CITY OF ALAMEDA, CALIFORNIA

Marina Cove II Subdivision

INITIAL STUDY &
MITIGATED NEGATIVE DECLARATION

SEPTEMBER 2012

Douglas Herring & Associates
Environmental, Policy, and Planning Services

Marina Cove II Subdivision

Initial Study

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California Environmental Quality Act (CEQA)
Environmental Checklist Form

1. Project Title: Marina Cove II Subdivision

2. Lead Agency Name and Address:

City of Alameda
Planning Division
2263 Santa Clara Avenue
Alameda, CA 94501

3. Contact Person and Phone Number:

Andrew Thomas, Planning Manager
(510) 747-6881
athomas@ci.alameda.ca.us

4. Project Location:

Buena Vista Avenue at Entrance Road
Assessor Parcel Number (APN) 072-0384-031

The project site is located on the northern waterfront of the City of Alameda, at the northeast corner of the intersection of Buena Vista Avenue at Entrance Road. The approximately 7.14-acre site is currently developed with a large one-story warehouse building and paved areas for truck parking and maneuvering. The site is bounded on the south and east by medium-density single-family residential development, on the west by the historic Del Monte Warehouse, and on the north by the Fortman Marina.

5. Project Sponsor's Name and Address:

Trident Partners
502 Waverly Place, Suite 302
Palo Alto, CA 94301

Contact: John Shelton, CEO
(650) 289-9400
jpsheltonjr@gmail.com

6. General Plan Designation:

Medium-Density Residential

7. Zoning:

R-4/PD (Neighborhood Residential with a Planned Development overlay)

8. Description of Project:

Introduction

The proposed project evaluated in this Initial Study consists of a Tentative Subdivision Map for a 69-unit residential subdivision. The project site is part of a larger site—the original Marina Cove Subdivision—that was previously proposed for development and was evaluated in a Mitigated Negative Declaration (MND) in June 2000.[1] The property to the east of the current project site was subsequently developed with single-family homes as a first phase of that proposed development. The proposed project was previously approved, and was expected to be developed as a second phase of the Marina Cove Subdivision. However, because the previously approved Tentative Map expired, the City is performing a new environmental review for the current map application. The proposed project substantially conforms to the previously approved project in all major aspects, such as street layout, number of units, and lot size. The project will require subsequent approvals, such as a detailed Development Plan and Design Review for the homes expected to be developed following Tentative Map approval.

In 2008 the City of Alameda adopted the Northern Waterfront General Plan Amendment (GPA) to provide a planning framework for future growth and redevelopment of a collection of primarily industrial parcels located along the City's north-central shoreline. The purpose of the Northern Waterfront GPA was to establish General Plan and Zoning Ordinance policy, standards, and requirements for future development while encouraging economically viable redevelopment of the area with a mix of uses that are sensitive to existing residential neighborhoods and the historic character of the area. The Northern Waterfront GPA is located generally north of Buena Vista Avenue, west of Grand Street, and east of Wood Street. The Northern Waterfront GPA was adopted as a new chapter to the Alameda General Plan. The City certified an Environmental Impact Report (EIR) for the Northern Waterfront GPA in July 2007 in compliance with the California Environmental Quality Act (CEQA).[2]

Overview

Trident Partners is proposing to develop a residential subdivision of single-family homes and below-market-rate (BMR) duplexes on an approximately 7.14-acre level site located on the northern waterfront of the City of Alameda, shown on Figure 1. The project has a General Plan designation of Medium-Density Residential and a zoning designation of R-4/PD (Neighborhood Residential with a Planned Development overlay). Additional details on the project site are provided in Section 9, below. An aerial overview of the site is provided on Figure 2.

The proposed project would consist of the construction of 59 two-story detached single-family homes and 10 two-story attached BMR duplex units. As shown on the site plan (Figure 3), access to the proposed homes would be via four new streets extending across the project site. Additional details on these streets is provided below.

Most of the single-family homes would be developed on rectangular lots measuring 40 feet by 80 feet (3,200 square feet), though some lots would be somewhat larger. The five duplex homes would be on lots measuring 30 feet by 80 feet (2,400 square feet). The proposed project would have a gross density of 9.7 dwelling units per acre (du/ac) and a net density of 12.8 du/ac. Each

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[1] City of Alameda, *Proposed Mitigated Negative Declaration and Initial Study Checklist Marina Cove Project, Alameda, California*, June 2000.

[2] City of Alameda, *Alameda Northern Waterfront General Plan Amendment Draft Environmental Impact Report*, January 2006.

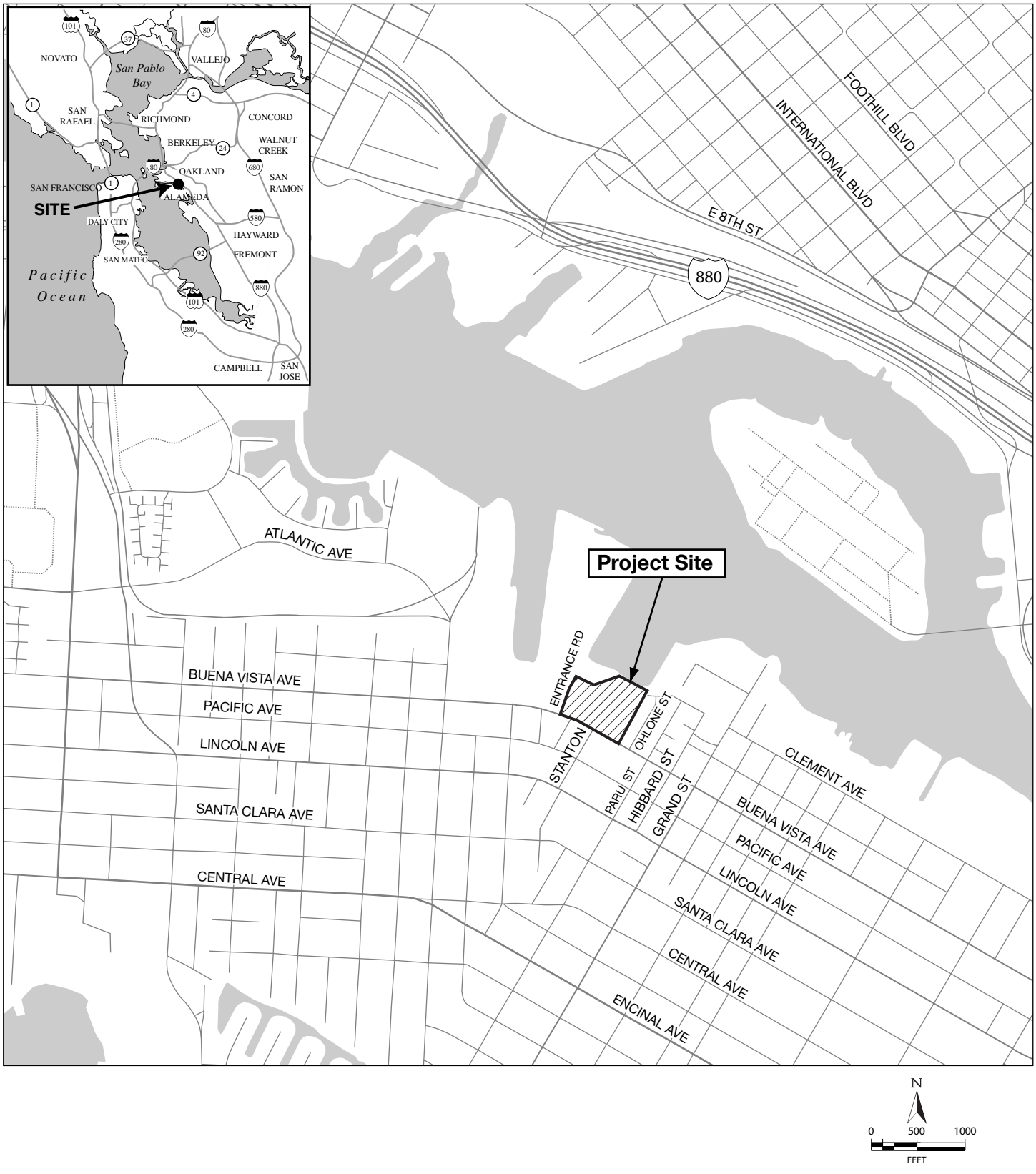

Figure 1

Project Site Location

Source: Douglas Herring & Associates

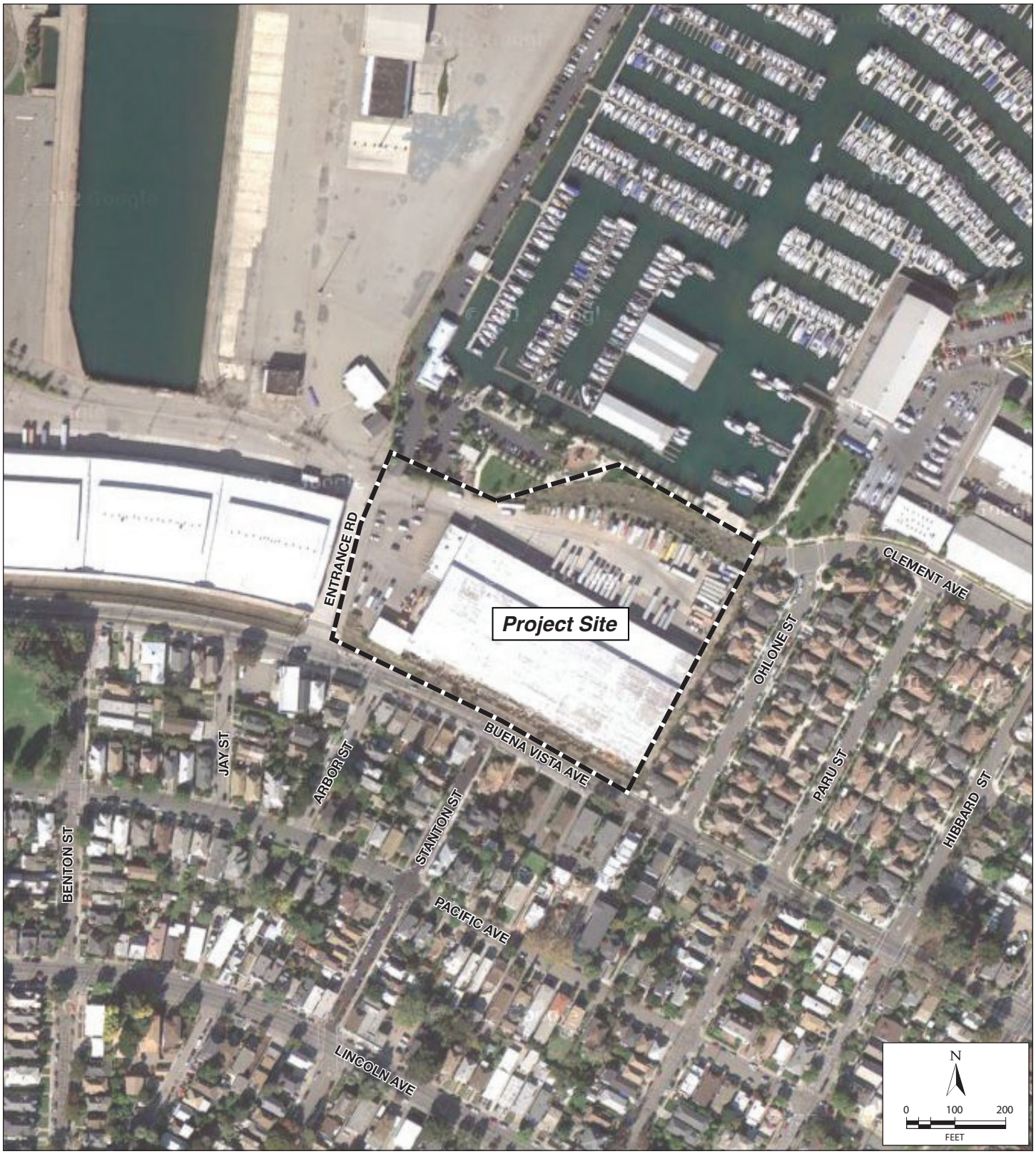

Figure 2

Aerial Photo of Site and Vicinity

Source: Google Maps

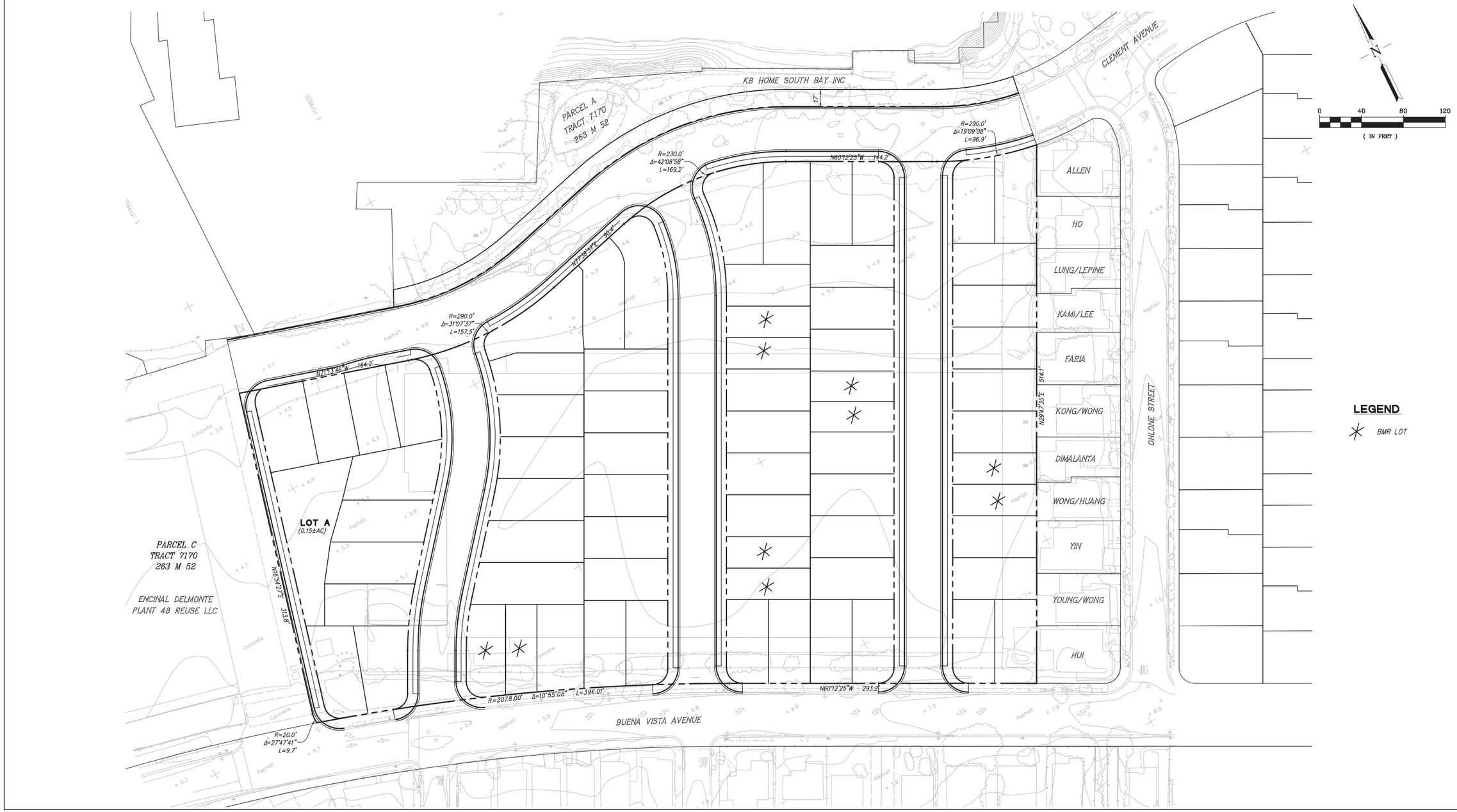

Figure 3

Site Plan

Source: Trident Partners

home, including the BMR units, would have an attached two-car garage, providing a total of 138 covered off-street parking spaces. Driveways would provide an additional 138 off-street parking spaces.

In addition to the 69 residential lots, an additional 0.15-acre lot (Lot A) would be developed along the west side of the site as public open space.

Circulation and Parking

As shown on the site plan (Figure 3), Arbor Street and Stanton Street would be extended north of Buena Vista Avenue across the project site.[3] A third street, currently unnamed but identified as Street A on the Tentative Map, would extend across the site parallel to and east of the Stanton Street extension. All three of these parallel streets would connect with Clement Avenue, which would be extended westward from its current terminus at the northeast corner of the site along the site's northern boundary, terminating at the northwest corner of the site. It is expected that this road may be extended further to the west in the future, in accordance with the Transportation Element of the General Plan.

The three north/south streets would be located within a 56-foot-wide right-of-way (ROW), including a 36-foot roadway (two 10-foot travel lanes and two 8-foot parking lanes), 5-foot-wide bio-retention swales adjacent to the parking lanes, and 5-foot-wide sidewalks at the outsides of the ROW. In addition, a 5-foot-wide utility easement would be located adjacent to the sidewalks on each side, outside the public ROW. The width of the ROW of the Clement Avenue extension would vary from 53 feet to 69 feet, depending on location along the curved roadway. It would include a 42-foot roadway with a westbound travel lane of 17 feet and an eastbound travel lane of 17 feet plus an 8-foot parking lane. Clement Avenue would have the same bioswales, sidewalks, and utility easements described above for the north/south streets, except the utility easements would be located only along the south side of the street.

Grading, Stormwater, and Wastewater

The site is essentially level and as a result, only a very limited amount of grading would be required. However, an area of undocumented fill would be over-excavated and replaced with engineered fill. In total, site preparation would require approximately 21,210 cubic yards of cuts and 30,630 cubic yards of fill, requiring about 9,420 cubic yards of imported fill. The proposed grading plan would result in street grades of 0.5 percent to 0.8 percent.

Site preparation would include the removal or abandonment of several existing storm drains crossing the site, including a 30-inch-diameter line extending across the western edge of the site, a 48-inch pipe crossing the northwest corner of the site, and a 27-inch line crossing the north-central side of the site.

Stormwater collection and drainage would occur along the proposed streets via catch basins located within the curbs. Collected stormwater from the streets would be directed to 5-foot-wide grassy bioswales located between the curbs and sidewalks; these swales would provide natural treatment of stormwater through biofiltration. Stormwater would also be collected from all impervious surfaces (including roofs) on the residential lots and directed to the treatment swales.

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[3] For ease of reference throughout this document (including figures with photos), the northwest/southeast alignment of Buena Vista Avenue is assumed to run in an east/west direction, and all other compass reference points are adjusted accordingly. Thus, while the project site is located on the northeast side of Buena Vista Avenue, it is described as being on the north side of Buena Vista Avenue. All other reference points have been similarly simplified.

Treated stormwater from the streets and private lots would be discharged into storm drains running under the streets, with diameters ranging from 18 inches to 48 inches. The stormwater would drain by gravity to the Arbor Street pump station, which is located near the southeast corner of the Fortman Marina basin, adjacent to the project site's northern boundary at Arbor Street. Stormwater would be pumped from here through an outfall that discharges into the Oakland Inner Harbor, which is hydrologically connected to San Francisco Bay.

The project would create 229,405 square feet (about 5.27 acres) of impervious surfaces and, under Section C.3 of the Clean Water Program Alameda County's National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit, would require 9,004 square feet of bioretention/treatment facilities. The project would provide 9,098 square feet of bioswales, exceeding the C.3 requirements. The project site is not located within an area subject to hydromodification management (HM) requirements pursuant to Provision C.3.

Wastewater would be collected in 8-inch sanitary sewer lines running under each of the proposed streets that would connect to an existing 57-inch sewer line in Buena Vista Avenue that conveys sewage westward to other interceptors and community collections systems at the intersection of Constitution Way and Atlantic Avenue. Wastewater treatment and disposal in the area is performed by the East Bay Municipal Utility District (EBMUD).

It is anticipated that project construction would commence in Spring 2013 and require 17 to 22 months to complete.

Public Services and Utilities

The proposed project would be served by the following service and utility providers:

- Alameda Fire Department
- Alameda Police Department
- Alameda Unified School District
- East Bay Municipal Utility District (EBMUD)
- Alameda Clean Water Program
- Alameda Public Works Department
- Alameda Recreation and Park Department
- Alameda Free Library
- Pacific Gas & Electric (PG&E)
- Alameda Municipal Power
- Alameda County Industries, Waste Management, Inc.

Population Generation

Based on U.S. Census data, the proposed project would generate a population of 2.40 persons per dwelling unit, or a total of about 166 residents. This would represent an approximately 0.22-percent increase in the overall population of the City of Alameda.

Planning Approvals

Subdivision Map: The project would require approval of a Tentative Subdivision Map and recording of a Final Subdivision Map, in accordance with the Subdivision Map Act, *California Government Code* Sections 66410 *et. seq.*

In addition to the approval of a Tentative Map for the project evaluated in this Initial Study, the project would also require additional future planning approvals, including approval of a Development Plan and a Planned Development Permit, pursuant to Chapter XXX, Article I, Section 30-4.13 of the *Alameda Code of Ordinances*, and design review approval pursuant to Chapter XXX, Article II, Section 30-37 of the *Alameda Code of Ordinances.*

Other Approvals

The project would also require grading and encroachment permits from the Alameda Public Works Department and building permits from the Alameda Community Development Department.

San Francisco Bay Area Regional Water Quality Control Board (RWQCB): The project would also require filing of a Notice of Intent (NOI) to the San Francisco Bay Area Regional Water Quality Control Board and preparation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP addresses control of stormwater pollution during construction through implementation of Best Management Practices (BMPs).

San Francisco Bay Conservation and Development Commission (BCDC): An existing Major Permit was previously issued by BCDC for development of the site with a residential subdivision. The project would likely require an administrative revision of the permit, which runs with the land. The applicant would be required to demonstrate that the project would provide public access to the Bay shoreline.

9. Site Description and Surrounding Land Uses:

The proposed project site is located in the City of Alameda on the north side of Buena Vista Avenue, east of Entrance Road, as shown on Figure 1. Regional freeway access to the site is from Interstate 880 via the Webster Street Tube or the Park Street Bridge.

The site is located on the northern waterfront of the island city, adjacent to the Fortman Marina. The City of Oakland shoreline is located about 4,000 feet to the north, across the Oakland Estuary.

The project site encompasses approximately 7.14 acres of level land area developed with a large one-story metal-clad storage warehouse that occupies more than half the site. The existing warehouse is shown on Figure 4a. The west end and northern side of the site are paved with asphalt used for parking trucks and truck trailers, as shown on Figure 4b. Approximately 500 linear feet of the eastern portion of the planned Clement Avenue extension across the site is vacant undeveloped land that supports sparse ruderal vegetation.

A cyclone fence about 4 feet in height extends along the site frontage on Buena Vista Avenue. A strip of land about 14 feet wide extends along the inside of the fence and a wooden fence, about 4 feet high, lines the other side of the strip of land. Inside this second fence is a second strip of land about 26 feet wide that extends along the length of the warehouse. This area is stockpiled with pallets, boxes, and other materials.

a) Oblique view of project site as viewed from Buena Vista Avenue at Ohlone Street.

b) West end of project site as viewed from Entrance Road.

Figure 4

Existing Site Conditions

Source: Douglas Herring & Associates

a) Viewing south along Stanton Street from just south of Buena Vista Avenue.

b) The historic Del Monte Warehouse located immediately west of the project site.

Figure 5

Neighboring Land Uses

Source: Douglas Herring & Associates

A strip of vacant land also runs along the east side of the site. In addition to weeds and grasses, numerous clumps of pampas grass grow along the wood fence that lines the eastern site boundary. The east end of the site is enclosed by an 8-foot-high cyclone fence topped with barbed wire. A one-story metal-clad office building is attached to the west end of the warehouse.

The project site is essentially level, with a negligible upward slope from west to east. Elevations range from about 4.0 feet above mean sea level (msl) near the northern edge of the site to about 7.4 feet msl in the southeastern corner of the site.

The project site is located on a single parcel (APN 072-0384-031). The property is currently zoned R-4-PD (Neighborhood Residential with a Planned Development overlay) and designated Medium-Density Residential in the Alameda General Plan.

The site is located at the edge of a former industrial zone that is gradually being redeveloped with new uses more compatible with existing residential development in the vicinity. The property to the east was already converted to single-family residential as part of the original Marina Cove project. The site is also bordered to the south by single-family residential development that extends for many blocks to the south, east, and west. A representative view of a residential street just to the south of the project is shown on Figure 5a. Littlejohn Park is located about 500 feet west of the project site, on the south side of Buena Vista Avenue.

The historic Del Monte Warehouse is located immediately to the west of the site. This two-story brick warehouse occupies two blocks and presents a long, curving façade along Buena Vista Avenue, shown on Figure 5b. As part of the Northern Waterfront GPA, the land use designation of this site was amended to Mixed Use in order to allow redevelopment of the former food processing plant with a variety of potential uses that could include live/work studios, residences, offices, retail uses, and/or restaurants. The blocks to the west of this large warehouse are occupied by single-family homes. The Bay-Eagle Community Garden is located one block to the northwest, at the intersection of Bay Street and Eagle Avenue.

Fortman Marina, home to the Alameda Yacht Club, is located immediately to the north of the project site. This 497-berth marina was developed in the historic Fortman Basin, which was dredged in the early 1900s to create the marina. Grand Marina, with 400 boat slips, is located just to the east of Fortman Marina. Fortman Marina is bordered on the west by the Encinal Terminals, a storage and cleaning facility for freight containers used by shipping companies that operate at the nearby Port of Oakland and/or at other Bay Area ports. This site was also designated for Mixed Use as part of the previous Northern Waterfront GPA, and its development with residential and other uses is anticipated in the next several years.

West of the Encinal Terminals site is a business park with office and light industrial uses. The shoreline to the north of the business park is developed with the Pacific Marina, home to the Encinal Yacht Club. Between the shoreline and the business park are Shoreline Park and the Marina Village residential neighborhood, consisting of apartments, condominiums, and single-family homes.

The area north of Clement Avenue and east of the project site is still a largely industrial district developed with maritime and industrial uses. It includes the Alameda Marina, with 530 boat berths as well as dry boat storage, RV and camper storage, and warehouse, office, and industrial buildings. The Island Yacht Club is based at this marina. Approximately 1,000 feet to the north of the marina is Coast Guard Island, which has a campus for Columbia College.

The south side of Clement Avenue east of Grand Street is lined with a mix of one- and two-story office buildings, small businesses, and single-family homes. Most of the block west of the intersection of Clement Avenue and Grand Street is occupied by a Pennzoil facility that manufactures and stores oils and greases, and includes an administrative office building.

In addition to nearby residences, other sensitive receptors in the vicinity of the project site include:

- First Baptist Church, at 1515 Santa Clara Avenue, about 1,300 feet south of the site;
- Calvary Christian Center, at 15116 Grand Street, about 1,400 feet southeast of the site;
- Christ Episcopal Church, at 1700 Santa Clara Avenue, about 1,600 feet south of the site;
- Mastick Senior Center, at 1155 Santa Clara Avenue, about 2,000 feet southwest of the site;
- Trinity Lutheran Church, at 1323 Central Avenue, about 2,100 feet southwest of the site;
- Columbia College, at Coast Guard Island, Building 3, about 2,400 feet northeast of the site;
- Fuzzy Caterpillar Preschool, at 1510 Encinal Avenue, about 2,500 feet south of the site;
- Franklin Elementary School, at 1433 San Antonio Avenue, about 2,500 feet south of the site;
- Henry Haight Elementary School, at 2025 Santa Clara Avenue, about 2,500 feet southeast of the site;
- First Presbyterian Church, at 2001 Santa Clara Avenue, about 2,500 feet southeast of the site;
- Alameda Korean Presbyterian Church, at 2001 Santa Clara Avenue, about 2,500 feet southeast of the site;
- Alameda Chapel, at 1001 Lincoln Avenue, about 2,600 feet west of the site;
- Argosy University San Francisco, at 1005 Atlantic Avenue, about 2,800 feet northwest of the site;

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural Resources	☒ Air Quality
☐ Biological Resources	☒ Cultural Resources	☒ Geology/Soils
☐ Greenhouse Gas Emissions	☒ Hazards & Haz. Materials	☒ Hydrology/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☒ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☒ Transportation/Traffic	☐ Utilities/Service Systems	
☒ Mandatory Findings of Significance		

DETERMINATION:

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on the attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date
Printed name	For

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

EVALUATION OF ENVIRONMENTAL IMPACTS:

I. AESTHETICS — *Would the project:*

a) Have a substantial adverse effect on a scenic vista? ☐ ☐ ☐ **X**

Explanation: General regional views in the project area are characterized as a mix of industrial and shipping facilities and residences. The site is bordered on the south and east by medium-density single-family residential development, on the west by the historic Del Monte Warehouse, and on the north by the Fortman Marina and the Alameda Yacht Club.

Although aesthetic evaluations are inherently subjective, certain viewscapes are widely held to be scenic. Such vistas typically tend to comprise or partially encompass natural landscapes. Within the project vicinity, the major scenic vista is the Oakland Alameda Estuary; however, the project site, which is currently developed with a warehouse facility, is not considered a scenic resource. The mid-ground and distant background views available from the project site face toward the north and consist mostly of boats docked at the marinas the Oakland hills, as shown on Figure AE–1a. A narrow and distant view of the downtown Oakland skyline is visible from the northwest corner of the site, framed by nearby buildings on the Encinal Terminals site. These views are only available to the public from, respectively, the terminus of Clement Avenue at the northeast corner of the site and the terminus of Entrance Road at the northwest corner of the site, and these views would be unaffected by the proposed project.

The major viewpoints from the north looking south toward the project site include the Alameda Yacht Club, which is a private club for sailboats and powerboats, and the Fortman Marina. This marina provides 497 berths, including 31 covered berths. The marina has a small park at the southern end of the property, adjacent to the northern boundary of the project site. Figure AE–1b shows the view from the marina park toward the project site. As shown, this is not a scenic view warranting protection. Construction of the proposed project would not obstruct views of the Oakland Estuary from this location, depicted on Figure AE–1a.

Viewpoints from the east looking west toward the project site are composed of existing residences located along Ohlone Street. These residential properties form the eastern boundary of the project site, and therefore have an immediate view of the proposed project. The view of the project site from the ground floor of these residences is partially obscured by a 7-foot-high wood fence with a lattice top, but the warehouse is plainly visible over the top of the fence and from second-floor bedrooms facing the west. Figure AE–2a shows two of the homes located on Ohlone Street that border the existing warehouse facilities. This photo and the one shown on Figure 7a demonstrate that the existing warehouse facility is visually prominent as viewed from this neighborhood, and is visually incompatible with surrounding residential development. The project site does not provide a scenic view and it obscures such scenic views of the Oakland Estuary and distant Oakland Hills as might otherwise be visible from Buena Vista Avenue.

a) Viewing north from adjacent to the northwest corner of the project site.

b) View of the project site from the marina park adjacent to the site's northern boundary.

Figure AE-1

Existing Views Near the Project Site

Source: Douglas Herring & Associates

a) View from residential neighborhood on Ohlone Street toward the project site. The existing warehouse is visible between the two homes.

b) Viewing north from Stanton Street toward project site.

Figure AE-2

Existing Views Toward the Project Site

Source: Douglas Herring & Associates

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

The viewpoint from public vantage points west of the project site (for example, from Atlantic Avenue) looking toward the site is composed primarily of the historic Del Monte warehouse. This warehouse is very large and, along with intervening trees, obstructs the entire view of the project site from Atlantic Avenue.

Viewpoints from the south looking toward the project site are composed of existing residences that are located adjacent to the project site along the south side of Buena Vista Avenue, the public right-of-way (ROW) along Buena Vista Avenue, and the ROWs (streets and sidewalks) of the north/south streets south of the project site. Figure AE–2b shows a representative view from the south, taken from Stanton Street between Buena Vista Avenue and Pacific Avenue looking north toward the site. This figure demonstrates that the existing warehouse currently obstructs views of the Oakland Estuary from south of the site. Because the existing residences do not currently have a view of the Oakland Estuary, the proposed project would not have an adverse aesthetic impact on scenic resources. The proposed project would demolish the existing commercial warehouse building and build residences that would conform to design and architectural guidelines that are consistent with the existing residences.

The project would have a beneficial effect on scenic views by opening up new view corridors toward the estuary through the new north/south streets. Although these views would be narrowly framed, they would be a substantial improvement over the existing views north across the project site, which consist entirely of the massive warehouse building. In addition, the proposed extension of Clement Avenue across the northern boundary of the site would provide new/expanded public access to the view of Fortman Marina, the Oakland Estuary, and the distant Oakland Hills, depicted on Figure AE–1a.

As noted in the Northern Waterfront GPA DEIR, the entire GPA area occupies a relatively flat area and there are no slopes greater than a few feet in height. The GPA DEIR also states that "Buildings such as the Del Monte Warehouse, the Chipman Warehouse (located on the project site), and the Encinal Terminals are large, and comprise highly visible landmarks within the generally flat landscape."[4] The GPA DEIR aesthetics section also stated that viewpoints of the GPA planning area are from the immediate vicinity or obscured by existing buildings. According to the GPA DEIR, "views from Buena Vista Avenue to the waterfront are limited, with no clear view of the waterfront at any point."[5] Specifically, the following features obstruct views of the waterfront: the large Chipman and Del Monte building, large shipping containers (stacked upon each other vertically) at the Encinal terminal, and boat masts at the Fortman and Grand Marinas. A site visit performed in August 2012 confirmed this assessment from 2006 is still current.

Based on all of the considerations discussed above, the project would have no adverse impact on scenic vistas.

Following approval of the proposed Tentative Subdivision Map, the design of the homes would require Design Review approval pursuant to Alameda Municipal Code Sections 30-36 and 30-

[4] City of Alameda, *Alameda Northern Waterfront General Plan Amendment Draft Environmental Impact Report*, page IV.M-1, January 20006.

[5] *Ibid*, page IV.M-10.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

37, which would ensure the homes are compatible and harmonious with surrounding properties.

b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	X

Explanation: The project site contains no significant trees, rock outcroppings, or historic buildings, and is not located within the viewshed of a State scenic highway.[6] The proposed project would have no impact on scenic resources.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	X

Explanation: The existing visual quality of the site is quite low, consisting of a large warehouse, pavements, and ruderal vegetation. The proposed project would demolish the existing commercial warehouse facilities and replace them with new residences that would conform to the City's architectural and design standards and would be visually consistent with the existing homes in the nearby blocks. Therefore, the proposed project would not degrade the existing visual character of the site or its surroundings. On the contrary, the proposed project would be considered an aesthetic improvement because construction of the new residences would comply with architecture and design standards that would be consistent with the existing homes. The site would be opened up visually and would provide the visual variety inherent in a neighborhood of single-family homes with variations in architecture, landscaping, color, and more, all of which is currently lacking at the site. As noted above, the homes would require Design Review, which would further ensure the homes are compatible and harmonious with surrounding properties.

In conclusion, the proposed project would have no adverse impact on the existing visual quality of the site or its surroundings.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	X	☐

Explanation: The proposed project would not result in the introduction of a substantial source of new glare. The proposed buildings would not be covered in reflective surfaces and the amount of fenestration would be modest and in line with common residential developments. While parked cars can provide new sources of daytime glare on sunny days, all homes would have two-car garages providing 138 off-street spaces of covered parking. There would be no

[6] California Department of Transportation, website, http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm, accessed August 8, 2012.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

concentration of parked cars anywhere on the site, and this would not be a substantial source of glare. Furthermore, the generous planting of street trees proposed along the single street would serve to substantially block glare from offsite receptors. The proposed project would conform to the City's design standards and guidelines for light and glare in residential areas. The potential for new project–generated glare to adversely affect offsite properties would therefore not be significant.

The project would introduce new nighttime light sources from interior and exterior lighting of the proposed homes. Where project buildings are visible during the day from offsite locations, the interior household lighting would be visible in these buildings at night. However, nighttime lighting of this nature is contained by window coverings, fixture shades, and intervening building surfaces, and does not create nighttime glare. This type of lighting is also an inherent and widely accepted aspect of any type of occupied human development. Exterior lighting would be required to be shielded and downward-directed in accordance with the City's standard conditions of approval imposed during Design Review, which is required by Alameda Municipal Code Sections 30-36 and 30-37. For these reasons, the project would not introduce a new source of substantial light with the potential to adversely affect nighttime views in the area.

The project's light and glare impacts would therefore be less than significant.

II. AGRICULTURAL AND FOREST RESOURCES

— *In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forestry Legacy Assessment Project, and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:*

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	X

Explanation: The project property is designated "Urban and Built–Up Land" on the most recent map of important farmland published by the Department of Conservation (DOC), a department

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

of the California Resources Agency.[7] The DOC's Farmland Mapping and Monitoring Program (FMMP) produces maps and statistical data used for analyzing impacts on California's agricultural resources. The FMMP updates the maps every two years; the most recent map was prepared in 2010. The project would be located in a fully developed area that has been urbanized for many years. The entirety of the island city of Alameda is designated Urban and Built–Up Land. There is no Prime Farmland or Farmland of Statewide Importance in the vicinity of the project site, and the project would not convert farmland to a non-agricultural use.

