If soil is classified as hazardous waste by State and Federal standards, it will be disposed of at the Class I Kettleman Hills Landfill in Kettleman City, California; Class I Buttonwillow Landfill in Buttonwillow, California; the Class I Landfill In Beatty, Nevada, or other licensed and approved facility.

If soil is classified as non-hazardous waste by State and Federal standards, it will be disposed at one of the following Class II landfills or other licensed and approved facility.

- Waste Management's Altamont Landfill in Livermore, California;
- Republic Services' Vasco Road Landfill in Livermore, California;
- Republic Services' Keller Canyon Landfill in Pittsburg, California; or
- Allied Waste's Forward Landfill in Manteca, California.

9.4.2 Transportation Plan

All transportation activities will be performed in strict compliance with all regulations and ordinances. Hauling contractor(s) used to transport non-hazardous or hazardous waste will be fully licensed and permitted by the State of California. For hazardous waste haulers, the selected transportation company will be certified by the State of California as a hazardous waste hauler, and appropriately permitted to haul contaminated waste material. All Department of Transportation (DOT) and California Highway Patrol (CHP) safety regulations will be strictly followed by both hazardous and non-hazardous waste haulers. Transportation routes will be developed to minimize transporting the affected soil through residential areas. Transportation route(s) will be established upon selection of the appropriate landfill(s).

9.5 Wastewater and Groundwater Management Protocols

Wastewater generated during Site redevelopment, such as decontamination liquids, will be temporarily stored on-Site. Decontamination water will be combined with tanked excavation

groundwater per section 8.0 above or profiled and transported to an appropriate disposal or recycling facility.

If a saturated zone is encountered during earthwork activities that produces accumulated water, it will be temporarily containerized on-Site within portable aboveground industrial holding tanks per section 8.0 above. Holding tanks will be staged on the existing hardscape (i.e. concrete or asphalt) where feasible.

Collected wastewater and groundwater will be treated and discharged per section 8.0 above or transferred into a vacuum truck or 55-gallon steel drums for off-Site transportation and disposal.

9.6 Spill Response Plan

In the event of a spill, the Contractor will be responsible and prepared to respond in a safe and efficient manner, specific to the particular spill situation. Standards will be set, and consistent procedures will be used for handling of spills, whether they are on-Site spills or spills occurring during transportation. Haulers will have an Emergency Spill Contingency Plan (ESCP) to ensure that all drivers and dispatchers know their responsibilities in the unlikely event that an accidental spill occurs while transporting contaminated material off-Site. The drivers and dispatchers will be required to know the procedures for emergency spill response. The ESCP will meet or exceed all Federal, State, and County regulations currently in effect. The provisions of the ESCP will be strictly adhered to, in order to ensure continued protection of the public safety and the environment. The HASP will address the handling of on-Site spills.

10.0 DUST AND ODOR EMISSIONS

During excavation activities, depending on soil and weather conditions, there is potential to generate airborne dust and fugitive emissions. Standard dust and fugitive emissions control measures will be followed during the ground disturbing activities to comply with OSHA and BAAQMD rules and accomplish the following goals:

- Reduce the potential for health impacts to workers;
- Reduce the potential for health impacts to facility neighbors;
- Prevent violations of ambient air quality standards;
- Minimize nuisance dust complaints from facility neighbors; and
- Minimize the migration of contaminants adhered to fugitive dust particles outside the Site.

10.1 Erosion, Dust, and Odor Control Measures

Once the pre-construction ground surface is stripped from the Site, the exposed soil will become susceptible to erosion by wind and water. Therefore, erosion control measures and dust control measures will in place before construction begins. Emission (dust) control measures will at a minimum comply with those established by OSHA and the BAAQMD for construction-related activities. Dust control measures will be based on "Best Management Practices" and will be used throughout all phases of construction.

10.1.1 Construction Mitigation Measures

The following basic construction mitigation measures will be implemented in accordance with recommendations for all proposed projects in the BAAQMD California Environmental Quality Act Air Quality Guidelines (BAAQMD, 2017):

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day;
- All haul trucks transporting soil, sand, or other loose material off-Site will be covered;
- All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited;
- All vehicle speeds on unpaved roads will be limited to 15 miles per hour (mph);

- All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used;
- Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure CCR Title 13, Section 2485). Clear signage will be provided for construction workers at all access points;
- All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation; and
- A publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints will be posted. This person will respond and take corrective action within 48 hours. The BAAQMD's phone number will also be visible to ensure compliance with applicable regulations.

Dust level monitoring of air will be conducted to evaluate the potential exposure to Site personnel and to off-Site downwind receptors. The presence of airborne dust will be evaluated through the use of real time personal sampling equipment and perimeter air sampling. If the difference between the upwind and downwind dust monitoring levels exceeds 50 micrograms per cubic meter ($\mu g/m^3$), additional dust control methods (i.e., applying additional water to disturbed areas) will be implemented.

10.1.2 Dust Suppression Measures

If dust is excessive, some or all of the following mitigation procedures may be implemented:

- Active areas adjacent to residences may need to be kept damp at all times.
- Apply water or (non-toxic) soil stabilizers to unpaved access roads, parking areas, and staging areas.
- Sweep (with water sweepers) paved access roads, parking areas, and staging areas.
- Cover or otherwise stabilize exposed soil stockpiles.
- Suspend construction activities that cause visible dust plumes and odors to extend beyond the limits of the Site.

10.1.3 Odor and Vapor Suppression Measures

By controlling the dust as described above, the emission of odor and vapors will be reduced to levels that likely will not pose a risk to the health of the public and Site workers. The water spray used to control dust will also significantly reduce the emissions of any potential volatiles that may be present in the soil. The selective loading and transportation of impacted soils could minimize the use of soil stockpiling, further reducing potential emissions of volatiles. Any active stockpile of contaminated soil or exposed excavation left overnight at the Site will be properly covered with plastic so emissions of volatiles will be minimized.

If odor is excessive and vapor emissions are detected, some or all of the following mitigation procedures may be implemented:

- Use of chemical suppressants mixed with water and applied using various applications such as spray or mist;
- Use of plastic sheeting to cover the sidewalls of the trench during non-active remedial activities will minimize the migration of VOCs and odors;
- Alternative work sequencing, such that excavation of soil with potential odor during mid- day or afternoon (during hot weather) is avoided;
- Any highly odorous soil could be segregated and placed inside a roll-off bin equipped with a lid. This will minimize the amount of highly odorous soil during loading; and
- Balancing the excavation with transportation so that the need for large stockpiles is reduced.
- Other emissions include exhaust from remediation equipment. The equipment proposed for the Site redevelopment will be maintained properly so that exhaust emissions will be within acceptable standards.

10.2 Air Monitoring

To the extent feasible, the presence of airborne contaminants will be evaluated through the use of portable monitoring equipment. Information gathered will be used to ensure the adequacy of the levels of protection being employed at the Site and may be used as the basis for upgrading or downgrading levels of personal protection, at the discretion of the Site Safety Officer. In addition, this sampling equipment will be utilized to monitor the potential for the migration of

contaminants off-Site (i.e. fence line monitoring). Such monitoring will incorporate off-Site receptor type, wind direction, work tasks being performed, etc.

The following air sampling equipment will be utilized for Site monitoring:

- Personal sampling pumps with appropriate sample collection media; and
- Dust monitors.

The above instruments will serve as the primary instruments for personal exposure monitoring. They will be utilized to fully characterize potential employee exposure and the need for equipment upgrades/downgrades.

10.2.1 Integrated Industrial Hygiene Sampling

Integrated Industrial Hygiene (IH) sampling for airborne contaminants and dust will be conducted during the excavation process and/or loading operation. This IH sampling will be performed to properly characterize potential employee exposures and/or to establish baseline levels. Sampling may include personnel monitoring and fence line sampling. The duration of such monitoring will be determined based upon analytical results, regulatory requirements, etc.

10.2.2 Real-Time Air Monitoring During Excavation of Contaminated Soil

Dust monitoring will also be conducted to characterize the potential for exposure to Site personnel during disruption of contaminated soil using a direct-reading dust monitor. Continuous monitoring will also be performed during operations that have not previously been characterized. After initial Site screening, monitoring will be conducted periodically or anytime Site conditions might be altered (i.e. weather, drilling, excavation, spills, etc.).

Results of monitoring information will be recorded, and will include time, date, location operations, and any other conditions that may contribute to potential exposures. Maintenance and calibration information will be maintained and made available upon request. The monitoring equipment will be calibrated in accordance with the manufacturer's specifications, and the records of such maintained with the project HASP.

Real-time air monitoring for respirable dust will be performed during the first three days of excavation of contaminated soil. The objective of the perimeter air-monitoring program is to protect the health and safety of the nearby community and to document the effectiveness of the dust control measures.

The Site Safety Officer will determine the air monitoring locations based on Site operations and the location of areas that could be adversely impacted by air emissions. In general, real-time monitoring will be conducted downwind and around the perimeter of relevant activities. Monitoring locations will be documented on a monitoring log, along with any concentrations detected.

The dust standard will be based on the PM10 ambient air quality standards adopted by BAAQMD, which specifies a ceiling level of no more than 50 micrograms per cubic meter (µg/m^3) difference between upwind and downwind sampling locations. The ceiling level of 50 µg/m^3 represents the Bay Area 24-hour time-weighted average standard for 10-micron diameter particulate matter (the PM10 24-hour standard).

The perimeter of the work area will be monitored while excavation of contaminated soil is being conducted. If any readings exceed action levels, work will be stopped, engineering controls will be implemented, and the work and monitoring schedule will be adjusted until background levels are reached.

Real-time dust monitors will be used to measure mass concentrations of airborne dust and provide respirable dust, expressed as concentration of particulates smaller than 10 microns (PM10) correlated measurements. A handheld respirable air monitor (mini-RAM) will be used to provide real-time data on total dust levels as PM10. Real-time worker dust monitoring will be performed continuously during work activities where soil disturbance is anticipated, downwind of active excavations. Measurements of real-time and time-weighted averages (TWA) of airborne particulate concentrations will be recorded using a Monitoring Instruments for the Environment, Inc. (MIE) RAM, model PDR-1000 or equivalent equipment. The miniRAM measures the concentration of airborne particulate matter using a high sensitivity nephelometer (photometer) using a light scatter sensor. The sensitivity of the miniRAM is reported to range from 0.001 milligrams per cubic meter (mg/m^3) to 400 mg/m^3. The miniRAM will be calibrated daily in the supplied calibration pouch.

Real-time monitoring will consist of the following activities:

- Determine the predominant wind direction;
- Place one instrument upwind of Site operations for ambient sampling;
- Place one or more instrument(s) downwind of Site operations, at the Site perimeter;
- Position the instrument probe near the normal breathing zone and monitor for approximately five minutes after instrument readings have stabilized; and

- Record the following observations and readings in real-time:
  - Location;
  - Time;
  - Site activity;
  - Readings;
  - Visual observations of dust;
  - Site conditions, including current weather conditions; and
  - Odors and/or other miscellaneous observations.

10.2.2.1 Consideration for Lead in Shallow Soil

Figure 10-1 and Table 10-1 summarize the range of lead levels found in shallow soil samples collected from the Site. The theoretical lead concentration in dust during soil disturbance activities was calculated based on the maximum allowable dust concentration adopted by BAAQMD (50 µg/m^3) and using the measured lead concentration in shallow soil. Results are summarized in the following table.

Maximum Estimated Lead Dust Concentration in Air During Soil Disturbance Activities Based on Shallow Soil Data

Soil Concentration Basis	Soil Concentration (mg/kg)	Calculated Lead Concentration in On-Site Ambient Air from Dust[Note 1] (µg/m^3)	California Air Quality Standard (µg/m^3)
Maximum Lead Concentration in Shallow Soil, Site-Wide	876	0.044	1.5
Average Lead Concentration in Shallow Soil, Site-Wide	174	0.0087	

[Note 1] Concentration of chemical in dust (µg/m3) = PM10 (50 µg/m3) x soil concentration (mg/kg) / unit conversion factor 1,000,000 mg/kg

Dust is visible at approximately 1 mg/m^3 in air. The corresponding lead concentration in soil that would result in a lead concentration in air of 1.5 ug/m^3 is

Site data indicates that the theoretical lead concentrations in air will be well below the California Air Quality Standard of 1.5 $\mu g/m^3$. The dispersion and mixing of dust will likely result in even lower levels than what has been calculated using the above method.

Additional monitoring and/or dust control measures other than what has been proposed in this SGMP are not warranted due to dust concentrations in shallow soil.

11.0 STORM WATER MANAGEMENT

Other environmental controls may be required in the event that anticipated conditions at the Site change. In the event that remediation activities occur during the rainy season, then water management procedures will be implemented in addition to probable modifications of other plans, such as the HASP. The following procedures will be implemented at the Site during the rainy season:

- The weather forecast will be monitored. During the days heavy rain is forecasted, remediation activities may be stopped;
- The boundary of the remediation area will be properly bermed to prevent storm water from entering or leaving the remediation area;
- Storm water entering the remediation area from non-impacted areas and storm water originating within the excavated area will be pumped to settlement tanks and treated prior to discharge under permit;
- The excavation will be conducted in small sections so the exposed excavated area can be covered immediately if heavy rains occur;
- Procedures will be used to prevent wet soil from sticking to the tires of trucks used to haul soil off-Site. These procedures may include plastic sheeting at the loading area, a tire wash at Site egress paths, and/or a stabilized gravel construction entrance; and
- Plastic sheeting will be used extensively to cover the area of excavation during non-working hours.

In general, the excavation will be kept as dry as possible in order to minimize the waste generated and the backfilling (as necessary) of the excavation can be conducted promptly. Storm water best management practices (BMPs) will be followed in accordance with the contractors Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the Site (if required). Note that typically for the size of Site less than one acre, a SWPPP may not be required under the Construction General Permit. The BMPs for the Site development activities may include: use of fiber rolls; inlet protection; stabilized construction entrance; landscape and paving; street cleaning; and catch basin cleaning.

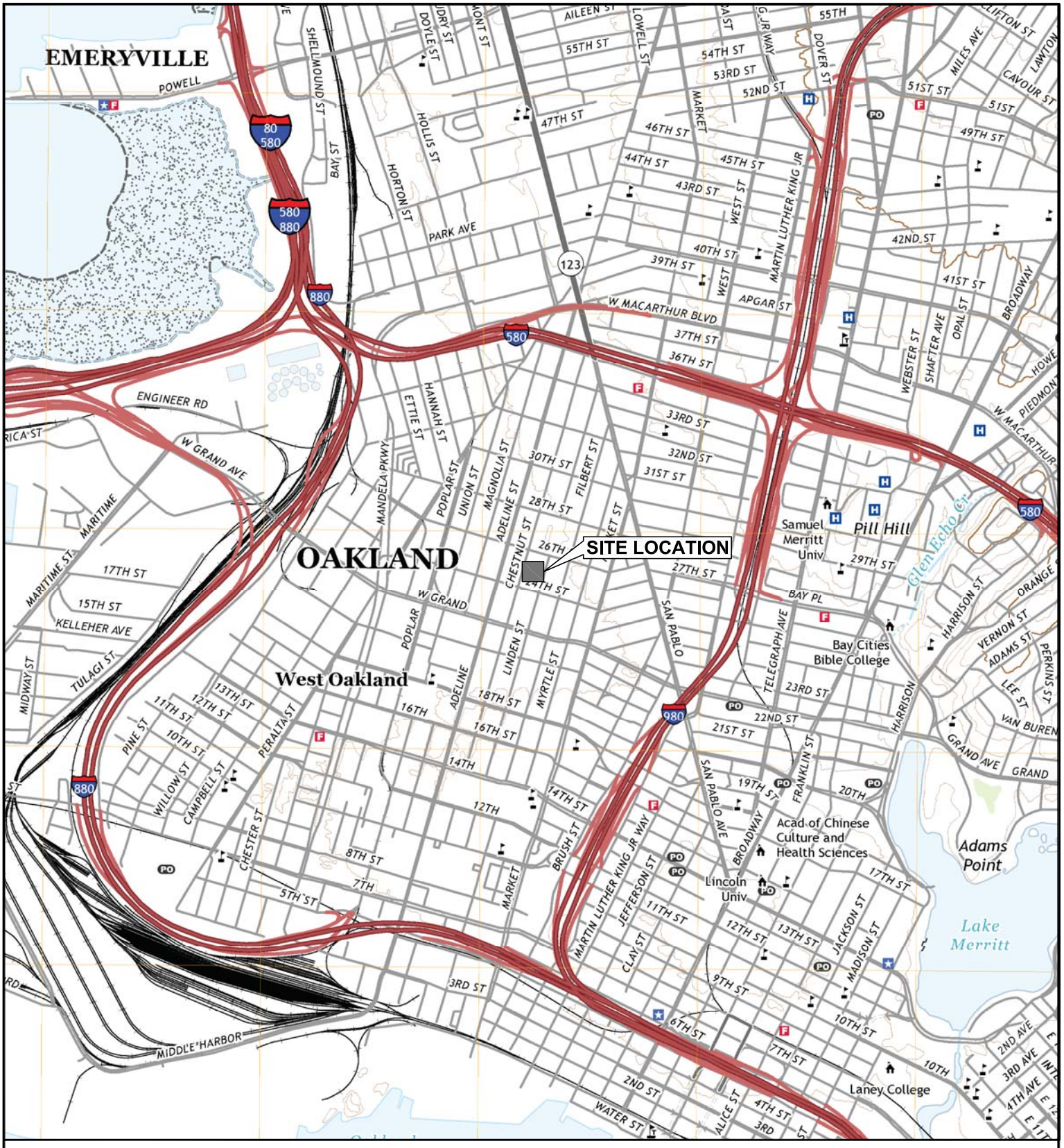
12.0 SCOPE, REPRESENTATIONS, AND LIMITATIONS

This document was prepared for the exclusive use of Dalzell Corp and ACDEH for the express purpose of complying with ACDEH requirements. This SGMP does not address issues related to other chemicals or media that may be encountered during construction or other activities including, but not limited to, demolition and construction debris, asphalt, concrete, asbestos-containing building materials, lead-based paint, or any chemicals brought on-Site by workers. If such materials are encountered during a project, each Contractor is responsible for complying with all applicable laws pertaining to the handling and disposal of these materials.

This SGMP is based on current known Site conditions and current laws, policies, and regulations as of publication in August 2019.

RMD has used professional judgment to present the findings and opinions of a scientific and technical nature. The opinions expressed are based on the conditions of the Site existing at the time of the field investigation, current regulatory requirements, and any specified assumptions. The presented findings and recommendations in this report are intended to be taken in their entirety to assist Dalzell Corp and ACDEH personnel in applying their own professional judgment in making decisions related to the Site. No warranty or guarantee, whether expressed or implied, is made with respect to the data or the reported findings, observations, conclusions, and recommendations.