The proposed conversion of the project property to residential use would not remove productive agricultural land from production, and it would not convert land designated as Prime Farmland or Unique Farmland from agricultural production. The project's impact on agricultural resources would therefore be less than significant.

b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?* ☐ ☐ ☐ **X**

Explanation: The project site is zoned for residential use; no portion of the site is zoned for agricultural use, and none of the site lies within a Williamson Act contract area.

c) *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined in Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?* ☐ ☐ ☐ **X**

Explanation: The project site is not zoned as forest land or timberland, and no trees are present on the site, other than a single small tree near the southern edge of the site that appears to be in poor health. The proposed project would have no impact on forest or timberland.

d) *Result in the loss of forest land or conversion of forest land to a non-forest use?* ☐ ☐ ☐ **X**

Explanation: See Item II(c), above.

e) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?* ☐ ☐ ☐ **X**

[7] California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, "Alameda County Important Farmland 2010" (map), April 2011.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Explanation: The project site is not located in an area devoted to or compatible with agricultural use and does not support forest land. The project would not cause conversion of other farmland to non-agricultural use or forest land to non-forest use.

III. AIR QUALITY

— *Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:*

a)	*Conflict with or obstruct implementation of the applicable air quality plan?*	☐	☐	☒	☐

Explanation:

Introduction to the Air Quality/GHG Analysis

The air quality analysis presented throughout Section III is based on the air quality impact assessment guidelines adopted by the Bay Area Air Quality Management District (BAAQMD) in June 2010 and updated in May 2011.[8] In March 2012 an Alameda County Superior Court judge suspended the revised thresholds of significance for air quality and greenhouse gas impacts promulgated in the BAAQMD's June 2010 CEQA guidelines until such time as the agency conducts CEQA review of the thresholds. The District has appealed this ruling, with the outcome yet to be determined.

The State *CEQA Guidelines* explicitly allow and encourage a lead agency to determine its own thresholds of significance for evaluating the significance of environmental effects.[9] In doing so, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence. Although a lead agency is required to adopt thresholds of significance intended for general use by ordinance, resolution, rule, or regulation, with a public review process, in the current instance, the City of Alameda is utilizing the thresholds recommended in the BAAQMD's June 2010 CEQA guidelines for the proposed project, but does not intend to apply them generally to environmental review projects in the City. It is expected that, as the primary regulatory agency in the Bay Area with jurisdiction over air quality, the BAAQMD will again be in a position to recommend thresholds of significance for air quality and greenhouse gases in the near future. When this occurs, the City will resume deferring to the District's recommended thresholds of significance for CEQA review, as has previously been the case with most cities and counties in the nine-county Bay Area over which BAAQMD has jurisdiction.

There is substantial evidence supporting the City's decision to rely on BAAQMD's June 2010 CEQA guidelines and thresholds for evaluating the air quality and greenhouse gas (GHG) impacts of the proposed project. The BAAQMD spent more than a year and a half developing

[8] Bay Area Air Quality Management District (BAAQMD), *California Environmental Quality Act Air Quality Guidelines*, May 2011.

[9] California Resources Agency, Office of Planning and Research, *CEQA Guidelines*, Section 15064.7.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

the June 2010 thresholds of significance, and conducted workshops and public meetings throughout the process to solicit input and feedback from the public. Draft documents were available for review on the BAAQMD website throughout the process. A variety of different options were evaluated during the process. The District drew on its own air quality expertise, as well as that of the California Air Resources Board, numerous other air pollution control districts throughout the State, and outside consultants. Other air districts consulted during the process included the Monterey Bay Unified Air Pollution Control District, Santa Barbara County Air Pollution Control District, Mojave Desert Air Quality Management District, South Coast Air Quality Management District, Sacramento Metropolitan Air Quality Management District, and the Ventura County Air Pollution Control District.

The thresholds of significance are tied to compliance with the California ambient air quality standards (CAAQS) and the national ambient air quality standards (NAAQS), which were developed pursuant to the State Clean Air Act and federal Clean Air Act, respectively. Thresholds for toxic air contaminants are based on health risk, and GHG thresholds are based on achieving GHG reductions mandated by Assembly Bill 32 and former Governor Arnold Schwarzenegger's Executive Order S-3-05. The adopted thresholds were supported by the California Attorney General and major environmental groups. They were based on scientific methods, including computer modeling, and utilized emissions data, ambient air pollution data, population data and growth projections, and health risk data, among other sources. While the BAAQMD may have been remiss in adopting the thresholds without conducting CEQA review, there was substantial research, public input, and a solid basis for determining and adopting the standards. It should also be noted that in setting aside the BAAQMD's June 2010 thresholds, the Superior Court did not rule or comment on the validity of the thresholds themselves. Absent guidance from the State Office of Planning and Research or the California Air Resources Board regarding this issue, the City of Alameda has determined that the BAAQMD relied on substantial evidence in adopting the June 2010 thresholds of significance for criteria air pollutants, GHGs, and toxic air contaminants, which forms the basis for the City's use of those thresholds in the analysis presented in Section III, Air Quality, and in Section VII, Greenhouse Gases.

Compliance with Air Quality Plan

BAAQMD is the air quality agency with jurisdiction over the Bay Area. It is responsible for monitoring regional air quality, developing regional clean air plans, and responding to citizen air quality complaints. BAAQMD is also the agency with permit authority over most types of stationary sources in the San Francisco Bay Area.

The project site lies within the San Francisco Bay Area Air Basin (SFBAAB), one of the cleanest air basins in the State. The nine counties surrounding San Francisco Bay (Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southwestern Solano, and southern Sonoma counties) form a regional air basin, sharing common geographical features and weather patterns, and therefore similar air pollution burdens, which cannot be addressed by counties acting on their own.

As required by the federal Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA) identified criteria pollutants and established the NAAQS to protect the public health and welfare. There are NAAQS for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter equal to or less than 10 microns (PM_{10}), fine particulate matter equal to or less than 2.5 microns ($PM_{2.5}$), and lead (Pb). These pollutants are

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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known as "criteria" air pollutants because standards have been established to meet specific public health and welfare criteria.

The NAAQS are defined as the maximum acceptable concentration that may be reached, but not exceeded more than once per year. California has adopted more stringent ambient air quality standards for most of the criteria air pollutants (CAAQS, or State standards). The pollutants of greatest concern in the area are ozone and PM_{10}. The Bay Area is currently designated as a nonattainment area for the State and federal ozone standards, the State respirable particulate matter (PM_{10}) standard, and the State and federal fine particulate matter ($PM_{2.5}$) standards. The *Bay Area 2005 Ozone Strategy* and the *Bay Area 2010 Clean Air Plan* adopted by BAAQMD identify a variety of strategies, programs, regulations, and control measures intended to reduce emissions of air pollutants including ozone and ozone precursors so as to bring the Bay Area into attainment with the CAAQS and NAAQS. Most of the regulations and control measures require implementation by BAAQMD or the Metropolitan Transportation Commission and/or coordination with transit agencies or other public agencies.

If project review is conducted in accordance with the BAAQMD CEQA Guidelines, a project is typically assumed by the Air District to comply with the Clean Air Plan and with the Ozone Strategy, the applicable air quality plans.[10] Since the project is not anticipated to result in any unavoidable significant air quality impacts, and the air quality analysis presented in this Initial Study was conducted in accordance with the BAAQMD CEQA Guidelines, the proposed project would not conflict with the Clean Air Plan or Ozone Strategy.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	X	☐	☐

Explanation: The project would be located in a region that experiences occasional violations of ozone, PM_{10}, and $PM_{2.5}$ standards. Construction and operation of new development therefore has the potential to contribute to these violations. These potential impacts are addressed separately below.

Operational Impacts

BAAQMD's CEQA Air Quality Guidelines establish new thresholds of significance for operational emissions of 54 lb./day or 10 tons/year for ROG, $PM_{2.5}$, and NO_x, and 82 lb./day for PM_{10}. By comparison, the previous operational thresholds adopted by BAAQMD in 1996 were 80 lb./day or 15 tons/year for ROG, PM_{10}, and NO_x. There was no previous threshold for $PM_{2.5}$. The current thresholds address emissions of exhaust and evaporative organics. Fugitive dust emissions of PM_{10} and $PM_{2.5}$ are addressed through compliance with prescribed control measures identified by BAAQMD.

Operational air emissions from the project would be generated primarily from autos driven by residents and visitors and from delivery and service trucks. Emissions could also be generated by lawn mowers, gas-powered leaf blowers, barbeques, fireplaces, and other common

[10] Alison Kirk, Senior Environmental Planner, Bay Area Air Quality Management District, personal communication, March 12, 2012.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

residential sources. Evaporative emissions from architectural coatings and consumer cleaning/maintenance products are other typical emissions from residential uses. The California Emissions Estimator Model, Version 2011.1.1 (CalEEMod), was used to predict emissions from construction and operation of the project, assuming full build out of the project. The project land use type, size, and trip generation rate were input to CalEEMod, as described in more detail below. Adjustments to the model are described below. Model output worksheets are included in Appendix A.

CalEEMod Inputs and Assumptions

Land Use Descriptions: The project land uses were input to CalEEMod, including 59 new single-family detached residences (CalEEMod = "Single-Family Housing") and 10 new below-market-rate units in duplexes (CalEEMod = "Condo/townhouse").

Year of Analysis: Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates CalEEMod uses. With construction occurring during 2013 and 2014, the earliest year the project could possibly begin operating would be 2015. Use of this date is considered conservative, as emissions associated with build-out later than 2015 would be lower.

Trip Generation Rates: CalEEMod allows the user to enter specific trip generation rates. TJKM Transportation Consultants provided trip generation rates for the project by land use type, which were entered into the model.

Area Sources: Minor adjustments were made to the area source inputs of CalEEMod. These include adjustments that all residences would use natural gas and would potentially include only natural gas-fueled fireplaces. In addition, the emission rate for architectural coatings (e.g., paints) was adjusted to account for current BAAQMD regulations (Reg. 8, Rule 3).

Table AQ–1 reports the average daily operational emissions. As shown in Table AQ–1, average daily emissions of ROG, NO_X, PM_{10} exhaust, or $PM_{2.5}$ exhaust associated with operation would not exceed the BAAQMD significance thresholds. Therefore, the project's operational impact on air quality would be less than significant.

Construction Impacts

Construction operations for any sizeable project have the potential to result in short-term but significant adverse air quality impacts. BAAQMD's CEQA Air Quality Guidelines establish thresholds of significance for construction emissions of 54 lb./day for ROG, $PM_{2.5}$, and NO_x, and 82 lb./day for PM_{10}. These are the same daily thresholds applicable to operational emissions. The PM thresholds apply to exhaust emissions only, not ground disturbance.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Table AQ–1
Operational Project Emissions of Criteria Air Pollutants

Scenario/Parameter	ROG	NO_x	PM_{10}	$PM_{2.5}$
Emissions in tons per year	1.10	1.46	0.05	0.05
BAAQMD Thresholds	10	10	15	10
Significant?	***No***	***No***	***No***	***No***
Emissions in pounds per day[1]	6.0	8.0	0.3	0.3
BAAQMD Thresholds	54	54	82	54
Significant?	***No***	***No***	***No***	***No***

Source: Illingworth & Rodkin, Inc., 2012.
Notes:
[1]Assumes 365 operational days per year.

The CalEEMod model provided average daily and annual emissions for each phase of construction. CalEEMod provides emission estimates for both on-site and off-site construction activities. A reasonable construction scenario was developed, based on projected building construction techniques, equipment, and schedule provided by the applicant. Appendix A includes the model output for construction emissions and a list of construction equipment that is anticipated. CalEEMod provides an assessment of overall construction emissions from both on-site and off-site activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes truck hauling and worker traffic. Refined emissions modeling of $PM_{2.5}$ exhaust from on-site activities was predicted as part of the construction health risk assessment addressed later in this section.

Schedule, Phasing and Equipment

Although the actual construction of the project is projected to require between 17 and 22 months, the modeling scenario conservatively assumes that the project site would be built out over a period of approximately 9 months beginning in Spring 2013. Modeling a shorter construction period exaggerates the emissions, and thus represents a worst-case analysis. Under this scenario, it is estimated that construction would take up to 194 total work days. The construction schedule, estimated hauling, and demolition volumes (of both the existing warehouse and parking lot concrete), and anticipated equipment use by phase were input to the model. Off-road equipment emission factors were adjusted by reducing the load factors used in the modeling by 33 percent to be consistent with latest 2010 CARB estimates. Construction period architectural coatings (ROG emissions) were adjusted in the model to account for BAAQMD Regulation 8, Rule 3 – Architectural Coatings, which limits most paints to less than 150 grams of volatile organic compounds per liter.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Table AQ–2 shows average daily construction emissions of ROG, NOx, PM_{10} exhaust, and $PM_{2.5}$ exhaust during both demolition and construction of the project. As indicated in Table AQ–2, predicted project emissions would not exceed the BAAQMD significance thresholds.

Table AQ–2
Project Construction Emissions of Criteria Air Pollutants

Scenario/Parameter	ROG	NO_x	PM_{10}	$PM_{2.5}$
Average Daily Emissions (lbs.)	1.10	1.46	0.05	0.05
BAAQMD Thresholds	10	10	15	10
Significant?	***No***	***No***	***No***	***No***

Source: Illingworth & Rodkin, Inc., 2012.

Although the project is not predicted to exceed significance thresholds, absent implementation of the BAAQMD's Basic Construction Mitigation Measures, the project's effects of construction–generated criteria pollutants would be a ***potentially significant impact***, based on the criteria discussed above. Implementation of the controls listed in Mitigation Measure AQ–1, which incorporates the Basic Construction Mitigation Measures, would reduce the project's construction–related air quality impacts to a less–than–significant level.

Mitigation Measure AQ–1: The project applicant shall require the construction contractor to reduce the severity of project construction period dust impacts by complying with the following control measures:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 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.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

- Idling times shall 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 Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

c) *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*	☐	☐	X	☐

Explanation: As discussed in Section III(b), above, the project's emissions of criteria air pollutants would be well under the significance thresholds adopted by BAAQMD for evaluating impacts of ozone and particulate matter. Therefore, the project would not contribute substantially to existing or projected violations of those standards. Carbon monoxide emissions from traffic generated by the project would be the pollutant of greatest concern at the local level. Congested intersections with a large volume of traffic have the greatest potential to cause high localized concentrations of carbon monoxide. Air pollutant monitoring data indicate that carbon monoxide levels have been at healthy levels (i.e., below State and federal standards) in the Bay Area since the early 1990s. As a result, the region has been designated as attainment for the standard. There is an ambient air quality monitoring station in West Oakland at 1100 21st Street that measures carbon monoxide concentrations. The highest measured level over any 8-hour averaging period during the last three years (2009 – 2011) is less than 3 parts per million (ppm),[11] compared to the ambient air quality standard of 9.0 ppm. BAAQMD screening guidance indicates that a project would have a less-than-significant impact with respect to carbon monoxide levels if project traffic projections indicate traffic levels would not increase at any affected intersection to more than 44,000 vehicles per hour. The busiest intersection affected by the project would have 2,000 vehicles per PM peak hour. Because traffic volumes at the busiest intersection affected by the project would be far less than the 44,000-vehicle threshold volume, the project would not have a significant effect with respect to carbon dioxide.

[11] California Air Resources Board (CARB), 2012. iDAM: Air Quality Data Statistics. Available online: http://www.arb.ca.gov/adam. Accessed: August 8, 2012.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Therefore, the project's cumulative impact related to emissions of criteria air pollutants would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	**X**	☐

Explanation: Health risk from exposure to air pollutants is evaluated based on the potential for exposure to $PM_{2.5}$ and toxic air contaminants (TACs), the two emission types that pose the most significant threat to human health. According to BAAQMD, more than 80 percent of the inhalation cancer risk from TACs in the Bay Area is from diesel engine emissions.[12] TACs are a set of airborne pollutants that may pose a present or potential hazard to human health, and are separated into carcinogens and non-carcinogens. State and local regulatory programs are intended to limit exposure to TACs and the associated health risk. Both TACs and $PM_{2.5}$ are emitted by trucks, cars, construction equipment, and other mobile sources. They are also emitted by stationary sources that require permitting by the BAAQMD, which requires source controls.

Project impacts related to increased health risk can occur either by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity. The BAAQMD recommends using a 1,000-foot radius around a project site for purposes of identifying community health risk from siting a new sensitive receptor or a new source of TACs. A lead agency should enlarge the radius if an unusually large source or sources of hazardous emissions that might affect a project lies outside the 1,000-foot radius.

The proposed project would introduce new sensitive receptors to the project site. Sensitive receptors are people most susceptible to poor air quality, and include children, the elderly, the infirm, or others with medical conditions susceptible to poor air quality (e.g., asthma, bronchitis, chronic respiratory disease). Land uses that are generally considered to be sensitive receptors include residences of all types, schools and school yards, parks and playgrounds, daycare centers, nursing homes, and medical facilities.

The BAAQMD provides screening tools and recommended procedures for evaluating the potential health risk associated with proposed land use development.[13] For new receptor projects, such as the proposed residential subdivision, lead agencies should review the risks from nearby roadways, freeways, and stationary sources. In most cases, the screening for cancer risk described below will also adequately screen for health risks associated with $PM_{2.5}$.[14] The BAAQMD considers an excess cancer risk of more than 10 in one million persons, a non-cancer (i.e., chronic or acute) health risk greater than a Hazard Index (HI) of 1.0, or a $PM_{2.5}$ concentration of more than 0.3 micrograms per cubic meter ($\mu g/m^3$) to be a significant adverse impact.

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[12] Bay Area Air Quality Management District (BAAQMD), *California Environmental Quality Act Air Quality Guidelines*, page 5-3, May 2011.

[13] Bay Area Air Quality Management District (BAAQMD), *Recommended Methods for Screening and Modeling Local Risks and Hazards*, Version 3.0, May 2012.

[14] Ian Peterson, Environmental Planner II, Bay Area Air Quality Management District, personal communication, July 3, 2012.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Freeway and Roadway Sources of TACs

In conducting a screening analysis for estimating community risk associated with siting a new sensitive receptor in proximity to a major source of TACs, the BAAQMD recommends that a lead agency utilize a 1,000-foot radius. If a large source is located outside this radius, the radius should be enlarged. Permitted sources of TACs include facilities such as oil refineries, gas stations, dry cleaners, crematories, landfills, wastewater treatment plants, hospitals, and coffee roasters, among many others. Unpermitted sources, such as freeways and high-volume roadways, can also be significant emitters of TACs, particularly since diesel engines power most trucks and some autos. As noted above, diesel engine emissions comprise the majority of TACs and $PM_{2.5}$ emitted in the Bay Area.

Interstate 880 is considered a significant source of TACs and $PM_{2.5}$, but this freeway is approximately 0.9 miles north of the project site, and poses no significant health risk to the project. Other major roadways are only considered to have a potential cancer risk or chronic health hazard risk if they have a traffic volume of at least 10,000 average annual daily traffic (AADT). The two local roadways with the highest traffic volumes in the project vicinity are Buena Vista Avenue and the future Clement Avenue. Both roadways are projected to have cumulative plus project traffic volumes under 10,000 AADT. The computed AADT for Buena Vista Avenue adjacent to the project site is 4,923 vehicles; it is 6,453 vehicles on Clement Avenue.[15] Using the BAAQMD screening table for local roadways,[16] the exposure from each roadway at a distance of 10 feet is below a cancer risk of 10 in one million, $PM_{2.5}$ concentration levels of 0.3 $\mu g/m^3$ and acute or chronic Hazard Index of 1.0.

Stationary Sources of TACs

A Google Earth™-based database maintained by the BAAQMD was consulted to identify any permitted sources of TACs in the project vicinity.[17] Three sources were identified within the recommended 1,000-foot screening radius: (1) City of Alameda Public Works Department diesel generator and (2) fuel tank, both located at 1616 Fortmann Way, approximately 900 feet northeast of the site; and (3) ConGlobal Industries, formerly located at 1532 Buena Vista Avenue. Personal communication with John Cook indicated that ConGlobal, a shipping and container industry, relocated approximately five years ago.[18] As such, ConGlobal was not factored into the risk computation.

The BAAQMD database provides the estimated cancer risk and non-cancer (i.e., chronic or acute) health risk at these sources. The risk numbers provided in the database were adjusted for the appropriate distance to the project site using the BAAQMD's Diesel Internal Combustion (IC) Engine Distance Multiplier Tool[19] for the diesel generator to derive the adjusted risk factors at the project site. The BAAQMD database indicates that the fuel tank risk is negligible. It

[15] Actual counted volumes were not available. The AADT was calculated from actual counts of AM and PM peak-hour volumes. The calculated values assume AADT = 3 X (AM + PM).

[16] Bay Area Air Quality Management District (BAAQMD), *Roadway Screening Analysis Tables*, updated April 29, 2011.

[17] Bay Area Air Quality Management District (BAAQMD), *Stationary Source Screening Analysis Tool*, updated May 30, 2012.

[18] John Cook, Owner, Townsend Real Estate, personal communication, August 8, 2012.

[19] Bay Area Air Quality Management District (BAAQMD), *Diesel Internal Combustion (IC) Engine Distance Multiplier Tool*, updated June 13, 2012.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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should be noted that the cancer and health risk numbers provided in the database of stationary sources do not represent actual impacts. Rather, they are upper-limit health risk screening values used to determine whether a refined modeling analysis of health impacts is required.

Project residents would be exposed to a screening-level excess cancer risk of 1.13 per million persons from the permitted stationary air pollutant source (diesel generator) located in the project vicinity. The non-cancer health risk would be well under a hazard index of 0.01. The annual average $PM_{2.5}$ concentration would be well under 0.01 $\mu g/m^3$. The hazard index (HI) is defined as the ratio of the predicted incremental exposure concentration from the project to a published reference exposure level (REL) that could cause adverse health effects, as established by the California Office of Environmental Health Hazard Assessment (OEHHA). Project residents would be exposed to increased cancer, health, and $PM_{2.5}$ risks well below the thresholds referenced above. The health risks to project occupants from exposure to existing stationary sources of TACs would therefore be a less-than-significant impact.

Community Risk Impact from Construction Activity

Construction activity is anticipated to include demolition of existing buildings and paved areas, excavation, grading, building construction, paving, and application of architectural coatings. During demolition, excavation, grading, and some building construction activities, substantial amounts of dust could be generated. Most of the dust would result during grading activities. The amount of dust generated would be highly variable and would be dependent on the size of the area disturbed at any given time, amount of activity, soil conditions and meteorological conditions. To address the potential community risk impact from dust resulting from construction impacts, the BAAQMD CEQA Air Quality Guidelines best management practices identified in Mitigation Measure AQ–1 will be adopted and construction dust impacts would therefore be less than significant.

In addition, construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a TAC. As previously discussed in Section III(b), these emissions would not significantly affect or result in non-attainment conditions or air quality violations. BAAQMD has developed screening tables for evaluating potential impacts from toxic air contaminants emitted at construction sites.[20] The screening tables are described by BAAQMD as "environmentally conservative interim guidance" and are meant to be used to identify potentially significant impacts that should be modeled using refined techniques. These screening tables indicate that construction activities associated with residential development could have significant impacts at distances beyond 100 meters or 330 feet, with the primary impact being excess cancer risk. Since project construction activities would include demolition, excavation, grading and building construction that would last longer than 6 months and would be located within 330 feet of residences, a more refined level analysis of community risk assessment was conducted.

There are existing residences immediately adjacent to the eastern portion of the project site along Ohlone Street and farther east. There are additional residences and apartments along Buena Vista Avenue and farther south of the project site. A health risk assessment of the project construction activities was conducted that evaluated potential health effects of sensitive

[20] BAAQMD, *Screening Tables for Air Toxics Evaluation During Construction*, May 2010.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

receptors at these nearby residences from construction emissions of diesel particulate matter (DPM). A dispersion model was used to predict the off-site DPM concentrations resulting from project construction, so that lifetime cancer risks could be predicted. Figure AQ-1 shows the project site, construction emission sources used in the air quality dispersion modeling analysis, and sensitive receptor locations where potential health impacts were evaluated.

On-site construction period diesel exhaust emissions were computed using emission factors from the CARB OFFROAD model for off-road construction equipment and from the EMFAC2011 model for emissions from trucks (e.g., haul trucks and vendor trucks). Emissions from trucks were evaluated for on-site activity and truck travel within 1,000 feet of the site. The number and types of construction equipment and diesel vehicles, along with the anticipated length of their use, for different phases of construction was based on the site-specific construction activity schedule. All of the construction equipment was assumed to be from model year 2005, which is representative of U.S. Environmental Protection Agency (EPA) Tier 2 equipment. Heavy-duty truck trips were based on the amount of material to be hauled away during demolition of the existing structures and the amount of soil to be imported for the project. Vendor truck trips were estimated as 7 trips per day during the building construction phase based on the CalEEMod modeling. Vendor trucks were assumed to be made up of 50 percent heavy-duty trucks and 50 percent medium-duty trucks. Construction of the project is anticipated to occur over a one-year period commencing in 2013. The anticipated construction schedule and DPM emission calculations are provided in Appendix A.

The U.S. EPA ISCST3 dispersion model was used to predict concentrations of DPM at existing residences surrounding the project site using the modeled rate of emissions. The ISCST3 modeling included a single area source to represent the on-site construction activities and a line source (modeled as a series of volume sources along a path) to represent the off-site truck travel along Buena Vista Avenue and Entrance Road. An emission release height of 6 meters was used for the area source. The elevated emission release height represents the elevated exhaust stacks and buoyant plumes. Emissions were modeled as occurring daily between 7:00 a.m. and 4:00 p.m. The model used a three-year (1998 – 2000) BAAQMD data set of hourly meteorological data from the Port of Oakland, located about 3.7 miles northwest of the project site. Annual DPM concentrations from construction activities were predicted for 2013 based on the three-year average concentrations from modeling three years of meteorological data. DPM concentrations were calculated for two heights at each receptor location: 1.5 meters and 4.55 meters, representative of the first and second stories of apartments and residences.

The maximum-modeled DPM concentration occurred east of the construction area at a residence next to the project site on Ohlone Street, at the height of a second-story receptor. The location of this receptor is shown on Figure AQ-1.

Increased cancer risks were calculated using the maximum modeled annual DPM concentrations and BAAQMD recommended risk assessment methods for both a child exposure (3rd trimester through two years of age) and for an adult exposure. Although OEHHA assumes an exposure period of 350 days per year,[21] with 15 days away from the site during vacation, hospitalization, and other reasons, the modeling was conducted assuming emissions occur 365

[21] Office of Environmental Health Hazard Assessment (OEHHA), *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, August 2003.

Figure AQ-1

Modeled Construction Emission Sources and Sensitive Receptor Locations

Source: Illingworth & Rodkin, Inc.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

days per year, resulting in a slightly more conservative estimate of impact. Infant and child exposures were assumed to occur at residences through the entire construction period.

Results of this assessment indicate an incremental residential child cancer risk of 7.2 cancer cases per million and a residential adult incremental cancer risk of 0.4 cancer cases per million. These cancer risks are below the BAAQMD's threshold of 10 excess cancer cases per million. Appendix A includes the emission calculations used for the construction area source modeling and the cancer risk calculations.

Potential non-cancer health effects due to chronic exposure to DPM were also evaluated. The chronic inhalation reference exposure level (REL) for DPM is 5 $\mu g/m^3$. The maximum predicted annual DPM concentration from construction activities is 0.082 $\mu g/m^3$, which is much lower than the REL. The Hazard Index (HI), which is the ratio of the annual DPM concentration to the REL, is 0.016. This HI is much lower than the BAAQMD significance criterion of a HI greater than 1.0.

Based on the results summarized above, the health risk assessment determined that the project's health risk impacts would be less than significant.

e)	*Create objectionable odors affecting a substantial number of people?*	☐	☐	**X** ☐

Explanation: The BAAQMD identifies a variety of land uses that may typically generate objectionable odors, and recommend screening distances of 1 to 2 miles, depending on the use. Examples of odor-generating land uses include wastewater treatment plants, solid waste landfills and transfer stations, composting facilities, oil refineries, asphalt batch plants, chemical manufacturing plants, and coffee roasters, among others. No odor-generating facilities that would cause odor complaints were identified in proximity to the project site.

During construction, diesel-powered vehicles and equipment would generate odors at the site. However, these odors would be temporary and they would be quickly dispersed through atmospheric dispersion, and therefore would not be likely to be noticeable beyond the project boundaries.

Operation of the proposed project would not create objectionable odors affecting a substantial number of people. Odors generated by residential uses could include temporary fumes from paints or similar products, emissions from outdoor barbeques, fugitive cooking odors, odors from fertilizer or pesticide applications, and similar common activities. These odors are highly temporary, would affect few if any offsite receptors, and would not be especially objectionable. Therefore, any potential for the project to create objectionable odors affecting a substantial number of people would be less than significant.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

IV. BIOLOGICAL RESOURCES — *Would the project:*

a)	*Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*	☐	☐	☐	**X**

Explanation: The majority of the project site is occupied by a large warehouse. Nearly all of the rest of the site is covered by pavement, with the primary exception of the eastern portion of the planned extension of Clement Avenue across the northern edge of the site. This strip of land consists of exposed soil, non-native grasses and weeds, and a few small clumps of pampas grass, sweet fennel, and coyote brush. A narrow strip of land extending along the southern edge of the site is also covered with grasses and weeds, a single small tree in poor health, and several small clumps of pampas grass. There is no habitat on the project site for sensitive or special-status wildlife species. The site has been fully developed with urban uses for many years, and is located in an area that has been developed with urban uses for decades. While rodents and common urban bird species could utilize the limited ruderal habitat on the site for foraging, these are not protected or special-status species. Such usage would be expected to be very limited due to the scarcity of vegetation for food and cover. Any wildlife that is using the site on a periodic basis would readily be able to relocate to similar urban habitat nearby. Therefore, the proposed project would not have an adverse effect on special-status plant or wildlife species.

b)	*Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*	☐	☐	☐	**X**

Explanation: There are no riparian corridors or other sensitive natural communities on the project site.

c)	*Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*	☐	☐	☐	**X**

Explanation: There are no creeks, wetlands, or other waters on the project site that would be regulated as Waters of the U.S. and State pursuant to Section 404 of the Clean Water Act.

d)	*Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with any*	☐	☐	☐	**X**

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Explanation: There is a very limited amount of poor-quality natural habitat that lacks sufficient vegetation to serve as an attraction to wildlife, and the site is surrounded by industrial development and other urban uses. There is therefore no potential for the site to serve as a migration corridor for wildlife.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	X

Explanation: The City's Historic Preservation Ordinance protects significant trees by requiring approval by the Historical Advisory Board for removal of trees from sites designated by the City as Historical Monuments.[22] The project site is not a designated Historical Monument, and removal of the lone tree from the site would therefore not conflict with the City's Historic Preservation Ordinance. There are no other local policies or ordinances protecting biological resources that are applicable to the project site or the proposed project.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	X

Explanation: There are no habitat conservation plans or other similar plans applicable to the project site.

V. CULTURAL RESOURCES — *Would the project:*

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	X	☐	☐

Explanation: Section 15064.5 defines an historical resource as a resource listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources. California historic resources listed in, or formally determined eligible for the National Register of Historic Places are automatically listed on the California Register. A lead agency under CEQA also may determine an object, building, structure, site, area, place, record, or manuscript to be an historical resource, provided the determination is "supported by substantial evidence in light of the whole record."[23] A lead agency may generally consider a

[22] City of Alameda, *Code of Ordinances*, Chapter XIII, Article VII, Section 13-21–Preservation of Historical and Cultural Resources.

[23] Governor's Office of Planning and Research, *CEQA Guidelines*, Section 15064.5(a)(3), revised October 26, 1998.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

resource to be historically significant if it meets one or more of the criteria for listing on the California Register of Historical Resources. Those criteria include the following:

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

The value and significance of an historical resource is determined in part by the degree of historical integrity it possesses. Following the National Register integrity criteria, California Register regulations specify that integrity is a quality that applies to historic resources in seven ways: location, design, setting, materials, workmanship, feeling, and association.[24]

Historical Context of the Project Area[25]

The City of Alameda was once part of a Spanish land grant that extended from Berkeley to San Leandro, given to Luis Peralta in 1818 by the Governor of California. William Worthington Chipman and Gideon Aughinbauh purchased "the Encinal" area encompassing the project site from Peralta around 1851 for $14,000 and developed it with a peach orchard. The City was formally named Alameda, Spanish for "grove of trees," in 1853. The City, which was a peninsula at the time, then had a population of a few hundred people housed in approximately 50 to 60 homes.

Alameda grew as a producer of fruit and other agricultural products to serve the growing market in San Francisco. It also served as a bedroom community to many San Francisco commuters, who valued the City's temperate weather and for its proximity to San Francisco. By 1870 the population had grown to 1,557 people, and by the early 20th century, Alameda had two well-established business districts, along with several small shopping areas and extensive residential development. In 1902, Alameda became an island when the completion of a tidal canal severed the peninsula from Oakland.

Northern Alameda Waterfront

The development of the area known as the Northern Alameda Waterfront began in 1852 with the construction of Hibberd's Wharf near San Antonio Creek. Following the 1859 dredging of the creek by the Army Corps of Engineers, the waterfront was developed with a shipbuilding industry, which in turn led to development of the area to the south with residential neighborhoods that sprang up as early as the 1870s.

[24] The definition of integrity under the California Register follows National Register of Historic Places criteria. Detailed definitions of the qualities of historic integrity are in National Register Bulletin 15, *How to Apply National Register Criteria for Evaluation*, published by the National Park Service.

[25] This summary is drawn from the Northern Waterfront GPA EIR.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

The Alameda Beltline Railyard (originally the Industrial Railway or Municipal Railway) was constructed along the northern waterfront in 1918 in order to open up the area to industrial development. Operated by Southern Pacific, the rails were extended several times over the years as a result of an increased demand for service, accelerated by two world wars and construction of the Naval Air Station.

The Encinal Terminals, a large industrial shipping terminal on the north side of Atlantic near the Oakland Estuary, was opened in 1925 as a general cargo facility for agricultural products, and before World War II, it was one of the largest cargo facilities in the Bay Area and one of the largest employers in Alameda. During World War II, it served as the General Navy Supply Depot for the South Pacific. A great deal of additional industrial development was constructed along Buena Vista Avenue between 1927 and 1956, including the Del Monte Warehouse and distribution center, constructed in 1927 by the Alaska Packer's Association for the California Packing Corporation. The area was developed with numerous shipyards and a steel fabricating plant that employed thousands of workers during World War I and continuing until most of the shipyards were shut down after the Vietnam War. The Weyerhaeuser Paper Co., Pennzoil, and other large companies also began operations in the area north of Buena Vista Avenue after World War II.

The dominance of industrial development in the Northern Waterfront has been declining since the 1970s. Del Monte ceased operations in 1973 and the Pacheco and Todd shipyards closed in 1981. The former Bethlehem steel plant is now occupied by the Marina Village Development.

Historical Resources on the Project Site

The Northwest Information Center (NWIC) at Sonoma State University conducted an archival records search for the project site and determined that two cultural resource studies had previously been conducted in the general project area, but they did not include architectural evaluations of the existing warehouse or archaeological investigations of the project site.[26] Because Native American resources have been found in this part of Alameda County in close proximity to the former margin of the Bay and its associated estuaries and marshlands, the NWIC concluded that there is a moderately high potential for unrecorded Native American cultural resources to remain buried at the project site. Based on a review of historic maps and literature in which development on the site appears to date to at least 1899, the NWIC also determined that there is a moderate potential for identifying unrecorded historic-period archaeological resources at the site. Based on these findings the NWIC recommended additional evaluation by a qualified archaeologist familiar with the architecture and history of Alameda County.

Accordingly, the archaeological consulting firm Holman & Associates was retained in August 2012 to perform a cultural resources evaluation of the project site.[27] This evaluation consisted of an expanded archival literature review at the Northwest Information Center at Sonoma State University and performance of an on-site surface reconnaissance of the project site that, due to the presence of a building and pavement occupying most of the site, was restricted to the strip

[26] California Historical Resources Information System (CHRIS), Northwest Information Center, Sonoma State University, *Record Search Results for the Marina Cove II Residential Subdivision Project, City of Alameda*, NWIC File No. 12-0077, July 31, 2012.

[27] Holman & Associates Archaeological Consultants, *Marina Cove II Residential Subdivision Project, City of Alameda, Alameda County, California*, (letter report) August 13, 2012.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

of undeveloped land in the northern portion of the site. Holman determined that there are no recorded historic or prehistoric archaeological resources on or in the vicinity of the project site, and concluded that the NWIC's determination regarding archaeological sensitivity was based on the site's proximity to the prehistoric estuary edge and/or its position when historic development began in the area in the early 20th century.

No indications of cultural resources were encountered during the surface reconnaissance of the project site conducted on August 9, 2012 by Holman & Associates, who noted that the lack of visual indicators was due to the site being covered with fill materials, a building, paved parking lots, and gravel. The archaeologist concluded that the lack of recorded prehistoric archaeological sites within a half-mile of the site could be due to the early industrial development of the area, and concurred with the NWIC conclusion that there is a moderately high potential for unrecorded Native American cultural resources to remain buried at the project site.

An historical evaluation of the warehouse on the site was previously performed by Archaeological Resource Management (ARM).[28] The evaluation determined that the warehouse is not listed on the California Register of Historical Resources or the National Register of Historic Places, nor is it eligible for listing on either register. ARM concluded that the warehouse had only a peripheral association with the local fruit industry and did not play a significant role in the local or regional history, and was not associated with any important individuals or events.

Despite this finding, historic resources of significance could potentially remain buried under the project site. If historic resources are present on the site, they could be damaged or destroyed during project construction, which would be a ***potentially significant impact***. Implementation of Mitigation Measures CR–1 through CR–3, set forth in Section V(b), below, would reduce potential impacts to cultural resources to a less-than-significant level.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	X	☐	☐

Explanation: Prior to European contact, the project area was inhabited by the Bay Miwok tribe of Native Americans. By the 19th century, forced missionization and the epidemic spread of western diseases had reduced the Bay Miwok population significantly, resulting in the disappearance of local tribelets, such as the Chochenyo, who inhabited the area now comprising the Alameda Northern Waterfront. Buried Native American artifacts, including remnants of former settlements, have been encountered throughout the Bay Area, particularly adjacent or in proximity to water sources, and could potentially be present at the project site.