FIGURES



SCALE 1:24000

1 MILE 1/2 0

7000 FEET 6000 5000 4000 3000 2000 1000 0 1000

RMD ENVIRONMENTAL SOLUTIONS

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

SITE LOCATION MAP

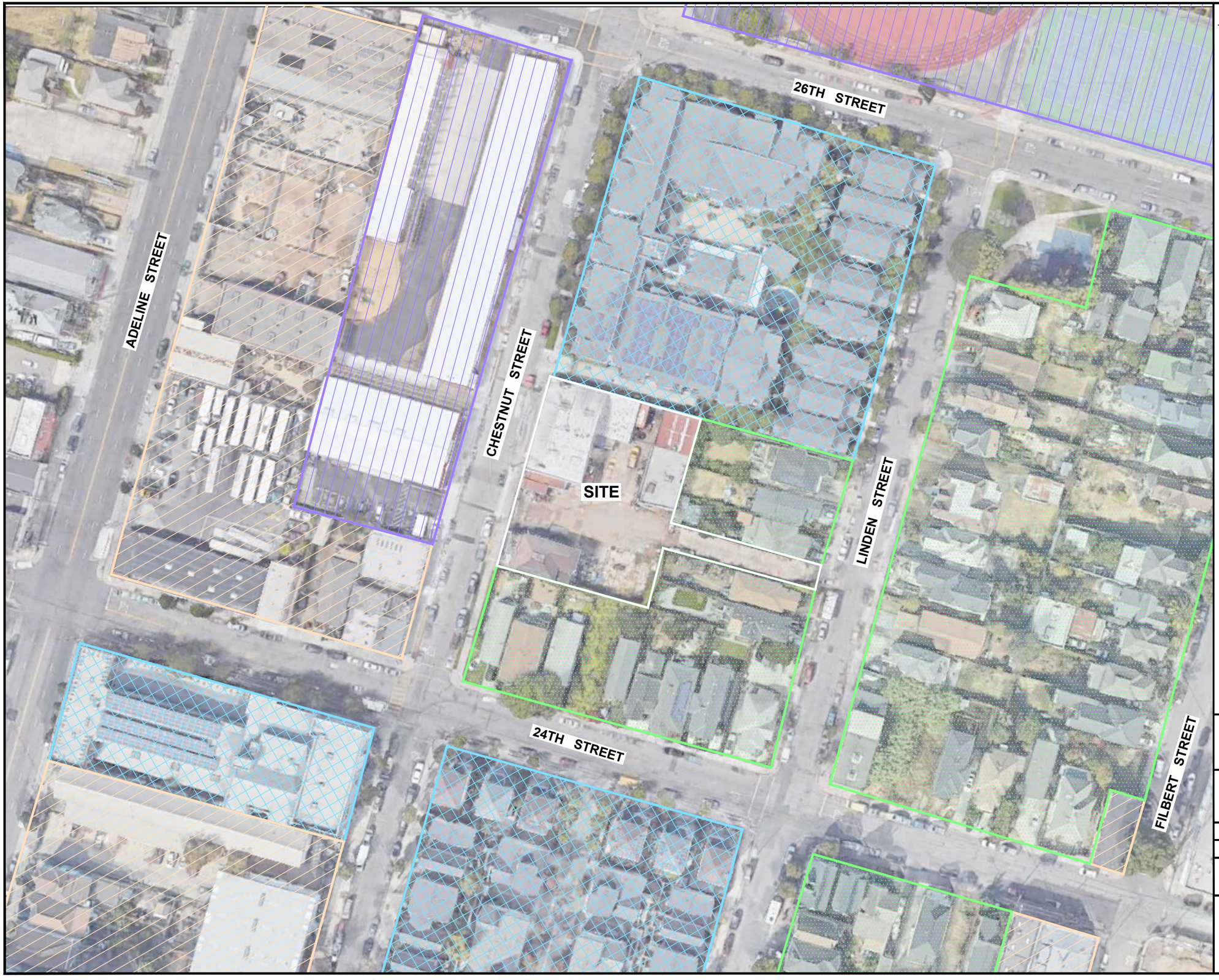
N

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	08/2019	BCD	KR

Base map from USGS 7.5 minute
Oakland West (dated 2018)
California topographic quadrangle

FIGURE 1-1

2432-SLM.dwg



LEGEND

- SCHOOL
- COMMERICAL / INDUSTRIAL
- SINGLE FAMILY HOMES
- APARTMENTS

SITE VICINITY MAP

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	03/2020	BCD	KR

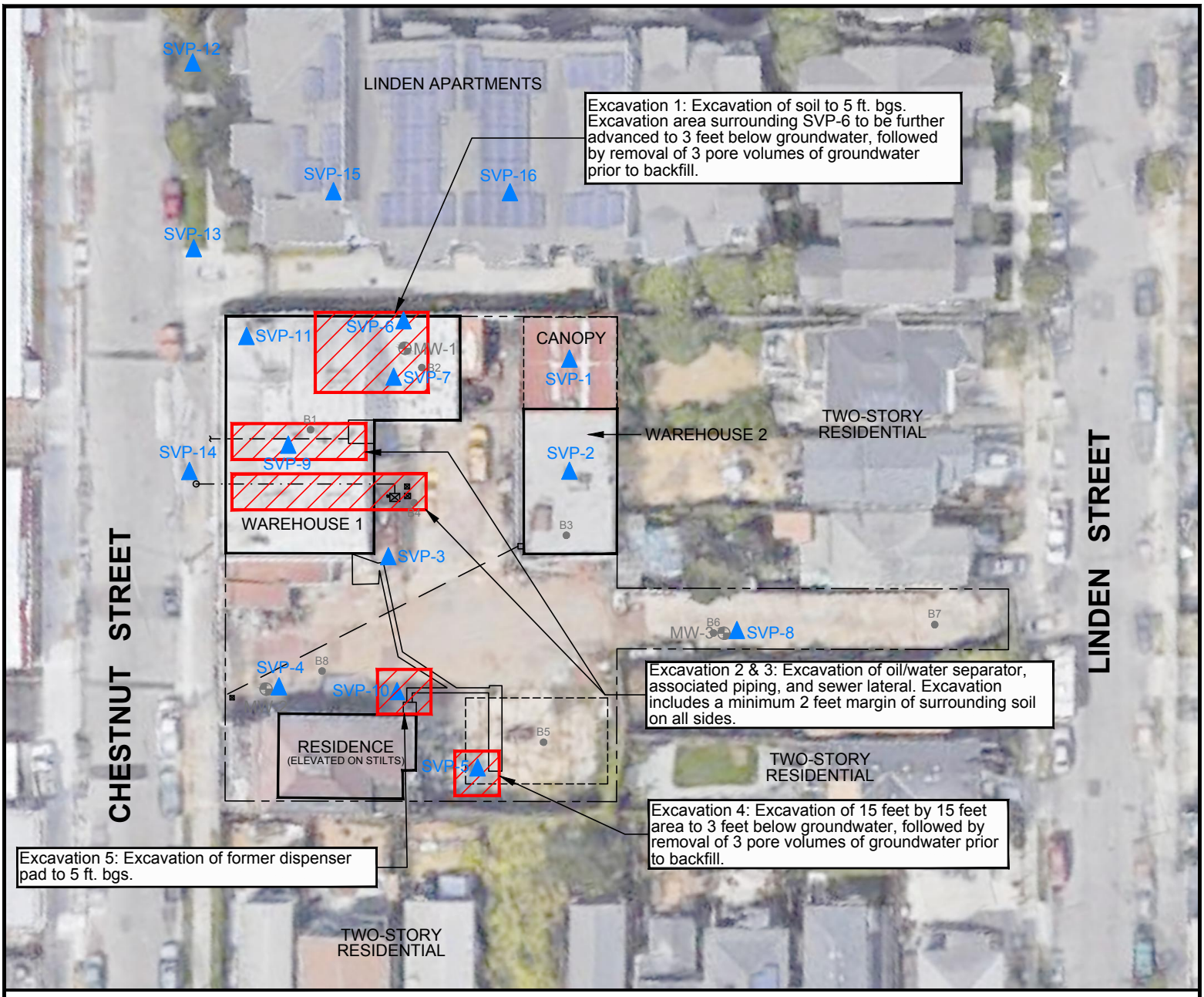
0 80 160
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 2-1

N

2432-VCM.dwg



LEGEND

- SUSPECTED FORMER UST AREA
- SVP-1 — SOIL VAPOR MONITORING POINT
- MW-1 — GROUNDWATER MONITORING WELL
- B1 — SOIL BORING LOCATION
- EXCAVATION AREA

NOTES:

1. CONCENTRATIONS SHOWN IN MICROGRAMS PER CUBIC METER (µg/m³).
2. PROPOSED EXCAVATIONS MAY BE MODIFIED AND FURTHER ADVANCED BASED ON FIELD OBSERVATIONS.

PROPOSED EXCAVATIONS #1 THROUGH #5, EXISTING SITE LAYOUT

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	02/2020	BCD	KD

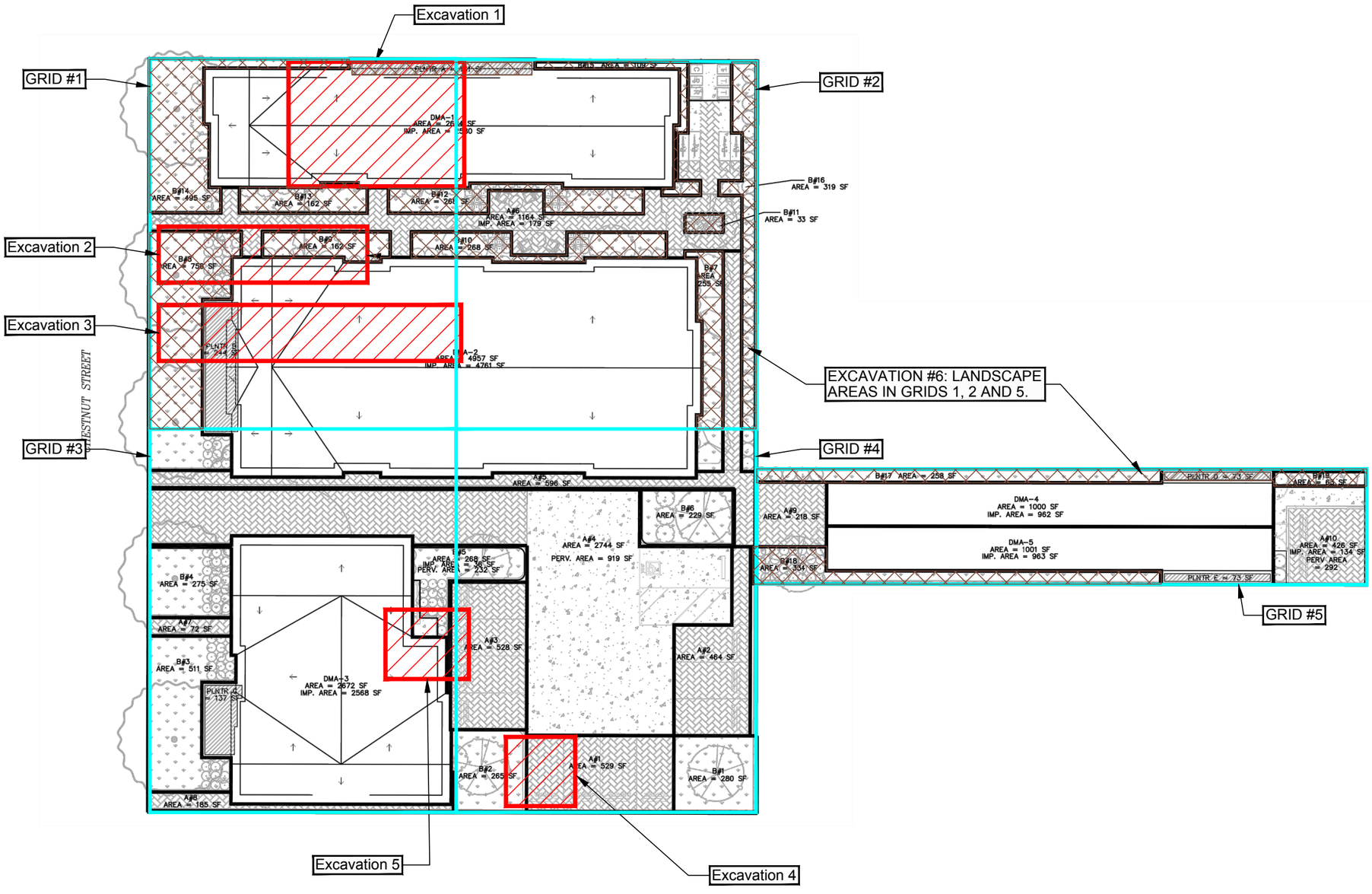
0 50 100
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 6-1

N

2432-PTB-PSAE.dwg



LEGEND

- COMPOSITE SAMPLE GRID AREA
- PROPOSED EXCAVATION AREA #1 THROUGH #5
- PROPOSED EXCAVATION AREA #6 THE UPPER 2 FEET OF EXCAVATION #6 WILL BE REMOVED AND REPLACED WITH CLEAN FILL FOR LANDSCAPING

PROPOSED EXCAVATIONS

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	03/2020	BCD	KR

0 25 50
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 6-2

N

2432-6.1.dwg

COMPOSITE SAMPLE RESULTS NOTE 1		
GRID 1	0.5'	120
GRID 2	0.5'	113
GRID 3	0.5'	10.9
GRID 4	0.5'	18.1
GRID 5	0.5'	143

LEGEND

- B11 — HISTORICAL SOIL SAMPLE LOCATION (P&D ENVIRONMENTAL)
- G1-1 — SHALLOW SOIL SAMPLE LOCATION WITHIN INDICATED GRID AREA
- MW-1 — GROUNDWATER MONITORING WELL
- SUSPECTED FORMER UST AREA
- COMPOSITE SAMPLE GRID AREA
- LOCATION EXCEEDS FINAL SCREENING LEVEL
- 10 | 5.81 — LEAD CONCENTRATION IN mg/kg; SAMPLE DEPTH IN FEET BELOW GROUND SURFACE
- FUTURE LANDSCAPE AREA

NOTES:

1. DATA BASED ON COMPOSITING THE FIVE SAMPLES FROM THE INDICATED GRID AREA.
2. SAMPLES COLLECTED IN JANUARY AND SEPTEMBER 2019.

LEAD CONCENTRATIONS IN SOIL

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	03/2020	BCD	KD

0 30 60
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 10-1

N

2432-PSVP-DATA.dwg

TABLE

Table 10-1

Calculation of Potential Lead in Air Concentration During Shallow Soil Disturbance Activities

2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street

Oakland, California

Sample ID	Sample Depth *(feet bgs)*	Lead Concentration *(mg/Kg)*
GRID 1-1	0.5	64.7
GRID 1-2	0.5	40.3
GRID 1-4	0.5	100
GRID 1-5	0.5	113
GRID 2-1	0.5	326
GRID 2-3	0.5	18.1
GRID 2-4	0.5	337
GRID 2-5	0.5	203
GRID 5-1	0.5	190
GRID 5-2	0.5	188
GRID 5-3	0.5	84.2
GRID 5-4	0.5	179
GRID 5-5	0.5	876
COMP GRID 1	0.5	120
COMP GRID 2	0.5	113
COMP GRID 3	0.5	10.9
COMP GRID 4	0.5	18.1
COMP GRID 5	0.5	143

Average Lead Concentration	174	mg/kg
Maximum Lead Concentration	876	mg/kg
Allowable PM10 Max	50	ug/m3
Corresponding Lead Concentration in Air Using Maximum Soil Concentration and a PM10 Concentration of 50 ug/m3	0.044	ug/m3
Corresponding Lead Concentration in Air Using Average Soil Concentration and a PM10 Concentration of 50 ug/m3	0.0087	ug/m3
California State Air Quality Standard for Lead (reference: https://ww2.arb.ca.gov/resources/lead-and-health)	1.5 ug/m3	ug/m3

Notes:

Samples collected on September 9, 2019

APPENDIX A

ACKNOWLEDGEMENT AGREEMENT

APPENDIX A

AGREEMENT AND ACKNOWLEDGMENT STATEMENT
2420 & 2432 Chestnut Street and 2432 Linden Lane
Oakland, California

Soil Management Plan Agreement

All project personnel and subcontractors are required to sign the following agreement prior to conducting work at the site.

1. I have read and fully understand the plan and my individual responsibilities.

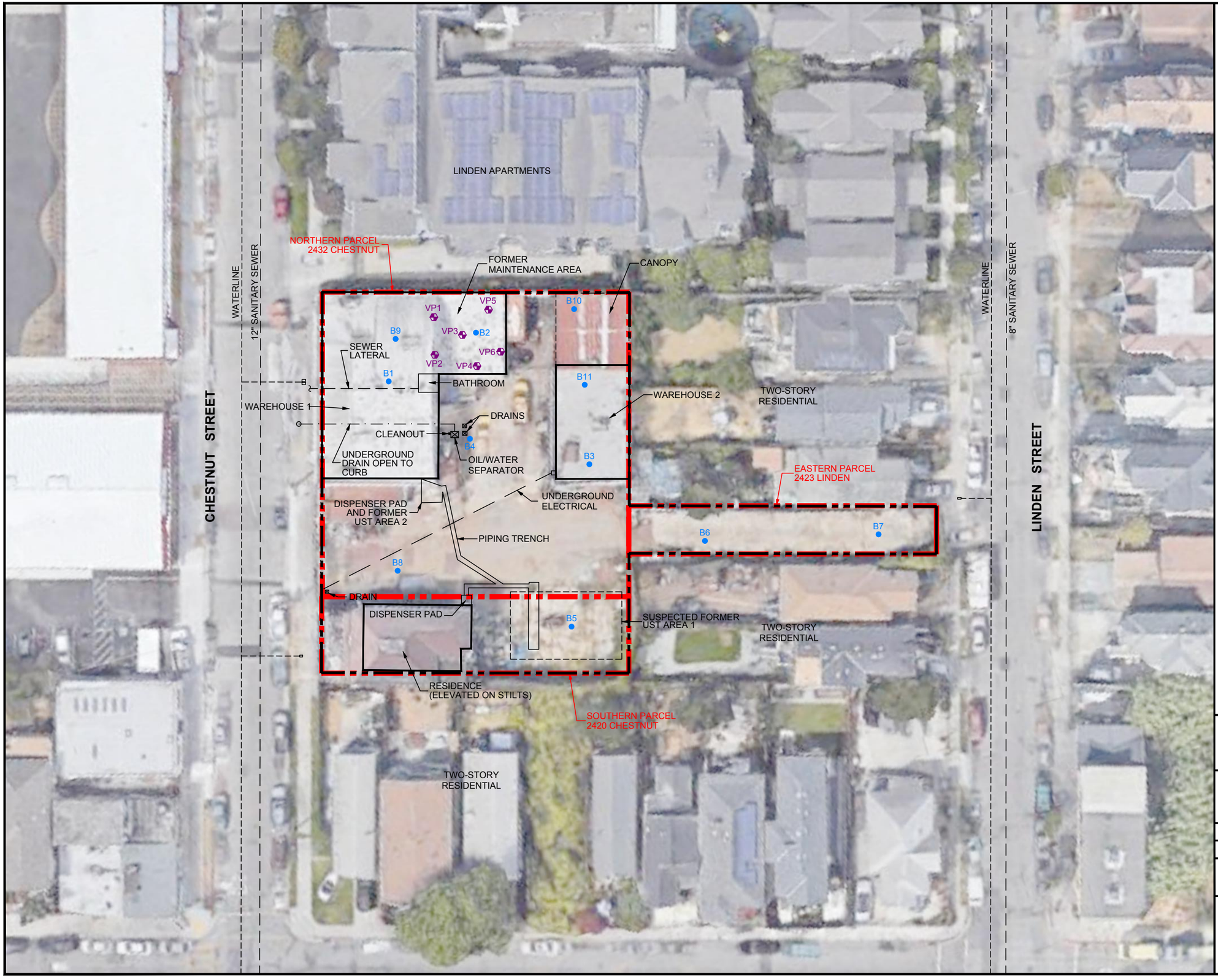
2. I agree to abide by the provisions of the plan.

Name	Signature
Company	Date
Name	Signature
Company	Date
Name	Signature
Company	Date
Name	Signature
Company	Date

(Add additional sheets if necessary)

APPENDIX B

HISTORICAL SOIL AND GROUNDWATER DATA



LEGEND

- B11 — HISTORICAL SOIL AND GRAB GROUNDWATER SAMPLE LOCATION (P&D ENVIRONMENTAL)
- VP6 — SUB SLAB VAPOR PIN LOCATION (P&D ENVIRONMENTAL)
- SUSPECTED FORMER UST AREAS & AREAS OF 4/15/19 INVESTIGATION (P&D ENVIRONMENTAL) (29 BORINGS UP TO) 13 FEET BELOW GROUND SURFACE DEEP)
- PARCEL LINES
- SITE BOUNDARY

SITE PLAN WITH HISTORICAL SAMPLE LOCATIONS

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	03/2020	BCD	KR

0 40 80
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 2-1

N

2432-Base.dwg

LEGEND

- SUSPECTED FORMER UST AREA
- SVP-1 — SOIL VAPOR MONITORING POINT
- MW-1 — GROUNDWATER MONITORING WELL
- SB-1 — OFFSITE GRAB GROUNDWATER SAMPLE LOCATION, DECEMBER 2019
- G1-1 — SHALLOW SOIL SAMPLE LOCATION
- SITE BOUNDARY
- COMPOSITE SAMPLE GRID AREA

NOTE:

1. Refer to the Site Plan for identification of features.

SAMPLE LOCATIONS
SEPTEMBER 2019-FEBRUARY 2020

2420 & 2432 CHESTNUT STREET
AND 2423 LINDEN STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-DAL-001	03/2020	BCD	KD

0 50 100
HORIZONTAL SCALE IN FEET

RMD ENVIRONMENTAL SOLUTIONS

FIGURE 3-1

N

2432-PTB-DATA-2.dwg

Table 4-1

Summary of Soil Analytical Results - Asbestos

2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street

Oakland, California

Boring ID	Sample Depth *(feet bgs)*	Date	Appearance	Asbestos %
COMP 1-1/2/3/4/5	0.5	09/09/19	Brown, Non-Fibrous	ND
COMP 2-1/2/3/4/5	0.5	09/09/19	Gray, Non-Fibrous	ND
COMP 3-1/2/3/4/5	0.5	09/09/19	Gray, Non-Fibrous	ND
COMP 4-1/2/3/4/5	0.5	09/09/19	Gray, Non-Fibrous	ND
COMP 5-1/2/3/4/5	0.5	09/09/19	Brown, Non-Fibrous	ND

Notes:

Samples analyzed using USEPA Method 600/R-93/116.

bgs Below ground surface.

ND Not detected above laboratory reporting limit.