As noted in Section V(a), cultural resources evaluation of the project site was performed by Holman & Associates in August 2012, which included an archival search of archaeological resources in the area that identified no archaeological sites on or within a half-mile of the project site. While no significant deposit or concentration of archaeological data was identified in the

[28] Archaeological Resource Management, *Historic Evaluation of the Structures Located at the 1500 Block of Buena Vista Avenue*, January 12, 1999.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

archival research or field reconnaissance of the proposed project site, Holman concurred with the NWIC conclusion that there is a moderately high potential for unrecorded Native American cultural resources to remain buried at the project site, and recommended subsurface testing of the site prior to project construction or archaeological monitoring during construction. Absent these precautions, potentially significant deposits may be present in the site's subsurface, and could be damaged or destroyed during site grading, which would constitute a ***potentially significant, adverse impact***. Implementation of the following mitigation measures would reduce this potential impact to a less-than-significant level.

Mitigation Measure CR–1: Prior to issuance of a grading permit, the project sponsor shall retain the services of a qualified archaeologist to develop and implement a plan, subject to review and approval by the City of Alameda Planning Division, for conducting a program of systematic subsurface archaeological testing. The mechanical testing program shall include excavation of test pits by backhoe following building demolition and removal of pavement, but prior to site grading. Mitigation Measures CR–2 and CR–3 shall also be implemented.

OR:

Following building demolition and removal of pavement, a qualified archaeologist shall be present during site clearing, grading, and excavation activities to continuously monitor for appearance of cultural resources. Monitoring shall continue until such time as the archaeologist determines that further removal of soils from the site will have no potential for encountering prehistoric and/or historic cultural deposits. If any potentially significant resources are discovered, all work shall be immediately halted in the area designated by the archaeologist as archaeologically sensitive until Mitigation Measure CR–2 has been fully implemented.

Mitigation Measure CR–2: If any cultural artifacts are encountered during site grading or other construction activities, all ground disturbance in the vicinity shall be halted until a qualified archaeologist can identify and evaluate the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s). The archeological consultant shall immediately notify the City of Alameda Planning Division and the project sponsor of the encountered archeological deposit. The archeological consultant shall prepare and implement a plan, subject to review and approval by the City of Alameda Planning Division, for evaluation, recovery, and/or documentation of the discovered resource.

The results of any additional archaeological effort required through the implementation of Mitigation Measures CR-1 through CR-3 shall be presented in a professional-quality report, to be submitted to the project sponsor, the City of Alameda, and

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

the Northwest Information Center at Sonoma State University in Rohnert Park. The project sponsor shall fund and implement the mitigation in accordance with Section 15064.5(c)-(f) of the CEQA Guidelines and Public Resources Code Section 21083.2.

Mitigation Measure CR–3: In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and a qualified archaeologist shall notify the Office of the Alameda County Coroner and advise that office as to whether the remains are likely to be prehistoric or historic period in date. If determined to be prehistoric, the Coroner's Office will notify the Native American Heritage Commission of the find, which, in turn, will then appoint a "Most Likely Descendant" (MLD). The MLD in consultation with the archaeological consultant and the project sponsor, will advise and help formulate an appropriate plan for treatment of the remains, which might include recordation, removal, and scientific study of the remains and any associated artifacts. After completion of analysis and preparation of the report of findings, the remains and associated grave goods shall be returned to the MLD for reburial.

c) *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?* ☐ ☒ ☐ ☐

Explanation: The Northern Waterfront GPA EIR did not identify known paleontological resources or unique geologic features within the GPA area, but concluded that paleontological resources could be discovered during grading or excavation activities associated with new development in the area. Any destruction of unique paleontological resources during earthmoving activities would be a ***potentially significant impact***. Implementation of the following measure, which is consistent with the mitigation identified in the previous EIR, would reduce this potential impact to a less-than-significant level:

Mitigation Measure CR–4: If any paleontological resources are encountered during site grading or other construction activities, all ground disturbance shall be halted until the services of a qualified paleontologist can be retained to identify and evaluate the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s). The project sponsor shall immediately notify City of Alameda Planning Division staff and the City building inspector assigned to the project upon discovery of paleontological resources. If a fossil find is confirmed, it shall be recorded with the U.S. Geological Survey and curated in an appropriate repository, as determined by the paleontologist.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
	☐	☐	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	X	☐	☐

Explanation: See Section V(b).

VI. GEOLOGY AND SOILS — *Would the project:*

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	X

Explanation: The information and analysis presented in Section VI, Geology and Soils, is based on a site-specific preliminary geotechnical investigation prepared by Cornerstone Earth Group (CEG) for the project.[29] The investigation will be peer reviewed by the Land Development and Permit Review Program of the City of Alameda Public Works Deparrtment, which will either concur with the findings and recommendations made by CEG or identify additional areas for examination or clarification. The investigation included subsurface testing, with three cone penetration tests (CPT) drilled at various locations throughout the development area. Information is also drawn from a previous geotechnical investigation of the site in 1998 by Lowney Associates.[30]

The project area is not located within an Alquist-Priolo fault zone and no active faults have been identified or mapped within or in proximity to the site by the California Division of Mines and Geology (CDMG), the U.S. Geological Survey, or Cornerstone Earth Group.[31] There is therefore no potential for fault rupture at the site.

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[29] Cornerstone Earth Group, *Preliminary Geotechnical Investigation, Marina Cove Residential Development, 1551 Buena Vista Avenue, Alameda, California*, June 14, 2012.

[30] *Ibid*.

[31] In California, the Alquist-Priolo Earthquake Fault Zoning Act of 1972 (formerly the Special Studies Zoning Act) regulates development and construction of buildings intended for human occupation to avoid the hazard of surface fault rupture. This Act and supplemental amendments groups faults into the categories of active, potentially active, and inactive. Historic and Holocene age faults are considered active, Late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive. These classifications are qualified by the conditions that a fault must be shown to be "sufficiently active" and "well defined" by detailed site-specific geotechnical explorations in order to determine that building setbacks might be established.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
	☐	☐	☐	☐
ii) Strong seismic ground shaking?	☐	X	☐	☐

Explanation: The project area is located in the Coast Ranges Province that developed in response to faulting associated with movement at the plate boundary between the North American and Pacific Crustal Plates, which resulted in a series of northwest-trending mountain ranges and intervening valleys. The project site is located within an uplifted range of hills locally referred to as the East Bay Hills block, bounded on the west by the active Hayward fault and on the east by the active Calaveras fault.

Published geologic maps indicate that the majority of the site is underlain by sandstone and mudstone units of the Tertiary Age Lower Mulholland Formation. In general, bedding near the site is mapped with a northwest strike with dips ranging from about 35 to 64 degrees towards the northeast.

The closest known active faults to the project site are the Hayward fault, located about 4.2 miles to the southwest; the Calaveras fault, located about 5.5 miles to the east; and the Concord-Green Valley fault, located about 9 miles to the northeast. The San Andreas fault, another major fault system in the region, is located about 22.5 miles southwest of the site. Many earthquakes of low magnitude occur every year throughout the region, with the majority concentrated along the San Andreas, Hayward, and Calaveras faults.

Similar to most urban locations throughout the Bay Area, the project site is potentially subject to strong seismic ground shaking during an earthquake on one of the major active earthquake faults that transect the region. At least five known earthquakes of Richter Magnitude (RM) 6.5—four of them greater than RM 7.0—have occurred within the San Francisco Bay Area within the last 150 years. According to a 2007 analysis by the Working Group on California Earthquake Probabilities, an expert panel co-chaired by U.S. Geological Society seismologists, there is a 63 percent probability that an earthquake of magnitude 6.7 or greater will occur in the San Francisco Bay Area in the next 24 years, and a 31 percent probability that such an earthquake will occur on the Hayward fault. It is therefore likely that a major earthquake will be experienced at the project site during the life of the project, and such an earthquake would produce strong seismic ground shaking.

A major earthquake on any of the active faults in the region could result in very strong to violent ground shaking. The intensity of earthquake ground motion would depend upon the characteristics of the generating fault, distance of the site to the earthquake epicenter and rupture zone, magnitude and duration of the earthquake, and site-specific geologic conditions. The California Geological Survey's Interactive Probabilistic Seismic Hazards Map (2002) indicates there is a 10-percent probability that seismic ground shaking will product a peak horizontal ground acceleration (PHGA) of at least 0.579 at the site within the next 50 years.[32]

A strong seismic event could seriously damage the proposed project and put its occupants at risk, which would be a ***potentially significant impact***. However, the geotechnical consultant for the project concluded that proper site preparation, structural design, and construction

[32] California Geological Society, Probabilistic Seismic Hazards Mapping Ground Motion Page, accessed July 28, 2012 at: http://redirect.conservation.ca.gov/cgs/rghm/pshamap/pshamap.asp.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

techniques would enable the project structures to withstand the maximum probable ground shaking at the site. Accordingly, the following measures are recommended to reduce this impact to a less-than-significant level:

Mitigation Measure GS–1: Prior to issuance of a grading permit, per the recommendation of the preliminary geotechnical investigation prepared for the project, the project sponsor shall retain the services of a qualified geotechnical engineer or engineering geologist to prepare a design-level geotechnical investigation for purposes of clarifying site preparation and design recommendations related to liquefaction potential, foundations, undocumented fill, shallow ground water, expansive soil, and abandoned below-grade improvements such as buried debris, pipelines, railroad ties and tracks, and old foundations and slabs. The recommendations in the preliminary geotechnical investigation report shall be updated or modified as appropriate to reflect the design-level geotechnical investigation.

Mitigation Measure GS–2: The proposed project design and construction shall incorporate all of the site preparation, foundation design, structural design, drainage, ground improvement performance testing, exterior flatwork, asphalt concrete pavement, and other recommendations presented in the June 14, 2012 geotechnical investigation prepared for the project by Cornerstone Earth Group, unless modified during construction, based on field conditions, by a qualified registered geotechnical or civil engineer. In addition, the final grading plans shall be reviewed by a qualified registered geotechnical or civil engineer, and any resulting additional recommendations shall be incorporated into the project. All site preparation work shall be performed under the observation of the Geotechnical Engineering firm of record. All design and construction shall conform to the requirements of the latest Uniform Building Code. All structural design and construction shall be subject to final approval by the City of Alameda Community Development Department.

iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐

Explanation:

Liquefaction

Liquefaction occurs when clean, loose, saturated, uniformly graded, fine-grained soils are exposed to strong seismic ground shaking. The soils temporarily lose strength and cohesion due to buildup of excess pore water pressure during earthquake-induced cyclic loading, resulting in a loss of ground stability that can cause building foundations to fail. Soil liquefaction may also damage roads, pavements, pipelines, and underground cables. Soils susceptible to liquefaction

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

include saturated, loose to medium dense sand and gravel, low-plasticity silt, and some low-plasticity clay deposits.

The project site is mapped by the California Geological Survey as within a Liquefaction Hazard Zone.[33] CEG evaluated subsurface conditions and determined that the majority of the site is underlain by artificial (man-made) fill overlying alluvial and older dune sand deposits. Artificial fill may be engineered and/or non-engineered material. The artificial fill at the northern edge of the site is generally underlain by a thin layer of Holocene Bay Mud, generally less than one to two feet thick. The young Bay sediments are generally underlain by older dune sands to the maximum depth of exploration, approximately 42 to 44 feet. CEG's analysis determined that the soils could experience liquefaction that could result in settlement on the order of ¾ to 1¾ inches, with differential settlements of ½ to 1 inch across a typical residential foundation. While this would be a ***potentially significant impact***, implementation of Mitigation Measures GS–1 and GS–2 would reduce the impact to a ***less-than-significant*** level.

Seismically-Induced Lurching or Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. As failure tends to propagate as block failures, it is difficult to analyze and estimate where the first tension crack will form.

The project site is located approximately 80 to 200 feet southwest of the Fortman Marina basin, a man-made dredged harbor. A previous investigation performed for the site recommended ground improvement along the waterfront of the Fortman Marina, to act as a lateral shear keyway that would resist lateral forces. In 2001, approximately 400 feet of shear keyway was constructed using closely spaced, eight-foot diameter soil-cement columns that extended to depths of approximately 17 feet.[34] CEG reviewed the installed shear key improvements, and concluded that lateral spreading appears to have been effectively mitigated and that there was little potential for future lateral spreading at the project site.

Earthquake-Induced Settlement

Settlement of the ground surface can be accelerated and accentuated by earthquakes. During an earthquake, settlement can occur as a result of the relatively rapid rearrangement, compaction, and settling of subsurface materials (particularly loose, non-compacted, and variable sandy sediments). Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different rates). Areas are susceptible to differential settlement if underlain by compressible sediments, such as poorly engineered artificial fill or unconsolidated sediments. The geotechnical consultant determined that the soils at the site are predominantly medium dense sands above the design ground water level, and that the potential for differential seismic settlement affecting the proposed project structures would be low.

[33] Cornerstone Earth Group, *Preliminary Geotechnical Investigation, Marina Cove Residential Development, 1551 Buena Vista Avenue, Alameda, California*, June 14, 2012.

[34] *Ibid*.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

iv) Landslides? ☐ ☐ ☒ ☐

Explanation: A landslide is a slope failure created by down-slope slippage of a mass of earth or rock that typically occurs as a planar or rotational feature along single or multiple surfaces. The project site is relatively flat, with only a few feet of topographic variation. Site elevations range from approximately four feet near the northern corner of the site to approximately 7.5 feet near the southern corner.[35] Therefore, the site is not subject to substantial risk of loss, injury, or death involving landslide.

b) Result in substantial soil erosion or the loss of topsoil? ☐ ☒ ☐ ☐

Explanation: Any construction project that exposes surface soils creates a potential for erosion from wind and stormwater runoff. The potential for erosion increases on large, steep, or windy sites; it also increases significantly during rainstorms. Demolition and grading at the project site would remove the existing building and paved surface that cover most of the site, and expose this area to erosion. Site grading activities would involve excavation, scraping, grading, and stockpiling of rock and soil. Stormwater could carry significant amounts of suspended sediment, potentially degrading water quality in the Oakland Estuary and San Francisco Bay. This would be considered a ***potentially significant impact***, which would be reduced to a less-than-significant level through implementation of the following mitigation measures. Although preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) is a standard requirement of the San Francisco Bay Area Regional Water Quality Control Board, inclusion of the requirement as a project mitigation measure ensures more effective tracking and monitoring.

Mitigation Measure GS–3: Grading activities shall be restricted to the summer construction season (April 15th through October 15th). Any site earthwork after October 15th shall be limited to activities related to erosion control unless authorized in writing by the City of Alameda.

Mitigation Measure GS–4: A Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and Stormwater Control Plan (SCP) shall be prepared and submitted along with grading permit applications. The SWPPP shall provide for temporary measures to control sediment and other pollutants during construction and the SCP shall specify permanent controls (such as drainage ditches) that should last for the life of the project. The requisite plans shall be prepared in accordance with the standards provided in the *Manual of Erosion and Sedimentation Control Measures* (2005) or the California Stormwater Quality Association's (CASQA) Best Management Practice (BMP) Handbooks for Construction and

[35] *Ibid.*

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

for New Development and Redevelopment (2009). Implementation of the plan will help stabilize graded and stockpile areas and reduce erosion and sedimentation. The plans shall identify Best Management Practices (BMPs) that will be adhered to during construction activities. Erosion-minimizing features such as hay bales, water bars, covers, sediment fences, sensitive area access restrictions (for example, flagging), and/or retention/settlement areas shall be implemented as necessary before the onset of inclement weather. Mulching, seeding, or other suitable stabilization measures shall be used to protect exposed areas during construction activities. The plans shall incorporate requirements of the Clean Water Program Alameda County and other applicable federal, State, and local requirements.

Mitigation Measure GS–5: To the extent practicable, existing topsoil in areas to be graded shall be stockpiled and re-used in the project areas for landscaping, erosion control, or other purposes.

c) *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*	☐	X	☐	☐

Explanation: The potential for landsliding, lateral spreading, settlement, and liquefaction was addressed above in preceding sections, and mitigations were identified to reduce potential impacts to less-than-significant levels.

d) *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?*	☐	X	☐	☐

Explanation: Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wetted. Fine-grained clay sediments are most subject to expansion. The soils that mantle the project vicinity are a mixture of sand, silts, and clay, which typically have a low shrink/swell potential. However, Bay Mud deposits, which underlie the artificial fill in a portion of the site, are moderately to highly expansive.[36] Structural damage may occur over a long period of time, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Heaving and cracking of pavements and slabs-on-grade can also occur on expansive soils as a result of shrinking and swelling in response to seasonal wetting and drying. While expansion of soils could damage building foundations and affect slope stability, which would be a ***potentially significant impact***, the potential hazard due to expansive soils would be mitigated through implementation of Mitigation Measures GS–1 and GS–2. Site soils should be

[36] City of Alameda, *Draft Environmental Impact Report, Alameda Northern Waterfront General Plan Amendment*, page IV.1-11, January 2006.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

moisture conditioned by watering for several days prior to placement of concrete and compacted in accordance with the recommendations of the geotechnical engineer. These requirements and other critical site grading requirements will be addressed through compliance with Mitigation Measures GS–1 and GS–2.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	X

Explanation: The proposed project would be tied to the municipal sewer system and would not require the use of a septic or alternative wastewater disposal system.

Upon implementation of Mitigation Measures GS–1 through GS–5, all potential geology and soils impacts would be reduced to a less-than-significant level.

VII GREENHOUSE GAS EMISSIONS—

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	X	☐

Explanation: Please see the discussion in Section III(a) for a background discussion on the approach to the air quality and greenhouse gases (GHG) analyses. The analysis presented in this section was done in accordance with the Bay Area Air Quality Management District's (BAAQMD) CEQA guidelines for air quality, and utilizes the thresholds of significance established in those guidelines, which the City is adopting as its own thresholds for purposes of this analysis. The application of the BAAQMD CEQA guidelines is discussed in Section III.

Operational Impacts

For new land use development other than stationary sources the thresholds of significance for GHG emissions are 1,100 metric tons of carbon dioxide equivalent per year ($MTCO_2e$/year) or 4.6 $MTCO_2e$/SP/year, where SP is service population, consisting of residents (if applicable) and employees. For new stationary sources the threshold is 10,000 $MTCO_2e$/year. Below these thresholds the GHG effects of a project can be considered to be less than significant. The proposed project would not include a new stationary source, so that threshold does not pertain to the project.

The same CalEEMod run that was used to predict project operational criteria air pollutant emissions was also used to predict operational GHG emissions (see Section III for additional details). The model output worksheets are contained in Appendix A. Default rates for energy consumption from residential units were assumed in the model. Emissions rates associated with electricity consumption were adjusted to account for Pacific Gas & Electric's (PG&E) projected 2015 carbon dioxide (CO_2) intensity rate. This 2015 rate is based in part on the requirement of a

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☐	☐	☐	☐

renewable energy portfolio standard of 33 percent by the year 2020. However, it should be noted that electric power is provided to the City of Alameda by Alameda Municipal Power (AMP), which currently derives 66 percent of its energy portfolio from renewable sources. When hydroelectric power from dams is factored in (which the State does not count as renewable), AMP's power is more than 98 percent carbon neutral.[37] In addition, AMP recently launched a program that allows all AMP customers to support 100-percent renewable energy by purchasing wind and solar power to match their monthly electricity use.[38] Due to these factors, the CalEEMod results would be expected to over-estimate GHGs emitted by proposed project operations.

CalEEMod uses a default rate of 641.30 pounds of CO_2 per megawatt of electricity produced based on emission rates certified prior to 2010. The derived 2015 rate for PG&E was estimated at 391.16 pounds of CO_2 per megawatt of electricity delivered and is based on the California Public Utilities Commission (CPUC) GHG Calculator.[39]

Assuming full occupancy of the project in 2015, the project's annual GHG emissions are predicted to be 915.1 $MTCO_2e$/year. This would be below the BAAQMD significance threshold of 1,100 $MTCO_2e$/year. The project's operational impact related to GHG emissions would therefore be less than significant. It should also be noted that the City has adopted a variety of initiatives and measures in the Local Action Plan for Climate Protection intended to reduce emissions of GHGs, including the following:[40]

- Reduce transportation emissions by 10 percent by implementing measures to require Transportation Demand management programs for large employers.
- Facilitate bicycle use through new ordinances to encourage bike riding.
- Evaluate parking strategies, provide transit and shuttles with traffic signal priority and queue jumpers, and encourage car share programs.
- Reduce emissions from energy consumption by adopting sustainable design and green building measures that improve energy efficiency in new buildings.
- Reduce emissions associated with solid waste by adopting "Zero Waste Strategy" programs and ordinances to encourage and mandate a reduction waste generation.

Construction Impacts

The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, the BAAQMD CEQA guidelines state that a Lead Agency should quantify and disclose GHG emissions that would occur during construction, and make a determination on the significance of these construction-generated GHG emission impacts in relation to meeting California Assembly Bill 32 (AB 32) GHG reduction goals. These goals, as established in Public Resources Code Section 21082.2, include reducing GHG emissions to the

[37] Alameda Municipal Power, "The AMP Power Content Label," accessed September 5, 2012 at: http://www.alamedamp.com/power/power-content-label.

[38] Alameda Municipal Power, August 8, 2012 Press Release, accessed September 5, 2012 at: http://www.alamedamp.com/2011-12-press-releases/1020-amp-launches-new-renewable-energy-program.

[39] California Public Utilities Commissions GHG Calculator version 3c, October 7, 2010. Available on-line at: http://ethree.com/public_projects/cpuc2.php. Accessed: August 8, 2012.

[40] City of Alameda, *Local Action Plan for Climate Protection*, February 5, 2008.

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☐	☐	☐	☐

1990 baseline by 2020, to 60 percent of the 1990 baseline by 2035, and to 20 percent of the 1990 baseline by 2050.[41] This translates to an estimated State GHG reduction goal of 174 million metric tons per year of CO_2e emissions by 2020.[42] The BAAQMD guidance encourages the Lead Agency to incorporate best management practices (BMPs) to reduce GHG emissions during construction, as feasible and applicable.

CalEEMod was used to predict both on-site and off-site construction emissions in the form of CO_2e. Construction modeling is described in Section III, Air Quality. Under this scenario, construction of the project would emit a total of 240.4 metric tons of CO_2e. These would be temporary emissions, and would be spread out over approximately 17 to 22 months. Neither the City of Alameda nor the BAAQMD have quantified GHG thresholds for construction activities. However, the emissions would be below the lowest operational threshold adopted by BAAQMD (1,100 $MTCO_2e$/year) and would be spread out over more than the measurement period (one year) of the operational threshold. The mitigation measures identified under Mitigation Measure AQ–1 to reduce construction period criteria air pollutant impacts would also reduce GHG emissions. When compared to the overall State reduction goal of approximately 174 million metric tons/year of CO_2e, the total construction GHG emissions for the project of 240.4 $MTCO_2e$ would be approximately 0.00014 percent of the State goal. These emissions would be quite small relative to Statewide emissions and should not conflict with the State's ability to meet the AB 32 goals and are therefore considered less than significant.

Though the BAAQMD has not established thresholds for construction-period GHG emissions, BAAQMD recommends that construction projects implement the following BMPs: Use of alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15 percent of the fleet, as feasible; use of local building materials (within 100 miles) of at least 10 percent; and recycle at least 50 percent of construction waste or demolition materials. Mitigation Measure AQ–1, required in Section III(b), includes other BMPs that would minimize GHG emissions during construction, such as minimizing equipment idling time and properly tuning equipment and vehicle engines.

Regarding recycling of construction waste, in 2002 the City implemented a comprehensive construction and demolition (C&D) debris diversion program. This was identified in the City's *Zero Waste Implementation Plan* as a key strategy for reducing emissions of GHGs.[43] The program requires the City's permitted C&D debris haulers—Waste Management, Inc. and Sonrise Construction—to provide the City with documentation that they have diverted 50 percent of all C&D debris generated by building or demolition projects valued at $100,000 or more. As reported in the *Zero Waste Implementation Plan*, in 2008 Sonrise Construction diverted 594 tons of C&D debris and disposed of just 81 tons, a diversion rate of 88 percent.

Because the GHG emissions from construction would be well under comparable operational thresholds of significance, would not impact the State's ability to meet the AB 32 GHG reduction goals, and would be minimized through implementation of BMPs, the project's emissions of GHGs would not have a significant impact on the environment.

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[41] Bay Area Air Quality Management District (BAAQMD), B*ay Area 2010 Clean Air Plan, Final Clean Air Plan - Vol. I*, page 1-2, adopted September 15, 2010.

[42] *Ibid*, page 3-27.

[43] City of Alameda, *Zero Waste Implementation Plan*, September 2010.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
	☐	☐	☐	☐
b) *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*	☐	☐	X	☐

Explanation: See the discussion in Section VII(a), above. The project conforms to General Plan policies and projections. The MCSP EIR determined that development of the MCSP area would not conflict with BAAQMD's Clean Air Plan, which is intended to reduce District-wide emissions of GHGs and other pollutants. The proposed project is consistent with the General Plan and MCSP, and would therefore not conflict with the Clean Air Plan.

VIII HAZARDS AND HAZARDOUS MATERIALS —

Would the project:

a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*	☐	☐	X	☐

Explanation: The proposed project would not involve the routine transport, use, or disposal of hazardous materials. Residential occupants of the site would be expected to store and use small containerized quantities of hazardous household, yard care, and automotive products of a wide variety. This type of usage is typical of all residential development, and would not constitute a significant hazard to the public or the environment.

b) *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*	☐	☐	X	☐

Explanation: As discussed in Section VIII(a) above, the proposed project would not introduce hazardous materials beyond those generally found within residential uses, including containerized household, yard care, and automotive products.

Phase I Environmental Site Assessment

A Phase I Environmental Site Assessment (ESA) of the project site was performed by Cornerstone Earth Group in June 2012.[44] The purpose of the ESA was to identify recognized environmental conditions on the project site, including the presence or likely presence of any hazardous substances that could create a significant hazard to the public or the environment, whether through an existing release, past release, or threat of a release into structures, into the ground, or into surface or groundwater.

[44] Cornerstone Earth Group, *Phase I Environmental Site Assessment, 1551 Buena Vista Avenue, Alameda, California*, June 11, 2012.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

The ESA included a review of publicly available local, State, and federal environmental databases; several publicly available historical sources; historical topographic maps from 1895 through 1980; aerial photographs from 1939 through 2005; historic street directories; fire insurance maps; and physical setting sources. Cornerstone also conducted a reconnaissance of the property and interviews with persons and government officials knowledgeable of the site history and conditions.

The project site is listed on the Hazardous Waste Information System (HAZNET) database, which indicates that "other organic and inorganic solids" and "unspecified organic liquid mixture" were manifested for off-site disposal in 2003. Two adjacent properties were also identified in the local, State, and federal environmental databases that were searched. The Encinal Terminals site located at 1521 Buena Vista Avenue, just to the north of the project site, is listed on the State's Leaking Underground Storage Tank (LUST) database; the Spills, Leaks, Investigation and Cleanup (SLIC) database; and others. The LUST and SLIC listings identify a status of Case Closed for this site. The Weyerhaeuser Paper Company, at 1801 Hibbard Street, adjacent to the eastern boundary of the project site, is listed on the LUST and other databases as Case Closed. This property was redeveloped in 2002 as the original Marina Cove subdivision.

History of the Site

The project site was historically used for agricultural production dating to the late 1800s. A 1939 aerial photograph shows the site developed with row crops and what appear to be a farm house and associated outbuildings. The existing warehouse on the site was constructed between 1949 and 1950 by Stokely-Van Camp, Inc., which used the site for storage of canned goods. It was subsequently acquired by Del Monte and became part of the company's warehouse and distribution center, including the extant Del Monte Warehouse located immediately west of the project site. The warehouse on the project site has been operated by Chipman Moving and Storage for storage and office purposes since around 1993.

The Corn Products Company (CPC) International previously operated a tank farm immediately to the north of the project that was used to store animal fats, various food related oils, and syrup. The facility consisted of more than 50 above-ground storage tanks (ASTs), and partially extended onto the northeastern portion of the project site, primarily within the alignment for the proposed extension of Clement Avenue. The ASTs appear to have been constructed during the 1950s and 1960s and removed during the late 1990s or early 2000s.

The CPC tank farm and the project site were both part of the original Encinal Terminals facility, which currently consists of the trapezoidal pier located just to the northwest of the project site.

Chemical Use and Storage

The Encinal Terminals facility previously included three underground storage tanks (USTs) storing gasoline, two USTs storing diesel fuel, a concrete waste oil tank, six ASTs storing caustic soda, a sulfuric acid AST, and other drum storage areas, sumps, and clarifiers. These facilities were removed between 1988 and 2001. The 2,000-gallon diesel UST, removed in 1994, was located in the northeast corner of the project site within the proposed Clement Avenue alignment, while the other facilities were located offsite to the north.

Soil and groundwater samples collected from the area around the UST were collected and submitted for analysis at a State-certified laboratory. Total petroleum hydrocarbons as diesel

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(TPHd) was detected at 26,000 micrograms per liter (μg/L) in groundwater from the UST excavation and at up to 15,000 μg/L in groundwater samples collected from adjacent borings. Total petroleum hydrocarbons as gasoline (TPHg) was detected in groundwater at up to 970 μg/L. Toluene, ethylbenzene, and xylenes were detected in groundwater at up to 3.3 μg/L, 3.7 μg/L, and 26 μg/L, respectively. Benzene was not detected in the groundwater samples.

The collected soil samples also revealed petroleum hydrocarbon contamination. TPHd was detected in soil samples from the UST excavation at up to 160 miligrams per kilogram (mg/kg) and at up to 1,100 mg/kg in soil samples collected from adjacent borings. Toluene, ethylbenzene, and xylenes were detected in soil samples at up to 0.011 mg/kg, 0.005 mg/kg, and 0.094 mg/kg, respectively. Benzene was not detected in any of the soil samples. Remediation of the contaminated soil was performed and the Alameda County Department of Environmental Health (ACDEH) issued a case closure letter dated February 6, 1996 indicating that no further action related to the UST release was required, but noting that if a change in land use is proposed, the owner must promptly notify the department.[45]

The Phase I ESA noted that additional groundwater sampling was conducted near the former diesel UST in 2011 by Adanta, Inc.[46] and Bureau Veritas (BV).[47] Although Adanta reported elevated TPH concentrations in the groundwater, BV determined that these results were not indicative of the actual petroleum hydrocarbon concentrations at the site because the grab groundwater samples were analyzed for extractable petroleum hydrocarbons without using the silica gel clean-up (SGC) method. Consequently, BV performed subsequent sampling from four groundwater monitoring wells adjacent to the four Adanta borings where the highest concentrations of TPH in ground water had been reported. Employing the SGC analytical method, collected groundwater samples revealed TPHd at 660 ug/L in one monitoring well (MW-103), while TPHg and petroleum hydrocarbons as motor oil (TPHmo) were not detected. BV concluded that the elevated concentrations of TPH presented in the Adanta report were not validated and should not be considered representative of petroleum hydrocarbon concentrations in groundwater at the site, and Cornerstone concurred with this conclusion.

Former USTs were also located near the southeast edge of the project site, on the former Weyerhaeuser property now developed with single-family homes constructed in 2002. There were five USTs containing gasoline, diesel, and waste oil, which were removed in 1991 and 1994. Both soil and groundwater contamination with TPH was identified and subsequently remediated under ACDEH oversight.

The ACDEH issued a case closure letter dated December 3, 1999 indicating that no further action related to the UST releases was required. An associated transmittal letter noted that the following conditions remain at the Weyerhaeuser property. Groundwater samples from the most recent sampling from the monitoring wells (August 1998) contained up to 1,700 μg/L TPHg, 99.3 μg/L benzene, 13.9 μg/L xylenes, and 51.9 μg/L ethylbenzene. Groundwater samples collected on July 16, 1999 from boreholes B-9 and B-10 located inside the former

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[45] Alameda County Health Care Services Agency, *Remedial Action Completion Certification, Underground Storage Tank Case, Encinal Terminals, 1521 Buena Vista Avenue, Alameda, CA 94501, Site No. 3522*, February 6, 1996.

[46] Adanta, Inc., *Phase II Environmental Site Assessment Soil and Groundwater Sampling, Encinal Terminals, 1501-1521, 1523, and 1551 Buena Vista Avenue, Alameda, California*, July 12, 2011.

[47] Bureau Veritas, *Monitoring Well Installation and Groundwater Sampling Report, 1501-1521, 1523, and 1551 Buena Vista Avenue, Alameda, California*, August 22, 2011.

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Weyerhaeuser building contained up to 4,520 µg/L TPHg, 13.7 µg/L benzene, 22.3 µg/L ethylbenzene, 3.0 µg/L xylenes, 0.6 µg/L 1,1-Dichloroethene (DCE), 34.7 µg/L 1,1-Dichloroethane (DCA), 2.2 µg/L trichloroethene (TCE), and 1.7 µg/L 1,1,2-Trichloroethane (TCA). These wells were located offsite from the proposed project site, and the Phase I ESA did not recommend any further action with respect to these groundwater concentrations. However, as discussed in more detail below, subsequent testing at the project site was conducted in August 2012 as part of a Phase II ESA.

The caustic soda and sulfuric acid ASTs were removed from the Encinal Terminals property north of the project site in July 2001. Approximately 300 to 400 gallons of sulfuric acid leaked from the AST, and approximately 126 tons of contaminated soil was excavated during site remediation and hauled offsite for disposal. Soil samples were collected from test pits adjacent to the AST at depths of 4.5 and 9 feet and analyzed for pH. Two additional soil samples were collected from a trench, located approximately 100 feet south of the sulfuric acid AST, where an acrid odor and discolored soil had been noted. These were analyzed both for pH and volatile organic compounds (VOCs). The soil pH levels ranged from 6.41 to 7.34 in the acid AST excavation, and from 5.18 to 6.63 in soil samples from the trench. The VOCs detected in the trench soil included acetone (0.13 to 0.16 mg/kg), carbon disulfide (0.011 to 0.02 mg/kg), methyl butyl ketone (up to 0.016 mg/kg), and methyl ethyl ketone (0.083 to 0.22 mg/kg). Additional soil samples and grab groundwater samples were collected from four borings advanced in the vicinity of the sulfuric acid release and the neighboring trench. The pH values in soil and groundwater ranged from 6.45 to 7.86. VOCs detected in the groundwater included chloroform, dichloroethane (DCA), 2-butanone, carbon disulfide and methyl-tertiary-butyl-ether (MTBE); these VOCs were detected a low concentrations (up to 0.0089 ug/L). The ACDEH noted in 2004 that these concentrations were below the RWQCB's risk-based screening levels for residential land use, and determined that the investigation and cleanup of the reported sulfuric acid release were complete.[48]

Other Sources of Contamination

A Pennzoil pipeline previously traversed the project site and the former Weyerhaeuser property to the east. The Phase I ESA reports that ICES collected soil samples in March 1999 from five borings advanced in the vicinity of the abandoned pipeline. Groundwater samples also were collected from two of the borings on the project site. The analytical laboratory data was summarized in a subsequent report by SOMA, reporting TPHg, TPHd and TPHmo concentrations in the soil samples of up to 3.3 mg/kg, 57 mg/kg, and 320 mg/kg, respectively. These analytes were not detected in the groundwater samples. Based on these results, ICES concluded that soil and groundwater in the immediate vicinity of the abandoned Pennzoil pipeline had not been significantly impacted by petroleum constituents. The site owner believes that this pipeline was removed and associated soil contamination was remediated years ago. The Phase I ESA recommends that removal of the pipeline be confirmed prior to development of the site with residential uses.

Several railroad track spurs are present on the northeast portion of the project site that previously extended onto the adjacent Marina Cove subdivision (former Weyerhaeuser property), and at least two other spurs appear to have been previously located on the southwest

[48] Alameda County Health Care Services Agency, *Case Closure, Marina Cove Subdivision (Former Weyerhauser Co.), 1801 Hibbard Avenue, Alameda, CA 94501, Case No. R00002502*, January 7, 2004.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

side of the site. Soil contamination is frequently found along old rail lines as a result of the application of various chemicals for dust suppression and weed control. When the spurs were removed from the adjoining former Weyerhaeuser property prior to its development with the current subdivision, elevated concentrations of TPHmo and lead were detected in soil and ballast along the track spurs. The contaminated soil and ballast were removed under ACDEH oversight.

Soil samples were also collected from the southern side of the proposed project site along the former rail spurs. Lead concentrations of 380 and 450 mg/kg, and TPHmo concentrations of 240 and 350 mg/kg, respectively, were reported in the two soil samples. These lead concentrations exceeded the current California Human Health Screening Levels (CHHSLs) for residential use of 80 mg/kg for lead in soil.[49] The TPHmo concentrations exceeded the California Regional Water Quality Control Board's (RWQCB) residential Environmental Screening Level (ESL) of 370 mg/kg.[50] Limited additional sampling performed along the on-site railroad spurs by Adanta in 2011 did not identify lead above the residential CHHSLs, but TPHmo analyses were not performed. The Phase I ESA recommended that additional soil sampling be performed to evaluate soil quality along the railroad spurs on the project site. The results of this testing are reported below under the discussion of the Phase II ESA.

Because the project site was historically was used for agricultural purposes, the Phase I ESA concluded that residual pesticide concentrations could remain in the soil on the site, and recommended sampling. The results of this testing are reported below under the discussion of the Phase II ESA.

Due to the age of the warehouse building on the site, there is a potential for asbestos-containing building materials (ACBM) and lead-based paint (LBP) to be present in the building. During the proposed demolition of the building, friable asbestos and/or lead could be released into the environment, posing a health hazard to workers. If not addressed properly, the potential hazards posed by these facilities on the site would represent a ***potentially significant adverse impact***. Implementation of the following mitigation measures would reduce the impact to a less-than-significant level.

Mitigation Measure HM–1: Prior to issuance of a demolition permit for the existing buildings on the site, a survey for asbestos-containing building materials (ACBM) shall be conducted by a qualified asbestos abatement contractor. If ACBM is identified, all friable asbestos shall be removed prior to building demolition by a State-certified Asbestos Abatement Contractor, in accordance with all applicable State and local regulations. The Bay Area Air Quality Management District (BAAQMD) shall be notified ten days in advance of any required abatement work. To document compliance with the applicable regulations, the project sponsor shall provide the Alameda Community Development Department with a copy of the notice required by BAAQMD for

[49] California Environmental Protection Agency (CalEPA), *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties*, updated September 2010.

[50] California Regional Water Quality Control Board (RWQCB), *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, May 2008.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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asbestos abatement work, prior to and as a condition of issuance of the building permit for the proposed project by the City of Alameda Community Development Department.

Mitigation Measure HM–2: Prior to issuance of a demolition permit for the existing buildings on the site, a survey for lead-based paint (LBP) shall be conducted by a qualified lead assessor. If LBP is identified, lead abatement shall be performed in compliance with all federal, State, and local regulations applicable to work with LBP and disposal of lead-containing waste. A State-certified Lead-Related Construction Inspector/Assessor shall provide a lead clearance report after the lead abatement work in the buildings is completed. The project sponsor shall provide a copy of the lead clearance report to the City of Alameda Community Development Department.

Other Environmental Conditions

The Phase I ESA included a visual inspection of the site by a Cornerstone engineer to identify Recognized Environmental Conditions. The report documents a variety of existing facilities, building components and contents, and other conditions. The most notable as they pertain to hazards (aside from those already discussed above) include the following:

- Two truck scales were present on the northeast side of the building and a third truck scale was observed on the southeast side of the building.
- A concrete foundation and a steel frame that appeared to be remnants of a portable building or trailer were present adjacent to the scale on the southeast side of the building.
- An above-ground propane tank was present on the western corner of the site, along with a wooden shed. The shed contained water service piping and valves in addition to approximately 25 gallons of paint stored on wooden shelving.
- Five additional 5-gallon buckets of paint and asphalt roof coating were stored on the gravel-covered floor of the shed. No evidence of significant spills or leaks was readily apparent.
- A below-ground concrete vault with steel access cover was observed within an exterior fenced area at the northern corner of the building. The vault appeared to be associated with a below-ground stormwater collection/drainage system.
- A steel-frame pipeline bridge, crossing over railroad track spurs, was observed on the northern portion of the site. Six-inch diameter steel piping extended across the bridge. The piping extended below ground on the south side of the bridge and was observed to be disconnected above grade on the northern side of the bridge. In subsequent email correspondence, the site owner, Mr. Chengben Wang, indicated that the piping formerly contained liquid sugar.
- Four full (or partially full) 55-gallon drums were observed on pavement near the eastern corner of the building. One was unlabeled and labeling on the others indicated that they contained motor oil, hydraulic fluid, and antifreeze. A metal shipping container was present on the southwest side of building that contained a 55-gallon drum that was full

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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of what appeared to be oil or waste oil. An additional 55-gallon drum (full and unlabeled) and a 25-gallon drum (empty) were located nearby on a wooden pallet placed on concrete pavement. No evidence of significant spills or leaks from the drums was readily apparent. The Phase I ESA recommended prompt, proper disposal of these drums in order to limit the potential for hazardous materials spills.

- A groundwater monitoring well, labeled MW-103, was observed on the site within an asphalt paved parking lot located to the northwest of the building.
- Undocumented fill appears to be present beneath the site, likely as a result of the placement of dredged soil and imported fill. The fill is presumed to also extend beneath the adjacent Marina Cove subdivision (former Weyerhaeuser property), which was approved for residential development by ACDEH (after cleanup of soil apparently not related to undocumented fill). Sampling and analysis of this fill was performed as part of the Phase II ESA, described below.

Phase II Environmental Site Assessment

A Phase II ESA of the project site was performed by Cornerstone Earth Group in August 2012 to further evaluate the potential for soil and/or groundwater contamination discussed above.[51] The Phase II ESA included drilling 13 exploratory borings (EB-1 through EB-13) to depths of about 5 feet at strategic locations on the site, and collection of soil samples that were submitted for laboratory analysis. The sampling locations are shown on Figure HM–1. One of the borings—Boring EB-13—was advanced to approximately 15 feet in the vicinity of the former diesel UST on the north side of the site in order to collect a grab groundwater sample (GW-1). However, a sufficient amount of groundwater for sampling was not encountered in this boring.

Three borings (EB-1 through EB-3) were drilled in the central area of the site to evaluate native soil for the presence of organochlorine pesticides (OCPs) and metals potentially associated with prior agricultural use of the site. No TPHg, TPHo, VOCs, OCPs, or polychlorinated biphenyls (PCBs) were detected in the soil samples collected from these borings. The highest concentration of TPHd in the samples from these borings was 3.3 mg/kg, well under the residential ESL of 83 mg/kg. However, lead was detected at a concentration of 110 mg/kg in the sample collected from boring EB-1 at a depth of approximately 3 to 3.5 feet, exceeding the residential CHHSL for lead of 80 mg/kg. The Phase II ESA report noted that an exceedance of the CHHSL or ESL does not indicate that adverse impacts to human health are necessarily occurring or will occur, but indicates that further evaluation of potential health concerns is warranted.

A minor petroleum odor was noted on soil samples collected from borings EB-1, EB-2, and EB-3 at depths of approximately 1.5 to 3 feet. To evaluate the source of this odor, the soil samples from these borings were analyzed for polycyclic aromatic hydrocarbons (PAHs). Several PAHs were detected in these soil samples. They are listed in Table HM–1 along with the residential ESLs. As shown in the table, the PAH levels were all below the residential ESLs, in most cases by a wide margin. CalEPA has not established CHHSLs for the listed PAHs, with the exception of Benzo[a]pyrene, which has a residential CHHSL of 0.038 mg/kg; as shown in Table HM–1, the highest detected concentration was below the CHHSL for this compound.

[51] Cornerstone Earth Group, *Phase II Soil Quality Evaluation, 1551 Buena Vista Avenue, Alameda, California*, Project No. 557-1-2, August 13, 2012.

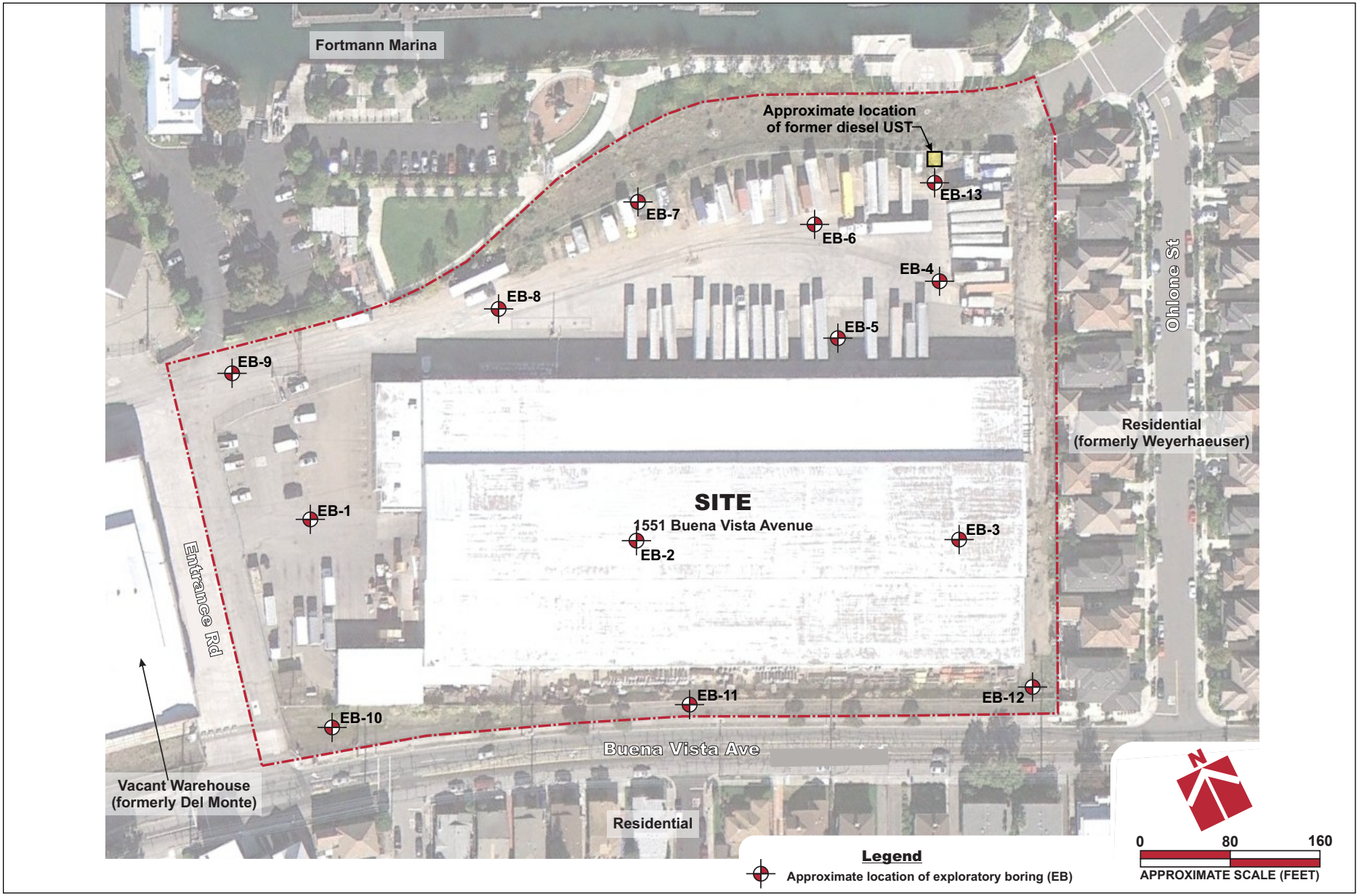

Figure HM-1

Soil Sampling Locations

Source: Conerstone Earth Group

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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To evaluate soil quality along the extant railroad spurs on the north side of the site and along the former railroad spurs along the south side of the site, 16 selected soil samples collected from borings EB-4 through EB-13 were analyzed for total petroleum hydrocarbons (TPHd and TPHmo), PCBs, and 17 California Assessment Manual (CAM) metals using US EPA-approved test methods. To further evaluate the quality of the fill found in most of the borings, five selected soil samples were also analyzed for TPHg and VOCs. Based on the analytical laboratory results, TPHg, VOCs, OCPs, and PCBs were below detection limits. TPHd was detected in 9 of 18 samples analyzed (including EB-3, reported above) at concentrations ranging from 1.1 mg/kg to 15 mg/kg, well under the residential ESL of 83 mg/kg. TPHmo was detected in 1 of 18 soil samples at 62 mg/kg. The residential ESL for TPHmo is 370 mg/kg.

Table HM–1
Polycyclic Aromatic Hydrocarbons (PAHs) Detected on the Project Site
(mg/kg)

PAH	Highest Concentration	Residential ESL[1]
Anthracene	0.0064	2.8
Benzo[a]anthracene	0.021	0.38
Benzo[a]pyrene	0.034	0.038
Benzo[b]fluoranthene	0.040	0.38
Benzo[g,h,i]perylene	0.028	27
Chrysene	0.013	23
Fluoranthene	0.035	23
Ideno[1,2,3-c,d]pyrene	0.021	0.62
Napthalene	0.015	1.3
Phenanthrene	0.018	11
Pyrene	0.038	85

Source: Cornerstone Earth Group, 2012.

Note:

[1]ESL = Environmental Screening Level established by California Regional Water Quality Control Board

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☐	☐	☐	☐

Based on the results summarized above, the Phase II ESA concluded that the elevated lead level encountered in boring EB-1 represented a potential hazard to future residential use of the site. This is therefore considered a ***potentially significant impact***. Implementation of the following mitigation measures would reduce this impact to a less-than-significant level and would also address the other environmental concerns raised in the Phase I and II ESAs.

Mitigation Measure HM–3: The project sponsor shall provide documentation to the City of Alameda demonstrating that the lead contamination in site soils has been remediated to below the applicable environmental screening level (ESL) for residential use. Removal and disposal of lead-contaminated soil, as well as drums of motor oil, hydraulic fluid, antifreeze, propane, and other hazardous materials, shall be performed by qualified personnel in accordance with applicable State regulations.

Mitigation Measure HM–4: Prior to issuance of a grading permit for the project, the project sponsor shall prepare a soil management plan (SMP) to establish management practices to be followed during site grading in the event that any other pockets of contaminated soil, debris, or buried structures are encountered during the grading. The construction contractor shall be required to conform with the procedures identified in the SMP, as applicable.

Mitigation Measure HM–5: For all remediation work performed in compliance with Mitigation Measures HM–3 and HM–4, the project sponsor shall prepare and implement a Health and Safety Plan (HASP) and a Soil Management Plan (SMP). The HASP shall identify the measures necessary to protect workers and to prevent their exposure to hazardous contaminants that are present in the soils on the site. It shall be prepared in consultation with the San Francisco Bay Area Consultation Service Office of the California Department of Industrial Relations, Division of Occupation Safety and Health (Cal/OSHA), and in accordance with all applicable State and federal occupational safety and health standards, including Cal/OSHA's Hazardous Waste Operations and Emergency Response Guidelines (CCR Title 8, Section 5192). The SMP shall address the proper handling and disposition of potentially contaminated soils that may be encountered during excavation, and shall be reviewed and approved by the Alameda Fire Department/CUPA and/or the California Department of Toxic Substances Control (DTSC).

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	**X**

Explanation: There are no public schools within one-quarter mile of the project site. The nearest school is Franklin Elementary School, at 1433 San Antonio Avenue, about 2,500 feet south of the

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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site. Fuzzy Caterpillar Preschool, at 1510 Encinal Avenue, is located about the same distance from the site. In any event, the proposed project would not emit hazardous gases, waste, or other substances with a potential to pose a threat to students at schools in the area or to residential properties in closer proximity to the site.

d)	*Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*	☐	☐	**X** ☐

Explanation: The Phase I ESA for the project included a search was conducted of local, State, and federal databases listing sites associated with hazardous materials or hazardous waste generation, storage, or spills. As discussed in more detail in Section VIII(b), the nearby properties identified in the search have a case-closed status, and do not pose a significant hazard to the public or the environment. The project site is also listed on the HAZNET database due to offsite disposal in 2003 of organic and inorganic materials. The potential for on-site hazardous materials to pose an environmental or public health threat is evaluated in detail in Section VIII(b).

e)	*For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?*	☐	☐	☐ **X**

Explanation: There are no public airports within 2 miles of the project site; the nearest airport is Oakland International Airport, located approximately 3 miles southeast of the site.

f)	*For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*	☐	☐	☐ **X**

Explanation: There are no private airstrips within 2 miles of the project site; the nearest private airstrip is the Alameda Naval Air Station, located about 3 miles northwest of the project site. The base was closed in 1997.

g)	*Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*	☐	☐	☐ **X**

Explanation: The proposed project would provide adequate emergency ingress and egress via the four proposed interconnected streets. The addition of 69 residential dwelling units to the area would not have the potential to interfere with implementation of an emergency response or emergency evacuation plan.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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h) Expose people or structures to significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	X

Explanation: The project is located in a fully urbanized environment; there are no wildlands in proximity to the site. There is therefore no potential to expose people or structures to a significant risk of wildland fires.

IX. HYDROLOGY AND WATER QUALITY — *Would the project:*

a) Violate any water quality standards or waste discharge requirements?	☐	X	☐	☐

Explanation:

Operational Impacts

For residential development projects, the most common source of pollutants with a potential to degrade surface water quality is the automobile, which deposits oil and grease, fuel residues, heavy metals (e.g. lead, copper, cadmium, and zinc), tire particles, and other pollutants onto roadways and parking areas. These contaminants can be washed by stormwater runoff into surface waterways, degrading water quality.

Urban/suburban developments introduce a variety of other pollutants that contribute to surface water pollution, including pesticides, herbicides, and fertilizers from landscaping; organic debris (e.g. grass, leaves); weathered paint; eroded metals from painted and unpainted surfaces; organic compounds (e.g., cleaners, solvents, adhesives, etc.); nutrients; bacteria and viruses; and sediments. Even building rooftops are a source of pollutants, because mercury and polychlorinated biphenyls (PCBs) are airborne pollutants that get deposited on roofs and other impervious surfaces. While the incremental pollutant load from a single site may not be significant, the additive, regional effects of pollutants from all development have a significant adverse effect on water quality and the innumerable organisms that depend on the region's surface water bodies. Even low concentrations of heavy metals such as mercury bioaccumulate in fish, resulting in levels that adversely affect the health of sea animals and humans that eat them. Testing in the San Francisco Bay Area has shown elevated levels of mercury and PCBs in the sediment of urban storm drains throughout the region.

Operation of the project following completion of construction would have the potential to result in a ***significant, adverse impact*** on surface water quality, for the reasons set forth above. Although compliance with the stormwater treatment requirements described below would ensure that operational impacts are less than significant, Mitigation Measure WQ–1 is required to provide a means for monitoring and verifying compliance.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Operational stormwater discharges from new development are regulated by the terms of each jurisdiction's municipal stormwater permits. In the City of Alameda, development projects must comply with the National Pollutant Discharge Elimination System (NPDES) permit (NPDES Permit No. CAS612008) issued to the Clean Water Program Alameda County (CWPAC) (formerly the Alameda Countywide Clean Water Program) and other Bay Area jurisdictions by the RWQCB (NPDES Order No. R2-2009-0074). The revised Municipal Regional Stormwater Permit (MRP) was issued on October 14, 2009 and replaced the previous permit originally issued in February 2003 with substantial new requirements for development and redevelopment projects.

Under the current MRP, any private or public development project that would create or modify 10,000 square feet or more of impervious surfaces must comply with Provision C.3. Projects subject to Provision C.3 must include low-impact development (LID) measures to treat stormwater runoff. Project applicants are required to implement appropriate source control and site design measures and to design and implement stormwater treatment measures in order to reduce the discharge of stormwater pollutants to the *maximum extent practicable* (MEP), a standard established by the 1987 amendments to the federal Clean Water Act.

Following construction, stormwater collection and drainage would occur along the proposed streets via catch basins located within the curbs. Collected stormwater from the streets would be directed to 5-foot-wide grassy bioswales located between the curbs and sidewalks; these swales would provide natural treatment of stormwater through biofiltration. Stormwater would also be collected from all impervious surfaces (including roofs) on the residential lots and directed to the treatment swales.

Treated stormwater from the streets and private lots would be discharged into storm drains running under the streets, with diameters ranging from 18 inches to 48 inches. The stormwater would drain by gravity to the Arbor Street pump station, which is located near the southeast corner of the Fortman Marina basin, adjacent to the project site's northern boundary at Arbor Street. Stormwater would be pumped from here through an outfall that discharges into the Oakland Inner Harbor, which is hydrologically connected to San Francisco Bay.

The project would create 229,405 square feet (about 5.27 acres) of impervious surfaces and would remove roughly 247,420 square feet of existing impervious surfaces, resulting in a net reduction of over 18,000 square feet. Under Section C.3 of the MRP, the project would be required to provide 9,004 square feet of bioretention/treatment facilities. The project would provide 9,098 square feet of bioswales, exceeding the C.3 requirements.

Provision C.3 of the MRP also includes hydromodification management (HM) requirements for certain projects located in areas susceptible to hydrograph modification. Hydrograph modification occurs when an undeveloped site is developed with impervious surfaces such as buildings and pavements, which prevents natural infiltration by rain water, and which results in an increase in the volume and rate of stormwater runoff from the site. Hydrograph modification has the undesirable effect of increasing erosion of natural creeks and earthen channels, which can cause flooding, property damage, degradation of stream habitat, and deterioration of water quality. Projects that create or replace 1 acre or more of impervious surfaces on sites within a designated "susceptible area" as mapped by the CWPAC must implement HM measures to control the flow and duration of stormwater runoff. HM measures can include site design and hydrologic source control measures, on-site structural HM

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☐	☐	☐	☐

measures, and in-stream restorative measures. The project site is not located within an area subject to HM requirements.[52]

To ensure adequate compliance with the C.3 requirements, the project sponsor shall implement the following mitigation measure:

Mitigation Measure WQ–1: The project applicant shall prepare a C.3 Stormwater Control Plan to reference and incorporate current construction and post-construction requirements specified by SWRCB Order No. 2009-0009-DWQ and the post-construction requirements specified by NPDES Order No. R2-2009-0074 and the Clean Water Program Alameda County (CWPAC). The C.3 Stormwater Control Plan shall be developed in accordance with the provisions of CWPAC's *C.3 Stormwater Technical Guidance* manual (Version 3.0, December 11, 2011). Additionally, as required by the C.3 Provisions, building permit applications must be accompanied by a Stormwater Control Plan, for review and approval by the City Engineer, which specifies the treatment measures and appropriate source control and site design features that will be incorporated into project design and construction to reduce the pollutant load in stormwater discharges and manage runoff flows.

Construction Impacts

Construction activities could potentially affect water quality as a result of erosion of sediment. In addition, leaks from construction equipment; accidental spills of fuel, oil, or hazardous liquids used for equipment maintenance; and accidental spills of construction materials are all potential sources of pollutants that could degrade water quality during construction. If not properly addressed, construction impacts on water quality could be particularly severe because storm runoff from the site is ultimately discharged into San Francisco Bay. San Francisco Bay is on the list of impaired water bodies compiled by the San Francisco Bay Regional Water Quality Control Board (RWQCB) pursuant to the federal Clean Water Act. Because the State is required to develop action plans and establish Total Maximum Daily Loads (TMDLs) to improve water quality within these water bodies, uncontrolled discharge of pollutants into them would be particularly detrimental.

As part of any new development at the site, the project sponsor would be required to obtain a General Construction Activity Stormwater Permit and carry out measures required to manage and control erosion from the site during construction pursuant to the requirements of the Regional Water Quality Control Board. Best Management Practices (BMPs) would include, but not be limited to, minimizing the migration of sediments off-site, covering soil stockpiles, sweeping soil from streets or other paved areas, site preparation in dry periods, and the planting of vegetation or landscaping in a timely manner. These measures should be consistent with the Association of Bay Area Governments' *Manual of Standards for Erosion and Sedimentation Control Measures* (2005 Updated Edition). Although project construction effects on surface water

[52] Clean Water Program Alameda County, Order No. R2-2009-0074 Municipal Regional Stormwater Permit, Attachment B: HMP Susceptibility Map, January 26, 2007.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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quality could result in a ***potentially significant impact***, implementation of Mitigation Measures WQ–2 and WQ–3 would ensure that construction impacts on water quality remain less than significant.

Mitigation Measure WQ–2: The project sponsor shall obtain National Pollutant Discharge Elimination System (NPDES) construction coverage as required by Construction General Permit (CGP) No. CAS000002, as modified by State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ. Pursuant to the Order, the project applicant shall electronically file the Permit Registration Documents (PRDs), which include a Notice of Intent (NOI), a risk assessment, site map, signed certification, Stormwater Pollution Prevention Plan (SWPPP), and other site-specific PRDs that may be required. At a minimum the SWPPP shall incorporate the standards provided in the Association of Bay Area Governments' *Manual of Standards for Erosion and Sedimentation Control Measures* (2005), the California Stormwater Quality Association's *California Stormwater Best Management Practices Handbook* (2009), the prescriptive standards included in the CGP, or as required by the Clean Water Program Alameda County, whichever are applicable and more stringent. Implementation of the plan will help stabilize graded areas and reduce erosion and sedimentation. The plan shall identify Best Management Practices (BMPs) that shall be adhered to during construction activities. Erosion-minimizing efforts such as hay bales, water bars, covers, sediment fences, sensitive area access restrictions (for example, flagging), vehicle mats in wet areas, and retention/settlement ponds shall be installed before extensive clearing and grading begins. Mulching, seeding, or other suitable stabilization measures shall be used to protect exposed areas during construction activities.

Mitigation Measure WQ–3: All cut-and-fill slopes shall be stabilized as soon as possible after completion of grading. No site grading shall occur between October 15th and April 15th unless approved erosion control measures are in place.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	X	☐

Explanation: The project would create 229,405 square feet (about 5.27 acres) of new impervious surfaces at the project site. However, at least 80 percent (5.68 acres) of the 7.1-acre site is currently developed with impervious surfaces. Implementation of the project would therefore

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

result in a net reduction in impervious surfaces. Therefore, the project would not reduce the amount of groundwater recharge that occurs at the site.

c)	*Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?*	☐	X	☐	☐

Explanation: The creation of new paved streets, construction of homes, and landscaping of yards would all alter the existing drainage patterns on the project site, which is currently occupied by a large warehouse and surrounding pavement. Because the total amount of impervious surfaces would be reduced in comparison with existing conditions, the amount of stormwater runoff from the site would be reduced. While stormwater runoff has the potential to cause erosion and sedimentation in downstream receiving waters, such impacts would be minimized through compliance with the C.3 requirements of the Clean Water Program Alameda County, required by Mitigation Measure WQ–1, above.

d)	*Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*	☐	☐	☐	X

Explanation: The project would not alter the course of a stream or river. Although it would alter the existing drainage pattern of the site, as discussed above, it would not increase the volume or rate of surface runoff because it would reduce the amount of impervious surfaces on the site. There is therefore no potential for the project to increase the risk of on- or off-site flooding.

e)	*Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*	☐	X	☐	☐

Explanation: As discussed above in Section IX(c), implementation of the proposed project would result in a reduction in stormwater runoff from the site. While the runoff would contain typical pollutants entrained in stormwater from urban areas, the project would provide on-site treatment of all stormwater runoff from the site via biofiltration, in compliance with Provision C.3 of the NPDES Municipal Storm Water Permit, which is administered by the Clean Water Program Alameda County. As part of this process, the applicant will be required to prepare and implement a Stormwater Control Plan that must demonstrate that the project would not increase stormwater flows, and must identify the necessary stormwater treatment facilities and measures incorporated into the project to control pollutant discharges from the site. These requirements are stipulated in Mitigation Measure WQ–1, above; with their implementation, the project's impact on water quality would be less than significant.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Otherwise substantially degrade water quality?	☐	☐	X	☐

Explanation: See Sections IX(a) and IX)d). Other than the impacts identified therein, the project would not have the potential to substantially degrade water quality.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	X

Explanation: The project site is within a larger surrounding area mapped as Zone X by the Federal Emergency Management Agency (FEMA), which is the designation assigned to areas that have been determined to be outside of the 0.2 percent annual chance flood plain (i.e., the 500-year flood plain).[53] Adjacent Fortman Basin and Alameda Harbor are designated on the FEMA Flood Insurance Rate Map (FIRM) as Zone AE, which is assigned to areas that are located within the floodway of the 1-percent annual chance (100-year) flood plain and for which the base flood elevations have been determined. The waterfront is protected by a seawall that would contain floodwaters within the basin and channel. Neither FEMA, the Northern Waterfront GPA EIR, nor the geotechnical report for the project identified a flood hazard on the site. Based on these information sources, the project would not place housing within a 100-year flood hazard area.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	X

Explanation: As discussed in Section IX(g), above, the project site is not located within a 100-year or 500-year flood hazard area.

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	X

Explanation: The project site is not located within a dam failure inundation zone as mapped by the Association of Bay Area Governments (ABAG).[54]

[53] Federal Emergency Management Agency, Flood Insurance Rate Map, Alameda County, California and Incorporated Areas, Community Panel Number 06001C0069G, August 3, 2009.

[54] Association of Bay Area Governments (ABAG), Dam Failure Inundation Hazard Map for Alameda, 1995, Accessed August 7, 2012 at: http://www.abag.ca.gov/cgi-bin/pickdamx.pl.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

j) Inundation by seiche, tsunami, or mudflow? ☐ ☐ **X** ☐

Explanation: Tsunamis (seismic sea waves) are long-period waves that are typically caused by underwater disturbances (landslides), volcanic eruptions, or seismic events. Areas that are highly susceptible to tsunami inundation tend to be located in low-lying coastal areas such as tidal flats, marshlands, and former bay margins that have been artificially filled but are still at or near sea level.

The project site is within a tsunamis inundation hazard area as mapped by the California Department of Conservation[55] and by the California Emergency Management Agency.[56] However, these maps are prepared at a planning level of detail. The site-specific analysis performed by the geotechnical consultant for the project noted that a tsunami originating in the Pacific Ocean would lose much of its energy passing through the relatively narrow Golden Gate and into San Francisco Bay. Given that factor combined with an elevation at the project site of between 5 and 7 feet above mean sea level, the geotechnical consultant concluded that there is a low potential for inundation of the site due to tsunamis. The Northern Waterfront GPA EIR also indicated that the potential for inundation by tsunamis is low, reporting that the predicted wave run-up in the Oakland Estuary adjacent to the Northern Waterfront GPA area was estimated at 5.0 feet above mean sea level for the 100-year tsunamis. The building pad elevations for the proposed project would generally range from 6.5 feet to 8.5 feet above mean sea level, with a single pad at an elevation of 6.0 feet. Therefore, in the rare event that a 100-year tsunamis inundated San Francisco Bay, the expected run-up at the site would not encroach upon the proposed homes. This would therefore be a less-than-significant impact.

A seiche is a free or standing wave oscillation(s) of the surface of water in an enclosed or semi-enclosed basin that may be initiated by an earthquake. For the same reasons noted above for tsunamis hazard, the geotechnical consultant for the project concluded that there is a low potential for inundation of the site due to seiche.

Debris flows, mudslides, and mudflows begin during intense rainfall as shallow landslides on steep slopes. The rapid movement and sudden arrival of debris flows can pose a hazard to life and property during and immediately following a triggering rainfall. The project is essentially flat and is not located downslope of unstable areas that would be subject to mudflows. There is therefore no potential for mudslides or debris flows.

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[55] California Department of Conservation, Tsunamis Inundation Map for Emergency Planning, State of California, County of Alameda, Oakland West Quadrangle, July 31, 2009, Accessed August 7, 2012 at: http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/Pages/Statewide_Maps.aspx.

[56] California Emergency Management Agency, California Geological Survey, and University of Southern California, "Tsunami Inundation Map for Emergency Planning, State of California, San Francisco Bay Area," December 9, 2009.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

X. LAND USE AND PLANNING — *Would the project:*

a) Physically divide an established community?

☐ ☐ ☐ **X**

Explanation: The project site is currently developed with a large one-story warehouse building and paved areas for truck parking and vehicle operations. The site is bounded on the south and east by medium-density single-family residential development, on the west by the historic Del Monte Warehouse, and on the north by the Alameda Yacht Club.

The proposed project would create new residences that are consistent with the existing residences that currently border the project site. Further, construction of the proposed project would not result in large roadways that could physically divide an existing neighborhood. On the contrary, the proposed extension of existing roadways and the construction of one new road would provide connections between existing neighborhoods and proposed neighborhoods, which could promote community cohesion. Therefore, implementation of the proposed project would not physically divide an established community. There is no adverse impact.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purposed of avoiding or mitigating an environmental effect?

☐ ☐ ☐ **X**

General Plan: Land Use

This parcel is located at the northeast corner of Buena Vista Avenue and Ohlone Street in Alameda, California. The General Plan land use designation of the site is Medium-Density Residential. This designation allows two-family or one-family units with a minimum lot size of 2,000 square feet per unit. Allowed densities range from 8.8 to 21.8 units per acre. The proposed use would be consistent with the General Plan land use designation and the project density of 9.7 dwelling units would be within the permitted density range. The lot sizes, ranging from 2,400 square feet to 3,200 square feet, would also be consistent with the minimum lot size requirement for Medium-Density Residential sites.

Zoning Ordinance

The project site is currently zoned R-4/PD (Neighborhood Residential with a Planned Development overlay). The PD combining district is intended to provide more flexibility in site design, development standards, and types of land uses than would otherwise be allowed in the underlying zoning district. It is also intended to ensure project compatibility with surrounding uses, and to ensure that adverse environmental effects are reduced or avoided to the maximum extent feasible. All Planned Developments are required to be consistent with the General Plan. As determined in the preceding discussion, the proposed project would be consistent with the General Plan.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

In general, permitted uses in Planned Developments are determined by the district with which the PD district is combined. The proposed single-family homes and residential duplexes (two-family dwellings) are principal permitted uses in the R-4 district. Requirements for minimum lot area and width, maximum building coverage, yards, off-street parking, and height are established by the Planning Board for each specific Planned Development. Consequently, it is not feasible to evaluate the project's consistency with these development standards.

Other development regulations are determined by the underlying zoning district, which in this case is the R-4 district. The R-4 district establishes a height limit of 35 feet. The R-4 district requires a minimum of 400 square feet of usable open space (comprised of common and private open space) per dwelling unit. The following open space minimum requirements also apply: 120 square feet of private open space per ground-level dwelling unit; 60 square feet of private open space per non-ground-level dwelling unit; 90 square feet of common open space per dwelling unit; and 300 square feet of common open space per lot. Usable open space is defined in detail in Municipal Code Section 30-5.12, which restricts the amount of yard space that may be applied to the requirement, and establishes minimum dimensions for private balconies, porches, decks, and patios. The project's compliance with these requirements will be verified during the development review process conducted by the City.

Although public agencies vary in their approach to addressing zoning and General Plan policy conflicts under CEQA, the rule of thumb employed in this analysis derives from the specific guidance provided by Appendix G of the CEQA Guidelines, which treats a conflict with any applicable land use plan or policy "adopted for the purpose of avoiding or mitigating an environmental effect" as a significant, adverse impact. No conflicts with such policies were identified for the proposed project. The project would therefore have no impact related to General Plan policy or zoning conflicts.

c)	*Conflict with any applicable habitat conservation plan or natural community conservation plan?*	☐	☐	☐	**X**

Explanation: There is no adopted habitat conservation plan or natural community conservation plan applicable to the project site.

XI. MINERAL RESOURCES — *Would the project:*

a)	*Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*	☐	☐	☐	**X**

Explanation: No regionally significant mineral deposits have been mapped on the project site. A portion of the site is classified Mineral Resource Zone MRZ-1 by the California Department of Conservation's Division of Mines and Geology (DMG).[57] The MRZ-1 designation is assigned to areas where sufficient data exists for a determination that no significant mineral deposits exist, or where it is judged that there is little likelihood for their presence.

[57] California Department of Conservation, Division of Mines and Geology, Generalized Mineral Land Classification Map of the South San Francisco Bay Production-Consumption Region (Plate 1 of 29), 1996.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

The Alameda General Plan does not identify any areas of significant mineral deposits anywhere within the City. The project site is located in an area that has been fully developed with urban uses for many years, and would not be a viable location for extraction of mineral resources. Therefore, the proposed project would not have any effect on the availability of mineral resources in the region and State.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	X

Explanation: As noted above in Section X(a), the Alameda General Plan does not identify any areas of significant mineral deposits in the project area and the California Division of Mines and Geology has not mapped any mineral resources on or near the site. The proposed project would have no potential to adversely affect the availability of mineral resources.

XII. NOISE — *Would the project result in:*

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?00	☐	X	☐	☐

Explanation:

Introduction to Noise Descriptors

Noise is defined as unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing.

Most of the sounds that we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies of a sound in accordance with a weighting that reflects the facts that human hearing is less sensitive at low frequencies and extreme high frequencies than in the mid-range frequency. This is called "A" weighting, and the decibel level so measured is called the A-weighted sound level (dBA). In practice, the level of a sound source is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve. Typical A-weighted levels measured in the environment and in industry are shown in Table N–1 for different types of noise.

Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources that create a relatively steady background noise in which no particular source is identifiable. To describe the time-varying character of environmental noise, the statistical noise descriptors, L_{01}, L_{10}, L_{50}, and L_{90}, are

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

commonly used. They are the A-weighted noise levels equaled or exceeded during 1 percent, 10 percent, 50 percent, and 90 percent of a stated time period. A single number descriptor called the L_{eq} is also widely used. The L_{eq} is the average A-weighted noise level during a stated period of time.

In determining the daily level of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. During the nighttime, exterior background noises are generally lower than the daytime levels. However, most household noise also decreases at night and exterior noise becomes very noticeable. Further, most people sleep at night and are very sensitive to noise intrusion. To account for human sensitivity to nighttime noise levels, a descriptor, DNL (day/night average sound level), was developed. The DNL divides the 24-hour day into the daytime of 7:00 AM to 10:00 PM and the nighttime of 10:00 PM to 7:00 AM. The nighttime noise level is weighted 10 dB higher than the daytime noise level. The Community Noise Equivalent Level (CNEL) is another 24-hour average which includes both an evening and nighttime weighting.

Table N–1
Typical Noise Levels

Noise Level (dBA)	Outdoor Activity	Indoor Activity
90+	Gas lawn mower at 3 feet, jet flyover at 1,000 feet	Rock Band
80-90	Diesel truck at 50 feet	Loud television at 3 feet
70-80	Gas lawn mower at 100 feet, noisy urban area	Garbage disposal at 3 feet, vacuum cleaner at 10 feet
60-70	Commercial area	Normal speech at 3 feet
40-60	Quiet urban daytime traffic at 300 feet	Large business office, dishwasher next room
20-40	Quiet rural, suburban nighttime	Concert hall (background), library, bedroom at night
10-20		Broadcast/recording studio
0	Lowest threshold of human hearing	Lowest threshold of human hearing

Source: (modified from Caltrans Technical Noise Supplement, 2011)

Noise levels that are generally considered acceptable or unacceptable can characterize various environments. Lower levels are expected in rural or suburban areas than would be expected in commercial or industrial zones. Nighttime ambient levels in urban environments are about 7 decibels lower than the corresponding average daytime levels. The day–to–night noise level difference in rural areas away from roads and other human activity can be considerably less.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Noise levels above 45 dBA at night can result in the onset of sleep interference.[58] At 70 dBA, sleep interference becomes considerable.