Table 4-2
Summary of Soil Analytical Results - Petroleum Hydrocarbons and VOCs
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Boring ID	Sample Depth (feet bgs)	Date	TPH-G (mg/Kg)	TPH-D[Note 3] (mg/Kg)	TPH-MO[Note 4] (mg/Kg)	TPH-BO (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl-benzene (mg/Kg)	Total Xylenes (mg/Kg)	PCE (mg/Kg)	TCE (mg/Kg)	cis-1,2-DCE (mg/Kg)	trans-1,2-DCE (mg/Kg)	Vinyl Chloride (mg/Kg)	Carbon Tetrachloride (mg/Kg)	Naphthalene (mg/Kg)	Other VOCs
Final Screening Level[Note 1]			**100**	**260**	**1,600**	**1,600**	**0.025**	**3.2**	**0.43**	**2.1**	**0.08**	**0.085**	**0.19**	**0.65**	**0.0015**	**0.076**	**0.042**	
B1	4.5	01/09/19	ND<1.2	ND<1.2	ND<5.9	ND<5.9	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	
	9.5	01/09/19	ND<1.2	ND<1.2	ND<5.9	ND<6.2	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	
B2	4.5	01/09/19	ND<1.2	ND<1.2	ND<5.9	ND<5.9	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	
	9.0	01/09/19	ND<1.2	ND<1.2	ND<5.9	ND<6.0	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	
B3	4.5	01/09/19	ND<1.2	ND<1.2	ND<5.9	ND<5.9	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	
	9.5	01/09/19	ND<1.2	ND<1.2	ND<5.9	ND<6.2	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	
B4	4.5	01/08/19	ND<1.2	ND<1.2	ND<5.9	ND<6.1	ND<0.0061	ND<0.0061	ND<0.0061	0.037	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	
	9.5	01/08/19	ND<1.2	9.9	55	51	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	
B6	4.5	01/08/19	ND<1.2	ND<1.2	ND<5.9	ND<6.1	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	
	9.5	01/08/19	ND<1.2	ND<1.2	ND<5.9	ND<6.1	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	
B7	4.5	01/08/19	ND<1.2	ND<1.2	ND<5.9	ND<6.0	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	ND<0.0060	
	9.5	01/08/19	ND<1.2	ND<1.2	ND<5.9	ND<5.9	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	
B8	4.5	01/08/19	ND<1.2	ND<1.2	ND<5.9	ND<6.2	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	
	9.5	01/08/19	ND<1.2	ND<1.2	ND<5.9	ND<6.1	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	
	11	01/08/19	220 B	13	ND<5.9	15	ND<0.12	ND<0.12	0.60	0.72	ND<0.12	ND<0.12	ND<0.12	ND<0.12	ND<0.12	ND<0.12	0.74	
B9	4.5	03/28/19	ND<1.1	ND<1.1	ND<5.7	ND<5.7	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	Note 2
B10	4.5	03/28/19	ND<1.2	ND<1.2	ND<5.8	ND<5.8	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	ND<0.0058	
B11	4.5	03/28/19	ND<1.2	ND<1.2	ND<6.2	ND<6.2	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	
G1-1	0.5	09/09/19	0.0486 B J	NA	NA	NA	ND<0.00118	0.00250 J	0.00101 J	0.00727 J	0.216	ND<0.00118	ND<0.00296	ND<0.00592	NDM<0.000809	ND<0.00592	ND<0.0148	
G2-1	0.5	09/09/19	0.0535 B J	NA	NA	NA	0.000602 J	0.00269 J	0.000793 J	0.00790 J	0.00487	ND<0.00124	ND<0.00309	ND<0.00618	NDM<0.000844	ND<0.00618	ND<0.0154	
G3-2	0.5	09/09/19	0.0414	NA	NA	NA	ND<0.00116	ND<0.00582	ND<0.00291	ND<0.00757	ND<0.00291	ND<0.00116	ND<0.00291	ND<0.00582	NDM<0.000796	ND<0.00582	ND<0.0146	
G4-1	0.5	09/09/19	0.154	NA	NA	NA	ND<0.00116	ND<0.00579	ND<0.00289	ND<0.00752	0.00415	ND<0.00116	ND<0.00289	ND<0.00579	NDM<0.000790	ND<0.00579	ND<0.0145	
G5-5	0.5	09/09/19	ND<0.117	NA	NA	NA	0.00158	0.00915	0.00282 J	0.0143 J 4	0.00242 J	ND<0.00117	ND<0.00292	ND<0.00584	NDM<0.000798	ND<0.00584	ND<0.0146	
COMP GRID 1	0.5	09/09/19	NA	5.62	49.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
COMP GRID 2	0.5	09/09/19	NA	3.85 J	33.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
COMP GRID 3	0.5	09/09/19	NA	3.36 J	43.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
COMP GRID 4	0.5	09/09/19	NA	1.25 J	12.10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
COMP GRID 5	0.5	09/09/19	NA	4.77	27.50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
MW-1	10	09/11/19	ND<0.118	ND<0.473	ND<0.473	NA	ND<0.00125	0.006 J	ND<0.00313	0.00827	0.00648	ND<0.00125	ND<0.00313	ND<0.00626	NDM<0.000855	ND<0.00626	ND<0.0157	
MW-2	10	09/09/19	ND<0.118	ND<0.473	ND<0.473	NA	0.000645 J	0.00417 J	0.00139 J	0.00993	ND<0.00325	ND<0.00130	ND<0.00325	ND<0.00651	NDM<0.000888	ND<0.00651	ND<0.0163	
MW-3	10	09/09/19	ND<0.117	ND<0.473	ND<0.473	NA	ND<0.00134	0.00286 J	0.00136 J	0.00690 J	ND<0.00335	0.000865 J	ND<0.00335	ND<0.00669	NDM<0.000914	ND<0.00669	ND<0.0167	

Notes:
Shaded data exceeds Final Screening Levels
Hatched cells are below laboratory reports limits. Reporting limit is above applicable ESL.

Note 1 Final Screening levels are based on the lowest applicable SFBRWQCB ESL value. See Table 5-1.

Note 2 Refer to Table 4-3 for maximum reported concentrations of "Other VOCs". Other VOCs were reported by the laboratory at concentrations that were either below ESLs or reported constituents do not have ESLs associated with them and are not expected to be regulatory drivers for investigation or remediation.

Note 3 For samples collected on 9/9/2019 and 9/11/2019, TPHd data shown represents laboratory results for carbon range C12 - C22 hydrocarbons.

Note 4 For samples collected on 9/9/2019 and 9/11/2019, TPHmo data shown represents laboratory results for carbon range C22 - C40 hydrocarbons.

bgs	Below ground surface.
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board.
ESL	Environmental Screening Level.
ND<0.010	Particular analyte not detected above laboratory reporting limit.
NDM<0.00975	Particular analyte not detected above method detection limit.
B	The same analyte is found in the associated blank.
J	Estimated value.
mg/Kg	Milligrams per kilogram.
--	No published value.
VOCs	Volatile Organic Compounds.

TPH-G	Total Petroleum Hydrocarbons as Gasoline.
TPH-D	Total Petroleum Hydrocarbons as Diesel.
TPH-MO	Total Petroleum Hydrocarbons as Motor Oil.
TPH-BO	Total Petroleum Hydrocarbons as Bunker Oil.
PCE	Tetrachloroethene.
TCE	Trichloroethene.
DCE	Dichloroethene.

Table 4-3
Maximum Concentrations of Other VOC Constituents Detected in Soil
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Analyte	Maximum Detected Concentration *(mg/Kg)*	Final Screening Levels [Note 1] *(mg/Kg)*
Isopropylbenzene	0.25	--
4-Isopropyltoluene	0.15	--
n-Butylbenzene	0.71	--
sec-Butylbenzene	0.19	--
n-Propylbenzene	1.0	--
1,2,4-Trimethylbenzene	2.6	--
1,3,5-Trimethylbenzene	0.16	--

Notes:

[Note 1] Final Screening Levels are based at the lowest value applicable SFBRWQCB ESLs. See Table 5-1.

-- No published value.
mg/Kg Milligrams per kilogram.
SFBRWQCB San Francisco Bay Regional Water Quality Control Board.
ESL Environmental Screening Level.

Table 4-4
Summary of Soil Analytical Results - SVOCs
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Boring ID	Sample Depth (feet bgs)	Date	Dimethyl Phthalate (mg/Kg)	Benzo (a) anthracene (mg/Kg)	Benzo (b) fluoranthene (mg/Kg)	Benzo (k) fluoranthene (mg/Kg)	Benzo (g,h,i) perylene (mg/Kg)	Benzo (a) pyrene (mg/Kg)	Chrysene (mg/Kg)	Fluoranthene (mg/Kg)	Indeno (1,2,3-cd) pyrene (mg/Kg)	1,1 - Biphenyl (mg/Kg)	Bis (2-ethylhexyl) Adipate (mg/Kg)	Bis (2-ethylhexyl) Phthalate (mg/Kg)	2-Chlorophenol (mg/Kg)	Di-n-Butyl Phthalate (mg/Kg)	Naphthalene (mg/Kg)	Phenanthrene (mg/Kg)	Phenol (mg/Kg)	Pyrene (mg/Kg)	Other SVOCs
Final Screening Levels [Note 1]			0.035	0.63	1.1	4.8	8.3	0.11	2.2	0.69	0.48	0.42	--	0.8	0.012	--	0.042	7.8	9.4	45	
B1	4.5	01/09/19	ND<0.0025	ND<0.0059	ND<0.0013	ND<0.0013	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0013	ND<0.0025	ND<0.015	0.26 J	0.011	ND<0.0059	0.0056	ND<0.0013	ND<0.005	0.25 B	ND<0.0025	See Note 2
	9.5	01/09/19	NA																		
B2	4.5	01/09/19	ND<0.0025	ND<0.0059	ND<0.0013	ND<0.0013	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0013	ND<0.0025	ND<0.015	ND<0.59	0.0044 J	ND<0.0059	0.0027	ND<0.0013	ND<0.005	0.063 B	ND<0.0025	
	9.0	01/09/19	NA																		
B3	4.5	01/09/19	ND<0.0025	ND<0.0059	ND<0.0013	ND<0.0013	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0013	ND<0.0025	0.0028 J	ND<0.59	0.013	ND<0.0059	0.0031	ND<0.0013	ND<0.005	0.018 B	ND<0.0025	
	9.5	01/09/19	NA																		
B4	4.5	01/08/19	ND<0.0025	0.0054 J	ND<0.0013	ND<0.0013	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0013	ND<0.0025	0.0031 J	ND<0.61	0.0049 J	ND<0.0061	ND<0.0031	ND<0.0013	ND<0.005	0.16 B	ND<0.0025	
	9.5	01/08/19	ND<0.0025	ND<0.0060	ND<0.0013	ND<0.0013	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0013	ND<0.0025	0.0035 J	ND<0.60	ND<0.0060	0.0024 J	ND<0.0030	ND<0.0013	ND<0.005	0.11 B	ND<0.0025	
B6	4.5	01/08/19	ND<0.0025	ND<0.0061	ND<0.0013	ND<0.0013	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0013	ND<0.0025	0.0038 J	ND<0.61	0.0058 J	0.0027 J	0.0029 J	ND<0.0013	ND<0.005	0.55 B	ND<0.0025	
	9.5	01/08/19	ND<0.0025	ND<0.0059	ND<0.0013	ND<0.0013	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0013	ND<0.0025	ND<0.015	ND<0.59	0.011	ND<0.0059	0.0056	ND<0.0013	ND<0.005	0.25 B	ND<0.0025	
B7	4.5	01/08/19	ND<0.0025	ND<0.0060	ND<0.0013	ND<0.0013	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0013	ND<0.0025	0.0029 J	ND<0.60	ND<0.0060	ND<0.0060	ND<0.0030	ND<0.0013	0.00072 J	0.0036 JB	ND<0.0025	
	9.5	01/08/19	NA																		
B8	4.5	01/08/19	ND<0.0025	ND<0.0062	ND<0.0013	ND<0.0013	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0013	ND<0.0025	ND<0.016	ND<0.62	ND<0.0062	ND<0.0062	ND<0.0031	ND<0.0013	0.00073 J	0.010 B	ND<0.0025	
	9.5	01/08/19	NA																		
	11	01/08/19	NA																		
B9	4.5	03/28/19	NA																		
B10	4.5	03/28/19	NA																		
B11	4.5	03/28/19	NA																		
G1-1	0.5	09/09/19	0.0131 B J	0.00788 J	0.016 J	ND<0.394	0.0107 J	0.0115 J	0.0118 J	0.0162 J	0.0107 J	NA	NA	ND<0.394	NDM<0.00984	ND<0.394	ND<0.394	0.00803 J	NDM<0.00823	0.0169 J	
G2-1	0.5	09/09/19	0.0113 B J	0.0257 J	0.0633	0.0192 J	0.0471	0.0466	0.0458	0.0693	0.0463	NA	NA	ND<0.411	NDM<0.0103	ND<0.411	0.0125 J	0.0369 J	NDM<0.00859	0.072	
G3-2	0.5	09/09/19	0.0148 B J	ND<0.0388	ND<0.0388	ND<0.0388	ND<0.0388	ND<0.0388	ND<0.0388	ND<0.0388	ND<0.0388	NA	NA	ND<0.388	NDM<0.00968	ND<0.388	ND<0.0388	ND<0.0388	NDM<0.00810	ND<0.0388	
G4-1	0.5	09/09/19	0.0252 B J	ND<0.0385	ND<0.0385	ND<0.0385	ND<0.0385	ND<0.0385	ND<0.0385	ND<0.0385	ND<0.0385	NA	NA	ND<0.385	NDM<0.00962	ND<0.385	ND<0.0385	ND<0.0385	NDM<0.00804	ND<0.0385	
G5-5	0.5	09/09/19	0.0607 B J	0.12	0.177 J	0.0565 J	0.154 J	0.173 J	0.145 J	0.223	0.136 J	NA	NA	0.0886 J	NDM<0.0485	0.364 J	NDM<0.052	0.0987 J	NDM<0.0406	0.258	
MW-1	10	09/11/19	NDM<0.00638	ND<0.0393	ND<0.0393	ND<0.0393	ND<0.0393	ND<0.0393	ND<0.0393	ND<0.0393	ND<0.0393	NA	NA	ND<0.393	NDM<0.00982	ND<0.393	ND<0.0393	ND<0.0393	NDM<0.00821	ND<0.0393	
MW-2	10	09/09/19	0.0111 B J	ND<0.0394	ND<0.0394	ND<0.0394	ND<0.0394	ND<0.0394	ND<0.0394	ND<0.0394	ND<0.0394	NA	NA	ND<0.394	NDM<0.00983	ND<0.394	ND<0.0394	ND<0.0394	NDM<0.00822	ND<0.0394	
MW-3	10	09/09/19	0.0106 B J	ND<0.0391	ND<0.0391	ND<0.0391	ND<0.0391	ND<0.0391	ND<0.0391	ND<0.0391	ND<0.0391	NA	NA	ND<0.391	NDM<0.00975	ND<0.391	ND<0.0391	ND<0.0391	NDM<0.00816	ND<0.0391	

Notes:
Shaded values exceed the Final Screening levels.
Hatched cells are below laboratory reports limits. Reporting limit is above applicable ESL.

[Note 1] Final Screening Levels are based on the lowest value of applicable SFBRWQCB ESLs. See Table 5-1.

[Note 2] Refer to laboratory report for full analyte list. No other SVOCs were reported above laboratory detection limits.

SFBRWQCB	San Francisco Bay Regional Water Quality Control Board.	"- -"	No published value.
ESL	Environmental Screening Level.	NA	Not analyzed.
ND<0.010	Particular analyte not detected above laboratory reporting limit.	B	Analyte detected in the associated Method Blank and in the sample.
NDM<0.00975	Particular analyte not detected above method detection limit.		
mg/Kg	Milligrams per kilogram.	J	The reported concentration is an estimated value.
SVOCs	Semi Volatile Organic Compounds.	bgs	Below ground surface.

Table 4-5
Summary of Soil Analytical Results - Metals
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Boring ID	Sample Depth (feet bgs)	Date	Antimony (mg/Kg)	Arsenic[Note 4] (mg/Kg)	Barium (mg/Kg)	Beryllium (mg/Kg)	Cadmium (mg/Kg)	Chromium[Note 3] (mg/Kg)	Cobalt (mg/Kg)	Copper (mg/Kg)	Lead (mg/Kg)	Mercury (mg/Kg)	Molybdenum (mg/Kg)	Nickel (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)	Thallium (mg/Kg)	Vanadium[Note 4] (mg/Kg)	Zinc (mg/Kg)
Final Screening Levels [Note 1]			**11**	**0.067**	**390**	**5.0**	**1.9**	**160**	**23**	**180**	**32**	**13**	**6.9**	**130**	**2.4**	**25**	**0.78**	**18**	**340**
Bay Area Background Metals in Soil [Note 2]			**<6.0**	**24**	**410**	**1.0**	**5.6**	**120**	**25**	**63**	**24**	**0.42**	**4.8**	**272**	**4.9**	**2.9**	**10**	**90**	**140**
B1	4.5	01/09/19	ND<0.50	6.9	240	ND<0.50	ND<0.25	46	19	18	8.2	0.061 B	0.70	44	ND<0.50	ND<0.50	ND<0.50	52	45
B2	4.5	01/09/19	ND<0.50	3.7	87	ND<0.50	ND<0.25	42	5.5	14	5.5	0.087 B	ND<0.50	47	ND<0.50	ND<0.50	ND<0.50	32	35
B3	4.5	01/09/19	ND<0.50	5.0	80	0.54	ND<0.25	44	11	17	7.1	0.098 B	0.54	72	ND<0.50	ND<0.50	ND<0.50	37	43
B4	4.5	01/08/19	ND<0.50	7.6	350	0.53	0.50	48	35	23	13	ND<0.050	2.0	100	ND<0.50	ND<0.50	ND<0.50	47	50
	9.5	01/08/19	ND<0.50	2.0	170	ND<0.50	ND<0.25	50	4.7	12	2.9	ND<0.050	ND<0.50	53	ND<0.50	ND<0.50	ND<0.50	26	27
B6	4.5	01/08/19	ND<0.50	6.0	1,700	ND<0.50	0.58	53	15	20	12	ND<0.050	1.3	92	ND<0.50	ND<0.50	ND<0.50	43	55
B7	4.5	01/08/19	ND<0.50	5.5	230	0.52	ND<0.25	52	10	23	5.4	ND<0.050	0.87	100	ND<0.50	ND<0.50	ND<0.50	41	60
B8	4.5	01/08/19	ND<0.50	2.1	120	ND<0.50	ND<0.25	48	8.9	15	4.5	ND<0.050	ND<0.50	49	ND<0.50	ND<0.50	ND<0.50	35	43
G1-1	0.5	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	64.7	NA	NA	NA	NA	NA	NA	NA	NA
G1-2	0.5	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	40.3	NA	NA	NA	NA	NA	NA	NA	NA
G1-4	0.5	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA
G1-5	0.5	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	113	NA	NA	NA	NA	NA	NA	NA	NA
G2-1	0.5	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	326	NA	NA	NA	NA	NA	NA	NA	NA
G2-3	0.5	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	18.1	NA	NA	NA	NA	NA	NA	NA	NA
G2-4	0.5	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	337	NA	NA	NA	NA	NA	NA	NA	NA
G2-5	0.5	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	203	NA	NA	NA	NA	NA	NA	NA	NA
G5-1	0.5	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	190	NA	NA	NA	NA	NA	NA	NA	NA
G5-2	0.5	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	188	NA	NA	NA	NA	NA	NA	NA	NA
G5-3	0.5	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	84.2	NA	NA	NA	NA	NA	NA	NA	NA
G5-4	0.5	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	179	NA	NA	NA	NA	NA	NA	NA	NA
G5-5	0.5	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	876	NA	NA	NA	NA	NA	NA	NA	NA
COMP GRID 1	0.5	09/09/19	0.914	4.19	159	0.269 J	0.434 J	19.5	7.04	22.5	120	0.136	0.268 J	14.8	0.271 J	0.221 J	ND<0.594	20.9	123
COMP GRID 2	0.5	09/09/19	0.844	3.99	185	0.285 J	0.65	17.3	11.8	25.4	113	0.195	0.310 J	16.1	ND<0.575	0.261 J	ND<0.575	22.5	163
COMP GRID 3	0.5	09/09/19	0.359 J	5.18	28.8	0.116 J	0.154 J	4.18 B	2.84	4.05	10.9	0.108	0.895 J	2.87	0.221 J	ND<0.543	0.169 J	6.42	48.7
COMP GRID 4	0.5	09/09/19	ND<0.603	2.4	24.3	0.138 J	0.136 J	3.16 B	3.01	3.99	18.1	0.142	0.459 J	3.09	ND<0.603	ND<0.603	ND<0.603	5.45	38.2
COMP GRID 5	0.5	09/09/19	0.772	3.11	150	0.368 J	0.175 J	32	6.99	22.1	143	0.353	0.352 J	22.2	0.239 J	ND<0.595	ND<0.595	22.8	105
MW-1	10	09/11/19	0.217 J J6	3.02	400 J3 J5	0.549 J	0.616	55.7	27.9	16.7	4.71	0.0364	2.26	99.6	0.451	ND<0.5	0.2 J	42.5	33
MW-2	10	09/09/19	ND<0.592	9.14 J6	129 J3 J5 J6	0.482 J	0.153 J	42.1	15.5	15	5.48	0.0327 J	0.598 J	82.8 J3 J5	ND<0.592	ND<0.592	ND<0.592	35.7 J6	25.5
MW-3	10	09/09/19	0.262 J	4.19	96.1	0.490 J	0.338 J	45.2	8.02	17.9	5.81	0.242 J6 O1	0.657	55.9	ND<0.587	ND<0.587	0.283 J	27.8	47.7

Notes:
Samples analyzed using USEPA Method SW6020.
Shaded values exceed the Final Screening Levels or background concentrations. Arsenic and vanadium exceeded the ESLs; however; they do not exceed background levels.
[Note 1] Final Screening Levels are based on the lowest value of applicable SFBRWQCB ESLs. See Table 5-1.
[Note 2] Lawrence Berkeley National Laboratory, Analysis of Background Distributions of Metals in Soil at Lawrence Berkeley National Laboratory, Table 5. Revised April 2009.
[Note 3] ESL value shown is for total chromium.
[Note 4] Vanadium and arsenic concentrations were compared to the published background values for soil in the Bay Area (see Note 2 above), instead of ESLs

bgs	Below ground surface.
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board.
ESL	Environmental Screening Level.
ND<0.50	Particular analyte not detected above laboratory reporting limit.
mg/Kg	Milligrams per kilogram.
NA	Not analyzed.
B	Analyte detected in the associated Method Blank and in the sample.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Table 4-6
Summary of Depth-to-Water and Groundwater Elevation Data
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Well ID	Top of Casing (feet amsl)	Date	Depth to Water (feet btoc)	Groundwater Elevation (feet amsl)
MW-1	15.82	09/20/19	9.09	6.73
	15.82	10/17/19	9.36	6.46
MW-2	14.73	09/20/19	10.11	4.62
	14.73	10/17/19	10.28	4.45
MW-3	15.96	09/20/19	9.43	6.53
	15.96	10/17/19	9.86	6.10

Notes:
amsl = above mean sea level.
bgs = below ground surface.
btoc = below top of casing.