City of Alameda Noise Standards

Section 8.7, Noise, of the Health and Safety Element to the *City of Alameda General Plan* contains Noise and Land Use Compatibility Standards adopted to guide the evaluation of a proposed project's compatibility of the noise environment on the site. These standards identify four categories for noise and land use compatibility, which vary by land use type. Section 8.7 establishes the following noise limit categories for residential uses:

1. In noise environments of 60 dB CNEL or less, residential uses are considered "normally acceptable" provided that buildings are of conventional construction.
2. In noise environments of between 60 dB and 70 dB CNEL, residential uses are considered "conditionally acceptable" and new construction or development should only be undertaken after a detailed noise analysis of the noise reduction requirements is made and noise insulation features are included in the design of the project.
3. In noise environments of between 70 dB and 75 dB CNEL, residential uses are considered "normally unacceptable." Residential construction or development is generally discouraged in these areas. If construction proceeds, a detailed noise analysis of the noise reduction requirements is needed and inclusion of noise insulation features may be required in the project's design.
4. Where noise environments exceed 75 dB CNEL, residential land uses are considered "clearly unacceptable" and the General Plan specifies that new residential development should not be undertaken in these areas.

The City of Alameda also requires that new dwellings limit intruding noise to 45 dB CNEL in all habitable rooms. In new dwellings subject to a noise easement, noise is not to exceed 40 dB CNEL in habitable rooms. If this requirement is met by inoperable or closed windows, a mechanical ventilation system meeting Uniform Building Code requirements must be provided.

Chapter 4-10, "Noise Control," of the Alameda Municipal Code also regulates noise in the community. Of relevance to this analysis are Sections 4-10.4 (Exterior Noise Standards) and 4-10.7 (Special Provisions [Exceptions]). Table N–2 lists exterior noise standards for various noise-sensitive receiving land uses (single- or multi-family residential, schools, hospitals, churches, public libraries, and commercial uses) as measured at the receiving land use. Section 4-10.7 includes exceptions to these noise standards, including, "noise sources associated with construction provided the activities take place between the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday or 8:00 a.m. to 5:00 p.m. on Saturdays."

State of California Standards

In addition to the State land use compatibility guidelines discussed above, the State *CEQA Guidelines* (Appendix G) and State Building Code (Title 24, Part 2) also have policies addressing noise–sensitive land uses. CEQA poses the questions contained in the Environmental Checklist (and incorporated into this document) to determine if impacts are potentially significant. Title 24, Part 2, California Code of Regulations establishes an interior noise standard of 45 dBA for

[58] U.S. Environmental Protection Agency, *Community Noise,* 1971.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

residential space (CNEL or L_{dn}). Acoustical studies must be prepared for residential structures to be located within noise contours of 60 dB(A) or greater (CNEL or L_{dn}) from freeways, major streets, thoroughfares, rail lines, rapid transit lines, or industrial noise sources. The studies must demonstrate that the building is designed to reduce interior noise to 45 dBA CNEL L_{dn} or lower.

Table N–2
City of Alameda Exterior Noise Standards
in A-Weighted Decibels (dBA)

Category	Cumulative No. of Minutes in Any One-Hour Period[1]	Daytime (7:00 a.m. to 10:00 p.m.)		Nighttime (10:00 p.m. to 7:00 a.m.)	
		Residential[2]	Commercial	Residential[2]	Commercial
1	30	55	65	50	60
2	15	60	70	55	65
3	5	65	75	60	70
4	1	70	80	65	75
5	0	75	85	70	80

Source: City of Alameda, 2011

Notes:

[1]For example (in Category 1), this means the measured noise level may not exceed 55 dBA for more than 30 minutes out of any one-hour time period.

[2]The Residential category includes single- and multi-family residential as well as school, hospital, church, and public library uses.

Significance Criteria

The following thresholds of significance for noise impacts are employed in the noise impact analysis presented in this Initial Study:

a. Exposure of persons to or generation of noise levels in excess of standards established by the City of Alameda. Specifically, exterior and interior noise levels of 60 dB CNEL and 45 dB CNEL, respectively, for residential uses exposed to transportation noise sources.

b. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels. Groundborne vibration levels exceeding 0.3 in/sec PPV (peak particle velocity) would be considered excessive as such levels have the potential to result in "architectural" damage to normal buildings.

c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, defined by the City of Alameda as 4 dB CNEL or greater.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, typically defined as hourly average noise levels exceeding 60 dBA and existing levels by more than 5 dBA.

e. For a project located within an airport land use plan or, where such a plan has not be adopted, within 2 miles of a public airport or public use airport, where the project would expose people residing or working in the area to excessive noise levels.

f. For a project within the vicinity of a private airstrip, where the project would expose people residing or working in the project area to excessive noise levels.

Existing Conditions

The primary existing noise source in the project area is traffic on Buena Vista Avenue. Truck traffic and loading/unloading noise from the existing warehouse use located on the site is also a source of noise in the project area. To the north of the project is a vacant terminal and boat docks, including the Alameda Yacht Club. Due to speed restrictions in the marina, boats coming and going from the Yacht Club are not a significant source of noise in the project area. The terminal adjacent and to the west of the Yacht Club was formerly operated by ConGlobal Industries, a shipping and container company.[59] As shipping activities are no longer conducted at this terminal, it is no longer a significant source of noise in the project area.

To characterize and quantify existing noise levels, ambient noise measurements were made at the project site from July 31 to August 3, 2012. The approximate noise measurement locations are shown on Figure N–1. Noise measurements were made using Larson-Davis Model 820 integrating sound level meters fitted with precision microphones and windscreens. The sound level measuring assemblies were calibrated before and after the noise monitoring survey, and the response of the systems were always found to be within 0.2 dB of the calibrated level. No calibration adjustments were made to the measured noise levels. Weather conditions during the noise measurements were characterized by clear to overcast skies, warm temperatures, and calm to light winds.

One long-term noise measurement, 48+ hours in duration, and three short-term (10-minute) noise measurements, were made to complete the noise survey. Long-term noise measurement LT-1 was located approximately 90 feet north of the Buena Vista Avenue centerline at the southwest corner of the property. This location was selected to quantify the daily trend in noise levels at planned residential land uses along Buena Vista Avenue. Hourly average noise levels typically ranged from 60 to 70 dBA L_{eq} during the day, and from 52 to 64 dBA L_{eq} at night. The calculated day-night average noise level at this location was 66-67 dBA CNEL. The daily distribution of noise levels at LT-1 is summarized in Appendix B.

Short-term measurement 1 (ST-1) was conducted at the northwest corner of the property, while ST-2 was made near the property line of the existing residences on Ohlone Street, and ST-3 was made at the intersection Buena Vista Avenue and Stanton Street. The results of the short-term noise measurements, all conducted on August 3, 2012, are presented in Table N–3.

[59] John Cook, Owner, Townsend Real Estate, personal communication, August 8, 2012.

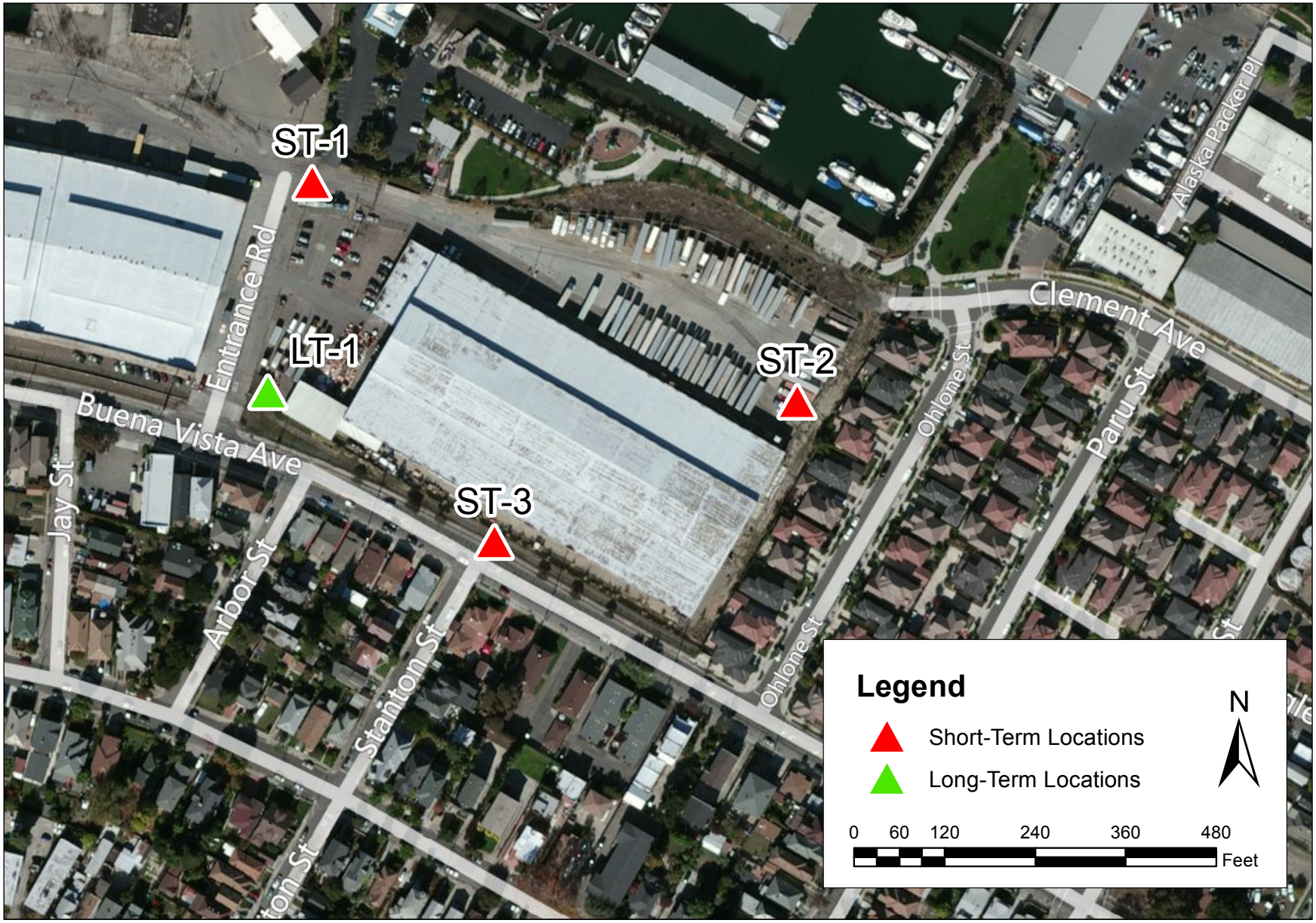

Figure N-1

Noise Monitoring Locations

Source: Bing, Illingworth & Rodkin, Inc, 2012

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Impact of Existing Noise Levels on Future Residents

The noise analysis assumes that the future exterior noise environment at the project site will continue to result primarily from local traffic, and that the nearby terminal located northwest of the site will remain inactive. Future traffic noise levels were calculated with the Federal Highway Administration's (FHWA) Traffic Noise Model (TNM v. 2.5). The model input was based on the Tentative Map Preliminary Grading and Drainage Plan for Tract 8118 – Marina Cove II.[60]

Table N–3
Summary of Short-Term Noise Measurements
in A-Weighted Decibels (dBA)

Location and Time of Day	L_{max}	$L_{(1)}$	$L_{(10)}$	$L_{(50)}$	$L_{(90)}$	L_{eq}	CNEL[1]
ST-1: Northwest corner of property, future residential building façade. (10:20 a.m.-10:30 a.m.)	66	64	54	50	48	53	57
ST-2: Ohlone Street residential property line. (9:50 a.m.-10:00 a.m.)	66	56	53	44	42	49	51
ST-3: Buena Vista Avenue and Stanton Avenue, apx. 35 feet from Buena Vista Avenue centerline. (9:30 a.m.-9:40 a.m.)	82	77	73	66	57	69	71

Source: Illingworth & Rodkin, Inc., 2012

Note:

[1]CNEL approximated by correlating to corresponding period at long-term site.

The noise model results demonstrate that the exposure of project residents to outdoor sound levels would be a less-than-significant impact. Based on the noise model results, additional traffic along Buena Vista Avenue is calculated to increase existing traffic noise levels by up to 1 dB CNEL in the near term (2015 Plus Project traffic scenario). By 2030, Clement Avenue would be extended along the northernmost property boundary of the site and would carry approximately the same volume of traffic that currently exists along Buena Vista Avenue. With the Clement Avenue extension, traffic noise levels along Buena Vista Avenue are calculated to decrease by about 1 dB CNEL as compared to the near-term traffic scenario, reverting back to the same noise level as existing conditions.

[60] Ruggeri-Jensen Azar, Tentative Map, Preliminary Grading and Drainage Plan for Tract 8118 – Marina Cove II, June 20, 2012.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

The private outdoor use areas of the proposed residential units adjacent to Buena Vista Avenue would experience the worst-case noise exposure in the near term (2015 Plus Project) prior to the extension of Clement Avenue. However, with the homes oriented toward Buena Vista Avenue, the two-story homes would substantially block traffic noise along the roadway from residents in the back yards of these homes. Future noise levels at the outdoor use (rear yard) areas of these lots are calculated to reach 58 dBA CNEL, which would be below the City's "normally acceptable" standard of 60 dBA CNEL. Actual noise levels would be expected to be even lower, on the assumption that these lots would have side yard privacy fences along the internal street exposures, which would further attenuate noise levels at the rear yards most affected by noise along Buena Vista Avenue.

The residential units proposed adjacent to Clement Avenue would also be oriented toward the roadway, with the private outdoor use areas of these units shielded from roadway noise by the homes. The worst-case noise exposure at residential lots adjoining Clement Avenue would occur when the extension of Clement Avenue is complete. Future noise levels at the outdoor use areas at these lots are also calculated to reach a maximum of 58 dBA CNEL following the planned extension of Clement Avenue further west to Sherman Street, and would be below the City's "normally acceptable" standard of 60 dBA CNEL. Based on these results, the exposure of project residents to outdoor sound levels would be a less-than-significant impact.

Interior noise levels within new residential units are required to be maintained at or below 45 dBA CNEL. Residential buildings along the north, west, and south boundaries of the project site would be exposed to future noise levels up to 71 dBA CNEL. Interior noise levels would vary depending on the final design of the buildings (relative window area to wall area) and construction materials and methods. Standard residential construction provides approximately 15 dBA of exterior-to-interior noise reduction, assuming the windows are partially open for ventilation. Standard construction with the windows closed provides approximately 20 to 25 dBA of noise reduction in interior spaces.

In exterior noise environments ranging from 60 dBA CNEL to 65 dBA CNEL, interior noise levels can typically be maintained below City standards with the incorporation of an adequate forced air mechanical ventilation system in each residential unit. Preliminary calculations indicate that this measure would be applicable to residential lots on the interior of the site (i.e., not along the project boundaries, and shielded by first-row residences). It is assumed that standard thermal-pane residential windows/doors with a minimum rating of STC 28 would be installed in these residences.

In noise environments of 65 dBA CNEL or greater, a combination of forced-air mechanical ventilation and sound-rated construction methods is often required to meet the interior noise level limit. Attaining the necessary noise reduction from exterior to interior spaces is readily achievable in noise environments of less than 75 dBA CNEL with proper wall construction techniques, the selection of proper windows and doors, and the incorporation of forced-air mechanical ventilation systems. Preliminary calculations show that it is likely that windows/doors with ratings of STC 30 to 35 would be required to mitigate the worst-case exterior noise exposures of 71 dBA CNEL. This measure would be applicable to residential lots located on the site's northernmost, westernmost, and southernmost boundaries.

Although the proposed project would expose residents to interior sound levels in excess of Alameda noise standards, which would be a ***potentially significant impact***, implementation of

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Measures N–1 through N–2 would ensure that the noise environment would be compatible with residential land uses and that the impact would be mitigated to a less-than-significant level.

Mitigation Measure N–1: The project sponsor shall provide a suitable form of forced-air mechanical ventilation, as determined by the local building official, for units throughout the site, so that windows can be kept closed at the occupants' discretion to control interior noise and achieve the interior noise standards.

Mitigation Measure N–2: The City of Alameda shall confirm the final specifications for noise insulation during final design of the project. In addition to sound-rated windows and doors, other treatments may include, but are not limited to: sound-rated exterior wall construction methods, acoustical caulking, insulation, acoustical vents, etc. Large windows and doors should be shielded by noise barriers or oriented away from noise sources where possible.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? ☐ ☐ **X** ☐

Explanation: The construction of the project may generate vibration when heavy equipment or impact tools (e.g. jackhammers, hoe rams) are used near the project boundaries. Construction activities would include demolition of existing structures, site preparation work, foundation work, and new building framing and finishing. The proposed project would not require pile driving, which can cause excessive vibration.

Neither the City of Alameda nor the State of California has adopted policies for groundborne vibration. For structural damage, the California Department of Transportation (Caltrans) uses a vibration limit of 0.5 inches/second, peak particle velocity (in/sec, PPV) for structurally sound buildings designed to modern engineering standards. Caltrans uses a limit of 0.3 in/sec, PPV for buildings that are found to be structurally sound but where structural damage is a major concern. For ancient buildings or buildings that are documented to be structurally weakened, Caltrans uses a conservative vibration limit of 0.08 in/sec, PPV. For purposes of this analysis, a threshold of significance of 0.3 in/sec, PPV is used.

Table N–4 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet. Project construction activities such as drilling, the use of jackhammers, rock drills, and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may generate substantial vibration in the immediate vicinity. Jackhammers typically generate vibration levels of 0.035 in/sec PPV and drilling typically generates vibration levels of 0.09 in/sec PPV at a distance of 25 feet. Vibration levels would vary depending on soil conditions, construction methods, and equipment used. Vibration levels would be expected to be 0.2 in/sec PPV or less, below the 0.3 in/sec PPV significance threshold. Vibration generated by construction activities near the common property line would at times be perceptible, however, but would not be expected to result in architectural damage to these buildings.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

In areas where vibration would not be expected to cause structural damage, vibration levels may still be perceptible. However, as with any type of construction, this would be anticipated and it would not be considered significant given the intermittent and short duration of the phases that have the highest potential of producing vibration (demolition and use of jackhammers and other high power tools). By the use of administrative controls such as notifying adjacent commercial shops of scheduled construction activities and scheduling construction activities with the highest potential to produce perceptible vibration to hours with the least potential to affect these uses, perceptible vibration can be kept to a minimum, and as such would not result in a significant impact with respect to vibration.

There are no significant sources of groundborne noise or vibration in the vicinity of the project site, and excessive vibration would not be created by the construction of the proposed project or demolition of the existing building and pavements. Therefore, the impact of vibration on existing or future residents would be less than significant.

c) *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?* ☐ ☐ **X** ☐

Explanation: The City of Alameda considers an increase in noise exposure of 4 or more dB to be significant if the resulting noise level would exceed that described as normally acceptable for the affected land use. The only permanent source of noise that would result from the project would be increased vehicle traffic on the local roadway network generated by project residents, visitors, and delivery/service vehicles.

Generally, a doubling of traffic volumes is required before an increase in ambient noise will be perceived by the average person, corresponding to a noise level increase of 3 dB. Traffic volume information provided by TJKM Transportation Consultants was reviewed at the study area intersections. Traffic volumes under the "Existing" and "2015 Plus Project" traffic scenarios were compared to calculate the relative increase in traffic noise attributable to the proposed project. This comparison showed that traffic volumes would only be slightly increased with the project as compared to existing conditions. Traffic noise levels are calculated to increase by 0 to 1 dBA CNEL as a result of the project.

Other noise generated by the project would consist of typical sounds emanating from residential developments, such as noise from lawn mowers, leaf blowers, children playing, music, etc. These intermittent noise sources would not be excessive, are typical of all residential developments, and are compatible with existing noise-sensitive residential land uses that border the site.

The incremental increase in noise that would be caused by project-generated sources would be substantially less than the 4 or more dB significance threshold established by the City of Alameda. Therefore, the noise impact from project traffic would be less than significant. No mitigation measures are recommended for traffic-related noise.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Table N–4
Vibration Source Levels for Construction Equipment
in Vibration Decibels (VdB)

Equipment		PPV[1] at 25 ft. (in./sec.)	Approximate Level at 25 feet (VdB)
Pile Driver (Impact)	upper range	1.158	112
	typical	0.644	104
Pile Driver (Sonic)	upper range	0.734	105
	typical	.0170	93
Clam Shovel Drop		0.202	94
Hydromill (Slurry Wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Source: U.S. Department of Transportation, 2006

Note:

[1]PPV = peak particle velocity

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? ☐ **X** ☐ ☐

Explanation: The project is anticipated to require a total of 9 months to demolish the existing structures on the site and construct the proposed residential units. Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise generating activities, and the distance between construction noise sources and noise sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise sensitive land uses, or when construction lasts over extended periods of time.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Construction activities generate considerable amounts of noise, especially during demolition and earth moving activities when heavy equipment is used. The highest maximum noise levels generated by project demolition and construction activities would typically range from about 90 to 95 dBA at a distance of 50 feet from the noise source. Typical hourly average construction generated noise levels are about 81 dBA to 88 dBA measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.). Hourly average noise levels generated by the construction of residential units would range from about 65 dBA to 88 dBA measured at a distance of 50 feet depending on the amount of activity at the site. Construction-generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor. Shielding by buildings or terrain often result in lower construction noise levels at more distant receptors.

Noise-generating demolition and construction activities are anticipated to result in noise levels that exceed 60 dBA L_{eq} and be at least 5 dBA L_{eq} above the ambient noise environment at adjacent noise-sensitive land uses over a temporary basis. Although demolition and construction noise would be a ***potentially significant impact***, implementation of Mitigation Measures N–3 through N–6 would ensure that short-term construction impacts associated with the proposed project would be mitigated to a less-than-significant level.

Mitigation Measure N–3: Pursuant to the Municipal Code, noise-generating construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday and 8:00 a.m. to 5:00 p.m. on Saturdays. Construction shall be prohibited on Sundays and holidays.

Mitigation Measure N–4: The project sponsor shall require the construction contractor to equip all construction equipment driven by internal combustion engines with intake and exhaust mufflers which are in good condition, appropriate for the equipment, and no less effective than those originally installed by the manufacturer. The manufacturers' noise abatement features, such as mufflers, engine covers, and engine vibration isolators, shall be intact and operational. All construction equipment shall be inspected weekly to ensure proper maintenance and presence of noise control devices (e.g., mufflers and shrouding, etc.). Unnecessary idling of internal combustion engines shall be strictly prohibited.

Mitigation Measure N–5: Wherever possible, hydraulic tools shall be used instead of pneumatic impact tools. "Quiet" air compressors and other stationary noise sources shall be utilized when appropriate technology is available. Construction staging areas, maintenance yards, air compressors, portable power generators, and other construction-oriented operations shall be located as far as reasonably possible from noise-sensitive receptors. Temporary noise barriers shall be constructed to screen stationary noise-generating equipment when located near adjoining sensitive land uses. Noise from construction workers' radios shall be limited such that the radios are not audible at existing residences bordering the project site.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Mitigation Measure N–6: The construction contractor shall prepare and submit to the City for approval a detailed construction plan identifying the schedule for major noise-generating construction activities. The plan shall designate a "disturbance coordinator" who will be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of any noise complaints (e.g., starting too early, bad muffler, etc.) and shall require that reasonable measures warranted to correct the problem be implemented. The contractor shall conspicuously post a telephone number for the disturbance coordinator at the construction site and include the notice sent to neighbors regarding the construction schedule.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X

Explanation: There are no public airports within 2 miles of the project site; the nearest airport is Oakland International Airport, located approximately 3 miles southeast of the site. The project site is not located within an airport land use plan or within two miles of a public airport or public use airport and would not expose people residing or working in the project area to excessive noise levels from aircraft.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X

Explanation: There are no private airstrips within 2 miles of the project site; the nearest private airstrip is the Alameda Naval Air Station, located about 3 miles northwest of the project site. The base was closed in 1997. The project would not expose people residing or working in the project area to excessive noise levels from aircraft.

XIII. POPULATION AND HOUSING — *Would the project:*

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	X	☐

Explanation: The proposed project would directly generate population growth through the development of 59 new single-family homes and 10 new BMR duplex units. According to U.S. Census data, the average per-household population within the City of Alameda is 2.40.[61] Using

[61] U.S. Census Bureau, Average Household Size of Occupied Housing Units by Tenure, Alameda City, California, 2010 Census Summary File 2, Accessed August 1, 2012 at:

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

this number to estimate the population on the project site, the 69 homes would generate a population increase of approximately 166 persons. This would represent a potential net increase in Alameda's population of about 0.22 percent, based upon the 2010 Census Bureau estimate of an existing population totaling 73,812 people.

The approximately 7.1-acre site has a land use designation of Medium-Density Residential, which allows a density of up to 21.8 units per acre. Thus, under the General Plan, the site could be developed with up to 154 units, or more than double the number of units currently proposed. Therefore, the growth in population that would occur with implementation of the proposed project was planned for in the General Plan, and the impacts of this growth were previously evaluated in the General Plan EIR. In addition, the project would constitute infill development within a developed urban area, and new roads and infrastructure would not be extended into an undeveloped area. The project would therefore not cause a new impact related to population growth not already evaluated the General Plan EIR.

b) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?* ☐ ☐ ☐ **X**

Explanation: The project site does not contain any residential structures. Therefore, the project would not demolish or otherwise remove any existing housing units.

c) *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?* ☐ ☐ ☐ **X**

Explanation: See Section XII(b), above.

XIV. PUBLIC SERVICES: *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:*

a) *Fire protection?* ☐ ☐ **X** ☐

Explanation: Fire response to the project site would be provided by the Alameda Fire Department (AFD). The AFD has 93 sworn firefighters and 10 non-sworn personnel and operates out of four fire stations located throughout the City. The AFD also provides emergency

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http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_SF2_HCT5&prodType=table.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

medical services with three full-time advanced life support (ALS) ambulances. All engine companies and ambulances are staffed with at least one paramedic each, providing quick ALS service to all areas of the city.[62] In addition, the AFD has a basic life support program that provides non-emergency ambulance transport for patients who need to be transported to or from medical facilities. Example services include inter-facility transportation, doctors appointments, dialysis appointments, and medical event standbys.[63]

Station Number 3, located at 1709 Grand Street between Grand Street and Pacific Avenue, would be the first to provide fire and emergency response to the project site. This fire station is located 0.4 mile from the farthest point of the project site, at the intersection of Buena Vista Avenue and Entrance Road. Station No. 3 has one fire captain, one fire apparatus operator, one fire fighter paramedic, one fire engine, one fire boat, and one water rescue boat.[64]

In 2011, the AFD responded to 6,152 calls in the City, which included 1,120 calls for Station No. 3. According to the Northern Waterfront GPA DEIR, the AFD meets it goal of responding to calls within 3.5 minutes for 90 percent of calls.[65] A telephone call with AFD Fire Chief Mike D'Orazi on August 10, 2012 confirmed that this response rate is still accurate. The AFD does not have an official staffing ratio, but currently, there are 24 firefighters and one fire chief on duty every day. According to a report by Insurance Services Office, Inc. dated February 2012, the AFD earned an ISO score of 82.83.[66]

Development in the project area would be required to meet standard fire code requirements administered by the City of Alameda Building Services Division and specified by the California Building Code and California Fire Code (CFC). Fire hydrants in the project area would be spaced a maximum of 250 feet apart, with minimum flow requirements of 1,500 gallons per minute (gpm) with 20 pounds per square inch (PSI) residual pressure. The project area would also be subject to fire flow requirements set forth in the California Building Code, which specify a typical 3,000 gpm from two hydrants and 1,500 from each hydrant with 20 PSI residual pressure.

The AFD requires that fire hydrants be located within 40 feet of Fire Department connections and that all fire access meets CFC requirements, including a 28-foot inside radius on all access routes. Additionally, all new buildings would be required to be equipped with complete sprinkler systems. These standard required design features would ensure that adequate infrastructure would be provided for firefighting services.[67]

The City of Alameda Municipal Code Chapter 27-26, Police and Fire Requirements, states that new development must pay fees to assist in maintaining level of service standards to

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[62] City of Alameda Fire Department, Emergency Medical Services, Accessed August 9, 2012 at: http://www.cityofalamedaca.gov/City-Hall/EMS.

[63] City of Alameda Fire Department, Basic Life Support Transport Program, Accessed August 9, 2012 at: http://www.cityofalamedaca.gov/City-Hall/BLS.

[64] Mike D'Orazi, Fire Chief, City of Alameda Fire Department, personal communication, August 10, 2012.

[65] City of Alameda, *Alameda Northern Waterfront General Plan Amendment, Draft Environmental Impact Report*, Page IV.C-1, January 2006.

[66] Insurance Services Office, Inc., *Alameda, Alameda County, CA Public Protection Classification*, February 17, 2012, Accessed on August 9, 2012 at http://www.cityofalamedaca.gov/City-Hall/Fire.

[67] City of Alameda, *North Park Street Regulating Code, Draft Environmental Impact Report*, Page IV.C-6, January 2012.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

accommodate new growth. Chapter 27-3, Citywide Development Fees, would also apply to the proposed project.

As noted in the Northern Waterfront GPA DEIR, the City is located in an area facing a relatively high risk of disaster due to the proximity of local earthquake faults, major civilian flight paths, and land uses that involve the storage of hazardous waste.[68] The required development fees would ensure that adequate fire and emergency staff and facilities are available to serve new development. The proposed project would not be expected to require the construction of new facilities, or the alteration of existing facilities. Therefore, the project would have a less-than-significant impact on fire protection services.

b) Police protection? ☐ ☐ **X** ☐

Explanation: Police protection would be provided to the project by the Alameda Police Department (APD). The Department operates out of one station located at 1555 Oak Street, which is approximately 1.3 miles from the project site. The APD currently has a total of 76 police staff, including 52 sworn police officers, 15 sergeants, five lieutenants, one chief, and two captains.[69]

The APD's patrol is based on a five-sector system. Seven days a week, 24 hours a day, officers are assigned to patrol the five sectors. There are typically one to four officers assigned to a sector at any given time of day or night. According to the Northern Waterfront GPA DEIR, the GPA planning area is located in Police Sector 2, Beat #6 , and correspondence with APD staff in August 2012 confirmed that this information is still accurate. The APD has 30 patrol vehicles, but only eight are used during each shift. The average response time to the project site is 3 to 5 minutes. The target response time is 3 minutes, which is achieved for 80 percent of all calls.[70] According to email correspondence with APD staff in August 2012, the APD does not establish a target staffing ratio for the ADP.[71]

The proposed project would result in an incremental increase in calls for police services for a variety of property- and traffic-related incidents, but the increase would not result in a need for new police facilities or alterations to existing facilities. The project would be required to pay Citywide development impact fees that pay for police facilities and other services. With payment of these fees, the project's impacts on police services would be a less-than-significant impact.

[68] City of Alameda, *Alameda Northern Waterfront General Plan Amendment, Draft Environmental Impact Report*, Page IV.C-2, January 2006.

[69] Florence Lopez, City of Alameda Police Department, personal communication, August 1, 2012.

[70] Florence Lopez, City of Alameda Police Department, personal communication on August 1, 2012.

[71] Yvonne Crop, Records Supervisor, City of Alameda Fire Department, personal communication, August 9, 2012.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

c) Schools? ☐ ☐ **X** ☐

Explanation: The project area is located within the service boundaries of the Alameda Unified School District (AUSD). AUSD operates 13 elementary schools, three middle schools, three high schools, a preschool child center, and an adult continuation school.[72] The closest elementary schools are Franklin Elementary School, which is located at 1433 San Antonio (about 0.8 mile from the project site) and Henry Haight School, which is located at 2025 Santa Clara (apx. 0.9 mile from the site). The closest middle school is Wood Middle School, located at 420 Grand Street, about 1.1 miles from the site. The closest high school is Alameda High School located at 2201 Encinal, approximately 1.4 miles from the project site.

The AUSD employs a student yield factor as a basis for the determination of students generated by a specific project. The following yield factors were utilized to determine the student generation of single-family detached residential construction:[73]

	Students per Household	
Grade Level	Single-Family Units	Multi-Family Units
K-5	0.28	0.43
6-8	0.12	0.18
9-12	0.13	0.18
Total	**0.53**	**0.79**

Based on these factors, the proposed project's 59 single-family homes would generate 32 new students, including 17 K-5 students, 7 grade 6-8 students, and 8 grade 9-12 students. The project's 10 duplex homes would generate 8 new students, including 4 K-5 students, 2 grade 6-8 students, and 2 grade 9-12 students.

Current development fees within the City are $3.55 per square foot for residential and $0.36 per square foot for commercial development.[74] Payment of the School Facilities Mitigation Fee has been deemed by the State legislature to be full and complete mitigation for the impacts of a development project on the provision of adequate school facilities. The assessment of the adopted School Facilities Mitigation Fee ensures that the project would not result in a significant impact under CEQA, in accordance with Senate Bill 50, which became effective in 1998.

There are several schools near the project site, so it is unlikely that the addition of new students associated with the proposed project would result in a need for physical expansion of school facilities, or cause school enrollment to exceed existing capacity. With payment of the school

[72] City of Alameda, *North Park Street Regulating Code, Draft Environmental Impact Report,* Page IV.C-2, January 2012.

[73] *Ibid.*

[74] *Ibid.*

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

impact fees, the proposed project would cause a less-than-significant impact upon public school services within the AUSD.

d) Parks?

☐	☐	**X**	☐

Explanation: The Alameda General Plan describes the City's four categories of parks and community open space as: developed park lands; future park lands; limited access lands; and school parks. These categories are defined as follows:

- **Developed Park Land.** The City has over 200 acres of developed parks separated into subcategories by park type. The categories include neighborhood parks, community parks, community open space, greenways, and regional parks.
- **Planned Park Lands.** Undeveloped park lands consist of the 20-acre Mt. Trashmore site, undeveloped greenways and trails, and the future Catellus Mixed-Use Development and Alameda Point open space.
- **Limited Access Lands.** Limited-access park lands consist of either facilities that require a fee for use or that are closed to the general public. The Chuck Corica Municipal Golf Course, College of Alameda recreation and open space facilities, and AUSD facilities are considered limited access. Also considered limited access are two public swimming pools. The City has a joint agreement with AUSD for the use of the pools, which are used by students, City Swim Clubs, and the Masters Program during the school year. The Recreation and Park Department provides public aquatic programs during the summer at the pools.
- **School Parks.** This category includes AUSD school properties only. These areas are generally not available for public use after school and on weekends due to locked gates.

According to the Northern Waterfront GPA DEIR, the City's current ratio of neighborhood and community parkland, including school playgrounds and fields, is approximately 2.1 acres per 1,000 residents.[75] The GPA DEIR noted that the City of Alameda's general plan does not state a specific goal of park acreage per 1,000 residents, but California cities typically strive for 3 to 6 acres of park per 1,000 residents. About 95 percent of Alameda residents live within ⅜-mile of a park, the maximum radius for effective service as indicated by studies in other cities.[76]

More recently, the City of Alameda *Urban Greening Plan* stated that the City currently has 150 acres of municipal park land, not including the Chuck Corica Golf Complex.[77] Many of the parks are small, but effectively designed and programmed to meet much of the community's recreation needs. Parks are well distributed geographically to provide easy access to a local park for the majority of residents.

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[75] City of Alameda, *Alameda Northern Waterfront General Plan Amendment, Draft Environmental Impact Report*, Page IV.N-5, January 2006.

[76] *Ibid.*

[77] Gates + Associates, *Urban Greening Plan: Parks Improvement Assessment, Alameda, California*, June 2012.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

The 2012 *Urban Greening Plan* confirmed that California cities still typically strive to meet acreage standards of 3 to 6 acres per 1,000 residents. California's Quimby Act permits cities to require new development to contribute land or funding to provide a minimum of 3 acres of parkland per 1,000 new residents. The City currently provides approximately 2 acres of park and recreation space per 1,000 residents (not including the 325+ acre Chuck Corica Golf Complex). The *Urban Greening Plan* states that as the population grows and the City is further built out, it is appropriate to set 3 acres per 1,000 residents as the City standard, and as Alameda Point develops, new residential development should provide 3 acres of neighborhood park per 1,000 new residents.

Much of the City of Alameda has been built out, with the exception of the former Alameda Naval Air Station (referred to as "Alameda Point") and thus, there are limited options for expanding parks or the park system. At this point in time, several opportunities have been identified for potential future park sites, the most significant being the former Alameda Belt Line Rail Yard and yet-to-be-determined locations on Alameda Point.[78]

The following three parks are located near the project site:

- **Marina Cove Waterfront Park** is a 3.2-acre park located at 1591 Clement Avenue that runs along the marina from Clement Avenue to the Alameda Yacht Club. This park was designed, built, and required by the City to serve the previously approved Marina Cove Subdivision, including Phase II of the project (the currently proposed project). The park is located across the street from the Ohlone street boundary of the project. The park features open lawn areas at each end connected by a walk overlooking the water. Picnic areas, benches, and a play area provide opportunities to rest and enjoy the views. Park lighting enhances safety.
- **Littlejohn Park** is a 3.45-acre park located at 1401 Pacific Avenue, approximately 0.2 mile from the project site. Littlejohn Park features an unlighted multi-use field for baseball, softball, soccer, and football. It also has several picnic areas, two half basketball courts, a 2-12 year-old age group playground, and open lawn for informal play. There is enhanced planting at the entry near the community building. Parking is on-street only, and the park is surrounded on three sides by residences. There is ADA access to the group picnic area.
- **Neptune Park** is a 3.08-acre park located at 2301 Webster Street, about 1.9 miles from the project site. Neptune Park acts as the gateway to the City from the Webster Street Tunnel. The park features the City's monument sign and flagpoles set in a large open lawn area. Enhanced planting areas with a path and seating run the south edge of the park, near the adjacent residences. The park is highly visible from the street.

Although the proposed project residents would incrementally increase the use of existing parks, the amount of additional use by new residents would not be expected to result in physical deterioration of the parks or otherwise adversely affect park facilities. The Citywide Development Fees are designed to mitigate the impact of new development on existing parks facilities throughout the City. In addition, the proposed project would involve a 0.3-acre public art park, and the proposed road extensions may provide better access to the Bay Trail. Therefore, the project would have a less-than-significant impact on parks.

[78] *Ibid.*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
	☐	☐	☐	☐
e) Other public facilities?	☐	☐	X	☐

Explanation: Library services within the City of Alameda are provided by the Alameda Free Library. The West End library branch, located at 788 Santa Clara Avenue, is the closest library to the project site. The Library offers a wide range of services to support community priorities, including answering reference questions, staging story times, providing summer reading programs, hosting class visits, and educational events.[79] Data on the current number of visitors served with library services was unavailable at the time of preparation of this Initial Study.

The GPA DEIR does not contain any specific thresholds for library services or facilities. While the proposed project would generate an incremental increase in demand for library services, the additional demand that would be generated by an estimated population of 166 persons, only a small portion of whom would be expected to utilize the library in any given month, would be expected to be a small fraction of the existing monthly visitors. This would not require an expansion of library facilities, and the project's impact on library services would be considered less than significant.

XV. RECREATION —

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	X	☐

Explanation: The park facilities discussed in Section XIV(d) provide various recreation facilities, including softball fields, tennis courts, basketball courts, volleyball courts, soccer and other athletic fields, picnic areas, a model airplane field, boat launches, children's play equipment, two community swimming pools, and a public beach. The City also has a 45-hole public golf course on Bay Farm Island and a senior center offering a wide variety of fitness, educational, and recreational programs. The potential impact from a project-generated increase in parks and associated recreation facilities was addressed previously in Section XIII(d).

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	X	☐

Explanation: As discussed in Section XIV(d), the proposed project includes construction of a 0.3-acre garden park with art installations that would be developed in tandem with the

[79] City of Alameda, Alameda Free Library, Accessed August 10, 2012 at: http://www.cityofalamedaca.gov/Library/.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

proposed homes. Impacts from the development of this garden park are included in this project's environmental review.

XVI. TRANSPORTATION/TRAFFIC — *Would the project:*

a)	*Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?*	☐	☐	☒ ☐

Explanation: Information presented in this section is based on a traffic study of the project prepared by TJKM Traffic Consultants in August 2012.[80]

Traffic Scenarios

The intersection analysis was performed for the following five scenarios:

Existing Conditions – This scenario evaluates current traffic operation, with Levels of Service (LOS) calculated based on traffic volumes (counts) collected from the field in July 2012.

2015 Baseline Conditions – This scenario evaluates short–term traffic conditions, which include existing traffic plus the addition of projected traffic from recently approved but not–yet–built projects in the City of Alameda. In addition, an annual growth rate was applied to derive forecast year 2015 (three years from Existing Conditions) volumes. This scenario represents the baseline condition against which project impacts are evaluated, but does not include the proposed project.

2015 Baseline Plus Project Conditions – This is identical to Baseline Conditions, but with the addition of the net increase in traffic generated by the proposed Marina Cove II Residential Development.

2030 Cumulative Conditions – This scenario is based on the "2030 Project" cumulative volumes published in the City of Alameda's Transportation Element Update Draft EIR (Transportation Element DEIR) for the study intersections analyzed in that document, combined with 2030 link volume forecasts from the Alameda Countywide Travel Demand Model used to determine volumes for the remaining study intersections.

2030 Cumulative Plus Project Conditions – This is identical to Cumulative Conditions, but with the addition of the net increase in traffic generated by the proposed Marina Cove II Residential Development.

[80] TJKM Transportation Consultants, *Traffic Impact Study for Marina Cove II Residential Development in the City of Alameda* [Draft], August 15, 2012.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Study Intersections and Methodology

The traffic study evaluated the project at the following 20 intersections (unsignalized intersections are denoted with an asterisk (*)), selected in consultation with City of Alameda staff. The intersection locations are shown on Figure T–1. Eighteen of the study intersections are located within the City of Alameda and two intersections are in Oakland. Three of the listed intersections will be created in the future, one as part of the proposed project's extension of Clement Avenue along the project boundary, and two more with the future planned extension of Clement Avenue to Sherman Street, as indicated below:

1. Clement Avenue at Stanton Street (Future with Project)*
2. Clement Avenue at Ohlone Street*
3. Clement Avenue at Grand Street*
4. Clement Avenue at Entrance Road (Future Cumulative, with planned Clement extension)
5. Clement Avenue at Sherman Street (Future Cumulative, with planned Clement extension)
6. Buena Vista Avenue at Sherman Street
7. Buena Vista Avenue at Entrance Road*
8. Buena Vista Avenue at Stanton Street*
9. Buena Vista Avenue at Grand Street
10. Atlantic Avenue at Challenger Drive
11. Challenger Drive at Marina Village Parkway
12. Constitution Way at Atlantic Avenue
13. Constitution Way at Marina Village Parkway
14. Atlantic Avenue at Webster Street
15. Webster Street at Willie Stargell Avenue
16. Park Street at Clement Avenue
17. Park Street at Blanding Avenue
18. Blanding Avenue/Fernside Boulevard/Tilden Way
19. 5th Street at Broadway (Oakland)
20. Harrison Street at 7th Street (Oakland)

The traffic study evaluated the project during AM and PM peak hours, using the Highway Capacity Manual 2000 (HCM 2000) Operations Method contained in the standard traffic software Synchro. This methodology determines intersection level of service (LOS) based on average control delay per vehicle for the overall intersection during peak-hour operating conditions. Evaluation of non–signalized intersection was based on the HCM 2000 Unsignalized Methodology, also contained in Synchro.

Figure T-1

Traffic Study Intersections

Source: TJKM

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Level–of–Service Criteria

Traffic LOS is a qualitative measurement of traffic operations and flow characteristics. LOS A represents free flow conditions with little to no delays. LOS E represents conditions at capacity, and LOS F represents over saturation with excessive delays. The level of service generally reflects factors such as speed and travel time, delays, freedom to maneuver, traffic interruptions, comfort, convenience, and safety, as perceived by motorists. Intersection level of service provides a good indicator of overall operations of the roadway network because intersections generally are the capacity-controlling locations with respect to traffic operations on arterial and collector streets.

The HCM LOS criteria for signalized intersections is based on the following average delays for the overall intersection:

Signalized Intersections

Level of Service	Vehicle Delay (Seconds)
LOS A	< 10.0
LOS B	10.1 to 20.0
LOS C	20.1 to 35.0
LOS D	35.1 to 55.0
LOS E	55.1 to 80.0
LOS F	> 80.0

In the HCM 2000, LOS for two-way stop-controlled intersections is based on the worst of the two minor approaches. For all-way stop-controlled intersections, LOS is based on the average control delay experienced on all approaches. As shown in the following breakdown, the LOS criteria for stop-controlled intersections is more stringent than for signalized intersections. The primary reason for this is that drivers expect a signalized intersection to carry higher traffic volumes than unsignalized intersections.

Unsignalized Intersections

Level of Service	Vehicle Delay (Seconds)
LOS A	< 10.0
LOS B	10.1 to 15.0
LOS C	15.1 to 25.0
LOS D	25.1 to 35.0
LOS E	35.1 to 50.0
LOS F	> 50.0

The City of Alameda Transportation Commission has established a minimum acceptable peak–hour operating level of service for traffic of LOS D. If an intersection operates at LOS E or worse (i.e. LOS F), a project impact would be considered significant if it causes a 3-percent or greater increase in peak-hour traffic volume.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

The City of Oakland *Initial Study and Environmental Review Checklist* establishes a traffic operational standard for signalized intersections within the Downtown area of LOS E. If an intersection operates at LOS F, a project impact would be considered significant if it causes either the overall volume-to-capacity (V/C) ratio to increase 0.01 or more, or the critical movement V/C ratio to increase by 0.02 or more.

Existing Conditions

This section describes existing conditions in the project site vicinity, including roadway facilities, bicycle and pedestrian facilities, available transit service, truck routes, and project site traffic. In addition, existing traffic volumes and operations are presented for the study intersections, including the results of vehicle level of service calculations.

Street Network

The City of Alameda is an island separated from the City of Oakland by the Oakland Estuary. Access to the City of Alameda across the Oakland-Alameda Estuary is provided by a one-way couplet of under-Estuary tubes at Webster and Posey Streets (State Route 260), and draw bridges at Park Street/29th Avenue, Tilden Way/Fruitvale Avenue, and High Street. Doolittle Drive/Otis Drive (State Route 61) crosses San Leandro Channel, providing access from Bay Farm Island.

The street network serving the project site is shown on Figure T–1. Locally, the project would be accessed via Buena Vista Avenue and Clement Avenue. The proposed on-site streets—extensions of Clement Avenue, Arbor Street, and Stanton Street and a new street, A Street—are shown on Figure 3, in the Project Description. The roadways that would be utilized by project residents are described below. As noted in the Project Description, for ease of reference throughout this document, the northwest/southeast alignment of Buena Vista Avenue is assumed to run in a east/west direction, and all other compass reference points are adjusted accordingly. Thus, while the project site is located on the northeast side of Buena Vista Avenue, it is described as being on the north side of Buena Vista Avenue. All other reference points have been similarly simplified.

Interstate 880 (I-880) is a north/south eight-lane freeway (though oriented east/west in the study area) between I-80 near the Bay Bridge and San Jose. Traffic generated in Alameda uses I-880 to travel to/from eastern Alameda and Contra Costa County, San Francisco (via the Bay Bridge), the Tri-Valley (via State Route 238 and I-580), and the South Bay. The closest access to/from the project site is provided via circuitous routes to/from the Broadway, Jackson Street, 23rd Avenue, and 29th Avenue/Fruitvale Avenue interchanges.

Webster and Posey Tubes – The most direct connection from 1-880 to the project site is via State Route 260, the Webster and Posey Tubes. The Webster and Posey Tubes provide access from Oakland to Alameda. The Webster Tube serves southbound traffic into Alameda, while the Posey Tube operates in the northbound direction. Direct access to the tubes, heading into Alameda, is through local streets in downtown Oakland, although freeway ramps from 1-880 and 1-980 are close to the tube portals. The Webster Tube is accessed through the Oak Street/Jackson Street intersection or Broadway off-ramps from 1-880 northbound, and from the Jackson Street off-ramp from southbound 1-880. Traffic coming from 1-980 is directed to the 12th Street off-ramp and through Oakland streets (primarily Brush Street and Fifth Street) to reach the tube. Traffic exiting Alameda via the Posey Tube uses on-ramps located off of 5th and 6th

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Streets. To reach these on-ramps, drivers must drive to 7th Street, make a right turn, and then make another right turn at either Jackson or Madison Streets.

Clement Avenue is currently a two-lane street that runs east/west from Grand Street to Broadway, and serves primarily industrial land uses. Parking is permitted on both sides of the street. In the future, this street is planned to be extended from Grand Street to Sherman Street/Atlantic Avenue and from Broadway to Tilden Way. When those extensions are completed, the connection from Tilden Way to Sherman Street/Atlantic Avenue will tend to draw cross-town traffic from Lincoln Avenue and Buena Vista Avenue. In addition, some of the project traffic would use Clement Avenue once the planned extension of the roadway is completed. According to 2012 average daily traffic (ADT) counts conducted in July 2012, Clement Avenue east of Grand Street carries approximately 4,900 vehicles per day.

Buena Vista Avenue runs parallel to Clement Avenue and consists of a single travel lane in each direction with parking on both sides. It is fronted primarily by residential development, except in the immediate project site vicinity east of Sherman Street. According to 2012 ADT counts conducted, Buena Vista Avenue east of Grand Street carries approximately 10,800 vehicles per day.

Park Street is a north/south arterial with four travel lanes. One end is located at the Park Street Bridge (providing access to Oakland and I-880), while the other is located at Shoreline Drive, where it meets San Francisco Bay. Park Street is one of two major shopping streets in the City of Alameda.

Lincoln Avenue runs parallel to Buena Vista Avenue with four travel lanes and on-street parking allowed on both sides. This roadway runs between Park Street on the east and 5th Street on the west.

Tilden Way is a four-lane divided roadway from Park Street to the northern City limits, where it becomes Fruitvale Avenue in the City of Oakland. No on-street parking is allowed on Tilden Way, and Class II bicycle lanes are provided on both sides of the roadway. Tilden Way provides local access from the City to the Fruitvale Bay Area Rapid Transit (BART) station, located off San Leandro Street in the City of Oakland.

Sherman Street runs north/south and connects the project area to major east/west arterials such as Buena Vista Avenue, Central Avenue, and Encinal Avenue. Sherman Street has one travel lane in each direction, and provides local access to the adjacent residential neighborhoods. Parking is prohibited on the segment closest to the project site. According to the July 2012 ADT counts conducted, Sherman Avenue north of Buena Vista Avenue carries approximately 10,200 vehicles per day.

Atlantic Avenue is a major east/west arterial connecting western Alameda to the project area. The roadway provides two travel lanes in each direction west of Webster Street and one travel lane in each direction (with parking prohibited) from Constitution Way to Sherman Street. This segment has a 48-foot curb-to-curb width, with 10 feet of right-of-way on both sides from the curb line.

Constitution Way is a major north/south arterial providing access across Alameda. The roadway has two travel lanes in each direction near the project site, with a raised median and

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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left-turn storage lanes at selected areas. Along with Webster Street, Constitution Way provides access to and from the tubes. The roadway is the primary access to the project site from the Webster Tube. Parking is prohibited on Constitution Way.

Marina Village Parkway functions as a major collector street that connects the commercial and residential developments in the Marina Village area with Constitution Way. The roadway generally has two travel lanes in each direction, with a raised median and left-turn storage lanes and median breaks at intersections and driveways. Parking is prohibited along Marina Village Parkway.

Public Transit

Bus service in Alameda is provided by the Alameda-Contra Costa Transit District (AC Transit), which serves 13 cities and adjacent unincorporated areas in Alameda and Contra Costa counties. Three AC Transit bus routes run within walking distance (about one-quarter mile) of the proposed project. They are:

- ***Line 51A*** travels from the Berkeley Amtrak station and the Berkeley BART station to the Alameda Bridgeside Center at the intersection of Blanding Avenue and Broadway. The line runs along Santa Clara Avenue and Broadway in the City of Alameda from approximately 5:00 a.m. to midnight on weekdays (on 10-minute headways) and on weekends and holidays (on 15-minute headways). The nearest bus stops to the project site are at the intersection of Santa Clara Avenue and Stanton Street (about 0.25 miles from project site), and the intersection of Santa Clara Avenue and Morton Street (about 0.45 miles from project site).
- ***Line 851*** is the all-nighter bus running a similar route to Route 51A, except service is shortened, extending only from the Berkeley BART station to the intersection of Park Street and Santa Clara Avenue. Service is hourly from approximately midnight to 5:00 a.m. The nearest stop to the project site is at the intersection of Santa Clara Avenue and Stanton Street (about 0.25 miles from project site).
- ***Line O*** is a transbay route that travels between downtown Alameda and downtown San Francisco, running along Santa Clara Avenue in the project site vicinity. Some buses run an extended route to High Street and Fernside Boulevard. The bus operates on approximately half-hour headways from 5:00 a.m. to midnight on weekdays, with shorter headways during peak periods. The bus operates on one-hour headways on weekends from 6:00 a.m. to midnight. The nearest bus stop to the project site on this route is at the intersection of Santa Clara Avenue and Stanton Street (about 0.25 miles from project site).

In addition to these lines, limited service is provided on Line 314, which runs only on Tuesdays and Thursdays between 10:30 a.m. and 1:35 p.m. along Santa Clara Avenue. This limited service runs between Hegenberger Road/Edgewater Drive and West Oakland Post Office.

Bicycle and Pedestrian Facilities

Currently, an intermittent bike path/multi-use trail along the waterfront connects the north boundary of the project site with Grand Avenue to the east and Atlantic Avenue to the west, but no Class II bicycle lanes are provided on the streets that directly serve the project site. The existing Class II bike lanes closest to the project site are on Grand Street to the east, Atlantic Avenue to the west, and Santa Clara Avenue to the south. The City's General Plan also

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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designates Pacific Avenue, which parallels Buena Vista Avenue one block to the south, as a bicycle priority route.

Currently, there is no sidewalk along the Entrance Road along the border of the project. These conditions are consistent with the historical usage of the project site as an industrial facility. Sidewalks exist along both sides of Buena Vista Avenue and the existing segment of Clement Avenue, and the nearest crosswalks are at the intersection of Buena Vista Avenue/Arbor Street.

Existing Intersection Operations

TJKM Transportation Consultants collected traffic counts at the 17 existing study area intersections in late July of 2012 and evaluated the current 2012 intersection traffic operations. The counts were collected on mid-week weekdays from 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m. Because the counts were taken during the summer when schools are out of session and many people go on vacation, they were compared with other counts in the Alameda study area that TJKM conducted in October 2011, a non-summer month. Comparisons of the a.m. and p.m. peak hour total volumes at intersections with recent counts for both summer and non-summer dates are summarized as follows:

- July 2012 total intersection volumes for the a.m. peak hour are from 2 to 7 percent lower than the October 2011 volumes. The lower traffic volumes for the peak one hour occurring between 7:00 and 9:00 a.m. are consistent with expected traffic reductions for that time period when schools are not in session.
- July 2012 total intersection volumes for the p.m. peak hour are 7 percent higher than the October 2011 volumes. When schools are in session, relatively little school traffic occurs during the p.m. peak period between 4:00 and 6:00 p.m., which is reflected in the October 2011 counts. Summer schedules and activities can also tend to generate more traffic for purposes other than the work commute during the afternoon and evening. The slightly higher p.m. peak hour traffic volumes for July 2012 appear to be consistent with those travel patterns.

Based on these volume comparisons, TJKM made the following adjustments to the July 2012 peak-hour counts at the study intersections:

- Applied a 10-percent increase to the a.m. peak-hour count volumes. This conservatively rounds upward from the lower percentage differences observed in the comparison data.
- No adjustment was made to the p.m. peak-hour count volumes from July 2012. Use of these volumes is conservatively high based on the comparison data.

Figure T–2 shows the resulting existing weekday a.m. (adjusted) and p.m. peak one hour turning movement volumes at the study intersections, as well as lane configurations and traffic control devices. The resulting levels of service (LOS) are shown below in Table T–1. As shown in the table, under Existing Conditions, all study intersections are operating within acceptable City of Alameda and City of Oakland standards during both peak hours.

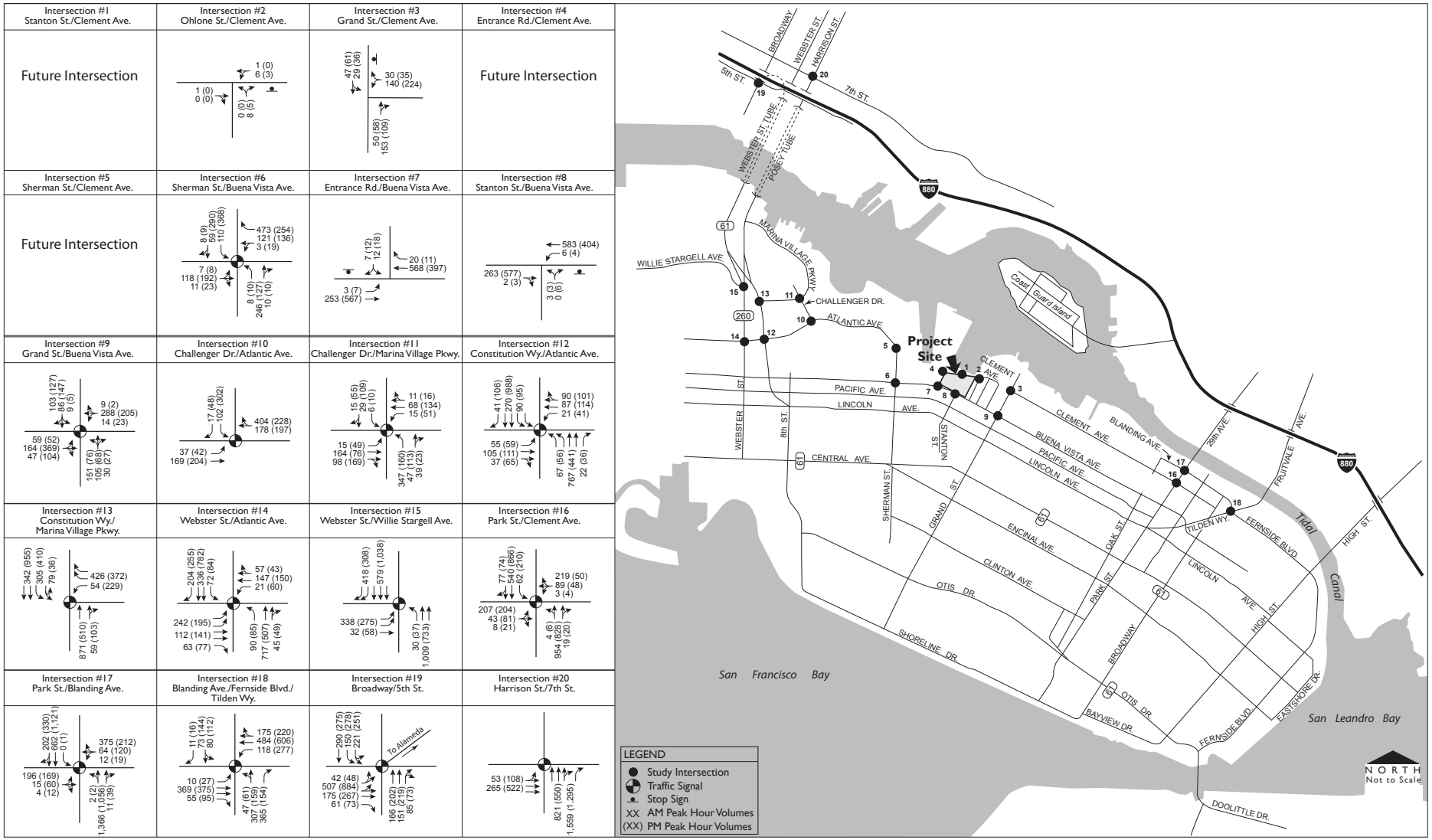

Figure T-2

Existing Traffic Volumes

Source: TJKM

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Table T–1
Existing Intersection Levels Of Service

ID	Intersection	Control[1]	AM Peak Hour		PM Peak Hour	
			Delay[2]	LOS[3]	Delay[2]	LOS[3]
1	Clement Ave./Stanton St.	Future OWS	n/a[4]	n/a[4]	n/a[4]	n/a[4]
2	Clement Ave./Ohlone St.	OWS	8.4	A	8.4	A
3	Clement Ave./Grand St.	OWS	11.6	B	13.3	B
4	Clement Ave./Entrance Rd.	Future OWS	n/a	n/a	n/a	n/a
5	Clement Ave./Sherman St.	Future Signal	n/a	n/a	n/a	n/a
6	Buena Vista Ave./Sherman St.	Signal	6.4	A	12.3	B
7	Buena Vista Ave./Entrance Rd	OWS	12.5	B	12.4	B
8	Buena Vista Ave./Stanton St.	Future TWS	13.4	B	13.0	B
9	Buena Vista Ave./Grand St.	Signal	13.5	B	13.2	B
10	Atlantic Ave./Challenger Dr.	Signal	8.1	A	12.6	B
11	Challenger Dr./Marina Village Dr	Signal	16.3	B	18.7	B
12	Atlantic Ave./Constitution Way	Signal	15.8	B	15.5	B
13	Constitution Way/Marina Village Drive	Signal	20.0	C	16.0	B
14	Atlantic Ave./Webster St.	Signal	21.8	C	17.5	B
15	Willie Stargell Ave./Webster St.	Signal	7.9	A	8.1	A
16	Park Street/Clement Ave.	Signal	47.3	D	26.6	C
17	Park Street/Blanding Ave.	Signal	41.8	D	16.4	B
18	Blanding Ave./Tilden Way	Signal	15.1	B	18.9	B
19	Broadway/5th Street	Signal	9.6	A	12.1	B
20	Harrison Street/7th Street	Signal	39.0	D	29.0	C

Source: TJKM Transportation Consultants, August 2012

Notes:

[1]Signal = Signalized intersection (LOS determined by vehicle delay)
[1]OWS = One-Way Stop-Controlled Intersection (LOS determined by vehicle delay); TWS = Two-Way Stop Controlled Intersection
[2]Average control delay per vehicle, in seconds, calculated using the 2000 *Highway Capacity Manual* methodology.
[3]LOS = Level of Service
[4]n/a = Not Applicable

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Existing and Planned Truck Routes

The City of Alameda has designated the following roadway segments in the project vicinity as truck routes:

- Buena Vista Avenue between Sherman Street and Grand Street
- Clement Avenue along its entire length, including the future extension segments between Sherman Street/Atlantic Avenue and Grand Street
- Sherman Street between Buena Vista Avenue and Atlantic Avenue
- Atlantic Avenue west of Sherman Street (and the future Clement Avenue extension)
- Grand Street between Buena Vista Avenue and Clement Avenue

According to the City of Alameda Planning Department, the truck route designation on Buena Vista Avenue should be removed upon completion of the planned Clement Avenue extension from Sherman Street/Atlantic Avenue to Grand Street to provide a continuous truck route.

TJKM collected new 72-hour traffic volume and vehicle classification counts on three of the existing roadway segments in the project vicinity that are currently designated as truck routes. These counts were taken on mid-week weekdays in July 2012. Table T–2 lists the average daily traffic (ADT) volumes measured on the truck routes.

The daily truck volumes shown in Table T–2 suggest a relatively close correlation of westbound truck travel on Clement Avenue to that on Buena Vista Avenue west of Grand Street. However, the large difference between the eastbound volumes, with 362 trucks on Buena Vista Avenue but only 118 trucks on Clement Avenue, is notable. This disparity indicates that a high percentage of eastbound trucks on Buena Vista Avenue continue travelling east past Grand Street on segments of Buena Vista Avenue that are not truck routes, rather than turning left at Grand Street to access the designated truck route on Clement Avenue. The planned future extension of Clement Avenue to provide a continuous truck route between Atlantic Avenue and Park Street is expected to substantially reduce truck volumes on Buena Vista Avenue.

Existing Project Site Traffic

The project site is currently occupied by the Chipman Moving & Storage facility, which is still actively operating. Vehicle access to the gates of the Chipman facility along the east side of Entrance Road is provided via the intersection of Entrance Road and Buena Vista Avenue. TJKM conducted counts in July 2012 of existing a.m. and p.m. peak-period traffic entering and exiting the Chipman facility, including large trucks. Table T–3 shows the a.m. and p.m. peak-hour traffic volumes accessing the Chipman facility.

Because of their size and slow acceleration, large trucks are equivalent to more than one passenger vehicle in traffic flow analysis. According to Highway Capacity Manual 2010 published by TRB, a factor of 1.5 passenger-car equivalents (PCE) per truck applies for the level terrain of the project vicinity. The PCE factor was applied to the large truck trips, and

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Table T–2
Existing ADT and Truck Volumes on Truck Route Segments

Intersection	Cars and Light-Duty Trucks	Heavy-Duty Trucks	Total ADT[1]
Sherman Street north of Buena Vista Avenue			
Northbound	5,174	208	5,382
Southbound	4,577	157	4,734
Total Two-Way Volume	**9,751**	**365**	**10,116**
Buena Vista Avenue west of Grand Street			
Westbound	5,573	190	5,762
Eastbound	4,668	362	5,030
Total Two-Way Volume	**10,241**	**552**	**10,793**
Clement Avenue east of Grand Street			
Westbound	2,581	228	2,809
Eastbound	1,934	118	2,052
Total Two-Way Volume	**4,515**	**346**	**4,861**

Source: TJKM Transportation Consultants, August 2012

Note:
[1]ADT = Average Daily Traffic

the resulting PCEs were added to the other vehicle trips currently accessing the Chipman facility, as shown in Table T–2.

TJKM also conducted July 2012 peak-period traffic counts at the entrance to Fortman Marina and the Alameda Yacht Club, which are located immediately north of the project site. The vehicle access driveway for these properties is located adjacent to the northwest corner of the project site, and is accessed via Entrance Road, which runs along the west side of the project site. The counts show 20 vehicles (9 in, 11 out) during the a.m. peak hour and 34 vehicles (21 in, 13 out) during the p.m. peak hour accessing the Fortman Marina and Alameda Yacht Club driveway.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Table T–3
Existing Chipman Moving and Storage Traffic at Project Site

Vehicle Type	AM Peak-Hour Trips			PM Peak-Hour Trips		
	In	Out	Total	In	Out	Total
Large Trucks[1]	4	6	10	1	1	2
Large Trucks X 1.5 PCE[1]	6	9	15	2	1	3
Other Vehicles[1]	9	4	13	2	10	12
Total Site Vehicles in PCEs[2]	**15**	**13**	**28**	**4**	**11**	**15**

Source: TJKM Transportation Consultants, August 2012

Note:
[1]Trips counted at project site, July 2012.
[2]PCE = Passenger Car Equivalent, Based on *Highway Capacity Manual 2010*

Baseline (2015) Conditions

Baseline Conditions are defined as conditions in year 2015 without the proposed project, which is anticipated for completion in that year. Traffic volumes under Baseline Conditions consist of existing traffic volumes multiplied by a three-year growth factor, plus traffic expected to be generated by approved developments in the study area that are not yet built or occupied. An annual compounded growth factor of 0.25 percent, based on annual growth estimates used in the *Boatworks Residential Project Draft Environmental Impact Report*, was applied to all of the turning movements volumes reported for Existing Conditions. In addition, traffic from the following approved but not completed development projects was added under this scenario, based on consultation with City staff:

- Boatworks Residential Project (100 dwelling units) in the northwest quadrant of the intersection of Clement Avenue and Oak Street;
- Alameda Landing Mixed-Use Development (140,000 square foot Target store, 40,000 square feet other retail, 100 residential units) west of Webster Street and north of Willie Stargell Avenue; and
- Alameda Station Retail Development (24,700 square feet, including pharmacy, bank, and food service) at the northeast corner of Park Street and Tilden Way.

Because no approved and funded transportation network improvements are expected to be completed by 2015, TJKM assumed that the roadway network, traffic controls, and lane geometries for Baseline Conditions would be the same as under Existing Conditions. Figure T–3 shows the Baseline traffic volumes at the study intersections resulting from the above growth factors and approved development traffic. The intersection levels of service that would result under the Baseline Conditions scenario are shown below in Table T–4.

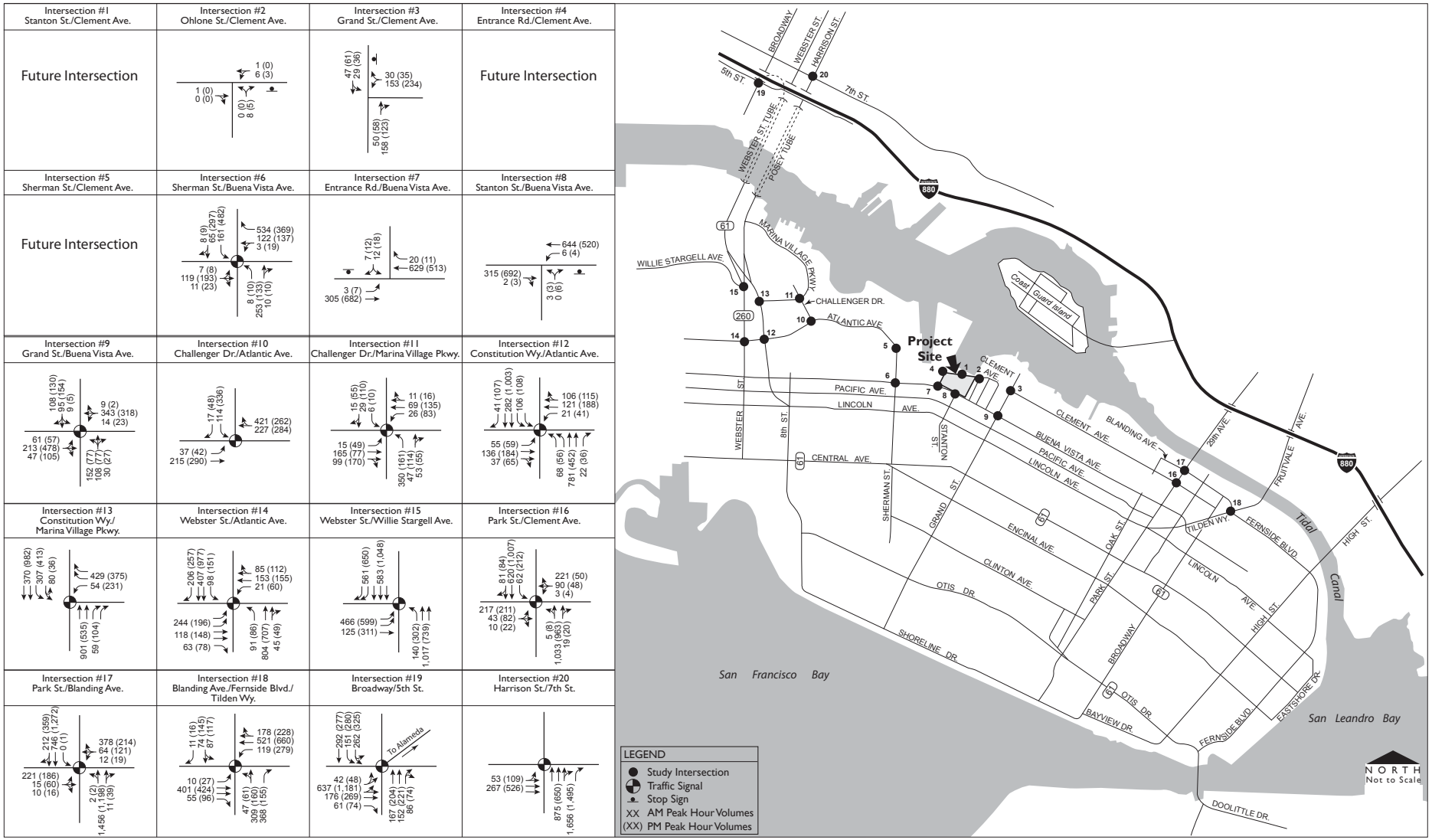

Figure T-3

Baseline Traffic Volumes

Source: TJKM

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Table T–4
2015 Baseline Intersection Levels Of Service

ID	Intersection	Existing Conditions				2015 Baseline Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
1	Clement Ave./Stanton St.	n/a[3]	n/a[3]	n/a[3]	n/a[3]	n/a[3]	n/a[3]	n/a[3]	n/a[3]
2	Clement Ave./Ohlone St.	8.4	A	8.4	A	8.4	A	8.4	A
3	Clement Ave./Grand St.	11.6	B	13.3	B	11.8	B	13.7	B
4	Clement Ave./Entrance Rd.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5	Clement Ave./Sherman St.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6	Buena Vista/Sherman St.	6.4	A	12.3	B	6.9	A	32.9	C
7	Buena Vista/Entrance Rd	12.5	B	12.4	B	13.1	B	13.8	B
8	Buena Vista/Stanton St.	13.4	B	13.0	B	13.1	B	14.5	B
9	Buena Vista Ave./Grand St.	13.5	B	13.2	B	14.4	B	16.1	B
10	Atlantic Ave/Challenger Dr.	8.1	A	12.6	B	9.8	A	15.9	B
11	Challenger Dr./Marina Village Dr	16.3	B	18.7	B	16.9	B	20.3	C
12	Atlantic/Constitution Way	15.8	B	15.5	B	17.0	B	20.5	C
13	Constitution Way/Marina Village Drive	20.0	C	16.0	B	20.2	C	16.4	B
14	Atlantic Ave./Webster St.	21.8	C	17.5	B	21.9	C	39.7	D
15	Willie Stargell Ave./Webster	7.9	A	8.1	A	10.1	B	20.9	C
16	Park Street/Clement Ave.	47.3	D	26.6	C	51.6	D	31.4	C
17	Park Street/Blanding Ave.	41.8	D	16.4	B	52.5	D	19.3	B
18	Blanding Ave./Tilden Way	15.1	B	18.9	B	15.5	B	20.2	C
19	Broadway/5th Street	9.6	A	12.1	B	10.1	B	20.4	C
20	Harrison Street/7th Street	39.0	D	29.0	C	51.5	D	50.9	D

Source: TJKM Transportation Consultants, August 2012

Notes:

[1]Average control delay per vehicle, in seconds, calculated using the 2000 *Highway Capacity Manual* methodology.
[2]LOS = Level of Service
[3]n/a = Not Applicable. These intersections would not exist until a future scenario.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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As shown in Table T–4, all traffic study intersections would continue to operate at acceptable levels of service under Baseline Conditions.

Baseline (2015) Plus Project Conditions

This scenario consists of Baseline (2015) Conditions, with the addition of traffic expected to be generated by the proposed Marina Cove II Residential Development. The scenario assumes the completion of an extension of Clement Avenue across the northern edge of the site that would connect with a new intersection at Entrance Road. The analysis of this scenario assumes that this new intersection would have one-way stop control on westbound Clement Avenue. In addition, three new north-south streets would be developed across the site connecting the Clement Avenue extension and Buena Vista Avenue. The extension of Clement Avenue would provide a new vehicle access to the Fortman Marina and Alameda Yacht Club driveway, in addition to the existing access via Entrance Road.