Table 4-8

Maximum Concentrations of Other VOC and SVOC Constituents Detected in Groundwater

2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street

Oakland, California

Analyte	Maximum Detected Concentration	Final Screening Levels Note 1
	(µg/L)	*(µg/L)*
VOCs		
Acetone	6.34 J	20,000
Carbon Disulfide	0.137 J	--
Chloroform	0.281 J	0.81
Di-isopropyl ether	0.202 J	--
Iodomethane	0.544 B J	--
Methyl tert-butyl ether	0.230 J	5.0
1,1,2-Trichlorotrifluoroethane	0.231 J	--
1,2,4-Trimethylbenzene	3.4	--
1,3,5-Trimethylbenzene	1.2	--
SVOCs		
Bis (2-ethylhexyl) Phthalate	0.11	4.0
Di-n-butyl Phthalate	0.11	--
Diethyl Phthalate	0.10	--

Notes:

Note 1 Final Screening Levels are based on the lowest value of applicable SFBRWQCB ESLs. See Table 5-2.

--	No published value.
µg/L	Micrograms per liter.
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board.
ESL	Environmental Screening Level.
VOCs	Volatile Organic Compounds.
SVOCs	Semi-Volatile Organic Compounds.
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.

Table 4-9
Summary of Groundwater Analytical Results - SVOCs
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Monitoring Well ID	Date	Anthracene (µg/L)	Acenaphthene (µg/L)	Benzo (a) anthracene (µg/L)	Benzo (b) fluoranthene (µg/L)	Fluoranthene (µg/L)	Fluorene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)	1-Methyl naphthalene (µg/L)	2-Methyl naphthalene (µg/L)
Final Screening Levels [Note 1]		1,800	20	0.017	0.25	800	290	0.17	1,000	120	--	10
B4	01/08/19	ND<0.011	ND<0.011	ND<0.021	ND<0.0053	ND<0.011	ND<0.011	ND<0.011	ND<0.021	ND<0.021	ND<0.011	ND<0.011
MW-1	09/20/19	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	0.0413 J	0.0174 J	ND<0.05	ND<0.25	ND<0.25
MW-2	09/20/19	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	0.0432 J	0.027 J	ND<0.05	0.0436 J	0.0341 J
MW-3	09/20/19	0.0188 J	0.0782	0.018 J	0.0066 J	0.0751	0.066	0.384	0.154	0.0425 J	0.0416 J	0.0755 J

Notes:
Samples analyzed using USEPA Method 8270C-SIM.
[Note 1] Final Screening Levels are based on the lowest value of applicable SFBRWQCB ESLs. See Table 5-2.
SFBRWQCB San Francisco Bay Regional Water Quality Control Board
ESL Environmental screening level
ND<0.50 Not detected above the laboratory reporting limit of 0.5 µg/L
µg/L micrograms per liter
J estimated value
Shaded cells exceed the final screening level

Table 4-10
Summary of Groundwater Analytical Results - Metals
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Boring ID	Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Molybdenum (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
Final Screening Levels [Note 1]		6.0	10	1,000	4.0	5.0	50	6.0	1,000	15	0.089	100	100	50	2.0	--	5,000
MW-1	09/20/19	ND<2.0	2.17	24.4	ND<2.0	ND<1.0	0.938 J	1.64 J	1.04 J B	ND<2.0	NDM<0.049	3.01 J	1.94 J	5.79	ND<2.0	3.01 J	ND<25
MW-2	09/20/19	ND<2.0	1.42 J	126	ND<2.0	ND<1.0	0.628 J	0.986 J	0.882 J B	0.256 J	NDM<0.049	11.3	3.65	ND<2.0	ND<2.0	2.84 J	ND<25
MW-3	09/20/19	ND<2.0	0.995 J	50.9	ND<2.0	ND<1.0	0.833 J	1.11 J	0.807 J B	ND<2.0	NDM<0.049	4.37 J	3.67	0.927 J	ND<2.0	2.17 J	ND<25

Notes:
Samples analyzed using USEPA Method SW6020.
[Note 1] Final Screening Levels are based on the lowest value of applicable SFBRWQCB ESLs. See Table 5-2.
SFBRWQCB San Francisco Bay Regional Water Quality Control Board
ESL Environmental screening level
ND<0.50 Not detected above the laboratory reporting limit indicated.
NDM<0.049 Particular analyte not detected above method detection limit indicated.
µg/L micrograms per liter
B The same analyte is found in the associated blank.
J Estimated value

Table 4-11
Summary of Subslab and Soil Vapor Analytical Results - TPHg and VOCs
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Sample ID	Sample Depth (feet bgs)	Date Sampled	TPH-G (µg/m³)	Benzene (µg/m³)	Toluene (µg/m³)	Ethylbenzene (µg/m³)	Total Xylenes (µg/m³)	MTBE (µg/m³)	PCE (µg/m³)	TCE (µg/m³)	cis-1,2-DCE (µg/m³)	trans-1,2-DCE (µg/m³)	Vinyl Chloride (µg/m³)	Carbon Tetrachloride (µg/m³)	Naphthalene (µg/m³)	Chloroform (µg/m³)	Other VOCs
Final Screening levels Note 1			3,300	3.2	10,000	37	3,500	360	15	16	280	2,800	0.32	16	2.8	4.1	
VP1	Subslab	04/02/19	570	ND<1.27	1.88	ND<1.71	ND<1.76	ND<1.48	1,304	ND<2.16	ND<1.60	ND<1.62	ND<1.03	ND<2.55	ND<2.17		
VP2	Subslab	04/02/19	300 J	0.431 J	1.38	ND<0.592	0.815	ND<0.511	516	ND<0.727	ND<0.553	ND<0.560	ND<0.356	ND<0.882	ND<0.751		
VP3	Subslab	04/02/19	2,400	1.37	2.51	ND<1.71	ND<1.76	ND<1.48	7,258	39.9	ND<1.60	ND<1.62	ND<1.03	ND<2.55	ND<2.17		
VP3 DUP	Subslab	04/02/19	2,500	ND<2.19	3.22	ND<2.94	ND<3.02	ND<2.54	5,426	41.7	ND<2.75	ND<2.78	ND<1.77	ND<4.38	ND<3.73		
VP4	Subslab	04/02/19	930	ND<1.27	2.23	ND<1.71	ND<1.76	1.74	2,094	23.4	ND<1.60	ND<1.62	ND<1.03	ND<2.55	ND<2.17		
VP5	Subslab	04/02/19	250 J	0.534	2.20	0.376	1.473	ND<0.296	155	1.55	ND<0.320	ND<0.324	ND<0.206	ND<0.510	ND<0.434		
VP6	Subslab	04/02/19	760	ND<1.27	2.87	ND<1.71	1.70	ND<1.48	194	2.02	ND<1.60	ND<1.62	ND<1.03	ND<2.55	ND<2.17		
SVP-1	4.5	09/17/19	541	1.61	10.7	2.98	12.49	ND<0.721	3.5	ND<0.107	ND<0.0793	ND<0.0793	ND<0.0511	0.547	ND<3.3	1.67	
SVP-2	4.5	09/17/19	430	0.859	7.95	0.633	ND<1.73	ND<0.721	0.583	ND<0.107	ND<0.0793	ND<0.0793	ND<0.0511	0.57	ND<3.3	1.83	
SVP-3	5.5	09/17/19	640	3.58	23.2	1.27	4.89	ND<0.721	1.26	ND<0.107	ND<0.0793	ND<0.0793	ND<0.0511	1.02	ND<3.3	6.90	
SVP-4	4.5	09/17/19	35,800 Note 3	16.6	14.8	2.45	11.66	9.01	0.165	2.57	ND<0.0793	ND<0.0793	ND<0.0511	0.345	ND<3.3	ND<0.0973	
	4.5	10/17/2019 Note 4	~~13,500~~ Note 3	~~ND<1.6~~	~~7.3~~	~~ND<2.2~~	~~6.8~~	~~ND<1.8~~	~~4.7~~	~~ND<2.7~~	~~ND<2.0~~	~~ND<2.0~~	~~ND<1.3~~	~~ND<3.1~~	~~ND<2.6~~	~~ND<2.4~~	
SVP-5	4.5	09/17/19	430	1.26	12.2	0.941	3.348	ND<0.721	19.1	ND<0.107	ND<0.0793	ND<0.0793	ND<0.0511	0.619	ND<3.3	7.21	
		12/12/19	ND<826	ND<0.639	4.14	1.01	4.60	ND<0.721	17.4	ND<1.07	ND<0.793	ND<0.793	ND<0.511	ND<1.26	ND<3.3	ND<0.973	
SVP-6	4.5	09/17/19	4,380	3.9	135	1.79	4.348	ND<0.721	1,050	0.97	ND<0.0793	ND<0.0793	ND<0.0511	0.926	ND<3.3	ND<0.973	
	4.5 (DUP)	09/17/19	4,750	4.44	134	1.83	4.9	ND<0.721	1,090	1.18	ND<0.0793	ND<0.0793	ND<0.0511	0.876	ND<3.3	ND<0.973	
	4.5	10/17/2019 Note 4	~~10,200~~ Note 3	~~ND<32~~	~~ND<38~~	~~ND<43~~	~~ND<43~~	~~ND<36~~	~~3,500~~	~~ND<54~~	~~ND<40~~	~~ND<40~~	~~ND<26~~	~~ND<63~~	~~ND<52~~	~~ND<49~~	
	8.5	09/17/19	27,700 Note 3	1.13	28.7	20.9	35.5	ND<14.4	17,300	8.14	ND<0.0793	ND<0.0793	ND<0.0511	ND<0.126	ND<66	ND<49	See Note 2
	8.5	10/17/2019 Note 4	~~8,790~~ Note 3	~~ND<96~~	~~ND<110~~	~~ND<130~~	~~ND<130~~	~~ND<110~~	~~15,000~~	~~ND<160~~	~~ND<120~~	~~ND<120~~	~~ND<77~~	~~ND<190~~	~~ND<160~~	~~ND<150~~	
SVP-7	4.5	09/17/19	7,600	2.66	37.7	1.06	ND<34.7	ND<14.4	4,480	1.96	ND<0.0793	ND<0.0793	ND<0.0511	0.813	ND<66	7.25	
	8.5	09/17/19	3,640	4.92	115	2.05	7.12	ND<0.721	937	0.50	ND<0.0793	ND<0.0793	ND<0.0511	0.976	ND<3.3	ND<0.0973	
SVP-8	4.5	09/17/19	355	0.831	6.74	1.94	10.02	ND<0.721	5.01	ND<0.107	ND<0.0793	ND<0.0793	ND<0.0511	0.248	ND<3.3	1.66	
	8.5	09/17/19	438	3.42	14	3.93	17.98	ND<0.721	2.32	0.374	ND<0.0793	ND<0.0793	ND<0.0511	0.3	ND<3.3	ND<0.0973	
SVP-9	4.5	09/17/19	711	3.13	11.5	1.36		ND<0.721	31.7	2.38	ND<0.0793	ND<0.0793	ND<0.0511	0.53	ND<3.3	2.25	
SVP-10	4.5	09/17/19	1,260,000 Note 3	ND<12.8	ND<15.1	ND<17.3	ND<34.7	25	ND<1.36	ND<1.07	ND<0.0793	ND<0.0793	ND<0.511	ND<1.26	ND<66	ND<0.0973	
	4.5	10/17/19	1,460,000 Note 3	ND<320	ND<370	ND<430	ND<430	ND<360	ND<670	ND<530	ND<390	ND<390	ND<250	ND<620	ND<520	ND<480	
SVP-11	4.5	09/17/19	2,240 B	1.2	6.71	ND<0.867	2.12	ND<0.721	1.47	ND<0.536	ND<0.0793	ND<0.0793	ND<0.256	ND<0.63	ND<3.3	ND<0.973	
SVP-12	5.0	12/12/19	2,920	3.16	67.1	3.4	15.18	ND<0.721	ND<1.36	ND<1.07	ND<0.793	ND<0.793	ND<0.511	ND<1.26	ND<3.3	ND<0.973	
SVP-13	5.0	12/12/19	859	2.61	76.8	1.29	5.56	ND<0.721	1.89	ND<1.07	ND<0.793	ND<0.793	ND<0.511	ND<1.26	ND<3.3	33.6	
SVP-13 Dup	5.0	12/12/19	934	2.91	88.5	1.67	6.49	ND<0.721	1.59	ND<1.07	ND<0.793	ND<0.793	ND<0.511	ND<1.26	ND<3.3	38.2	
SVP-14	4.5	12/12/19	2,580	38.3	640	144	577	1.73	ND<1.36	ND<1.07	ND<0.793	ND<0.793	ND<0.511	ND<1.26	ND<3.3	ND<0.973	
SVP-15	4.0	02/10/20	Tubing pulling water. No sample collected.														
SVP-16	4.0	02/10/20	NA	0.898	NA	4.86	NA	NA	3.22	0.135	ND<0.0793	ND<0.0793	ND<0.0511	5.660	NA	ND<0.0973	
SVP-17	3.5	02/10/20	NA	1.560	NA	4.64	NA	NA	15.40	ND<0.107	0.220	ND<0.0793	0.0979	0.346	NA	10.8	
SVP-17 - DUP			NA	1.11	NA	3.82	NA	NA	0.767	ND<0.107	ND<0.0793	ND<0.0793	ND<0.511	0.345	NA	8.08	

Notes:

Shaded values exceed the Final Screening Levels.

Hatched cells are below laboratory reporting limits. Reporting limits are above the ESLs.

Note 1 Final Screening Levels are based on the lowest value of applicable SFBRWQCB ESLs. See Table 5-3.

Note 2 Refer to Table 4-12 for maximum reported concentrations of "Other VOCs". Other VOCs were reported by the laboratory at concentrations that were either reported below ESLs or the continuents do not have ESLs associated with them and are not expected to be regulatory drives for investigation or remediation.

Note 3 TPH values do not resemble gasoline standard pattern. Reported value is the result of hydrocarbons within range of C5-C12 quantified as gasoline. Compounds include various pentanes, heptane, 2,-4dimethyl hexane, 2,-3dimethylbutane, and 3-methylheptane.

Note 4 Data is considered suspect due to the presence of helium (the sampling method leak indicator) above a calculated leak ratio of 5%

µg/m³	Micrograms per cubic meter.
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board.
ESL	Environmental screening level.
J	The reported concentrations is an estimated value.
B	The same analyte is found in the associated blank.
ND<1.27	Not detected above the indicated laboratory reporting limit.
TPH-G	Total Petroleum Hydrocarbon as Gasoline.
VOCs	Volatile organic compounds.
PCE	Tetrachloroethene.
TCE	Trichloroethene.
DCE	Dichloroethene.
MTBE	Methyl tert-butyl ether.

Table 4-12
Maximum Concentrations of Other VOC Constituents Detected in Subslab and Soil Vapor
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Analyte	Maximum Detected Concentration ($\mu g/m^3$)	Final Screening Levels ($\mu g/m^3$)
Acetone	75.3	1,000,000
Acetonitrile	2.68	--
Acrolein	0.237	--
tert-Butanol	20	--
2-Butanone (MEK)	2,100	170,000
Carbon disulfide	76.9	--
Chloromethane	0.808	3,100
Chloroethane	0.164	350,000
Cyclohexane	6.2	--
1,4-Dichlorobenzene	0.222	8.5
1,2-Dichloroethane	0.116	3.6
1,4-Dioxane	1.53	12
Ethanol	62.8	--
Ethyl Acetate	6,200	--
4-Ethyltoluene	72.1	--
Trichlorofluoromethane (Freon 11)	9.42	--
Dichlorodifluoromethane (Freon 12)	2.99	--
1,2,4-Trimethylbenzene	56.4	--
1,3,5-Trimethylbenzene	24.8	--
Heptane	14.1	--
Hexane	23	--
n-Hexane	11.2	--
Isopropylbenzene	6.1	--
4-Methyl-2-Pentanone (MIBK)	1,800	14,000
Methylene chloride	11.9	34
Isopropyl alcohol/2-Propanol	137	--
Propene	5.23	--
Styrene	0.530	31,000
Tetrahydrofuran	1,800	--
1,1,1-Trichloroethane	17.7	35,000
2,2,4-Trimethylpentane	11.5	--
Vinyl Acetate	0.437	--

Notes:

--	No published value.
VOCs	Volatile Organic Compounds.
$\mu g/m^3$	Micrograms per cubic meter.
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board.
ESL	Environmental Screening Level.

Table 4-13
Summary of Subslab and Soil Vapor Analytical Results - Fixed Gases
2420 Chestnut Street, 2432 Chestnut Street and 2423 Linden Street
Oakland, California

Sample ID	Sample Date	Depth (feet bgs)	Notes	Helium in Sample (%)	Average Helium Under Shroud (%)	Leak Ratio [1] (%)	Carbon Dioxide (%)	Methane (%)	Oxygen (%)
VP1	4/2/19	Subslab		<0.19	21.8	- -	1.1	NA	17
VP2	4/2/19	Subslab		<0.19	23.5	- -	1.4	NA	16
VP3	4/2/19	Subslab		<0.21	25.4	- -	0.90	NA	16
	4/2/19	Subslab	Duplicate	<0.20	25.4	- -	0.90	NA	16
VP4	4/2/19	Subslab		<0.20	22.1	- -	1.5	NA	17
VP5	4/2/19	Subslab		<0.20	22.6	- -	<0.20	NA	19
VP6	4/2/19	Subslab		0.21	21.5	0.98	0.68	NA	17
SVP-1	9/17/19	4.5		0.253	27.3	0.93	0.548	ND<0.4	18.6
SVP-2	9/17/19	4.5		<0.1	22.7	- -	1.43	ND<0.4	17.8
SVP-3	9/17/19	5.5		<0.1	27.9	- -	0.0872	ND<0.4	17.2
SVP-4	9/17/19	4.5		<0.1	27.6	- -	<0.5	ND<0.4	17.9
	10/17/19	4.5		2.5	14.48	17.27	NA	NA	NA
SVP-5	9/17/19	4.5		<0.1	26.2	- -	<0.5	ND<0.4	19.1
	12/12/19	4.5		0.107	26.2	0.41	ND<0.552	ND<0.4	18.7
SVP-6	9/17/19	4.5		<0.1	27.4	- -	<0.5	ND<0.4	19.2
	10/17/19	4.5		2.7	21.82	12.37	NA	NA	NA
	9/17/19	8.5		<0.1	27.3	- -	0.742	ND<0.4	17.3
	10/17/19	8.5		3.5	22.82	15.34	NA	NA	NA
SVP-7	9/17/19	4.5		<0.1	22.8	- -	<0.5	ND<0.4	18.6
	9/17/19	8.5		0.163	26.9	0.61	<0.5	ND<0.4	18.4
SVP-8	9/17/19	4.5		<0.1	21.7	- -	<0.5	ND<0.4	18.3
	9/17/19	8.5		<0.1	23.3	- -	0.554	ND<0.4	18.5
SVP-9	9/17/19	4.5		<0.1	24.8	- -	1.36	ND<0.4	16.8
SVP-10	9/17/19	4.5		<0.1	27.6	- -	0.914	ND<0.4	17.4
	10/17/19	4.5		0.044	18.6	0.24	NA	NA	NA
SVP-11	9/17/19	4.5		<0.1	25.3	- -	0.64	ND<0.4	17.2
SVP-12	12/12/19	5		0.55	24.9	2.21	ND<0.5	ND<0.4	15.7
SVP-13	12/12/19	5		ND<0.1	23.0	- -	0.776	ND<0.4	16.1
SVP-13Dup	12/12/19	5	Duplicate	ND<0.1	24.7	- -	1.37	ND<0.4	15.1
SVP-14	12/12/19	5		0.538	14.5	3.72	1.92	ND<0.4	13.3
SVP-15	2/10/20	4		Tubing pulling water. No sample collected.					
SVP-16	2/10/20	4		ND<0.1	20.8	- -	ND<0.5	ND<0.4	17.6
SVP-17	2/10/20	3.5		ND<0.1	18.6	- -	ND<0.5	ND<0.4	17.3
SVP-17Dup	2/10/20	3.5	Duplicate	ND<0.1	18.6	- -	ND<0.5	ND<0.4	18.5

Notes:
Fixed gases analyzed by ASTM Method D-1946.
[1] Estimated leak ratio (%) = [Concentration of Helium in Sample (%)] / [Concentration of Helium in Shroud (%)] X100.

bgs	below ground surface.
NA	Not analyzed.
ppmv	parts per million by volume.
%	Percent.
<0.11	Not detected at or above the indicated laboratory reporting limit of 0.11 %.
--	Not calculated, helium not detected in sample.