Project Trip Generation

Trip generation for the proposed project is based on published data in the Institute of Transportation Engineers' (ITE) reference *Trip Generation* (8th Edition, 2008). TJKM used ITE Code 210 (Single-Family Detached) and 230 (Condominium/Townhome) to develop project trip generation for the single-family units and below-market rate units, respectively. The existing trips generated by trucks at the Chipman storage facility on the site, discussed above, were deducted (as PCEs) from the proposed project's trip generation to determine the net total increase in trips that would result with the Marina Cove II project. The resulting trip generation for the project is shown in Table T–5. With the adjustment for existing truck trips, the project is expected to generate a net increase of 21 trips during the a.m. peak hour and 50 trips during the p.m. peak hour.

Project Trip Distribution

Trip distribution is a process that determines in what proportion vehicles would be expected to travel between a project site and various destinations outside the project study area. The process of trip assignment determines the various routes that vehicles would take from the project site to each destination using the expected trip distribution. Trip distribution assumptions for the proposed project were developed based on previous traffic impact studies conducted in the study area vicinity, TJKM's knowledge of the study area, and consultation with City transportation staff. Figure T–4 shows the trip distribution percentages developed for the proposed Marina Cove II Residential Development, and Figure T–5 shows the resulting project trip assignments for the study intersections in Baseline Conditions.

The project trip assignments shown on Figure T–5 reflect the reductions of trips at the Entrance Road/Buena Vista Avenue intersection that would result with elimination of the Chipman Moving and Storage facility traffic.

Figure T-4

Project Trip Distribution

Source: TJKM

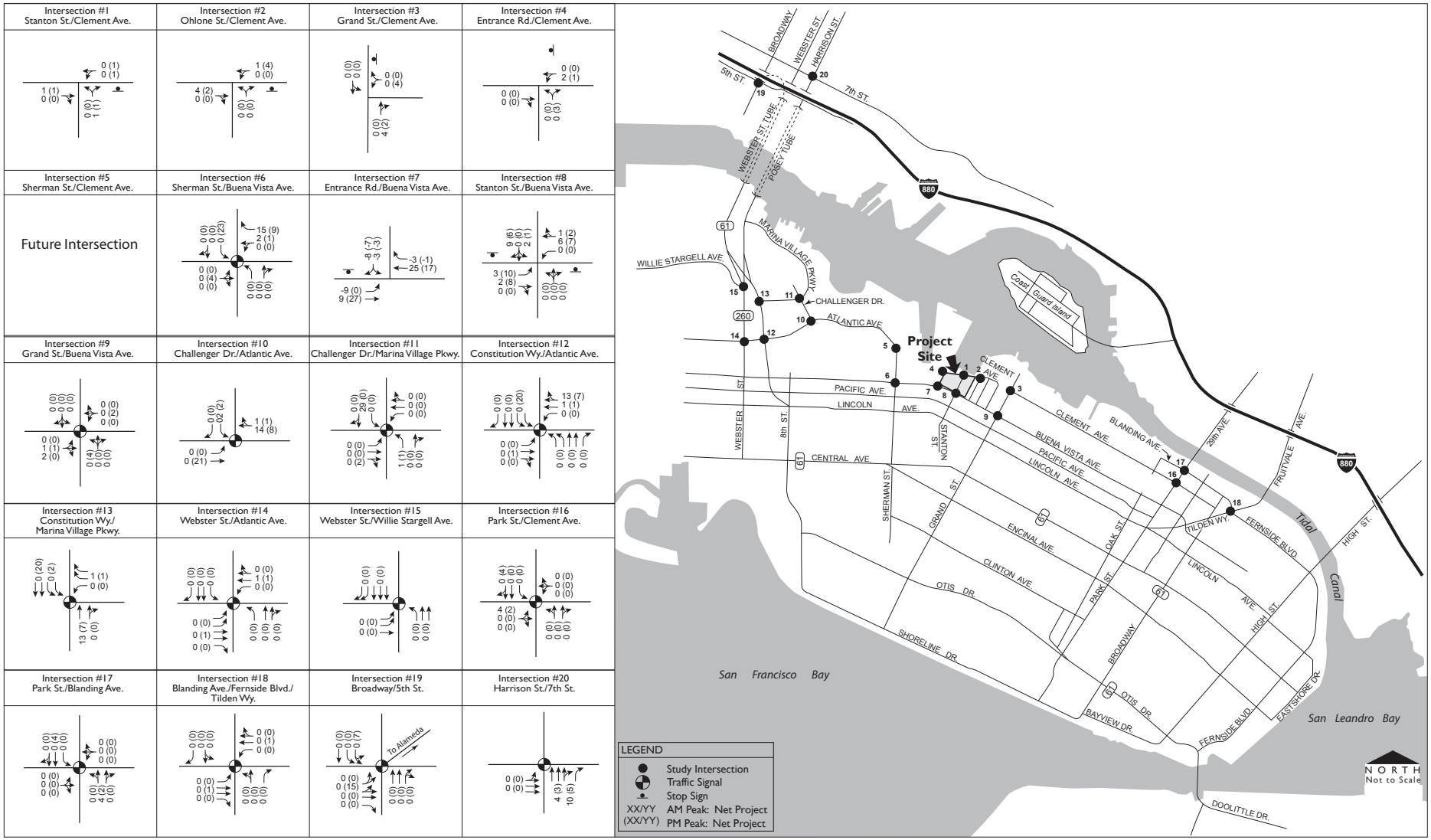

Figure T-5

Project Trip Assignment, Baseline Conditions

Source: TJKM

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Table T–5
Proposed Project Trip Generation

Land Use	Size (DU)[1]	Daily		AM Peak-Hour Trips						PM Peak-Hour Trips					
		Rate	Trips	Rate	In %	Out %	In	Out	Total	Rate	In %	Out %	In	Out	Total
Single-Family Homes	59	9.57	565	0.75	25	75	11	33	44	1.01	63	37	38	22	60
Duplexes	10	5.81	58	0.44	17	83	1	4	5	0.52	67	33	3	2	5
Project Total			**623**				**12**	**37**	**49**				**41**	**24**	**65**
Existing PCE[2] Trips							15	13	28				4	11	15
Net Total							**-3**	**24**	**21**				**37**	**13**	**50**

Source: ITE *Trip Generation* (8th Edition) and TJKM Transportation Consultants, August 2012

Notes:
[1]DU = dwelling units
[2]PCE = passenger car equivalents, derived in Table T–3

Proposed Project Impacts on Traffic

The assigned project trips were added to Baseline Conditions traffic volumes to generate Baseline Plus Project traffic volumes. Figure T–6 shows the resulting traffic volumes at the study intersections under Baseline plus Project Conditions. The intersection traffic controls and lane geometries assumed under this analysis scenario are the same as under the Baseline Conditions scenario, except: 1) at the Buena Vista Avenue/Stanton Street intersection, which would become a two-way stop with the new northerly extension of Stanton Street on the project site; and 2) at the new Clement Avenue/Entrance Road intersection, which was assumed to have one-way stop control on westbound Clement Avenue. The resulting intersection levels of service under Baseline Plus Project Conditions are listed in Table T–6. As shown in the table, all intersections are expected to continue operating acceptably at LOS D or better under the Baseline Plus Project Conditions. Therefore, the proposed project would have a less-than-significant impact on traffic under Baseline Plus Project Conditions, and no mitigations are required under this scenario.

Proposed Project Impacts on Transit Route Arterial Speeds

The project would add traffic to two study street segments serving transit routes, Park Street and Webster Street. Transit route arterial speed data for these street segments was obtained from the arterial LOS report generated by the peak-hour Synchro model, using the HCM 2000 methodology for Urban Street (arterial) LOS. The arterial speed is calculated using the distances between the intersections and the travel time along the roadway segments. Table T–7

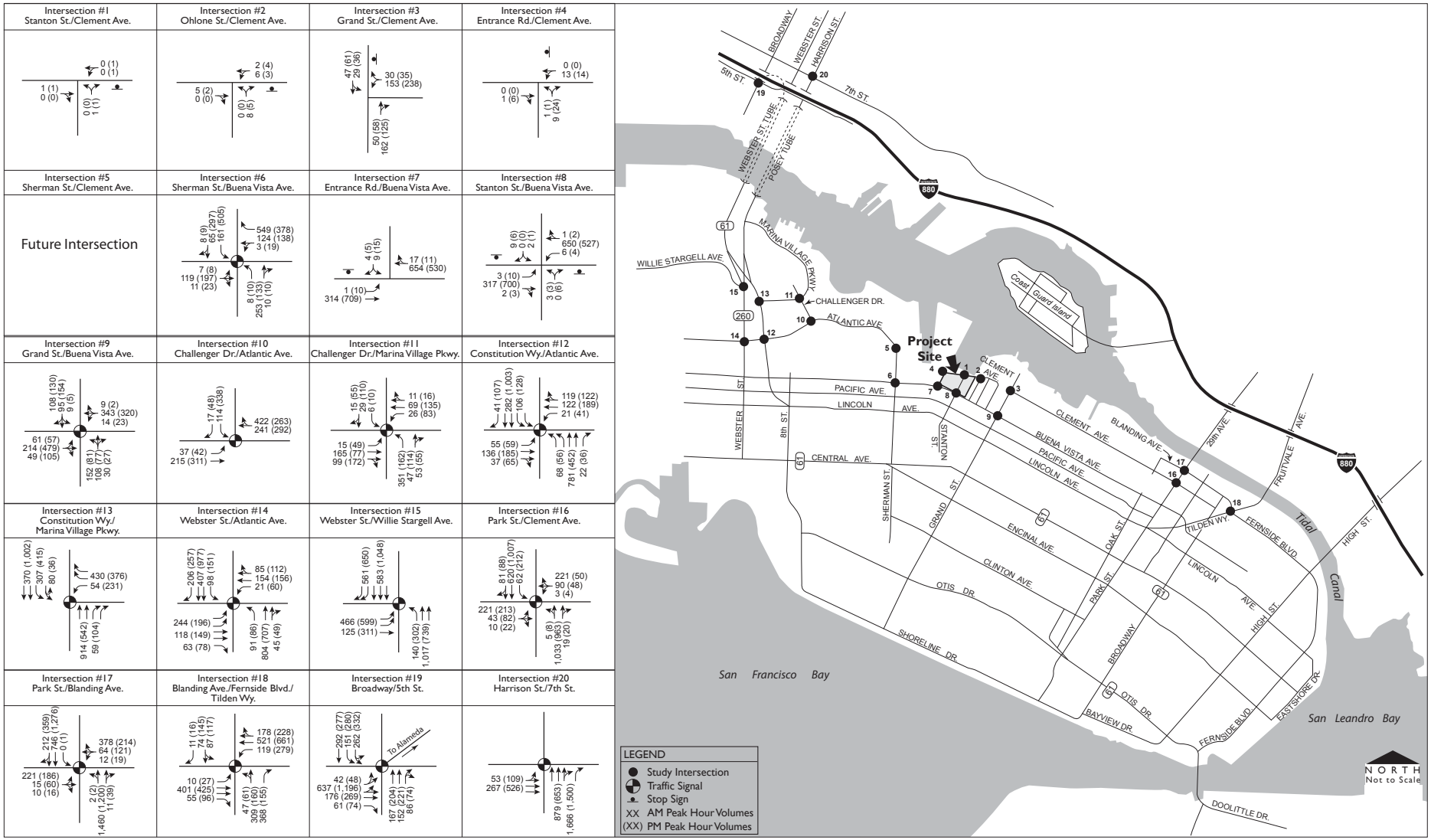

Figure T-6

Baseline Plus Project Traffic Volumes

Source: TJKM

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Table T–6
2015 Baseline Plus Project Intersection Levels Of Service

ID	Intersection	2015 Baseline Conditions				2015 Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
1	Clement Ave./Stanton St.	n/a[3]	n/a[3]	n/a[3]	n/a[3]	8.3	A	8.3	A
2	Clement Ave./Ohlone St.	8.4	A	8.4	A	8.4	A	8.4	A
3	Clement Ave./Grand St.	11.8	B	13.7	B	11.8	B	13.8	B
4	Clement Ave./Entrance Rd.	n/a	n/a	n/a	n/a	8.6	A	8.7	A
5	Clement Ave./Sherman St.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6	Buena Vista/Sherman St.	6.9	A	32.9	C	6.9	A	39.0	D
7	Buena Vista/Entrance Rd	13.1	B	13.7	B	13.3	B	14.3	B
8	Buena Vista/Stanton St.	13.1	B	14.5	B	14.3	B	14.7	B
9	Buena Vista Ave./Grand St.	14.4	B	16.1	B	14.4	B	16.1	B
10	Atlantic Ave/Challenger Dr.	9.8	A	15.9	B	10.1	B	16.0	B
11	Challenger Dr./Marina Village Dr	16.9	B	20.3	C	17.0	B	20.4	C
12	Atlantic/Constitution Way	17.0	B	20.5	C	17.1	B	20.4	C
13	Constitution Way/Marina Village Drive	20.2	C	16.4	B	20.6	C	16.5	B
14	Atlantic Ave./Webster St.	21.9	C	23.4	C	22.1	C	23.4	C
15	Willie Stargell Ave./Webster	10.1	B	20.9	C	10.2	B	20.9	C
16	Park Street/Clement Ave.	51.6	D	31.4	C	53.4	D	31.6	C
17	Park Street/Blanding Ave.	52.5	D	193	B	52.5	D	19.4	B
18	Blanding Ave./Tilden Way	15.5	B	20.2	B	15.5	B	20.2	C
19	Broadway/5th Street	10.1	B	20.4	C	10.1	B	21.6	C
20	Harrison Street/7th Street	51.5	D	50.9	D	53.0	D	51.4	D

Source: TJKM Transportation Consultants, August 2012

Notes:

[1]Average control delay per vehicle, in seconds, calculated using the 2000 *Highway Capacity Manual* methodology.
[2]LOS = Level of Service
[3]n/a = Not Applicable. These intersections would not exist until a future scenario.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

summarizes the arterial speed data for the Baseline and Baseline Plus Project Conditions. As shown in the table, the addition of project trips to the study street segments would result in a reduction in arterial speed of less than 10 percent, which is the City of Alameda's threshold of significance for impacts on transit route arterial speeds. The project would therefore have a less-than-significant impact on transit route arterial speeds along the Park Street and Webster Street study segments.

Table T–7
Transit Route Arterial Speeds Under Baseline Plus Project Conditions
(in miles per hour)

Road Segment	Baseline Conditions				Baseline Plus Project Conditions				≥ 10% Speed Increase?
	AM Peak Hr.		PM Peak Hr.		AM Peak Hr.		PM Peak Hr.		
	NB	SB	NB	SB	NB	SB	NB	SB	
Park Street	7.7	11.0	6.4	8.2	7.7	**10.6**	**6.3**	7.7	No
Webster Street	14.5	18.3	15.2	16.4	14.5	18.3	15.2	16.4	No

Source: TJKM Transportation Consultants, August 2012

Notes:
NB = northbound; SB = southbound
Bold indicates a reduction in speed.

Cumulative (2030) Conditions

TJKM used the "2030 Project" cumulative volumes published in the City of Alameda's Transportation Element Update Draft EIR (Transportation Element DEIR) for the project study intersections that were also analyzed in that document, which included intersection #6 and intersections #9 through #18, all of which are signalized. For unsignalized intersection #3, Clement Avenue/Grand Street, TJKM used the Cumulative 2030 volumes published in the Boatworks Residential Project Draft EIR. No recent studies were available with Cumulative 2030 forecasts for the remaining eight project study intersections.

The other eight study intersections consist of three future intersections on the planned Clement Avenue extension (#1, #4, #5), three existing unsignalized intersections adjacent to the project site on Clement Avenue (#2) or Buena Vista Avenue (#7, #8), and the two signalized intersections in Oakland (#19, #20). For these eight intersections, Cumulative 2030 peak-hour turning movement volumes were forecast using the following method:

- Link volumes for the intersection approach and departure legs were derived from existing counts by adding the growth between years 2012 and 2030 from the Alameda Countywide Travel Demand Model (Model) link volumes.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

- Based on the existing intersection turning movement patterns, the link volumes were distributed using the Furness Method. For the three future intersections with no existing turning movement counts, 2030 Model link volumes were manually distributed into turning movement volumes using the Furness Method for T-Intersections, and traffic engineering judgment, as needed.
- The resulting volumes were fine-tuned through balancing with adjacent study intersections that have 2030 volume forecasts from the Transportation Element DEIR.

Cumulative Transportation Improvements

The following planned transportation network improvements (per the documents shown below) were assumed to be completed by 2030:

- Clement Avenue extension from Grand Street to Hibbard Street and from Ohlone Street to Sherman Street/Atlantic Avenue, providing a continuous east-west route between Atlantic Avenue and Park Street. (Transportation Element; Northern Waterfront GPA).
- Sherman Street to be realigned to terminate at a T-intersection perpendicular to Atlantic Avenue and the Clement Avenue extension, which would be aligned to provide continuous east-west through movements. (*Encinal Terminals – Del Monte Warehouse – Chipman/Marina Cove II Sites Draft Master Plan*).
- Three new traffic signals on Clement Avenue at the following intersections: Sherman Street/Atlantic Avenue, Entrance Road, and Grand Street. (Northern Waterfront GPA).
- Mariner Square Drive extension from Mariner Square Loop (east side) to Marina Village Parkway intersection with Constitution Way. (Transportation Element).

Figure T–7 shows the Cumulative 2030 traffic volumes at the study intersections resulting from application of the growth factors described above plus approved development traffic. This figure also shows traffic controls and lane geometries at the study intersections, including the planned transportation improvements described above. The intersection levels of service that would result under the Cumulative Conditions scenario are shown below in Table T–8. As shown in the table, all study intersections are expected to continue operating within City standards of LOS D or better under this scenario except for the following intersections:

- Park Street/Clement Avenue
- Park Street/Blanding Avenue
- Blanding Avenue/Tilden Way

These intersections would operate unacceptably at LOS E or F during both peak hours. These levels of service would occur without the addition of project-generated traffic, and no mitigation is required of the proposed project under the Cumulative Conditions scenario. These three intersections were previously identified in the Transportation Element DEIR as having unacceptable LOS operations in both peak hours under 2030 conditions. Although the intersection of Harrison Street/7th Street in Oakland is expected to operate at LOS E during the p.m. peak hour, this is an acceptable level of service condition according to the thresholds of significance adopted by the City of Oakland for downtown intersections.

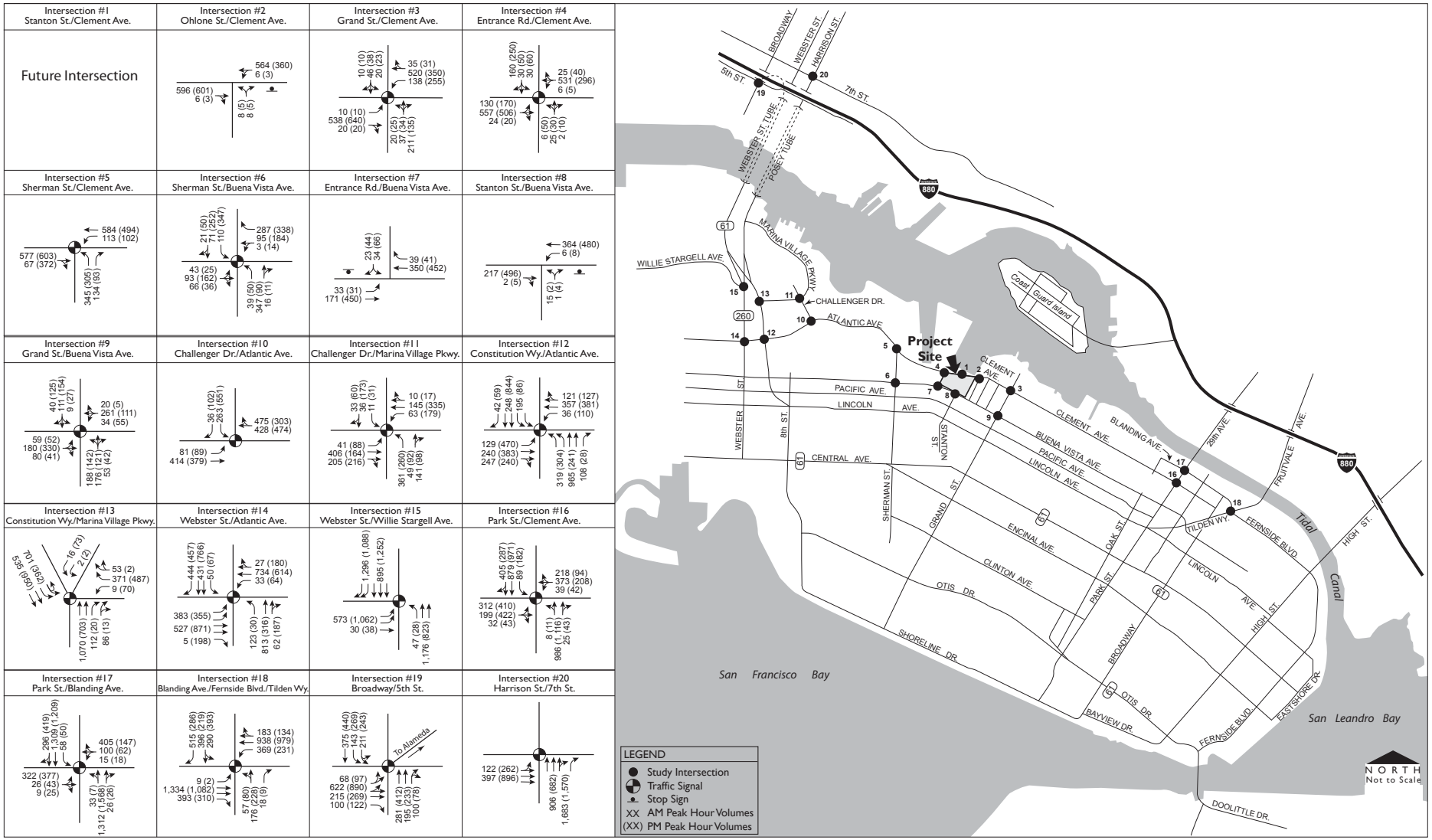

Figure T-7

Cumulative Traffic Volumes

Source: TJKM

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Table T–8
Cumulative (2030) Conditions Intersection Levels Of Service

ID	Intersection	Control[1]	AM Peak Hour		PM Peak Hour	
			Delay[2]	LOS[3]	Delay[2]	LOS[3]
1	Clement Ave./Stanton St.	Future OWS	n/a[4]	n/a[4]	n/a[4]	n/a[4]
2	Clement Ave./Ohlone St.	OWS	20.6	C	16.2	C
3	Clement Ave./Grand St.	OWS	21.5	C	28.7	C
4	Clement Ave./Entrance Rd.	Future Signal	9.4	A	13.2	B
5	Clement Ave./Sherman St.	Future Signal	20.1	C	47.6	D
6	Buena Vista Ave./Sherman St.	Signal	10.1	B	10.9	B
7	Buena Vista Ave./Entrance Rd	OWS	11.3	B	14.3	B
8	Buena Vista Ave./Stanton St.	OWS	10.9	B	12.0	B
9	Buena Vista Ave./Grand St.	Signal	11.0	B	10.3	B
10	Atlantic Ave./Challenger Dr.	Signal	25.3	C	44.6	D
11	Challenger Dr./Marina Village Dr	Signal	21.9	C	26.7	C
12	Atlantic Ave./Constitution Way	Signal	32.6	C	52.1	D
13	Constitution Way/Marina Village Drive	Signal	20.7	C	11.8	B
14	Atlantic Ave./Webster St.	Signal	37.4	D	31.7	C
15	Willie Stargell Ave./Webster St.	Signal	7.6	A	12.3	B
16	Park Street/Clement Ave.	Signal	**154.8**	**F**	**207.4**	**F**
17	Park Street/Blanding Ave.	Signal	**107.6**	**F**	**59.5**	**E**
18	Blanding Ave./Tilden Way	Signal	**118.5**	**F**	**88.7**	**F**
19	Broadway/5th Street	Signal	10.4	B	13.5	B
20	Harrison Street/7th Street	Signal	51.0	D	56.4	E

Source: TJKM Transportation Consultants, August 2012

Notes:

[1]Signal = Signalized intersection (LOS determined by vehicle delay)
[1]OWS = One-Way Stop-Controlled Intersection (LOS determined by vehicle delay)
[2]Average control delay per vehicle, in seconds, calculated using the 2000 *Highway Capacity Manual* methodology.
[3]LOS = Level of Service
[4]n/a = Not Applicable
Bold indicates the LOS exceeds the applicable jurisdiction's standard for acceptable operating conditions.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Cumulative (2030) Plus Project Conditions

This scenario consists of Cumulative (2030) Conditions, with the addition of traffic expected to be generated by the proposed project. Trip generation and distribution for the proposed project are identical to that assumed under Baseline plus Project Conditions. For study intersections #10 through #20, the project trip assignment is also identical to that previously shown on Figure T–5 for Baseline plus Project conditions. However, the project trip assignment for study intersections #1 through #9 in the immediate site vicinity would be different under Cumulative plus Project conditions because of the extension of Clement Avenue, as shown on Figure T–8. The project trip assignments shown on the figure account for the availability of a continuous Clement Avenue as an alternative to Buena Vista Avenue for east-west travel to and from the project site.

The intersection traffic volumes for the Cumulative Plus Project Conditions are shown on Figure T–9. The LOS analysis results for Cumulative Plus Project Conditions are summarized in Table T–9 and are compared to the Cumulative No Project Conditions. All intersections are expected to continue operating at acceptable service levels of LOS D or better as under Cumulative Plus Project Conditions except for the following intersections:

- Park Street/Clement Avenue
- Park Street/Blanding Avenue
- Blanding Avenue/Tilden Way

These intersections are expected to continue to operate at LOS E or F during both peak hours. The addition of project trips to the peak-hour volumes at these three intersections would be less than 1 percent of the total volumes, well under the 3-percent threshold for a significant impact identified in the Transportation Element for these unacceptable LOS locations. Therefore, the proposed project is expected to have a less-than-significant impact on traffic operations under Cumulative Plus Project Conditions, and no mitigation is required under this scenario. Similar to the Cumulative (No Project) Conditions, although the intersection of Harrison Street/7th Street in Oakland is expected to operate at LOS E during the p.m. peak hour, this is an acceptable level of service condition according to the thresholds of significance adopted by the City of Oakland for downtown intersections.

<u>Proposed Project Impacts on Transit Route Arterial Speeds</u>

The project would add traffic to two study street segments serving transit routes, Park Street and Webster Street. Transit route arterial speed data for these street segments was obtained using the same methodology as described under Baseline Plus Project Conditions. Table T–10 summarizes the arterial speed data for the Cumulative and Cumulative Plus Project Conditions. As shown in the table, the addition of project trips to the study street segments would result in a reduction in arterial speed of less than 10 percent, which is the City of Alameda's threshold of significance for impacts on transit route arterial speeds. The project would therefore have a less-than-significant impact on transit route arterial speeds along the Park Street and Webster Street study segments.

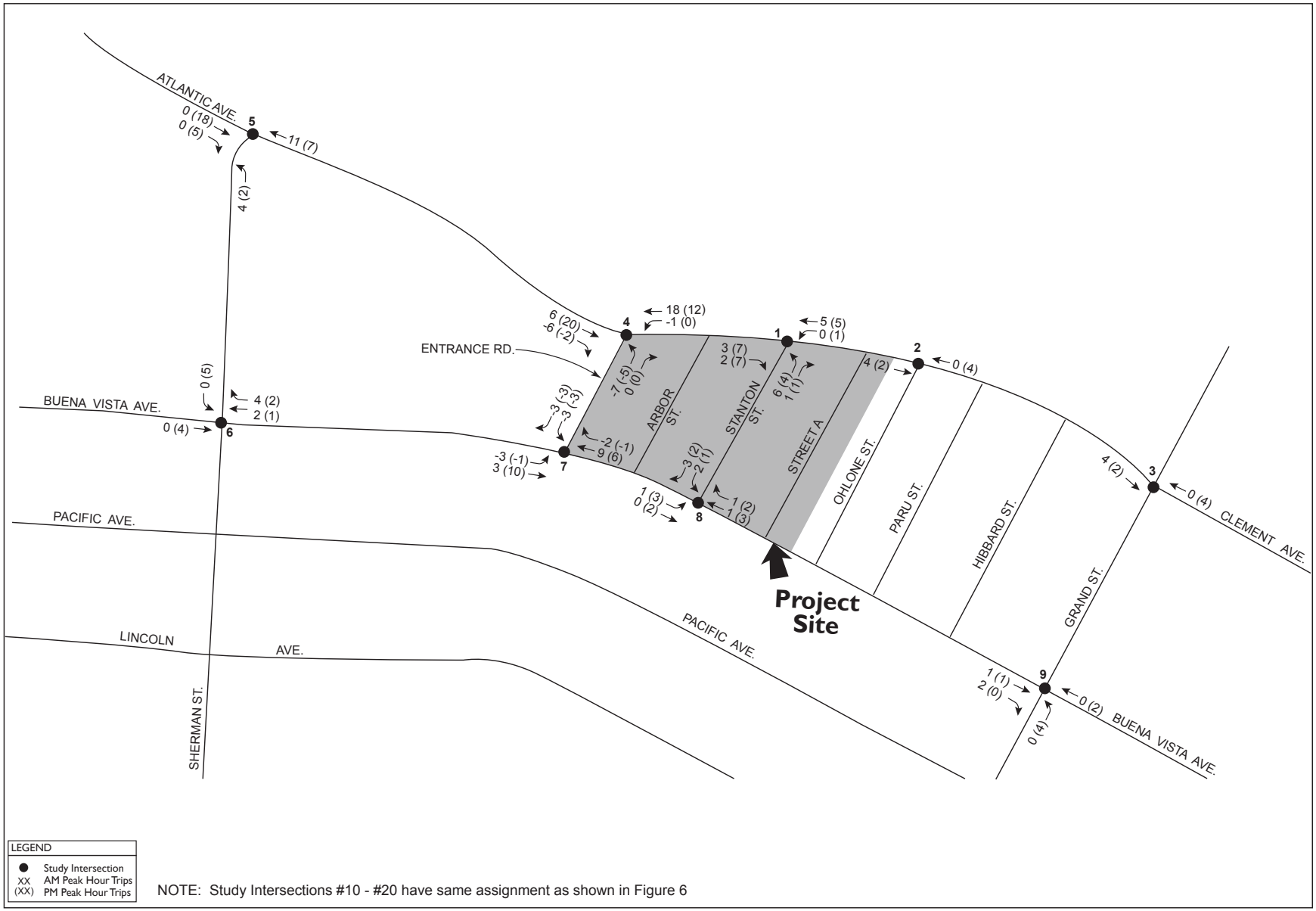

Figure T-8

Project Trip Assignment, Cumulative Conditions

Source: TJKM

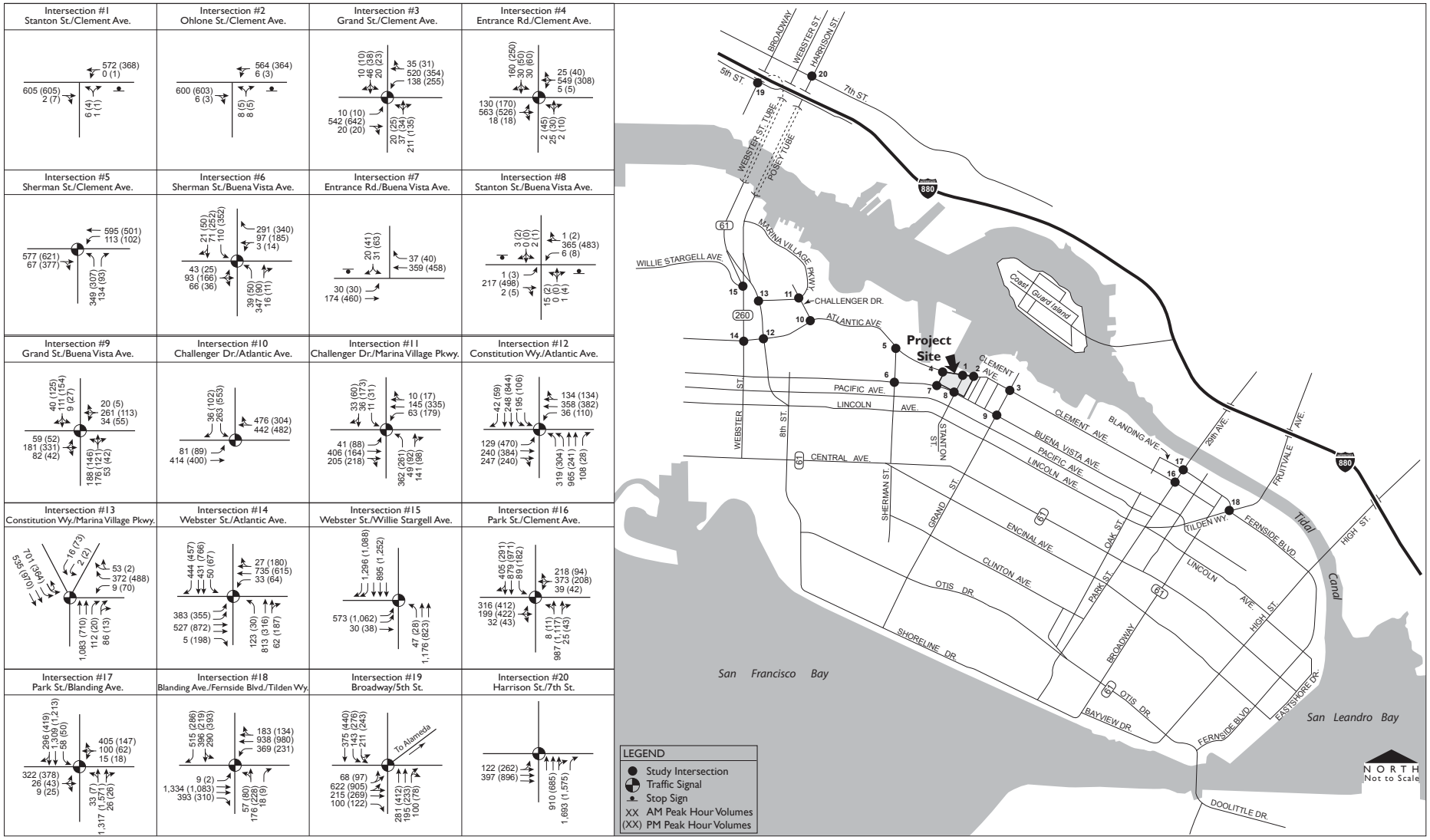

Figure T-9

Cumulative Plus Project Traffic Volumes

Source: TJKM

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Table T–9
Cumulative (2030) Plus Project Conditions Intersection Levels Of Service

ID	Intersection	2015 Baseline Conditions				2015 Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
1	Clement Ave./Stanton St.	n/a[3]	n/a[3]	n/a[3]	n/a[3]	22.6	C	17.9	C
2	Clement Ave./Ohlone St.	20.6	C	16.2	C	20.7	C	16.3	C
3	Clement Ave./Grand St.	20.2	C	23.4	C	21.2	C	234	C
4	Clement Ave./Entrance Rd.	9.4	A	13.2	B	9.4	A	13.6	B
5	Clement Ave./Sherman St.	20.1	C	34.5	C	20.2	C	36.4	D
6	Buena Vista/Sherman St.	10.1	B	10.9	B	10.1	B	11.1	B
7	Buena Vista/Entrance Rd	11.3	B	14.1	B	11.3	B	14.1	B
8	Buena Vista/Stanton St.	10.9	B	12.0	B	11.5	B	12.4	B
9	Buena Vista Ave./Grand St.	11.0	B	10.3	B	11.1	B	10.4	B
10	Atlantic Ave/Challenger Dr.	25.3	C	44.6	D	26.2	C	45.7	D
11	Challenger Dr./Marina Village Dr	21.9	C	26.7	C	21.9	C	26.7	C
12	Atlantic/Constitution Way	32.6	C	52.1	D	32.9	C	52.3	D
13	Constitution Way/Marina Village Drive	20.7	C	11.8	B	20.9	C	11.8	B
14	Atlantic Ave./Webster St.	37.4	D	31.7	C	37.5	D	31.7	C
15	Willie Stargell Ave./Webster	7.6	A	12.3	B	7.6	A	12.3	B
16	Park Street/Clement Ave.	**154.8**	**F**	**207.4**	**F**	**156.2**	**F**	**208.8**	**F**
17	Park Street/Blanding Ave.	**107.6**	**F**	**59.5**	**E**	**108.8**	**F**	**62.6**	**E**
18	Blanding Ave./Tilden Way	**118.5**	**F**	**88.7**	**F**	**118.5**	**F**	**88.8**	**F**
19	Broadway/5th Street	10.4	B	13.5	B	10.4	B	13.7	B
20	Harrison Street/7th Street	51.0	D	56.4	E	52.2	D	57.1	E

Source: TJKM Transportation Consultants, August 2012

Notes:

[1]Average control delay per vehicle, in seconds, calculated using the 2000 *Highway Capacity Manual* methodology.
[2]LOS = Level of Service
[3]n/a = Not Applicable
Bold indicates the LOS exceeds the applicable jurisdiction's standard for acceptable operating conditions.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Table T–10
Transit Route Arterial Speeds Under Cumulative Plus Project Conditions
(in miles per hour)

Road Segment	2030 Cumulative Conditions				2030 Cumulative Plus Project Conditions				≥ 10% Speed Increase?
	AM Peak Hr.		PM Peak Hr.		AM Peak Hr.		PM Peak Hr.		
	NB	SB	NB	SB	NB	SB	NB	SB	
Park Street	1.2	3.8	1.5	4.5	1.2	**3.8**	**1.5**	4.5	No
Webster Street	11.9	14.6	12.4	13.4	11.9	14.6	12.4	13.4	No

Source: TJKM Transportation Consultants, August 2012

Notes:
NB = northbound; SB = southbound
Bold indicates a reduction in speed.