Appendix I

ACDEH, Fact Sheet

September 2019

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
COLLEEN CHAWLA, Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
ENVIRONMENTAL PROTECTION
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502
(510) 567-6700
FAX (510) 337-9335

September 18, 2019

FACT SHEET ON ENVIRONMENTAL CORRECTIVE ACTIONS

Dalzell Corporation Property
2420 & 2432 Chestnut Street and 2423 Linden Street, Oakland, California
Site Cleanup Program Case No. RO0003369
Geotracker Global ID T10000013059

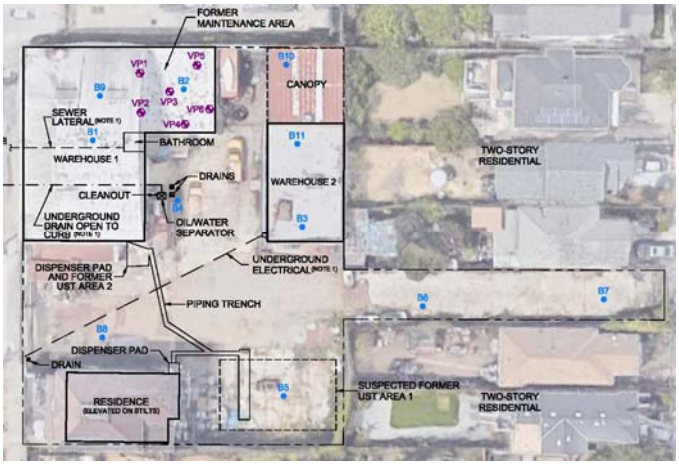
Summary - This fact sheet has been prepared to inform community members and other interested stakeholders of the status of environmental investigations and proposed corrective actions at the Dalzell Corporation Property project located at 2420 & 2432 Chestnut Street and 2423 Linden Street in Oakland, California (the Site). This fact sheet contains information concerning Site background, Site investigations, proposed corrective action plans to be implemented prior to the proposed residential redevelopment activities, and contact information.

Google Map Imagery 2018

Site Background – The Site is defined by three parcels - Assessor's Parcel Number 5-435-18-1 located at 2432 Chestnut Street, APN 5-436-17 located at 2420 Chestnut Street, and APN 5-436-5 located at 2423 Liden Street. The Site is located in a mixed residential and industrial area of the McClymonds neighborhood of Oakland. The Site consists of three adjacent rectangular parcels with an elevated residential dwelling, two vacant warehouse structures, a canopy area, and paved/asphalt areas. Historical operations included steel fabrication, acoustical silencers fabrication, and production of mechanical plumbing devices, between 1974 and 2017. Prior to 1974, historic operations at the Site included residential dwellings and various commercial tenants including a cabinet shop, plaster storage, irrigation supply company and an elevator company. Underground storage tanks (USTs) and fueling dispensing infrastructure where used at the Site during historic operations and were reportedly removed in the 1980's.

Proposed redevelopment plans include site demolition, and construction of a 3-story slab-on-grade building with twelve residential units and surface parking.

Site Investigation – Subsurface investigation activities have been conducted at the Site since January 2019. Total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), semi-VOCs (SVOCs) and metals have been reported in samples collected from soil, soil gas, sub-slab vapor, and grab groundwater at the Site. Data collected during subsurface investigations at the Site indicated petroleum and non-petroleum related constituents of concern (COC) including but not limited to soil impacts from gasoline range total petroleum hydrocarbons (TPH-g), ethylbenzene, and naphthalene



Site Plan with Historical Subsurface Investigation; RMD 2019

were detected in the area of the former UST. Semi-VOCs including phenol and metals, including barium and cobalt, have also been detected in soil. TPH-g has been detected in sub-slab vapor in all three parcels. Petroleum related COCs in groundwater include TPH-g, diesel and motor range TPH (TPH-d & TPH-mo), and benzene in the vicinity of the former USTs. Non-petroleum related COCs including chlorinated VOCs tetrachloroethene (PCE) and trichloroethene (TCE) have been detected in sub-slab vapor, soil gas, and groundwater on all three parcels.

Proposed Corrective Action Activities – Dalzell Corporation (Dalzell), the Property Owner and primary party for the Site Cleanup Program case is working with Alameda County Department of Environmental Health (ACDEH) to implement corrective actions at the Site prior to redevelopment activities. Proposed corrective actions

and Site development activities are presented in the *Corrective Action Plan* (CAP) dated August 5, 2019 prepared by RMD Environmental Solutions (RMD) on behalf of Dalzell. The proposed corrective actions have been designed to address petroleum-related and non-petroleum VOCs in the soil and non- petroleum VOCs in groundwater and mitigate potential vapor intrusion risks to existing and future Site occupants.

Proposed corrective actions presented in the Corrective Action Plan include the following:

- Demolition of all existing structures prior to redevelopment,
- Remedial excavation of impacted soil based on additional subsurface investigation results,
- Grading and soil excavation for subsurface utilities,
- Installation of trench dams and/or plugs along subsurface utility corridors to further control vapor migration along preferential pathways (if warranted),
- Installation of a vapor mitigation system underneath the building to control potential vapor migration to indoor air.

Next Steps - The public is invited to review and comment on the corrective actions proposed in the CAP. The CAP can be viewed over the internet at the State Water Resources Control Board Geotracker Website at http://geotracker.swrcb.ca.gov. Please send written comments regarding the proposed corrective actions to **Drew York** at ACDEH or **Kirsten Duey** at RMD at either of the addresses listed below. All written comments received by Friday, October 18, 2019 will be forwarded to the Dalzell and RMD and will be considered and responded to prior to implementation of the proposed cleanup

***For Additional information, please contact*:**

Drew York
ACDEH Case Manager
1131 Harbor Bay Parkway
Alameda, CA 94502
510-639-1276
andrew.york@acgov.org

Kirsten Duey
RMD Environmental Solution
609 Gregory Lane, Suite 200
Pleasant Hill, CA 94523
925-683-8177
kduey@rmdes.net

Appendix J

ACDEH, Conditional Approval of the Corrective Action Plan and Corrective Action Design and Implementation Plan

April 17, 2020

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
COLLEEN CHAWLA, Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
LOCAL OVERSIGHT PROGRAM (LOP)
FOR HAZARDOUS MATERIALS RELEASES
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502
(510) 567-6777
FAX (510) 337-9135

April 17, 2020

Bruce Hammon (*Sent via E-mail to: dalzellblh@aol.com*)
Dalzell Corporation
2138 Stoney Valley Road
Alamo, CA 94507

Subject: Conditional Approval of the *Corrective Action Plan* and *Corrective Action Design and Implementation Plan* for Site Cleanup Program Case No. RO0003369 and GeoTracker Global ID T10000013059, Dalzell Corporation Property Development located at 2432 Chestnut Street, Oakland, CA 94607, Assessor's Parcel Numbers: 5-435-18-1, 5-436-5, and 5-436-17

Dear Mr. Hammon:

Alameda County Department of Environmental Health (ACDEH) has reviewed the case file for the subject site (the "Site") in conjunction with the following documents prepared by RMD Environmental Solutions, Inc. (RMD) on behalf of Dalzell Corporation (Dalzell) and Riaz Capital, Inc. (Riaz):

- *Corrective Action Plan* (the "*CAP"*), dated August 5, 2019;
- *Data Gap Investigation Report and Addendum to Corrective Action Plan* (the "*Addendum*"), dated March 26, 2020;
- *Corrective Action Design and Implementation Plan* (the "*CAIP*"), dated March 26, 2020; and
- *Preliminary Redevelopment Plans for 2432 Chestnut Street*, as depicted in the plans dated July 12, 2019 prepared by Levy Design Partners Inc included in *Appendix A* of the *CAP*, and the Schematic Landscape Plan and Planting Plan presented on Sheet L1.1 and L2.1, prepared by CFLA, dated October 28, 2019 included in *Appendix A CAIP* (collectively referred to as the "*Preliminary Redevelopment Plans*").

These documents present the results of investigation activities to evaluate on and off-Site impacts from historic land use at the Site and proposed corrective actions to be implemented in conjunction with demolition of the existing structures and the proposed redevelopment of the Site with residential housing.

PROPOSED CORRECTIVE ACTIONS AND SITE REDEVELOPMENT

ACDEH understands that Dalzell is in contract with a Riaz who intends to purchase the Site consisting of three parcels identified by Alameda County Assessor Parcel Number's (APNs) 5-435-18-1, 5-436-17, and 5-436-5, upon ACDEH approval of the *CAP* and the *CAIP*. ACDEH further understands that Riaz will then proceed with obtaining the necessary approvals from the City of Oakland Planning and Building Department for the proposed Site redevelopment project presented in *Preliminary Redevelopment Plans* and implement the corrective actions presented in the *CAIP* during Site redevelopment activities. The proposed redevelopment consists of twelve slab-on-grade 3-story residential units with shared open space with no anticipated sub-grade parking, parking lifts, or elevators.

Proposed corrective actions presented in the *CAP* and further detailed in the *CAIP* include the following:

1. Excavation of soil in five on-Site areas where elevated concentrations of volatile organic compounds (VOCs) have been detected in soil, soil vapor or groundwater and off-Site disposal at a permitted disposal facility.

2. Excavation of lead impacted soil in proposed utility trenches and landscaped areas, and off-Site disposal at a permitted disposal facility or consolidation and capping on-Site beneath proposed foundations and hardscape areas.

3. Removal of subsurface infrastructure in suspected source areas including an oil and water separator and associated piping, and a portion of the sewer lateral beneath the on-Site warehouse.

4. Removal of a limited volume of groundwater in select excavation pits and discharge to the sanitary sewer or off-Site disposal at a permitted facility.

5. Installation of vapor mitigation engineering controls to control potential vapor intrusion to indoor air of the proposed residential structures and migration along new utility corridors.

6. Collection of an additional round of groundwater samples from the on-Site monitoring wells in the Spring of 2020 to evaluate whether implementation of the Monitored Natural Attenuation (MNA) Program proposed in the *CAP* will be required to monitor the effectiveness of natural biological, chemical, and physical processes to reduce VOCs in soil vapor and groundwater over time after corrective actions are completed.

ACDEH CAP AND CAIP CONDITIONAL APPROVAL

With the provision that the information provided to this agency is accurate and representative of currently known Site conditions, and that the redevelopment project approved by the City of Oakland Planning and Building Department is consistent with the *Preliminary Redevelopment Plans*, ACDEH concurs that implementation of the proposed corrective actions presented in the *CAIP* will minimize risk to on- and off-Site receptors from exposure to residual subsurface contamination at the Site. Therefore, ACDEH approves of the implementation of the proposed corrective actions and redevelopment of the Site presented in the *CAIP*, provided the conditions of approval listed below are met.

CONDITIONS OF APPROVAL

ACDEH's conditions of approval are provided in ***Attachment 1 – List of Deliverables & Compliance Dates*** and ***Attachment 2 – Technical Comments and Deliverable Requirements.*** The requisite deliverables must be:

(a) Submitted to ACDEH by the compliance dates listed in ***Attachment 1*** and approved by ACDEH prior to the start of each of the associated phases of corrective action implementation and site redevelopment activities.

(b) Prepared in accordance with the requirements provided in ***Attachment 2***

(c) Uploaded to the Case file on the State Water Resources Control Board's GeoTracker database in accordance with requirements listed in *Responsible Party(ies) Legal Requirement & Obligations Instructions* included as ***Attachment 3***.

CLOSING

Thank you for your cooperation. ACDEH looks forward to working with Riaz to implement the corrective actions in conjunction with Site redevelopment activities and advance the case toward closure. If you have any questions, please call me at (510) 639-1276 or send me an email message at andrew.york@acgov.org

Sincerely,

Dilan Roe

Drew J. York
Senior Hazardous Materials Specialist

Dilan Roe, PE, C73703
Chief - Land Water Division

Encl.: Attachment 1 – List of Deliverables & Compliance Dates
Attachment 2 – Technical Comments and Deliverable Requirements
Attachment 3 – Responsible Party (ies) Legal Requirement/Obligations Instructions
Attachment 4 – Electronic File Naming Conventions

cc: Seth Lang, Riaz Capital, Inc (*Sent via E-mail to: slang@riazinc.com*)
Claire Wang, Riaz Capital, Inc (*Sent via E-mail to: cwang@riazinc.com)*
Kirsten Duey, RDM Environmental Solution (*Sent via E-mail to: kduey@rmdes.net)*
Paul King, P&D Environmental, Inc. (*Sent via E-mail to: pdking0000@aol.com; paul.king@pdenviro.com)*
Tracy Craig, Craig Communications (*Sent via E-mail to: tracy@craig-communications.com)*
Alison Torbitt, Nixon Peabody (*Sent via E-mail to: atorbitt@nixonpeabody.com)*
Tim Lowe, City of Oakland Building Department (*Sent via E-mail to TLow@oaklandnet.com)*
Maurice Hackett, City of Oakland Planning Department (*Sent via E-mail to mhackett@oaklandca.gov*)
Dilan Roe, ACDEH, Chief Land and Water Division (*Sent via E-mail to: dilan.roe@acgov.org*)
Paresh Khatri, ACDEH (*Sent via E-mail to: paresh.khatri@acgov.org*)
Drew York, ACDEH (*Sent via E-mail to: andrew.york@acgov.org*)
Electronic File, GeoTracker

Alameda County Department of Environmental Health Local Oversight Program

Case No.:	**RO0003369**
Global ID:	**T10000013509**
Case Name:	**Dalzell Corp Property Development**
Case Address:	**2432 Chestnut Street, Oakland, CA 94621**
Directive Letter Issue Date:	**April 17, 2020**

Subject: Attachment 1 - List of Deliverables & Compliance Dates

PURPOSE

This document identifies deliverables requested by Alameda County Department of Environmental Health (ACDEH) for the above referenced Site Cleanup Program (SCP) case and provides compliance dates for submittal of these deliverables. These deliverables are being requested pursuant to ACDEH's conditions of approval for implementation of proposed corrective actions and site redevelopment presented in the following submittals prepared by RMD Environmental Solutions, Inc. (RMD) on behalf of Dalzell Corporation (Dalzell) and Riaz Capital, Inc. (Riaz):

1) *Corrective Action Plan* (the "*CAP*"), dated August 5, 2019;

2) *Data Gap Investigation Report and Addendum to Corrective Action Plan* (the "*Addendum*"), dated March 26, 2020;

3) *Corrective Action Design and Implementation Plan* (the "*CAIP*"), dated March 26, 2020; and

4) *Preliminary Redevelopment Plans for 2432 Chestnut Street*, as depicted in the plans dated July 12, 2019 prepared by Levy Design Partners Inc included in *Appendix A* of the *CAP*, and the Schematic Landscape Plan and Planting Plan presented on Sheet L1.1 and L2.1, prepared by CFLA, dated October 28, 2019 included in *Appendix A CAIP* (collectively referred to as the "*Preliminary Redevelopment Plans*").

ACDEH requests that you prepare the following deliverables in accordance with the requirements provided in ***Attachment 2 – Technical Comments & Deliverable Requirements***, and submit the deliverables to the State Water Resources Control Board's GeoTracker website in compliance with the requirements identified in ACDEH's *Responsible Party(ies) Legal Requirement/Obligations Instructions* and *File Naming Conventions* which are included as ***Attachments 3*** **and 4**, respectively. ACDEH also requests email notification verifying upload of the requested deliverables to the Case file on GeoTracker be provided to the primary caseworker, Drew York (andrew.york@acgov.org).

LIST OF DELIVERABLES AND COMPLIANCE DATES

Subsequent to the completion of the pending property transaction with Riaz Capital:

1. **VOLUNTARY REMEDIAL ACTION AGREEMENT WITH NEW PROPERTY OWNER**

   a. **Deliverable:** Executed Voluntary Remedial Action Agreement
   Submittal Compliance Date: Ten (10) days after execution of property transaction
   File Name: RO3369_VRAA_XXXX-XX-XX

   b. **Deliverable:** Property Title
   Submittal Compliance Date: Ten (10) days after execution of property transaction
   File Name: RO3369_TITLE_XXXX-XX-XX

2. **PROJECT SCHEDULE**

   a. **Deliverable:** Baseline Project Schedule
   Submittal Compliance Date: Ten (10) days after execution of property transaction
   File Name: RO3369_PROJ_SCHD_2020-05-15

3. **GROUNDWATER & SOIL VAPOR MONITORING AND REPORTING**

   a. **Deliverable**: 2nd Quarter 2020 Groundwater & Soil Vapor Monitoring Report
   Submittal Compliance Date: Tuesday, June 30, 2020
   File Name: RO3369_GW_SV_MON_R_2020-06-30

   b. **Deliverable:** 3rd Quarter 2020 Groundwater & Soil Vapor Monitoring Report
   Submittal Compliance Date: Friday, October 16, 2020
   File Name: RO3369_GW_SV_MON_R_2020-10-16

   c. **Deliverable**: Groundwater Monitoring Well & Soil Vapor Probe Installation Work Plan (*if warranted*)
   Submittal Compliance Date: Friday October 16, 2020
   File Name: RO3369_WELL_SVP_INSTALL_WP_2020-10-16

   d. **Deliverable:** Groundwater & Soil Vapor Monitoring Reports (if warranted)
   Submittal Compliance Date: Sixty (60) days after each sampling event
   File Name: RO3369_GW_SV_MON_R_XXX-XX-XX

Recurring requirements throughout the implementation of corrective actions at the Site under the oversight of ACDEH:

4. **SCHEDULES AND STATUS REPORTS**

   a. **Deliverable:** Updated Project Schedules
   Submittal Compliance Date: As needed and at least once per month on the 1st Monday of each month
   File Name: RO3369_PROJ_SCHD_XXXX-XX-XX

   b. **Deliverable:** Weekly Status Reports
   Submittal Compliance Date: First report is required to be submitted the first Monday after commencement of foundation/hardscape removal or earthwork activities and each Monday thereafter until installation of final groundcover at the Site is completed.
   File Name: RO3369_STATUS_R_XXXX-XX-XX

5. **PUBLIC PARTICIPATION PROGRAM**

   a. **Deliverable:** Public Participation Plan
   Submittal Compliance Date: Sixty days (60) prior to the start of foundation and hardscape demolition activities at the Site**.**
   File Name: RO3369_PP_PLAN_XXXX-XX-XX

b. **Deliverable:** Fact Sheets
Submittal Compliance Date: Forty-five (45) days prior to the implementation of a new phase of corrective action activities at the Site**.**
File Name: RO3369_PP_FACT_SHT_XXXX-XX-XX

c. **Deliverable:** Community Meeting Presentation(s)
Submittal Compliance Date: Two (2) weeks prior to the meetings
File Name: RO3369_PP_MTG_XXXX-XX-XX

Prior to the start of all site demolition and earthwork activities including grading, remedial excavation, and construction dewatering:

6. **ONSITE GROUNDWATER MONITORING WELL & SOIL VAPOR PROBE DESTRUCTION**

a. **Deliverable**: On-Site Groundwater Monitoring Well & Soil Vapor Probe Decommissioning Work Plan
Submittal Compliance Date: Sixty (60) days prior to well and probe decommissioning
File Name: RO3369_WELL_SVP_DCM_WP_ XXXX-XX-XX

Deliverable: On-Site Groundwater Monitoring Well & Soil Vapor Probe Decommissioning Report
Submittal Compliance Date: Thirty (30) days after decommissioning of wells and probes
File Name: RO3369_WELL_SVP_DCM_R_XXXX-XX-XX

7. **ENVIRONMENTAL DOCUMENTS**

a. **Deliverable:** Shallow Soil Characterization Work Plan
Submittal Compliance Date: Four (4) months prior to start of foundation and hardscape demolition
File Name: RO3369_SWI_WP_XXXX-XX-XX

b. **Deliverable:** Revised CAIP
Submittal Compliance Date: Sixty (60) days prior to start of foundation and hardscape demolition
File Name: RO3369_REV_CAIP_XXXX-XX-XX

c. **Deliverable:** Updated Environmental Soil and Groundwater Management Plan (Env SGMP)
Submittal Compliance Date: Thirty (30) days prior to the start of foundation and hardscape demolition
File Name: RO3369_ENV_SGMP_ XXXX-XX-XX

8. **DEVELOPER & CONTRACTOR DOCUMENTS**

a. **Deliverable:** Soil Excavation and Construction Sequencing Plan
Submittal Compliance Date: Sixty (60) days prior to start of foundation and hardscape demolition
File Name: RO3369_CONSTRC_SEQ_XXXX-XX-XX

b. **Deliverable:** Lead, Asbestos & PCB Abatement Report
Submittal Compliance Date: Thirty (30) days prior to the start of foundation and hardscape demolition
File Name: RO3369_LEAD_ABS_R_XXXX-XX-XX

c. **Deliverable:** Signed ENV SGMP Certification Form *(ACDEH approval not required)*
Submittal Compliance Date: Ten (10) days prior to the start of foundation and hardscape demolition
File Name: RO3369 _ENV_SGMP_CERT_XXXX-XX-XX

9. **PERMITS, PLANS, AND APPROVALS FROM OTHER AGENCIES *(ACDEH APPROVAL NOT REQUIRED)***

a. **Local Planning Department Entitlement Approvals**

i. **Deliverable:** California Environmental Quality Act (CEQA) Compliance Documents
Submittal Compliance Date: Thirty (30) days after City Adoption
File Name: RO3369_DEV_CEQA_XXXX-XX-XX

ii. **Deliverable:** Redevelopment Project Approval
Submittal Compliance Date: Thirty (30) days after Project Approval
File Name: RO3369_DEV_ENTITLE_XXXX-XX-XX

b. **Local Building Department Construction & Demolition Permits**

i. **Deliverable:** Building Permit Plan Set
Submittal Compliance Date: Sixty (60) days prior to the start of foundation and hardscape demolition
File Name: RO3369_BLD_PERMIT_XXXX-XX-XX

ii. **Deliverable:** Demolition & Grading Permits
Submittal Compliance Date: Thirty (30) days prior to the start of foundation and hardscape demolition
File Name: RO3369_DEMO_GRADING_PERMIT_XXXX-XX-XX

iii. **Deliverable:** Construction Management Plan
Submittal Compliance Date: Thirty (30) days prior to the start of foundation and hardscape demolition
File Name: RO3369_CMP_XXXX-XX-XX

c. **Groundwater Discharge to Sanitary Sewer or Storm Drain Permits**

i. **Deliverable**: East Bay Municipal Utility District (EBMUD) Special Discharge Permit (if discharge to sanitary sewer)
Submittal Compliance Date: Thirty (30) days prior to the start of discharge
File Name: RO3369_EBMUD_DISCH_PERMIT_XXXX-XX-XX

ii. **Deliverable:** Regional Water Quality Control Board's National Pollutant Discharge Elimination System (NPDES) Permit (if discharge to storm drain)
Submittal Compliance Date: Thirty (30) days prior to the start of discharge
File Name: RO3369_NPDES_PERMIT_XXXX-XX-XX

iii. **Deliverable:** City of Oakland Permits (Temporary Dicharge to Sanitary Sewer System, Sewer Connection, Obstruction)
Submittal Compliance Date: Thirty (30) days prior to the start of discharge
File Name: RO3369_OAKL_SS_PERMITS_XXXX-XX-XX

Prior to backfilling remedial excavations and fill import activities:

10. **REMEDIAL ACTION COMPLETION & FILL IMPORT DOCUMENTATION**

a. **Deliverable:** Remedial Completion Documentation Submittal Package
Submittal Compliance Date: Five (5) days prior to the start of backfilling
File Name: RO3369_REM_SOIL_EXC_CONF_XXXX-XX-XX

b. **Deliverable:** Application for Determination of Fill Material Suitability
Submittal Compliance Date: Thirty (30) days prior to the start of backfilling
File Name: RO3369_SOIL_IMPORT_XXXX-XX-XX

Prior to the start of foundation construction and utility installation:

11. **VAPOR MITIGATION ENGINEERING CONTROLS (VMECS)**

a. **Deliverable:** VMEC Design Documents
Submittal Compliance Date: Ninety (90) days prior to the start of grading
File Name: RO3369_VMEC_DESIGN_XXXX-XX-XX

b. **Deliverable: Approved Building Permit Plans with VMEC Incorporated**
Submittal Compliance Date: Thirty (30) days prior to the start of foundation construction
File Name: RO3369_BLDG_PERMIT_VMEC_XXXX-XX-XX

c. **Deliverable:** VMEC Construction Quality Assurance Plan
Submittal Compliance Date: Thirty (30) days prior to the start of foundation construction
File Name: RO3369_VMEC_CQA_XXX-XX-XX

d. **Deliverable:** VMEC Construction Quality Assurance Plan Status Reports
Submittal Compliance Date: At least once per month on the 1st Monday of each month throughout the installation of the VMECs
File Name: RO3369_VMEC_CQA_STATUS_R_XXX-XX-XX

Prior to building occupancy:

12. **CORRECTIVE ACTION COMPLETION REPORTS**

a. **Deliverable:** Remedial Action Completion Report
Submittal Compliance Date: Sixty (60) days after completion of remedial actions
File Name: RO3369_RACR_XXXX-XX-XX

b. **Deliverable:** Soil Import Summary Report
Submittal Compliance Date: Sixty (60) days after completion of soil import
File Name: RO3369_RACR_XXXX-XX-XX

c. **Deliverable:** VMEC Record Report of Construction
Submittal Compliance Date: Thirty (60) days after completion of VMECs and thirty (30) days prior to building occupancy
File Name: RO3369_VMEC_RROC_XXXX-XX-XX

d. **Deliverable:** VMS Post Construction Performance Monitoring Report(s)
Submittal Compliance Date: Thirty (30) days prior to building occupancy
File Name: RO3369_VMS_PERF_MON_R_XXXX-XX-XX

13. **OPERATION, MAINTENANCE, MONITORING AND REPORTING (OMM&R) PLANS**

a. **Deliverable:** VMEC OMM&R Plan
Submittal Compliance Date: Thirty (30) days prior to building occupancy
File Name: RO3369_OM_PLAN-VMEC_XXXX-XX-XX

b. **Deliverable:** Trench Dam & Plug OMM&R Plan
Submittal Compliance Date: Thirty (30) days prior to building occupancy
File Name: RO3369_OM_PLAN_TRENCHDAM_XXXX-XX-XX

14. **INSTITUTIONAL CONTROLS**

a. **Deliverable:** Environmental Risk Management Plan
Submittal Compliance Date: Sixty (60) days prior to building occupancy
File Name: RO3369_RMP_XXXX-XX-XX

b. **Deliverable:** Environmental Land Use Covenant
Submittal Compliance Date: Sixty (60) days prior to building occupancy
File Name: RO3369_LUC_XXXX-XX-XX

c. **Deliverable:** Financial Assurance Instrument
Submittal Compliance Date: Sixty (60) days prior to building occupancy
File Name: RO3369_FIN_ASSUR_XXXX-XX-XX

Prior to Case Closure:

15. **MONITORING WELL AND PROBE DESTRUCTION**

a. **Deliverable:** Groundwater Monitoring Well and Soil Vapor Probe Decommissioning Work Plan
Submittal Compliance Date: To be determined by Project Schedule
File Name: RO3369_WP_XXXX-XX-XX

b. **Deliverable:** Groundwater Monitoring Well and Soil Vapor Probe Decommissioning Report
Submittal Compliance Date: Sixty (60) days after decommissioning of the wells and probes
File Name: RO3369_SWI_XXXX-XX-XX

16. **INVESTIGATION DERIVED WASTE (IDW) REPORT**

a. **Deliverable:** IDW Report
Submittal Compliance Date: Sixty (60) days after IDW removal
File Name: RO3369_IDW_R_XXXX-XX-XX

Throughout the Post-Closure Period:

17. **COMPLIANCE REPORTS**

a. **Deliverable:** Routine Operations, Maintenance, and Monitoring Report / Site Inspection Reports
Submittal Compliance Date: To be determined in accordance with schedule in Environmental Risk Management Plan
File Name: RO3369_R_OMM_R_XXXX-XX-XX

b. **Deliverable:** Non-Routine Operations, Maintenance, and Monitoring Report / Site Inspection Reports
Submittal Compliance Date: To be determined in accordance with schedule in Environmental Risk Management Plan
File Name: RO3369_NR_OMM_R_XXXX-XX-XX

c. **Deliverable:** 5-Year Environmental Review Summary Report
Submittal Compliance Date: To be determined in accordance with schedule in Environmental Risk Management Plan
File Name: RO3369_5YR_RVW_R_XXXX-XX-XX

d. **Deliverable:** Work Plans for Tenant Improvements
Submittal Compliance Date: Sixty (60) days prior to proposed tenant improvement plans Risk Management Plan
File Name: RO3369_TEN_IMPROV_WP_XXXX-XX-XX

e. **Deliverable:** Tenant Improvement Completion Report
Submittal Compliance Date: Sixty (60) days after tenant improvement completion and thirty (30) days prior to tenant occupancy
File Name: RO3369_TENT_IMPROV_COMP_R_XXXX-XX-XX

Alameda County Department of Environmental Health Local Oversight Program

Case No.:	**RO0003369**
Global ID:	**T10000013509**
Case Name:	**Dalzell Corp Property Development**
Case Address:	**2432 Chestnut Street, Oakland, CA 94621**
Directive Letter Issue Date:	**April 17, 2020**

Subject: Attachment 2 – Technical Comments & Deliverable Requirements

PURPOSE

The purpose of this document is to identify requisite elements for each of the deliverables requested by Alameda County Department of Environmental Health (ACDEH) as conditions of approval for implementation of proposed corrective actions and site redevelopment for the above referenced Site Cleanup Program (SCP) Case. The requisite elements incorporate ACDEH's technical comments on the following submittals prepared by RMD Environmental Solutions, Inc. (RMD) on behalf of Dalzell Corporation (Dalzell) and Riaz Capital, Inc. (Riaz):

1) *Corrective Action Plan* (the "*CAP"*), dated August 5, 2019;

2) *Data Gap Investigation Report and Addendum to Corrective Action Plan* (the "*Addendum*"), dated March 26, 2020;

3) *Corrective Action Design and Implementation Plan* (the "*CAIP*"), dated March 26, 2020; and

4) *Preliminary Redevelopment Plans for 2432 Chestnut Street*, as depicted in the plans dated July 12, 2019 prepared by Levy Design Partners Inc included in *Appendix A* of the *CAP*, and the Schematic Landscape Plan and Planting Plan presented on Sheet L1.1 and L2.1, prepared by CFLA, dated October 28, 2019 included in *Appendix A CAIP* (collectively referred to as the "*Preliminary Redevelopment Plans*").

ACDEH requests that you prepare the deliverables listed in ***Attachment 1 - List of Deliverables & Compliance Dates*** in accordance with the corresponding Technical Comments and Deliverable Requirements provided below and submit the deliverables to the State Water Resources Control Board's GeoTracker website in compliance with the requirements identified in ***Attachment 1***.

TECHNICAL COMMENTS AND DELIVERABLE REQUIREMENTS

Subsequent to the completion of the pending property transaction with Riaz Capital:

1. **VOLUNTARY REMEDIAL ACTION AGREEMENT WITH NEW PROPERTY OWNER**

   a. **Executed Voluntary Remedial Action Agreement (*VRAA*)** – ACDEH understands that Dalzell is in contract with a Riaz who intends to purchase the Site upon conditional approval of the *CAP* and *CAIP*. The Site consists of three parcels identified by Alameda County Assessor Parcel Number's (APNs) 5-435-18-1, 5-436-17, and 5-436-5. ACDEH further understands that Riaz Capital will then proceed with obtaining the necessary approvals from the City of Oakland Planning and Building Department for the proposed Site redevelopment project presented in as conceptual drawings in *Appendix A* of the both the *CAP* and *CAIP*. Implementation of corrective actions presented in the

CAP and further detailed in the *CAIP* will be conducted during Site redevelopment activities. Therefore, ACDEH will require execution of a new *VRAA* between Riaz Capital and ACDEH to provide continuing regulatory oversight for the implementation of corrective actions during redevelopment activities under Site Cleanup Program (SCP) Case No. RO00003369.

b. **Property Title** – ACDEH requires that documentation of the transfer of property title to Riaz Capital be provided to support execution of the *VRAA*. If the property title is to be held by a subsidiary, ACDEH requires that documentation of Riaz's ownership or control over the subsidiary be provided. Upon transfer of the property, ACDEH requests the new associated Alameda County APN's (if applicable) be provided to adequately execute the updated *VRAA.*

2. **PROJECT SCHEDULE**

a. **Baseline Project Schedule** – ACDEH requires submittal of a *Baseline Project Schedule* which outlines the path forward at the Site. The purpose of the *Baseline Project Schedule* is to: (1) identify milestones and important target dates, such as the start and end of phases of construction, and the target occupancy date; and (2) facilitate the allocation of resources to allow for reasonable and timely preparation and review of documents. The *Baseline Project Schedule* must include the permitting and phases of construction, and entries for deliverable submittals in accordance with the requisite compliance dates provided in ***Attachment 1***. The *Baseline Project Schedule* must include a minimum of 30 days for ACDEH review and approval of deliverables.

3. **GROUNDWATER & SOIL VAPOR MONITORING AND REPORTING**

First encountered groundwater beneath and in the vicinity of the Site has been observed at depths ranging from approximately 7.5 feet below ground surface (bgs) to 22.5 feet bgs in boring logs and groundwater monitoring wells installed during site characterization activities conducted at the Site and at nearby cleanup cases including two cases associated with the Vincent Academy Charter Elementary School located at 2499 and 2501 Chestnut Street approximately 70 feet west of the Site [closed SCP Case No. 01S0653 - Vincent Academy (formerly Liden Lofts) and open Envirostor Case ID 60002958 – Vincent Academy Charter Elementary School], and two cases associated with the McClymonds High School located at 2607 Myrtle Street approximately 650 feet northeast of the Site (Leaking Underground Storage Tank (LUST) Cleanup Case No. RO0000292 – City of Oakland McClymond High School and Envirostor Case ID 60002956 – McClymonds High School].

Groundwater monitoring reports for closed SCP Case No. 01S0653 report groundwater depths between 7.6 feet to 8.8 feet bgs in groundwater monitoring wells installed at the Vincent Academy and a variable flow direction ranging from northeast to southwest. A recent site investigation report for Envirostor Case ID 60002956 reports an inferred groundwater flow direction based on contaminant concentrations in grab groundwater samples collected beneath the McClymonds School site in March 2020.

The *Addendum* presents results of groundwater data collected from groundwater monitoring wells installed on the Site after the preparation of the *CAP* and sampled in September 2019. Based on the groundwater data RMD concludes the following:

- The groundwater flow direction is to the southwest and not northwest as originally presented in the *CAP*. RMD states that the change in the presumed groundwater flow direction

presented in the *Addendum* is based on: 1) the groundwater elevations measured beneath Site (as shown on Figure 4-3 of the *Addendum*); 2) the groundwater flow direction reported beneath McClymond's High School from grab groundwater samples collected in March 2020 (as presented in the Subsurface Investigation Report prepared by Intertek PSI, dated February 14, 2020), and 3) the area topography indicating a gentle downward slope toward the southwest (as presented in Appendix F of the *Addendum*). RMD recommends collection of an additional round of groundwater samples from the on-Site groundwater monitoring wells in Quarter 2, 2020 to evaluate data during the wet season (when the groundwater surface elevation is likely to be higher compared to when the monitoring well samples were previously collected in September 2019) to further characterize groundwater at the Site, confirm the presumed southwest groundwater flow direction, and determine the need for additional groundwater monitoring. RMD proposes that if concentrations are consistent with the historical data collected from these locations, no further groundwater monitoring will be required.

- The concentration and distribution of TCE in groundwater indicates an upgradient source. TCE in groundwater has only been detected on the eastern half of the Site. Analytical data from soil, groundwater, and soil vapor samples collected beneath the Site, do not indicate that a significant release of TCE has occurred at the Site (Tables 4-2, 4-7, and 4-11 presented in the *Addendum*). The concentrations of TCE in the presumed upgradient groundwater flow direction from the Site are orders of magnitude higher than TCE concentrations that have been detected on the eastern portion of the Site. TCE concentrations in groundwater increase as the distance from the Site increases in the presumed upgradient groundwater flow direction (*Figure 4-4* and *Appendix F* of the *Addendum*).
- Impacts to groundwater due to historical releases of COCs at the Site are not present at levels that require active groundwater remediation or long-term, ongoing monitoring. Concentrations of COCs in groundwater above the San Francisco Bay Regional Water Quality Control Board's 2019 Environmental Screening Levels (ESLs) are localized on-Site with a small, low concentration PCE plume co-located with the elevated PCE in soil vapor. Site COCs are not present in off-Site groundwater or soil vapor downgradient from the Site at concentrations above applicable ESLs.
- Concentrations of COCs in the groundwater will be reduced with the implementation of removal of subsurface infrastructure, soil excavation, and groundwater removal activities in the source areas completed as part of the corrective actions.
- The potential for vapor intrusion risk due to the volatilization of PCE, TCE, or other VOCs at the Site can be evaluated using soil vapor data. Installation of VMECs will mitigate potential risk from vapor migration off-Site and into new Site structures.

ACDEH generally concurs with RMD's conclusions and recommendations however requires additional monitoring of the existing groundwater monitoring wells and soil vapor probes to confirm the conclusions. Therefore, the following documents must be submitted to ACDEH for review and approval:

a. **2nd Quarter 2020 Groundwater & Soil Vapor Monitoring Report** – A Report documenting the implementation of additional quarterly sampling of the groundwater monitoring wells and soil vapor probes within in the existing networks during the second quarter of 2020. ACDEH requests the 2nd Quarter sampling be conducted in the month of April 2020 or soon after to evaluate

groundwater conditions during seasonally wetter months. Justification must be provided in the Work Plan if the scope of work proposes to not sample all of the on- and off-Site soil vapor probes and vapor pins.

b. **3rd Quarter 2020 Groundwater & Soil Vapor Monitoring Report** – A Report documenting the implementation of additional quarterly sampling of the existing groundwater monitoring wells and soil vapor probes during the third quarter of 2020. The report must include an evaluation of the adequacy of the existing monitoring well and probe networks, and groundwater and soil vapor data sets to assess potential risk to off-Site receptors from on-Site sources prior to, during, and after corrective actions have been implemented. The Report must include an evaluation of the contaminant plume extent due to contaminant migration along submerged utility corridors in the vicinity of the Site and a monitored natural attenuation trend evaluation of on-Site known COCs.

c. **Groundwater Monitoring Well & Soil Vapor Probe Installation Work Plan (if warranted**) – A Work Plan for the installation of additional groundwater monitoring wells and soil vapor probes if warranted based on the evaluations and recommendations presented in the 3rd Quarter 2020 Groundwater & Soil Vapor Monitoring Report.

d. **Groundwater & Soil Vapor Monitoring Reports (if warranted).** A Report documenting the implementation of additional sampling of the groundwater monitoring well and soil vapor probe network.

Recurring requirements throughout the implementation of corrective actions at the Site under the oversight of ACDEH:

4. **SCHEDULES AND STATUS REPORTS**

a. **Updated Project Schedules –** The Project Schedule is a living document that must be updated throughout the lifecycle of the project as a planning and scheduling tool. Updated Project Schedules must be submitted to ACDEH on Monday of each week during implementation of the corrective actions and site redevelopment activities to be reflective of the actual project timetables.

b. **Weekly Status Reports –** *Weekly Status Reports* must be submitted to ACDEH on Monday of each week during implementation of the corrective actions and site redevelopment activities. The reports must include at a minimum:

i. A description of approved corrective actions implemented, and discovery of unknown environmental conditions and contingency measures taken during the previous week;

ii. A description of approved corrective actions that are planned to be conducted during the next current week;

iii. Documentation showing compliance with the requirements of the *Environmental Soil and Groundwater Management Plan* (*ENV SGMP*) and the results of community protection monitoring, including:

1) Identification of the number and duration of dust/volatile organic compound (VOC) action level exceedances (collectively, Action Level Exceedances);

2) A summary of corrective actions implemented to address Action Level Exceedances;

3) A figure depicting the inner quartile range of dust/VOC measurements at each monitoring station;
4) A wind-rose diagram;
5) A statement identifying if a potential unacceptable exposure to contaminated dust or VOCs occurred during the reporting period;
6) Raw data collected from each monitoring station (as an appendix/attachment); and
7) A copy of the Complaint Log and discussion of complaints received, and mitigation measures taken to resolve the complaints

5. PUBLIC PARTICIPATION PROGRAM

The Site is located in West Oakland in a mixed residential and industrial area of the McClymonds neighborhood, directly adjacent to the Vincent Academy Elementary School and in the vicinity of McClymonds High School. Historic land use at the Site has included residential, commercial and industrial facilities and associated infrastructure including vehicle maintenance areas, two former underground storage tanks (USTs) and associated dispensers and piping, and an oil/water separator. Chemicals of concern (COCs) including but not limited to metals (cobalt, lead), petroleum hydrocarbons as gasoline and diesel, semi-volatile organic compounds (SVOCs), and VOCs (including benzene, ethylbenzene, and naphthalene, and halogenated hydrocarbons such as chloroform, tetrachloroethylene (PCE), trichloroethene (TCE), and related daughter products) have been detected in soil, soil vapor and/or groundwater at the Site at concentrations that require remediation.

Public participation is an integral part of the investigation and implementation of corrective actions at environmental cleanup sites. ACDEH initiated the public participation process for the Site through the distribution of a *Fact Sheet* to the surrounding community on September 18, 2019 and invitation for public comment regarding the corrective actions proposed in the *CAP*. No comments were received by ACDEH or RMD during the 30-day public comment period.

Additional community involvement is required to be conducted by the Responsible Party (RP) throughout the environmental cleanup and redevelopment of the Site to inform the surrounding community of proposed corrective actions presented in the *CAP* and *CAIP* and upcoming work at the Site. The RP is required to engage the services of a *Public Participation Specialist* to develop and implement a *Public Participation Program* specific to the community and serve as an advisor to the RP and ACDEH on issues of community concern and involvement. In order to implement the *Public Participation Program*, the following deliverables must be submitted to ACDEH for review and approval

a. **Public Participation Plan –**The goal of the *Public Participation Plan* is to implement a proactive public participation program that encourages community involvement throughout investigation and cleanup of environmental cleanup cases by:
   i. Involving the public early and continuously throughout the environmental investigation and cleanup process through the distribution of *Fact Sheets* and community meetings;
   ii. Establishing an ongoing two-way communication process that provides information in a manner comprehendible to the layperson;

iii. Ensuring response to questions and concerns from the public in a responsive and timely fashion; and,

iv. Taking public concerns into account when final decisions are made on projects.

The *Public Participation Plan* is considered a "living" document and must be updated as necessary throughout the environmental investigation and cleanup process as the level of and need for public involvement changes to ensure it meets the community's needs. The *Public Participation Plan* must consider the community's concerns regarding the environmental investigation and cleanup of the Site, as well as broader concerns that may be brought up regarding the health and other social impacts of numerous industrial facilities (within and without ACDEH's regulatory jurisdiction), hazardous waste sites, and other potential sources of pollution in the community. These issues are complex and often inter-related and may require the interaction of several government agencies at all levels. Therefore, the *Public Participation Plan* must consider this and determine the necessary level of involvement from other agencies, not just in terms of ACDEH's decision-making, but also in terms of questions and concerns that will be raised by community members.

b. **Fact Sheets –** Additional Informational *Fact Sheets* will be required to be distributed to the surrounding community and public during corrective action implementation. The purpose of these informational *Fact Sheets* is to inform community members of upcoming work at the Site. The *Fact Sheets* must contain information on the Site background, environmental investigations, next steps, and information contacts. Copies of example Fact Sheet previously issued by ACDEH for other site cleanup program cases have been developed by Craig Communication, Riaz's currently retained *Public Participation Specialist*.

c. **Community Meeting Presentation(s)** – Preparation of PowerPoint slides with associated figures that convey the known chemicals of concern, proposed control and mitigation measures to protect the community surrounding the Site during the proposed remedial and corrective actions activities. The slides must also present the path forward of the Site (e.g. additional site investigation activities, potential soil excavation, etc.) and contact information (e.g. website, phone number) for the Site prior all environmental related activities overseen by ACDEH. PowerPoint examples can be provided by request and should prepared by the *Public Participation Specialist*. Community Meetings will be scheduled and moderated by the *Public Participation Specialist.* ACDEH will be the lead presenter with support by the Environmental Consultants as necessary.

Prior to the start of all site demolition and earthwork activities including grading, remedial excavation, and construction dewatering:

6. **ONSITE GROUNDWATER WELLS & SOIL VAPOR PROBES DESTRUCTION**

a. **On-Site Groundwater Monitoring Well & Soil Vapor Decommissioning Work Plan –** A Work Plan with a scope of work to properly destroy the On-Site groundwater and vapor monitoring wells in accordance with California Water Code and Alameda County Ordinance Code 6.88 under permit by the well permitting agency. If destruction of off-Site well or probes is proposed in the scope of work, justification for the request must be provided to ACDEH for consideration.

b. **On-Site Groundwater Monitoring Well & Soil Vapor Decommissioning Report –** A Report documenting the permitted destruction of the existing monitoring wells and vapor probes in accordance with an approved Work Plan. The report must include appropriate documentation (permits, waste disposal documentation, etc.). Final disposal documentation requires full and complete disposal forms, with a minimum of three accepting signatures. Documentation is not required for disposal of non-contaminated material such as well boxes

7. **ENVIRONMENTAL DOCUMENTS**

a. **Shallow Soil Characterization Work Plan** – A Work Plan to further characterize shallow lead impacted soil (less than 5 feet bgs) in the subsurface construction work zone during Site redevelopment activities for inclusion in (1) an *Updated Environmental Soil and Groundwater Management Plan (ENV SGMP)* to inform Health and Safety Plans for Contractors and community protection measures for dust monitoring during earthwork activities associated with Site development and long-term Site maintenance, (2) an *Updated CAIP* to be prepared subsequent to the City of Oakland Planning and Building Department Site redevelopment project entitlement approval and Building Permit issuance to better define the extents of excavation of lead impacted soil, and (3) to delineate soil concentrations remaining at the Site to inform the Environmental Land Use Covenant. Shallow soil samples have only been collected and analyzed from two intervals: 0.5-1.0-foot bgs and 4.5-5.0 feet bgs.

Corrective actions presented in the *CAIP* include limited excavation of lead impacted soil in proposed utility trenches and landscaped areas, and off-Site disposal at a permitted disposal facility or consolidation and capping on-Site beneath proposed foundations and hardscape areas. RMD states in the *CAIP* that it is expected that the lead impacted soil is limited to depths less than 2 feet bgs, however acknowledges that the sampling data has not been collected to confirm the vertical extent of lead impacts in soil between the 1 and 4 ½ feet bgs. Thus, ACDEH requests the Work Plan include a scope of work to vertically delineate soil within the construction zone interval that is defined by an evaluation of the depth below ground surface which construction/grading equipment and disturbance of subsurface soil on-Site will be conducted. The Work Plan must include an adequate grid of proposed soil samples across the Site to evaluate lead impacts in shallow soil.

b. **Revised CAIP –** Subsequent to the City of Oakland Planning and Building Department Site redevelopment entitlement approval and Building Permit issuance, and the shallow soil investigation, the existing *CAIP* must be updated and revised to reflect the results of the shallow lead impacted soil characterization activities. The *Updated CAIP* must include excavation of landscaped areas to sufficient depths to accommodate the planting of the root ball of trees in clean soil.

c. **Updated Environmental Soil and Groundwater Management Plan (*ENV SGMP*)** – The existing *ENV SGMP* prepared by RMD must be updated prior to start of construction to provide contact information for the RP, Public Participation Specialist, Environmental Consultants, and Contractors and Sub-Contractors. The Updated ENV SGMP must be updated to include the results of the shallow soil investigation, and additional community protection measures as warranted including real-time dust monitoring with dedicated environmental professional, increased dust suppression measures, revised truck decontamination and route procedures, and direct-load requirements.

8. **DEVELOPER & CONTRACTOR DOCUMENTS**

a. **Soil Excavation and Construction Sequencing Plan** – The CAIP proposes to dispose of lead impacted soil at a permitted disposal facility or consolidate and "cap" on-Site beneath proposed foundations and hardscape areas. Capped areas at the Site are proposed to consist of: beneath the first-floor building concrete floor slab, hardscape areas, such as parking lots and sidewalks, and beneath a minimum of two feet of clean import soil in landscape areas. The *CAIP* states that excavation activities will be conducted using conventional earthmoving equipment (e.g., track- or tire-mounted excavators), however specific equipment selection, details of cave-in protection systems (e.g., benching, sloping, or shoring), and the means to implement the soil excavation will be at the discretion of the selected excavation contractor.

ACDEH requests submittal of a *Soil Excavation and Construction Sequencing Plan* prepared by the Environmental Consultant with input from the Developer and excavation contractor that includes a description of the proposed excavation phasing and other measures to minimize volatilization of VOCs to outdoor air and exposure to receptors (for example phased demolition of pavement, use of containerized bins for excavated soil, direct load of excavated soil into trucks for immediate off-haul, etc.) The document must also contain figures illustrating the excavation phasing and other proposed staging areas including but not limited to potential stockpile locations and sequence of subsurface soil disturbance. ACDEH notes all stockpiled soil must be covered to minimize exposure to construction workers and the surrounding community. Based on results of additional shallow soil investigations, direct haul may be warranted for impacted soil that is excavated.

b. **Lead, Asbestos, and PCB Abatement Report** – A report documenting abatement of hazardous waste (lead, asbestos and polychlorinated biphenyls) in building materials in on-Site structures prior to building demolition.

c. **Signed Construction SGMP Certification Form** – A copy of the SGMP Certification Form signed by the RP and all their environmental professionals and contractors associated with implementation of field investigations at the Site certifying that they agree to comply with the ACDEH approved SGMP. Please note, before the start of all subsurface and construction activities are approved at the Site, a copy of the certification form indicated above must be received by this agency.

9. **PERMITS, PLANS, AND APPROVALS FROM OTHER AGENCIES**

Proposed redevelopment activities include demolition of all existing structures and construction of twelve slab-on-grade 3-story residential units with shared open space with no anticipated sub-grade parking, parking lifts, or elevators. Copies of permits, plans, and approval from other agencies must be submitted to ACDEH. ACDEH will review the documents to ensure consistency with ACDEH approved corrective actions and soil and groundwater management protocols presented in the *Updated CAIP and Updated ENV SGMP*. At a minimum, these submittals must include the following documents:

a. **Local Planning Department Entitlement Approvals** – Submittal of the following documents approved by the City of Oakland Planning Department. The documents must be accompanied by

a transmittal letter prepared by the Environmental Consultant that states that the documents are consistent with the conceptual plans presented in the *Preliminary Redevelopment Plans* and the corrective actions proposed in the *CAIP* and if not, must identify changes to the Site redevelopment, subterranean foundational elements (garages, elevator pits), and first floor building plans. ACDEH notes that substantial changes may invalidate the conclusions of the protectiveness of the proposed redevelopment of the site with respect to the residual contamination and the proposed corrective actions presented in the *CAIP* and will be required to be addressed in the *Updated CAIP.*

i. California Environmental Quality Act (CEQA) Compliance Documents and documentation of the date of City adoption

ii. Documentation of the redevelopment Project approval by the City of Oakland Planning Department

b. **Local Building Department Construction & Demolition Permits** – Submittal of the following documents approved by the City of Oakland Building Department. The documents must be accompanied by a transmittal letter prepared by the Environmental Consultant that states that the documents are consistent with the Site development plans and corrective actions presented in the *Updated CAIP.*

i. The Building Permit Plan Set

ii. Demolition and Grading Permits

iii. Construction Management Plan

c. **Groundwater Discharge to Sanitary Sewer or Storm Drain Permits** – Submittal of the following permits for discharge of contaminated groundwater to the sanitary sewer or storm drain system.

i. East Bay Municipal Utility District (EBMUD) - Special Discharge Permit

ii. Regional Water Quality Control Board **-** National Pollutant Discharge Elimination System (NPDES) permit

iii. City of Oakland Permits - Temporary discharge to sanitary sewer, sewer connection, obstruction

Prior to backfilling remedial excavations and fill import activities:

10. **REMEDIAL ACTION COMPLETION & FILL IMPORT DOCUMENTATION**

All contaminated soil exported from the site must be disposed of at an off-Site permitted disposal facility unless otherwise approved by ACDEH. ACDEH requires that imported or exported soil to other than a permitted disposal facility be characterized in accordance with the ACDEH's *Soil Import/Export Characterization Requirements* which was last revised on August 9, 2019 (ACDEH's *Fill Guidance*). The *Fill Guidance* provides requirements for the characterization of soil to determine its suitability for use at another site. These requirements have been prepared to ensure that unsuitable soil is not imported to environmental cleanup sites or exported from environmental cleanup sites to properties with sensitive land uses. The *Fill Guidance* is for characterization of soil only and does not address

requirements for characterization of other fill material including, but not limited to: crushed rock, pea gravel, recycled concrete, or flowable material.

At this time, ACDEH is exempting virgin concrete or flowable fill materials and virgin aggregates from characterization requirements presented in ACDEH's *Fill Guidance*. Written approval is required from ACDEH prior to the import or on-Site re-use of recycled aggregates (including crushed concrete or asphalt). Please be advised that ACDEH has adopted the New Jersey Department of Environmental Protection Solid and Hazardous Waste Management Program's *Guidance for Characterization of Concrete and Clean Material Certification for Recycling* dated January 12, 2010 and *Recycled Asphalt Pavement and Asphalt Millings Reuse Guidance* dated March 2013 amended with applicable ESLs.

a. **Remedial Action Completion Documentation Submittal Package –** A submittal package with a transmittal letter prepared by the Environmental Consultant documenting that remedial soil excavation has been completed in accordance with the *Updated CAIP* and *Updated ENV SGMP.* The submittal package must be submitted to ACDEH for review and approval prior to backfilling remedial excavations. ACDEH suggests the submittal package be submitted via email correspondence to facilitate quick review and backfill approval. At a minimum the report must include scaled figures (plan views and cross-sections) showing confirmation sampling locations and extents of excavation, tabulated volumes of soil excavated disposition (on-Site stockpile, direct haul to off-Site disposal facility, on-Site consolidation), volumes of contaminated groundwater removed and disposition (temporary storage in on-Site tanks, discharged to sanitary sewer or storm drain), subsurface infrastructure removed and disposition, tabulated soil and groundwater analytical results compared to cleanup goals, and draft soil and groundwater laboratory analytical reports.

b. **Application for Determination of Fill Material Suitability** – In an effort to streamline the determination of suitable imported fill material, ACDEH has created an *Application for Determination of Fill Material Suitability* to support requirements outlined in ACDEH's *Fill Guidance*. Submittal of the application and requisite supporting documents must be submitted to ACDEH for review and approval prior to import of fill. Requisite documents are outlined in the *Application* and include but are not limited to proposed sources, sampling and profiling protocols, analytical laboratory reports, and tables with analytical results and applicable environmental screening levels.

Prior to the start of foundation construction and utility installation:

11. **VAPOR MITIGATION ENGINEERING CONTROLS (VMECS)**

a. **VMEC Design Documents** – Proposed corrective actions presented in the *CAP* and *CAIP* include the installation of VMECs consisting of vapor mitigation system (VMS) beneath buildings and/or trench dams and plugs within utility corridors. *VMEC Design Documents* must be prepared by a Registered Civil Engineer and submitted to ACDEH for review and approval. The *VMEC Design Documents* must include a basis of design report (*BOD Report*) that identifies design objectives, assumptions, engineering calculations, and construction quality assurance and quality control measures (*CQA/CQC*); construction plan set and specifications (*Plans & Specs*); and an Operations, Maintenance, Monitoring and Reporting (*OMM&R*) Plan including post-construction/pre-occupancy VMEC system testing procedures, and long-term operation and maintenance. The *BOD Report* and *Plans & Specs* must be prepared with sufficient detail to evaluate the validity, constructability, and design performance of the engineering controls. The *BOD Report*, *Plans &*

Specs, and *OMM&R Plan*. The ACDEH approved VMEC *Plans & Specs* must be incorporated into the building and utility construction plans and specifications.

b. **Approved Building Permit Plans with VMEC Incorporated** – A copy of the City of Oakland approved Building Permit Plan Set for site redevelopment incorporating the VMECs must be submitted to ACDEH for review to verify that the VMECs have been incorporated into the plans as approved by ACDEH. Submittal of the Building Permit Plan Set must be accompanied by a transmittal letter prepared by the VMEC Design Engineer that states that the plans are consistent with the ACDEH approved *BOD Report* and *Plans & Specs* and identifies plan sheets where the VMEC design elements are incorporated.

c. **VMEC Construction Quality Control/Quality Assurance Plan** – A comprehensive report that identifies the members and responsibilities of the CQA Team and documents procedures and protocols that will be implemented by the CQA team during construction and testing of the VMECs to ensuring compliance with the ACDEH approved *Plans & Specs*. The CQA Plan must include at a minimum:

   i. **Material Quality Control and Quality Assurance** – Identification of measures for ensuring that materials are free from defect prior to installation.

   ii. **Material Storage** – Declaration of materials storage criteria and requirements

   iii. **Installer Qualifications** – Declaration of the minimum qualifications for installers. At a minimum, installers for barrier systems must be certified by the manufacturer. Contractors installing probes installed at a depth greater than 4.9 feet below ground surface must have a C-57 drillers license.

   iv. I**nspections** – Identification of minimum required inspections and triggers for additional inspections. This identification must include sequencing with other disciplines and must also include copies of forms that will be completed by the CQA inspector at the end of each inspection.

   v. **Inspector Qualifications** – Declaration of the minimum qualifications for inspectors.

   vi. **Protective Measures and Prohibited Work Practices** – Description of protective measures and prohibited work practices intended to limit potential damage to the VMECs during construction.

   vii. **Materials and Installation Testing** – Requirements for testing installed system components (e.g., seam tensile test, coupon test, wet mil test, smoke test) and triggers for additional testing requirements. At a minimum, the type, frequency, and passing conditions for each test must be included. Contingencies for how failures will be addressed must be included.

d. **VMEC Construction Quality Assurance Plan Status Reports** – Reports documenting the status of the VMEC installation and testing. The reports must be signed by the CQA Engineer with Responsible Charge and include at a minimum photo-logs and CQA Inspection Sheets.

Prior to building occupancy:

12. **CORRECTIVE ACTION COMPLETION REPORTS**

a. **Remedial Action Completion Report (*RACR*)** – A comprehensive report documenting implementation of the remedial actions presented in the *Updated CAIP* and demonstrating that remedial action objectives have been met or identifying any remedial action objectives that have not yet been met. The report must include as-built drawings and photo documentation and must include a certification by the remedial action design engineer that the remedial measures were implemented in accordance with the approved *Updated CAIP*. The report must also include copies of all permits and must document at a minimum the following (if applicable):

   i. Description of the remedial soil excavation activities including at a minimum the information submitted in the *Remedial Soil Excavation Completion Documentation Submittal Package*, the final disposition of soil (on-Site consolidation and capping, off-Site disposal), a figure depicting the surveyed locations and depths of consolidated lead impacted soil, copies of all manifests or other waste disposal documentation, and final laboratory analytical reports for soil confirmation samples and pre-characterization results of in-situ sampling and/or stockpiling sampling for soil disposed of off-Site.

   ii. Description of groundwater removal activities with supporting documentation, including but not limited to tables, figures, laboratory analytical reports, copies of discharge reports, and corrective actions associated with unauthorized releases during construction activities.

   iii. Description of removal of subsurface infrastructure in source areas (e.g., oil/water separation and piping, sanitary sewer laterals) and copies of waste manifests.

   iv. Description of discovery of unexpected subsurface structures (e.g., tanks, vaults, sumps), contingency measures implemented, and copies of laboratory analytical reports and waste manifests.

   v. Certification of compliance with the *Updated ENV SGMP* protocols during implementation of remedial measures including but not limited to agency notification and reporting requirements, pre-field activities (site security and access, traffic control, excavation permits, notification and utility clearance), waste management, soil and groundwater management, storm water management, dust and odor emission control, and contingency measures for discovery of unexpected underground structures.

   vi. As-built plans showing the surveyed locations of consolidated lead impacted soil (plans and cross-sections)

   vii. Photo-logs and field notes

b. **Soil Import Summary Report –** A report documenting the import/export of soil (if not disposed of at a permitted disposal facility) in accordance with the *Fill Guidance*. The report must be uploaded to the GeoTracker information repositories for both the fill material source area and the destination. At a minimum the report must include the following:

   i. A cover letter from the owner of the proposed fill source material that states, at a minimum, the following: “I have read and acknowledge the content, recommendations,

and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH." This cover letter must be signed by the owner of the proposed fill source material or a legally authorized representative of the owner of the proposed fill source material.

ii. A statement that fill material characterization was conducted under the responsible charge of a Qualified Professional. This statement must be accompanied by the signed and dated seal of the Qualified Professional with responsible charge.

iii. Summary tables of soil import logs. These logs must include the following information for each delivery of fill material: arrival date, manifest number or truck tag, quantity of fill material delivered, originating facility, and profile number.

iv. A figure depicting the location and depth of imported soil. If fill material from multiple sources has been imported, the location and depth of imported soil from each source must be distinguished.

v. Copies of all manifests or other documentation of soil import as an appendix.

vi. Copies of all fill characterization profiles as an appendix.

c. **VMEC Record Report of Construction (RROC)** – A comprehensive report documenting the construction quality assurance (CQA) activities and observation and findings during construction of the VMECs including vapor mitigation systems (VMS) beneath buildings and trench dams/plugs in utility corridors. The report must include as-built drawings, photo documentation, certification by the CQA Manager and VMEC Design Engineer that the completed VMEC and utility trench plugs were installed in accordance with the ACDEH, approved *BOD Report* and *Plans & Specs*.

d. **VMS Post Construction Performance Monitoring Report** – A report documenting the results of the VMS performance monitoring (indoor air, sub-slab soil vapor, and vent riser sampling) and certification by the VMEC Design Engineer that the VMS is functioning as designed.

13. **OPERATION, MAINTENANCE, MONITORING AND REPORTING (*OMM&R*) PLANS**

a. **VMEC OMM&R Plan** – An OMM&R Plan for the vapor mitigation engineering controls. The OMM&R Plan must include, at a minimum documentation of the installed VMEC components, including As-Built drawings and specifications, and photo documentation; responsible party information; details of required OMM&R activities; emergency contacts and protocols in case of system failure; and copies of the field forms to be completed during routine and emergency inspections.

b. **Trench Dam & Plug OMM&R Plan** – A OMM&R Plan for the trench dams and plugs installed within the utility corridors. The plan must include at a minimum documentation of the installed dams and plugs including As-Built construction drawings and specifications, surveyed coordinates, and photo documentation; responsible party information; and contacts and protocols in case that utility repair requires replacement of the dams or plugs.

14. **INSTITUTIONAL CONTROLS**

a. **Environmental Risk Management Plan (RMP)** – A RMP for long-term site management plan written for the property owner to facilitate compliance with the requirements of the Land Use Covenant (*LUC*). The *RMP* is a communications document for non-technical audiences identifying the location of residual COCs, potential deleterious health effects from exposure to COCs, and engineering, administrative, and institutional controls that are implemented at the Site to control unacceptable risk due to exposure from COCs. This document must include sufficient detail that non-technical staff can identify what work practices are unacceptable and can identify engineering controls if encountered. The *RMP* must also include communications and reporting requirements so that, in the event the engineering controls are encountered, the appropriate professionals and regulatory agencies can be notified to ensure that the integrity of the engineering controls is maintained.

b. **Environmental Land Use Covenant (LUC)** – Recordation of institutional controls including a *LUC* and Disclosure Covenants, Conditions and Restrictions (CC&Rs) providing legal and administrative controls and methods for dissemination of information to site users and occupants, homeowners associations, property managers and property owners to minimize risk during property development, future below-ground construction and maintenance, and long-term site use. ACDEH will provide the *LUC* for recordation under a separate correspondence.

c. **Financial Assurance Instrument** – Documentation of an appropriate financial instrument to assure ACDEH of implementation and maintenance of the VMECs. The details of this financial assurance must be worked out by the project proponent and ACDEH as design, construction, and monitoring plans are finalized and approved. The financial assurance instrument must provide for sufficient funds to construct, monitor, and provide regulatory oversight costs for long-term operations and maintenance of the VMECs. Estimates of these costs must be based, in part, on the cost estimates for project implementation that are established in the *Updated CAIP* and *OMM&R Plans*.

Prior to Case Closure:

15. **MONITORING WELL AND PROBE DESTRUCTION (IF APPLICABLE)**

a. **Groundwater Monitoring Well Decommissioning Report** – A report describing the permitted destruction of groundwater monitoring wells and soil vapor probes. The report must include appropriate documentation (permits, waste disposal documentation, etc.). Documentation is not required for disposal of non-contaminated material such as well boxes

16. **INVESTIGATION DERIVED WASTE (IDW) REPORT**

a. **IDW Report –** A report documenting removal of all waste piles, drums, debris and other investigation or remediation derived material in accordance with State laws. The report must identify all final disposal documentation including but not limited to full and complete disposal forms, with a minimum of three accepting signatures of waste manifests, associated truck tags, etc. Alternatively, this report can be combined with monitoring well and probes destruction report.

Throughout the Post-Closure Period:

17. **COMPLIANCE REPORTS**

a. **Routine Operations, Maintenance, and Monitoring Report / Site Inspection Reports** – A report documenting compliance with the Environmental Risk Management Plan and the OMM&R Plan. At a minimum, this report must include the following elements:

i. Narrative description of environmental activities (e.g. site inspections, sampling, maintenance) and/or activities covered by the Environmental Risk Management Plan (e.g. earthwork, utility work, slab modifications or penetrations) that were completed during the reporting period;

ii. Narrative description of the environmental activities or activities covered by the Environmental Risk Management Plan that are planned for implementation during the next reporting period;

iii. Results of the physical condition inspection for accessible elements of the engineering controls, including a photo-log with representative photographs;

iv. Tabulated results of the monitoring of performance metrics;

v. An evaluation of the current condition and performance of engineering controls, including a statement that the engineering controls are or are not achieving design objectives;

vi. Identification of any tenant or ownership changes that occurred during the reporting period;

vii. Signed tenant acknowledgement and compliance statements;

viii. Copies of field inspection forms and/or maintenance logs; and

ix. Updates to the Record Report of Construction as "redline" drawings as necessary.

b. **Non-Routine Operations, Maintenance, and Monitoring Report / Site Inspection Reports –** A report documenting the implementation of non-routine site inspections and/or maintenance and monitoring activities. Submittal of this report is required when trigger conditions identified in the Environmental Risk Management Plan are met (e.g. earthquake, un-planned/emergency utility work within burdened areas, unanticipated damage to engineering controls or slab foundation). At a minimum, this report must include the following elements:

i. Identification of the conditions that triggered the non-routine report;

ii. Description of the Scope of Work implemented;

iii. Documentation of compliance with requirements of the Environmental Risk Management Plan and OMM&R Plan;

iv. An evaluation of the condition and performance of engineering controls against design objectives after completion of the scope of work;

v. Identification of any outstanding environmental issues;

vi. Copies of field inspection forms and/or maintenance logs; and

vii. Updates to the Record Report of Construction as "redline" drawings as necessary.

c. **5-Year Environmental Review Summary Report –** A report presenting an evaluation of the performance and adequacy of the engineering and administrative controls that have been implemented at the Site in accordance with the requirements of the OMM&R Plan and the Environmental Risk Management Plan. This report may be combined with a routine Operations, Maintenance, Monitoring, and Reporting Plan or submitted as a stand-alone document and must, at a minimum have each of the following additional elements:

i. Results of the collection of risk metrics (collection of concentration data from applicable source area, point of control, and point of exposure);

ii. An evaluation on the performance of the engineering and administrative controls;

iii. An evaluation on the adequacy of the current financial assurance mechanisms;

iv. An evaluation on if termination criteria have been met; and

v. Recommendations for modifications or termination of the administrative or engineering controls.

d. **Work Plans for Tenant Improvement** – A work plan presenting a scope of work for the implementation of tenant improvement activities identified in burdened activities in the Environmental Risk Management Plan. The scope of work must demonstrate compliance with the Environmental Risk Management Plan, OMM&R Plans, and the Environmental Soil and Groundwater Management Plan as appropriate. The work plan must include a copy of the City of Oakland approved Building Permit Plan set.

e. **Tenant Improvement Completion Report** – A report documenting the implementation of an ACDEH approved Work Plan for Tenant Improvement and demonstrating compliance with the Environmental Risk Management Plan, OMM&R Plans, and the Environmental Soil and Groundwater Management Plan as applicable. The report must include As-built drawings of the tenant improvements.

Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)	**REVISION DATE:** December 14, 2017
	ISSUE DATE: July 25, 2012
	PREVIOUS REVISIONS: September 17, 2013, May 15, 2014, December 12, 2016
SECTION: ACDEH Procedures	**SUBJECT:** Responsible Party(ies) Legal Requirements / Obligations

REPORT & DELIVERABLE REQUESTS

Alameda County Department of Environmental Health (ACDEH) Cleanup Oversight Programs, Local Oversight Program (LOP) and Site Cleanup Program (SCP) require submission of all reports in electronic form to the State Water Board's (SWB) GeoTracker website in accordance with California Code of Regulations, Chapter 30, Division3, Title 23 and Division 3, Title 27.

Leaking Underground Fuel Tank (LUFT) Cases

Reports and deliverable requests are pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party (RP) in conjunction with an unauthorized release from a petroleum underground storage tank (UST) system.

Site Cleanup Program (SCP) Cases

For non-petroleum UST cases, reports and deliverables requests are pursuant to California Health and Safety Code Section 101480.

ELECTRONIC SUBMITTAL OF REPORTS

A complete report submittal includes the PDF report and all associated electronic data files, including but not limited to GEO_MAP, GEO_XY, GEO_Z, GEO_BORE, GEO_WELL, and laboratory analytical data in Electronic Deliverable Format™ (EDF). Additional information on these requirements is available on the State Water Board's website (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/)

- Do not upload draft reports to GeoTracker
- Rotate each page in the PDF document in the direction that will make it easiest to read on a computer monitor.

GEOTRACKER UPLOAD CERTIFICATION

Each report submittal is to include a GeoTracker Upload Summary Table with GeoTracker valid values[1] as illustrated in the example below to facilitate ACDEH review and verify compliance with GeoTracker requirements.

GeoTracker Upload Table Example

Report Title	Sample Period	PDF Report	GEO_MAPS	Sample ID	Matrix	GEO_Z	GEO_XY	GEO_BORE	GEO_WELL	EDF
2016 Subsurface Investigation Report	2016 S1	✓	✓	Effluent	SO	☐	☐	☐	☐	✓
2012 Site Assessment Work Plan	2012	✓	✓			☐	☐	☐	☐	☐
2010 GW Investigation Report	2008 Q4	✓	✓	SB-10	W	✓	☐	☐	☐	✓
				SB-10-6	SO	☐	☐	☐	☐	✓
				MW-1	WG	✓	✓	✓	✓	✓
				SW-1	W	✓	✓	✓	✓	✓

[1] GeoTracker Survey XYZ, Well Data, and Site Map Guidelines & Restrictions, CA State Water Resources Control Board, April 2005

Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)	**REVISION DATE:** NA
	ISSUE DATE: December 14, 2017
	PREVIOUS REVISIONS: September 17, 2013, May 15, 2014, December 12, 2016
SECTION: ACDEH Procedures	**SUBJECT:** Responsible Party(ies) Legal Requirements / Obligations

ACKNOWLEDGEMENT STATEMENT

All work plans, technical reports, or technical documents submitted to ACDEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to the State Water Board's GeoTracker website." This letter must be signed by the Responsible Party, or legally authorized representative of the Responsible Party.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6731, 6735, and 7835) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately licensed or certified professional and include the professional registration stamp, signature, and statement of professional certification. Additional information is available on the Board of Professional Engineers, Land Surveyors, and Geologists website at: http://www.bpelsg.ca.gov/laws/index.shtml.

UNDERGROUND STORAGE TANK CLEANUP FUND

For LUFT cases, RP's non-compliance with these regulations may result in ineligibility to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse the cost of cleanup. Additional information is available on the internet at: https://www.waterboards.ca.gov/water_issues/programs/ustcf/

AGENCY OVERSIGHT

Significant delays in conducting site assessment/cleanup or report submittals may result in referral of the case to the Regional Water Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

Appendix K

Fehr & Peers, *Transportation Impact Study*

July 2020

FEHR PEERS

MEMORANDUM

Date: July 6, 2020

To: Sharon Wright, Lamphier-Gregory

From: Sam Tabibnia, Fehr & Peers

Subject: 2432 Chestnut Street – Preliminary Transportation Assessment

OK20-0369

This memorandum summarizes the preliminary transportation impact review conducted by Fehr & Peers for the proposed 2432 Chestnut Street project in Oakland. Based on our analysis:

- The proposed 12-unit development would screen out of a vehicle miles traveled (VMT) analysis and is presumed to have a less–than-significant impact on VMT.
- The proposed project would generate approximately 70 daily, five AM peak hour, and six PM peak hour net new automobile trips. Trip generation estimates were developed in accordance with the City of Oakland's *Transportation Impact Review Guidelines* (TIRG, April 2017).
- According to the guidelines, a detailed Transportation Impact Review (TIR) and Transportation Demand Management (TDM) Plan are not required because the project would generate fewer than 50 vehicle trips during a single peak hour. However, the ultimate decision to prepare a TIR and/or TDM Plan and their potential content rests with City of Oakland Staff.

The remainder of this memorandum presents the project description, VMT screening, and trip generation.

PROJECT DESCRIPTION

The proposed project is located on the east side of Chestnut Street mid-block between 24th and 26th Streets in West Oakland. The project would demolish an existing single-family home and two vacant industrial buildings to provide 12 housing units. The project will construct three three-

story residential buildings and a one-story building for shared community space. The project would provide 12 off-street parking spaces, one of which would be ADA accessible.

VMT SCREENING

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

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 Metropolitan Transportation Commission (MTC) Travel Model includes

116 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.

The MTC Travel Model is a model that assigns all predicted trips within, across, or to/from the nine-county San Francisco Bay Area region 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 travel behavior from MTC Travel Model is modeled based on the following inputs:

- Socioeconomic data developed by the Association of Bay Area Governments (ABAG)
- Population data created using the 2000 US Census and modified using the open source PopSyn software
- Zonal accessibility measurements for destinations of interest
- Travel characteristics and vehicle ownership rates derived from the 2000 Bay Area Travel Survey (BATS)
- Observed vehicle counts and transit boardings

The daily VMT output from the MTC Travel Model for residential and office uses comes from a tour-based analysis. The tour-based analysis examines the entire chain of trips over the course of a day, not just trips to and from the project site. In this way, all of the VMT for an individual resident or employee is included; not just trips into and out of the person's home or workplace. For example, a resident leaves her apartment in the morning, stops for coffee, and then goes to the office. In the afternoon she heads out to lunch, and then returns to the office, with a stop at the drycleaners on the way. After work, she goes to the gym to work out, and then joins some friends at a restaurant for dinner before returning home. All the stops and trips within her day form her "tour." The tour-based approach would add up the total number of miles driven over the course of her tour and assign it as her daily VMT.

Based on the MTC Travel Model, the regional average daily VMT per capita is 15.0 under 2020 conditions and 13.8 under 2040 conditions.

Thresholds of Significance for VMT

According to the City of Oakland TIRG, the following are thresholds of significance related to substantial additional VMT:

- For residential projects, a project would cause substantial additional VMT if it exceeds existing regional household VMT per capita minus 15 percent.
- For office projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per worker minus 15 percent.
- For retail projects, a project would cause substantial additional VMT if it results in a net increase in total VMT.

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 or within a one-half mile of a Major Transit Corridor or Stop[1] 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 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).

[1] "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.

Impact Analysis

The proposed project satisfies the Small Project (#1), Low-VMT Area (#2) and the Near Transit Stations (#3) criteria and is therefore presumed to have a less–than-significant impact on VMT.

Criterion #1: Small Projects

The project is estimated to generate about 56 trips per day (see Table 2 on page 6), which is less than 100 vehicle trips per day and therefore satisfies criterion #1.

Criterion #2: Low-VMT Area

Table 1 shows the estimated 2020 and 2040 VMT per capita for TAZ 989, the TAZ in which the project is located, as well as the applicable VMT thresholds of 15 percent below the regional average. As shown in Table 1, the 2020 and 2040 estimated average daily VMT per capita in the project TAZ is less than the regional averages minus 15 percent. Therefore, the project satisfies criterion #2.

TABLE 1
2432 CHESTNUT STREET DAILY VEHICLE MILES TRAVELED SUMMARY

Land Use	Bay Area				TAZ 989	
	2020		2040		2020	2040
	Regional Average	Regional Average minus 15%	Regional Average	Regional Average minus 15%		
Residential (VMT per capita)[1]	15.0	12.8	13.8	11.7	7.5	6.2

Notes:

1. MTC Model results at analytics.mtc.ca.gov/foswiki/Main/PlanBayAreaVmtPerCapita and accessed in June 2020.

Source: Fehr & Peers, 2020.

Criterion #3: Near Transit Stations

The nearest BART station to the project site is the 19th Street BART Station, about 1.2 miles walking distance east of the project site. Although the project would be more than 0.5 mile from a BART station, it would be within 0.5 miles of frequent bus service along San Pablo Avenue (Route 72/72M/ 72R, with combined six-minute peak headways), 0.6 miles of Martin Luther King Jr. Way

(Route 18, with 15-minute peak headway), and about 0.2 miles from frequent bus service along Grand Avenue (Route NL with 15-minute peak headways) and Market Street (Route 88, with 15-minute peak headways). The project would be within 0.5 miles of the Major Transit Stops created by the intersection of AC Transit Routes 88 and 72/72M/72R at the Market Street/San Pablo Avenue intersection, and Routes 88 and NL at the Market Street/Grand Avenue intersection.

The project satisfies criterion #3 because it would also meet the following three conditions for this criterion:

- The proposed project would have a FAR of 1.1 which is greater than the required minimum of 0.75.
- The project is in the RM-2 and RM-4 zones in West Oakland which, according to the City of Oakland Municipal Code (Section 17.116.060), are required to provide a minimum of one parking space per unit. The proposed project would provide 12 off-street parking spaces, which corresponds to one space per unit and would meet Code requirement. Thus, the project would not provide more parking than required by City Code or used by project residents and visitors.
- The project is located within the West Oakland Priority Development Area (PDA), as defined by Plan Bay Area, and is therefore consistent with the region's Sustainable Communities Strategy.

AUTOMBILE TRIP GENERATION

Trip generation is the process of estimating the number of vehicles that would likely access the project on any given day. **Table 2** summarizes the trip generation for the proposed project. Trip generation data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual (10th Edition)* was used as a starting point to estimate the vehicle trip generation. The trip generation does not account for the trips generated by the existing active uses at the site that would be demolished and is therefore a conservative estimate.

ITE's *Trip Generation Manual (10th Edition)* is primarily based on data collected at single-use suburban sites where the automobile is often the only travel mode. However, the project site is in a dense mixed-use suburban environment where many trips are walk, bike, or transit trips. Since the project is more than 1.0 mile from the nearest BART station, the 19th Street Oakland BART station, this analysis reduces the ITE-based trip generation by about 21 percent to account for non-automobile trips. This reduction 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 for dense suburban areas (population density between 6,000 and 10,000 people per square mile) more than 1.0 mile from a BART Station is about 21 percent.

As summarized in Table 2, the net new automobile trip generation for the proposed development is approximately 70 daily, five AM peak hour, and six PM peak hour automobile trips.

TABLE 2
2432 CHESTNUT STREET PROJECT AUTOMOBILE TRIP GENERATION

Land Use	ITE Code	Size[1]	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				In	Out	Total	In	Out	Total
Residential [2]	220	12 DU	88	1	5	6	5	2	7
Non-Auto Adjustment[3]			*-18*	*0*	*-1*	*-1*	*-1*	*0*	*-1*
Adjusted Total Project Trips			**70**	**1**	**4**	**5**	**4**	**2**	**6**

Notes:
1. DU = Dwelling Units.
2. ITE *Trip Generation (10th Edition)* land use category 220 (Low-Rise Apartment, General Urban/Suburban):
   Daily: T = 7.32 * X
   AM Peak Hour: T = 0.46* X (20% in, 80% out)
   PM Peak Hour: T = 0.56 * X (65% in, 35% out)
3. Reduction of 20.5% assumed, based on City of Oakland *Transportation Impact Review Guidelines*, using Census data for dense suburban environments greater than 1.0 mile from a BART Station.

Source: Fehr & Peers, 2020.

CONCLUSIONS

Since the proposed project would generate less than 50 net new peak hour trips, the City of Oakland TIRG does not require a detailed TIR or TDM Plan for the project. However, the ultimate decision to prepare a TIR and/or TDM Plan and their potential content rests with City of Oakland Staff.

Please contact Sam Tabibnia (s.tabibnia@fehrandpeers.com, 510.835.1943) with questions or comments.