Pedestrian LOS

Potential impacts on pedestrian LOS were evaluated based on the HCM 2000 methodology for determining average delay for pedestrians at signalized study intersections. Pedestrian delay is based on the effective green signal time for pedestrians to cross each intersection leg, and the actuated cycle length of the signal. Based on City of Alameda pedestrian LOS standards for signalized intersections, a project impact would be considered significant if the delay for a crosswalk increases by 10 percent or more.

The proposed project would increase vehicle and pedestrian traffic in the project vicinity, but would not change the signal timing configurations at any study intersections, so the effective green signal times for pedestrians to cross and the actuated cycle lengths would remain the same. As a result, pedestrian delay and LOS at signalized study intersections would remain the same under both Baseline and Baseline plus Project conditions, as well as under both Cumulative and Cumulative plus Project conditions.

Additionally, the project would not remove a marked or unmarked crosswalk. Therefore, the project impact on pedestrian travel would be less than significant.

Bicycle LOS

Potential impacts on bicycle LOS were evaluated based on the Florida Department of Transportation methodology for assessing bicyclists' perceived level of comfort along study roadway segments. Bicycle LOS scores are based on five variables: 1) average effective width of the outside through lane (and presence of bike lane); 2) motor vehicle volumes; 3) motor vehicle speeds; 4) truck volumes; and, 5) pavement conditions. Based on City of Alameda

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

bicycle LOS standards for roadway segments, a project impact would be considered significant if the bicycle LOS score for a study roadway segment increases by 10 percent or more.

TJKM evaluated the project's impact on each of the five variables listed above that determine the bicycle LOS score, as follows:

1) **Width of Outside Through Lane:** The project would not change the average effective width of outside through lanes (including daily traffic volume and on-street parking occupancy factors) or disrupt bike lanes on any existing roadways. The new segment of Clement Avenue to be constructed as part of the project would provide adequate width for bike lanes on both sides of the roadway, which would increase the average effective width of outside through lanes on Clement Avenue, and thereby decrease the bicycle LOS score for this variable.

2) **Motor Vehicle Volumes:** The project would increase peak directional motor vehicle volumes by the following percentages:
   a) For Baseline conditions:
      - Six percent or less on Atlantic Avenue;
      - Four percent or less on Buena Vista Avenue west of Entrance Road;
      - Three percent or less on Sherman Street north of Buena Vista Avenue;
      - Two percent or less on Grand Street north of Buena Vista Avenue and on Clement Avenue east of Grand Street;
      - Approximately 1 percent on Buena Vista Avenue east of Stanton Street;
      - Less than 0.5 percent on Park Street.
   b) For Cumulative conditions, the percentage increases would be significantly lower than under Baseline conditions because of the higher growth in traffic volumes forecast for 2030, except for Buena Vista Avenue east of Sherman Street, which would have lower volumes because of the future parallel Clement Avenue extension. Despite these lower Cumulative volumes on Buena Vista Avenue, the project increases would be two percent or less west of Entrance Road and approximately one percent east of Stanton Street.

   Based on these percentage increases, the project would increase the bicycle LOS score by well under 10 percent for this component variable on any roadway segment in both the Baseline and Cumulative scenarios.

3) **Motor Vehicle Speeds:** The project would not change motor vehicle speeds on roadway segments in the vicinity, and thereby would result in no change to the bicycle LOS score for this variable.

4) **Truck Volumes:** By replacing the existing Chipman Moving & Storage facility with residential development, the project would significantly reduce truck volumes on nearby roadway segments, and thereby decrease the bicycle LOS score for this variable.

5) **Pavement Conditions:** The decrease in truck volumes with the project described above would also tend to reduce wear on the pavement on nearby roadway segments, which would tend to improve their pavement surface rating in the long term. Although this would likely be considered as no change to the bicycle LOS score for Baseline Conditions in 2015, it could be considered to decrease the bicycle LOS score for this variable under Cumulative 2030 Conditions.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Based on this analysis of its component variables, the bicycle LOS score would not increase by 10 percent as a result of the project, and the project's impact on bicycle travel would therefore be less than significant.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	X	☐

Explanation: The Alameda County Congestion Management Agency (CMA) only requires traffic impact analysis of potential impacts on the Metropolitan Transportation System (MTS) regional network within the Congestion Management Program (CMP) if a proposed project would generate 100 or more peak-hour trips.[81] Based on trip generation rates presented in Table T–5, above, the proposed 59 single-family homes and ten duplexes would generate 50 PM net peak-hour trips and 21 AM net peak-hour trips. The project would therefore not require analysis using the CMA traffic model.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	X

Explanation: The project would have no effect on air traffic patterns or air traffic levels. There are no airports within 2 miles of the project site; the nearest airport is Oakland International Airport, located approximately 3 miles southeast of the site.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	X	☐	☐

Explanation: TJKM Transportation Consultants evaluated the proposed site plan to identify any potential traffic hazards due to design features. This included an evaluation of sight-distance at the new intersections of the proposed north-south streets with Clement Avenue and Buena Vista Avenue. With the proposed roadway curvature on Clement Avenue, one critical sight-distance location would be the new intersection at Stanton Street, which would be on the inside of a curve. At this location, sight-distance in both directions on Clement Avenue for northbound vehicles on Stanton Street would be at least 150 feet, which is the stopping sight-distance at 25 mph, the intended design speed and speed limit on Clement Avenue.

A second critical sight-distance location was identified at the new intersection of Clement Avenue and Entrance Road, which would have a one-way Stop control on westbound Clement Avenue, with all other traffic movements remaining uncontrolled, for purposes of analysis. The Fortman Marina/Alameda Yacht Club driveway on the north side of the new Clement Avenue segment would be immediately east of this intersection. This driveway location would result in

[81] Alameda County Congestion Management Agency, *2009 Congestion Management Program*, page xiii, 2009.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

potential traffic hazards, because traffic approaching the driveway from northbound Entrance Road would not be required to stop at the intersection and would be likely to proceed diagonally directly across the westbound Clement Avenue approach lane to enter the driveway. Additionally, the Fortman Marina/Alameda Yacht Club driveway exit is not controlled by a stop sign, and existing landscaping east of the driveway would obstruct the driveway sight-distance for westbound traffic on Clement Avenue. This configuration would create a potential traffic hazard, which would be considered a ***significant, adverse impact***. Implementation of the following mitigation measure would reduce the impact to a less-than-significant level:

Mitigation Measure T–1: The assumed Stop sign on westbound Clement Avenue at the intersection with Entrance Road shall be relocated to the northbound Entrance Road approach to the intersection. In addition, a new Stop sign shall be installed at the southern end of the Fortman Marina/Alameda Yacht Club driveway where it would join with the Clement Avenue extension to control traffic exiting from the driveway. The project sponsor does not control these private properties (Entrance Road is privately owned). Implementation of this mitigation measure will therefore require the City of Alameda to enter into agreements with the owners of the involved properties.

It should be noted that alternative means of mitigating the identified traffic hazard impact were considered but rejected as inadequate. Relocating the stop sign for westbound Clement Avenue to a point immediately east of the Fortman Marina/Alameda Yacht Club driveway would require westbound traffic to stop before crossing the path of conflicting northbound and southbound traffic entering and exiting the driveway to/from Entrance Road. However, from this stop sign location, sight-distance of traffic on the uncontrolled northbound Entrance Road approach would be obstructed by the proposed project development on the southeast corner of the new Clement Avenue/Entrance Road intersection. Additionally, the previously mentioned sight-distance obstruction caused by the existing landscaping east of the uncontrolled Fortman Marina/Alameda Yacht Club driveway would remain problematic, and relocating the stop sign east of the driveway would not reduce the safety impact to be less than significant.

The recommended stop sign configuration would also provide more desirable traffic operations when Clement Avenue is extended westerly of Entrance Road in the future, during an interim period until a planned traffic signal is needed at the intersection. If the stop sign were to be installed on westbound Clement Avenue, future removal of that stop sign to implement the recommended configuration could create safety hazards related to driver confusion that can occur with stop sign removals. With the recommended stop signs on northbound Entrance Road and the Fortman Marina/Alameda Yacht Club driveway exit at Clement Avenue as mitigation, the resulting safety impact would be less than significant.

Sight-distance at all other new intersections would exceed the minimum requirements, and all of the proposed new intersections would provide adequate sight-distance. While no other impacts related to sight distance were identified, the traffic consultant recommended installation of stop signs to control traffic on the new north-south street approaches at their respective intersections with Clement Avenue and Buena Vista Avenue.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

TJKM also concluded that the proposed 42-foot curb-to-curb roadway width of the Clement Avenue extension would be appropriate for the planned 25-mph speed limit on the curving roadway, including for its future use as a designated truck route. The roadway design matches the cross-section recommended in the *Encinal Terminals – Del Monte Warehouse – Chipman/Marina Cove II Sites Draft Master Plan*.

e)	*Result in inadequate emergency access?*	☐	☐	**X** ☐

Explanation: As shown on the site plan (Figure 3, Project Description), the project would provide multiple access points from the north and south via the three new north/south roadways that would connect with Buena Vista Avenue and Clement Avenue. The proposed 42-foot curb-to-curb roadway width of the Clement Avenue extension and 36-foot curb-to-curb roadway width on the north/south streets appear to provide adequate access and maneuvering room for emergency vehicles. This will be verified by the Alameda Fire Department (AFD) during its review of the project plans. The AFD will ensure the project meets requirements for adequate emergency access as a condition of project approval.

f)	*Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?*	☐	☐	**X** ☐

Explanation: The project would be consistent with General Plan policies requiring new development to provide facilities for pedestrians and calling for the creation of pedestrian pathways along the waterfront and linking the waterfront to inland neighborhoods. The proposed 5-foot wide sidewalks along all new streets would fulfill both of these functions, providing access to the existing shoreline park located immediately north of the project site. Although no sidewalk is proposed for the north side of Clement Avenue, an existing pedestrian path is located in waterfront park located immediately adjacent to the proposed Clement Avenue. The project is therefore consistent with the relevant General Plan policies pertaining to pedestrian facilities.

The City's General Plan also includes policies to provide facilities for bicyclists, and to create bicycle pathways along the waterfront and linking the waterfront to inland neighborhoods. Clement Avenue is a designated bikeway in the General Plan, and the cross-section recommended in the *Encinal Terminals – Del Monte Warehouse – Chipman/Marina Cove II Sites Draft Master Plan* (Draft Master Plan) includes bike lanes in both directions. The 42-foot roadway width shown on the project site plan matches the width recommended in the Draft Master Plan and thereby provides adequate width for bike lanes, but no detailed pavement marking plan had been provided for review at the time this report was prepared. The bikeway on Clement Avenue would run along the waterfront for most of its length on the project's northern boundary.

The design of the new north/south streets is appropriate for bicyclists to share the road with motor vehicles. The bike access to be provided by the new north/south streets would help link the waterfront to the project and adjacent neighborhoods.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Currently, an intermittent bike path/multi-use trail along the waterfront connects the north boundary of the project site with Grand Avenue to the east and Atlantic Avenue to the west, but no Class II bicycle lanes are provided on the streets that directly serve the project site. The existing Class II bike lanes closest to the project site are on Grand Street to the east, Atlantic Avenue to the west, and Santa Clara Avenue to the south. The City's General Plan also designates Pacific Avenue, which parallels Buena Vista Avenue one block to the south, as a bicycle priority route.

The City's General Plan also includes a policy requiring new development to provide facilities for transit riders. No transit routes currently run on the streets adjacent to the project. The project site is one-quarter mile from the nearest AC Transit bus stop at the intersection of Stanton Street and Santa Clara Avenue, where an existing bus shelter is located. Stanton Street has existing sidewalks on both sides between the project site and the bus stop at Santa Clara Avenue. The sidewalks and bike access to be provided on the new north/south streets within the project site would help link the bus stop with the project and the waterfront. To further facilitate this link, TJKM recommended that the project install a crosswalk on Buena Vista Avenue at Stanton Street, including appropriate signage, pavement markings, and other safety features to be determined in coordination with City staff.

Future transit improvements identified in the General Plan include a Light Rail Corridor using the Alameda Belt Line Property along Clement Avenue and Atlantic Avenue, which runs along the north boundary of the project site. The General Plan includes a policy to maintain public right-of-way for this future transit corridor along Clement Avenue between Grand Street and Sherman Street. The project site plans include a 17-foot wide buffer strip along the north side of the proposed Clement Avenue extension, which appears to reserve right-of-way for the future transit corridor.

Based on the analyses presented above, the proposed project's site access plan would not interfere with adopted plans or policies, conflict with existing or planned facilities, or create a hazard for vehicle, truck, pedestrian, bicycle, or transit access, and the resulting project impacts would be less than significant.

XVII. UTILITIES AND SERVICE SYSTEMS — *Would the project:*

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	**X**	☐

Explanation: Wastewater flows from the proposed project would consist of typical residential sewage. Wastewater from the project would be treated by the East Bay Municipal Utility District (EBMUD) at their Main treatment plant, located at the foot of the San Francisco-Oakland Bay Bridge in the City of Oakland, approximately 4 miles north of the project site. The wastewater treatment plant is permitted by the Regional Water Quality Control Board (RWQCB) and effluent from the plant is regularly monitored to ensure that water quality standards are not violated. (See Section XVI(b) for additional information about the wastewater treatment plant.) There have been no violations of water quality standards by the treatment

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

plant during the past two years (August 1, 2010 through August 1, 2012),[82] and there are no RWQCB enforcement actions pending against the EBMUD.[83]

b)	*Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*	☐	☐	X ☐

Explanation:

Water Facilities

Potable water is provided to the City of Alameda by the East Bay Municipal Utility District (EBMUD), which serves incorporated and unincorporated areas in much of Alameda and Contra Costa counties. The District serves 20 cities and 15 unincorporated communities, with a service population of about 1.34 million people. EBMUD's water system infrastructure includes a network of storage reservoirs, pumping plants, aqueducts, and 4,100 miles of delivery pipes.[84] In addition to five major storage reservoirs, the distribution network includes 170 neighborhood reservoirs storing treated potable water, with a combined total capacity of 830 million gallons. The District operates six treatment facilities, including the Upper San Leandro Water Treatment Plant (WTP), as well as WTPs in Walnut Creek, Orinda, Lafayette, San Pablo, and El Sobrante, with a combined daily capacity of 375 million gallons per day (mgd). Each water treatment plant provides filtration, disinfection, fluoridation, and corrosion control.

Locally, a 12-inch diameter water main runs under Buena Vista Avenue adjacent to the site, and a secondary 6-inch diameter supply line also runs under Buena Vista Avenue from the east to Stanton Street, where it turns to the south and follows Stanton Street. An 8-inch water line runs in Clement Avenue, terminating at the current terminus of the street at the northeast corner of the project site. This supply line would be extended westward across the site in the proposed extension of Clement Avenue. Additional 8-inch lines would connect to this pipe and run southward in each of the proposed new streets. These lines would be used to supply individual connections to each of the proposed homes. The previous Marina Cove MND found no constraints to the water supply infrastructure serving the site, and concluded that project impacts on local and regional water distribution facilities would be less than significant. The Alameda Public Works Department will confirm that there is adequate capacity within the existing 8-inch supply line to serve the proposed homes prior to project approval.

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[82] State Water Resources Control Board, California Integrated Water Quality System Project (CIWQS), Wastewater Violation Report, 2010-2012, accessed August 13, 2012 at: http://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportPartyAtGlanceServlet?reportID=2&paagrPartyID=14382.

[83] State Water Resources Control Board, California Integrated Water Quality System Project (CIWQS), Facility-at-a-Glance Report, Central Contra Costa Sanitary District, accessed August 13, 2012 at: http://ciwqs.waterboards.ca.gov/ciwqs/readOnly/publicReportFacilityAtGlancePlaces.jsp.

[84] East Bay Municipal Utility District (EBMUD), *Urban Water Management Plan 2010*, page 2-5, June 2011.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Based on a per capita consumption of approximately 89.3 gallons per day (gpd),[85] and an estimated population of 166 residents, the proposed project would generate demand for about 14,824 gpd of domestic water. With a current total District-wide consumption of approximately 220 mgd, the project's incremental water demand would represent about 0.0067 percent of daily demand in the District.[86] With a current treatment capacity of 375 mgd, the District can accommodate projected future in demand with the available treatment capacity. EBMUD'S long-range planning for future water infrastructure and supply needs is based on population projections compiled by the Association of Bay Area Governments (ABAG), which takes into account growth planned in the adopted general plans of Bay Area cities and counties. Development of the project site with medium-density residential development has been planned for in the Alameda General Plan for the past 20 years, and therefore has been factored into growth projections on which EBMUD bases its infrastructure and supply planning. The proposed project's incremental increase in demand would not be significant, and would not require the construction of new water treatment or conveyance facilities. The project would have a less-than-significant impact on water treatment and distribution facilities.

Wastewater Facilities

Alameda is served by EBMUD's Special District No. 1 (SD-1), which treats domestic, commercial, and industrial wastewater for the cities of Alameda, Albany, Berkeley, Emeryville, Oakland, and Piedmont, and for the Stege Sanitary District, which includes El Cerrito, Kensington, and part of Richmond. Wastewater from SD-1, including the proposed project, would be treated at the East Bay Municipal Utility District (EBMUD) Main Wastewater Treatment Plant (WWTP), operated by the EBMUD and located at the foot of the San Francisco-Oakland Bay Bridge in the City of Oakland. The wastewater treatment plant provides primary and secondary treatment and discharges treated effluent into San Francisco Bay. The current primary treatment capacity is 320 million gallons per day (mgd), and the secondary treatment capacity is 168 mgd.[87] Storage basins provide plant capacity for a short-term hydraulic peak of 415 mgd. The average annual flow is currently 75 mgd.

The original collection system in the City of Alameda was a combined "storm/sewer" system, where both stormwater flows and sanitary sewer flows were collected and combined into one collection system and then discharged directly into San Francisco Bay. Work began in the City of Alameda in the mid-1940s to separate the stormwater flows from the sanitary sewer flows and to establish two independent systems.

The portions of the sanitary sewer distribution system that are within the public streets are operated and maintained by the City of Alameda, except for an interceptor trunk line that is maintained by the East Bay Municipal Utility District (EBMUD). Property owners own the connections from private property to the public system. An EBMUD sanitary sewer interceptor, which ranges in size from 48 inches to 60 inches in diameter, runs through the project area along Clement Avenue, heads south on Grand, then west on Buena Vista, and north on

[85] Per-capita water use in the East Bay Municipal Utility District is 178.6 gallons per day per household. It was conservatively assumed that the project's per-capita water demand would be half of the per-household rate, or 89.3 gpd.

[86] East Bay Municipal Utility District (EBMUD), *WSMP 2040: Water Supply Management Program 2040 Plan*, page 3-1, Final April 2012.

[87] East Bay Municipal Utility District, Wastewater Treatment and Sewers {online information], accessed August 14, 2012 at: http://www.ebmud.com/wastewater/online_tour.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

Constitution Way, where it joins with other interceptors and community collection systems at the intersection of Constitution Way and Atlantic Avenue.

The sanitary sewer collection system was constructed more than 50 years ago. The City began making improvements, upgrades, and modifications to the existing public collection system throughout the City in response to a 1986 report that detailed the system's deficiencies. As of November 2002, 90 percent of these improvements had been completed.

In addition, the City of Alameda Public Works has a Sewer System Rehabilitation program that, on a regular basis, inspects sewers and performs a conditions assessment of the City's 34 pump stations and 140 miles of sanitary sewer system. Based on these studies, the Annual Cyclic Sewer Program replaces and rehabilitates old infrastructure in order to maintain the structural and operational integrity of the City's sewer system.[88]

Project-generated wastewater would be collected in 8-inch sanitary sewer lines running under each of the proposed streets that would connect to an existing 57-inch sewer line in Buena Vista Avenue that conveys sewage westward to other interceptors and community collections systems at the intersection of Constitution Way and Atlantic Avenue.

The proposed project's 69 dwelling units would generate approximately 13,455 gallons per day (gpd) of sewage, based on a generation rate of approximately 195 gpd per single-family dwelling. This would represent an increase of 0.018 percent over current average flow rates. This would be a very small increase in wastewater delivered to the treatment plant. The project would therefore result in a less-than-significant impact on wastewater facilities.

c) *Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*	☐	☐	X	☐

Explanation: Cities in the Bay Area are responsible for controlling stormwater pollution by complying with the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit issued by the San Francisco Bay Regional Water Quality Board. The City of Alameda implements the Municipal Regional Stormwater NPDES Permit requirements with all other Alameda County local agencies as a co-permittee in the Alameda Countywide Clean Water Program. This permit requires the City to prevent the discharge of non-stormwater (materials other than rain water) from entering the municipal storm drain system and San Francisco Bay, including the Oakland Inner Harbor.[89]

The City's Department of Public Works has a Storm Drain/Urban Runoff Project Administration program that provides management and maintenance of the City's storm drainage system, including lagoons, in accordance with the City's NPDES permit requirements.

[88] City of Alameda, Department of Public Works, Capital Improvement Engineering, accessed on August 2, 2012 at http://www.cityofalamedaca.gov/City-Hall/Capital-Improvement-Engineering.

[89] City Of Alameda, Department of Public Works, Clean Water Compliance, accessed on August 2, 2012 at http://www.cityofalamedaca.gov/Go-Green/Clean-Water-Regulations.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

The program also provides technical assistance to businesses in the prevention of stormwater pollution and on-going public education in proper management of pollutants.[90]

Project-related stormwater collection and drainage would occur along the proposed streets via catch basins located within the curbs. Collected stormwater from the streets would be directed to 5-foot-wide grassy bioswales located between the curbs and sidewalks; these swales (gently sloped channels filled with vegetation, compost, or riprap) would provide natural treatment of stormwater through biofiltration. Stormwater would also be collected from all impervious surfaces (including roofs) on the residential lots and directed to the treatment swales.

Treated stormwater from the streets and private lots would be discharged into storm drains running under the streets, with diameters ranging from 18 inches to 48 inches. The stormwater would drain by gravity to the Arbor Street pump station, which is located near the southeast corner of the Fortman Marina basin, adjacent to the project site's northern boundary at Arbor Street. Stormwater would be pumped from here through an outfall that discharges into the Oakland Inner Harbor, which is hydrologically connected to San Francisco Bay.

The project would create 229,405 square feet (about 5.27 acres) of impervious surfaces and, under Section C.3 of the Clean Water Program Alameda County's NPDES Municipal Stormwater Permit, would require 9,004 square feet of bioretention/treatment facilities, which would allow some of the stormwater onsite to percolate into groundwater, and delay the offsite discharge of the remainder of the stormwater. The project would provide 9,098 square feet of bioswales, exceeding the C.3 requirements. The project site is not located within an area subject to hydromodification management (HM) requirements pursuant to Provision C.3. (Areas where increases in runoff peak flow, duration, and volume may cause increase erosion of creek beds and banks, silt pollutant generation, or other impacts to beneficial users are subject to hydromodification management.)

As a standard condition of approval, new development within the City of Alameda is required to replace or reconstruct existing storm drain systems and demonstrate that adequate capacity exists or can be provided either by expanding the capacity of lift stations, diverting run-off to alternative outfalls, or by reducing the volume of run-off from the development through on-site measures.[91]

The proposed project would be subject to existing NPDES permit requirements, which are intended to ensure that impacts on water quality and runoff would be reduced to a less than significant level. Relative to existing conditions, the proposed project would result in a reduction of impervious surfaces. Furthermore, the proposed project includes bioswales that would reduce or delay offsite runoff. For these reasons, the proposed project would not require the construction of new stormwater drainage facilities or expansion of existing facilities such as an expansion of the existing pump station. Therefore, this impact is considered less than significant.

[90] City Of Alameda, Department of Public Works, Maintenance Programs, accessed August 2, 2012 at http://www.cityofalamedaca.gov/City-Hall/Maintenance-Programs.

[91] City of Alameda, *Draft North Park Street Code, Draft Environmental Impact Report*, page IV.D-3, January 3, 2012.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*	☐	☐	X	☐

Explanation: As noted in Section XVII(b), above, water is supplied to the City of Alameda by the East Bay Municipal Utility District (EBMUD). The EBMUD obtains about 90 percent of its water supply from the Mokelumne River watershed in the Sierra Nevada, with the remainder collected from protected watershed lands in the East Bay area.[92] The District has water rights to a maximum of 325 million gallons per day (mgd) of Mokelumne River water, but this is expected to be reduced in the future as demands increase from Amador, Calaveras, and San Joaquin counties, which have water rights senior to those held by EBMUD.[93] Local runoff provides 15 to 25 mgd of EBMUD's water supply during normal rainfall years, but it provides a negligible amount during drought years.

In addition to these water supply sources, during droughts the EBMUD has access to up to 133,000 acre-feet (AF)[94] of water from the Freeport Regional Water Facility (FRWF) during a single dry year, not to exceed a total of 165,000 AF during three consecutive dry years. The FRWF is operated by the Freeport Regional Water Authority, which was formed in 2002 through a joint powers agreement between EBMUD and the Sacramento County Water Agency (SCWA).

Since 2010 the EBMUD has been operating the Bayside Groundwater Facility to provide an additional water supply source during droughts. During normal rainfall years, potable water is injected into the South East Bay Plain Groundwater Basin in the vicinity of the City of Hayward. The District can draw on this stored water during dry years via extraction wells that can produce 2 mgd over a 6-month period. This supplemental supply can produce about 1,120 AF/year (AFY), which the District plans to expand to up to 10,080 AFY in the future. The District is also exploring a variety of other long-term supplemental water supplies, including the possibility of a jointly-owned regional desalination facility to produce potable water from ocean, Bay, and/or brackish water.

The EBMUD's planning to ensure an adequate water supply during both wet and dry years is based on future growth projections through 2040, determined by a *2040 Demand Study* completed in 2009, based on land use projections from local planning agencies. The district-wide land use analysis was conducted prior to the current economic recession, when there was an expectation of continued economic expansion. Therefore, increased water demand associated with economic and population growth is likely to occur more slowly than projected in EBMUD's *2040 Demand Study*. The adjusted planning-level demand is 221 mgd in 2020 and 230 mgd in 2040, which reflects projected reductions as a result of conservation and recycling

[92] East Bay Municipal Utility District (EBMUD), *Urban Water Management Plan 2010*, page 1-6, June 2011.

[93] *Ibid*., page 2-1.

[94] An acre-foot is the amount of water necessary to cover 1 acre of land to a depth of 1 foot, and is equivalent to 325,851.43 gallons, or 43,560 cubic feet.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

programs. EBMUD has determined that its current supply is insufficient to meet customer needs during single- and multi-year droughts.[95]

EBMUD's *Urban Water Management Plan 2010* (UWMP), prepared in compliance with the California Urban Water Management Planning Act of 1983, documents the District's planning activities to ensure adequate water supplies to meet existing and future demands for water. Its drought planning is based on modeling of rainfall runoff that occurred in 1976 and 1977, the driest recorded two-year period.

The UWMP determined that EBMUD would need supplemental water supplies to meet projected demand during single and multiple dry years, even with rationing of 2 percent in 2010 and 4 percent in 2040 during a single dry year, and rationing of 15 percent during Years 2 and 3 of a three-year drought. EBMUD would have a total supplemental supply need of 69 thousand AF (TAF) over multiple dry years for 2030 level demands, beyond the current supplemental supplies provided through the Freeport Regional Water Facility and the Bayside Groundwater Facility. EBMUD plans to meet this need by relying on short-term supplemental supply sources that include the Northern California Water Transfers (expected to provide up to 13 MGD (15 TAF/yr) of dry-year water) and the Bayside Groundwater Project Expansion (expected to provide up to 9 MGD (10 TAF/yr) of dry-year water). Beyond 2030 and outside the current required 20-year planning horizon of the UWMP, EBMUD's supplemental supply needs will be met by implementing long-term conceptual supplemental supply sources, whose project capacities can only be quantified in subsequent UWMPs through refined project developments.[96]

The proposed project is well under the water demand threshold established by Senate Bill 610 (2001), requiring preparation of a Water Supply Assessment (WSA) during environmental review of projects over a certain size. Among other thresholds, a project is required to prepare a WSA if it would: (1) be a business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space, or (2) would demand an amount of water equal to, or greater than, the amount of water needed to serve a 500-dwelling unit project.[97] The proposed project would create an incremental increase in water demand that would not cause a substantial effect on the availability of regional water supplies. The *2040 Demand Study* on which EBMUD's UWMP is based factors in growth in the region. As discussed above in Section XVII(b), the regional growth projections factored in future development of the project site with medium-density residential homes. The growth in water demand that would be generated by the proposed project has therefore been factored in to EBMUD's long-term water supply planning, and the impact associated with the project's water demand would be less than significant.

[95] East Bay Municipal Utility District (EBMUD), *Urban Water Management Plan 2010*, page 4-7, June 2011.

[96] *Ibid*, page 4-10.

[97] California Code of Regulations, Title 14, Chapter 3, Article 10, Section 15155.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	X	☐

Explanation: See Section XVII(b), above.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	X	☐

Explanation: The City of Alameda delivers its waste to the Davis Street Resource Recovery Complex located in San Leandro, where it is sorted and recyclable materials are recovered. Residual waste is disposed of at the Altamont Landfill located in unincorporated Alameda County. The City of Alameda has developed a Citywide integrated waste management plan, which requires preparation of a project-specific waste management plan as part of the demolition or building permits for development. According to data published by StopWaste.Org, the City of Alameda achieved a diversion rate of 48 percent in 1995, 59 percent in 1998, and 75 percent in 2010.[98] In order to increase the diversion rate and facilitate compliance with the California Integrated Waste Management Act and Measure D (the Alameda County Source Reduction and Recycling Initiative Charter Amendment, which requires a plan to be prepared for reaching a 75 percent and beyond diversion goal), the City Municipal Code requires all persons receiving solid waste collection to also have recyclable and organic materials collected.[99]

Construction of the proposed project (building demolition and construction debris) would generate solid waste. When existing structures are "deconstructed," rather than demolished, wood and fixtures are retained for resale or other reuse rather than disposed of in landfills, and the majority of such materials can be diverted from the waste stream. In some cases, warehouse deconstruction has resulted in a yield of up to 87 percent reusable materials. Both for-profit and non-profit entities (contractors and organizations) can divert deconstructed materials into existing recycling and reuse markets, or can provide technical assistance to projects regarding the phasing and financing of alternative demolition procedures.[100]

Chapter XXI, Section 21 of the City of Alameda Municipal Code requires that new developments submit plans for managing construction debris area to promote separation of waste types and recycling, and to provide for reuse of materials on-site for reconstructing

[98] StopWaste.Org, Waste Diversion Rates for Alameda County Jurisdictions, accessed 14 August 2012 at: http://www.stopwaste.org/home/index.asp?page=516. StopWaste.Org is the Alameda County Waste Management Authority and the Alameda County Source Reduction and Recycling Board operating as one public agency.

[99] City of Alameda, North Park Street Regulating Code, Draft Environmental Impact Report, Page IV.D-3, January 2012.

[100] *Ibid.*

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

infrastructure.[101] These plans must be prepared in coordination with City staff, the project sponsor(s), and demolition subcontractors, and must be approved by City staff prior to issuance of a demolition permit.

The California Department of Resources Recycling and Recovery (CalRecycle) reports numerous solid waste generation rates developed by a variety of jurisdictions throughout the State, ranging from 7.8 pounds per person per day (lb/person/day) to 12.23 lb/person/day for single-family residential development.[102] Based on the highest of these solid waste generation rates (i.e., 12.23 lb/person/day), estimated by the City of Los Angeles, the proposed project's 69 single-family detached homes and 166 residents would generate approximately 2,030 pounds (or approximately 1 ton) per day. This would represent an incremental increase in current waste disposal at the Altamont Landfill, and consumption of 0.00882 percent of daily permitted capacity at the landfill. Given the City's existing diversion rate and Measure D, the solid waste generated by operation of the project could be expected to be less than this worst-case estimate. The Altamont Landfill has disposal capacity through 2045.[103] The proposed project would represent an incremental increase in collection and disposal of household waste, and would utilize less than 1/100th of 1 percent of permitted daily landfill capacity. With more than 30 years of remaining capacity at the landfill, the solid waste generated by the project would not measurably reduce existing landfill capacity. Therefore, construction and operation of the proposed project would present a less-than-significant impact on solid waste disposal.

g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	X

Explanation: The proposed project would be required to comply with all laws and regulations pertaining to solid waste. Although the project would not result in a significant impact on solid waste facilities, landfill disposal capacity is a diminishing resource. Furthermore, the construction and operation of landfills entail a number of adverse environmental effects, including natural resource depletion (i.e., energy and materials), reduction of wildlife habitat, air and water pollution, and contribution to global warming, among others.

The proposed project would not conflict with or interfere with the City's ability to implement its adopted solid waste programs and policies, including the Citywide integrated waste management plan and Chapter XXI, Section 21 of the City of Alameda Municipal Code, or Alameda County's Measure D. The project would be served by weekly curbside pickup of recyclable materials by Alameda County Industries (ACI). Waste generated by the proposed project would enter the same stream as other area waste collected by ACI, and would be subject to the same existing requirements regarding recycling and solid waste disposal. Because

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[101] Municode, City of Alameda Municipal Code, Chapter 21, Solid Waste Requirements, accessed August 14, 2012 at http://library.municode.com/index.aspx?clientId=16753&stateId=5&stateName=California.

[102] California Department of Resources Recycling and Recovery (CalRecycle), Estimated Solid Waste Generation Rates for Residential Developments [website], Accessed July 11, 2012 at: http://www.calrecycle.ca.gov/wastechar/wastegenrates/Residential.htm.

[103] Waste Management, Altamont Landfill, Sustainability, accessed August 14, 2012 at http://altamontlandfill.wm.com/sustainability/index.jsp.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

existing solid waste collection and disposal in Alameda complies with current federal, State, and local requirements, and because the project's solid waste would enter the same existing disposal stream, the proposed project would not violate any federal, State, or local statues or regulations related to solid waste.

XVIII.MANDATORY FINDINGS OF SIGNIFICANCE —

a)	*Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*	☐	X	☐	☐

Explanation: The project site is an industrial site that contains no valuable or sensitive habitats, and there is no potential for impacts to biological resources. There is a possibility for encountering buried historic/prehistoric cultural resources on the site, but mitigation measures have been identified to minimize potential impacts in the event such resources are encountered during project construction.

b)	*Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)*	☐	☐	X	☐

Explanation: No significant cumulative impacts were identified for the proposed project. The less-than-significant cumulative impacts are discussed individually in the dedicated resource sections, including air quality, greenhouse gases, traffic, and others.

c)	*Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?*	☐	X	☐	☐

Explanation: The proposed project, consisting entirely of residential construction, would not introduce any significant hazards to the project area. Measures have been identified to address potentially significant impacts associated with strong seismic shaking, landslide/slope stability, and other seismic/geotechnical hazards. Mitigation measures have also been identified to address potentially significant impacts on water quality, which could result in indirect health effects in swimmers in the San Francisco Bay (waterborne diseases) and to those consuming fish or shellfish. There is some potential to expose workers and future residents to hazardous materials, such as lead-contaminated soil and paint and asbestos-containing building materials.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

There is also potential for temporary air pollutant emissions from construction activities, including wind-blown dust, to adversely affect nearby persons with sensitive respiratory systems. Nearby residents could also be disturbed by temporary construction noise, and future project residents could be exposed to excessive noise levels from traffic. Mitigation measures have been identified to reduce these potential impacts to less-than-significant levels. With implementation of all mitigation measures identified in this Initial Study, the project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
☐	☐	☐	☐

REPORT PREPARATION—

This Initial Study and Mitigated Negative Declaration was prepared under the direction of Douglas Herring & Associates. In addition, the technical consultants listed below contributed to preparation of the Initial Study or produced separate technical reports.

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MITIGATION MEASURES—

The following mitigation measures have been identified in this document to reduce potentially significant impacts to less-than-significant levels:

Air Quality

Mitigation Measure AQ–1: The project applicant shall require the construction contractor to reduce the severity of project construction period dust impacts by complying with the following control measures:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 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.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall 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 Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Cultural Resources

Mitigation Measure CR–1: Prior to issuance of a grading permit, the project sponsor shall retain the services of a qualified archaeologist to develop and implement a plan, subject to review and approval by the City of Alameda Planning Division, for conducting a program of systematic subsurface archaeological testing. The mechanical testing program shall include excavation of test pits by backhoe following building demolition and removal of pavement, but prior to site grading. Mitigation Measures CR–2 and CR–3 shall also be implemented.

OR:

Following building demolition and removal of pavement, a qualified archaeologist shall be present during site clearing, grading, and excavation activities to continuously monitor for appearance of cultural resources. Monitoring shall continue until such time as the archaeologist determines that further removal of soils from the site will have no potential for encountering prehistoric and/or historic cultural deposits. If any potentially significant resources are discovered, all work shall be immediately halted in the area designated by the archaeologist as archaeologically sensitive until Mitigation Measure CR–2 has been fully implemented.

Mitigation Measure CR–2: If any cultural artifacts are encountered during site grading or other construction activities, all ground disturbance in the vicinity shall be halted until a qualified archaeologist can identify and evaluate the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s). The archeological consultant shall immediately notify the City of Alameda Planning Division and the project sponsor of the encountered archeological deposit. The archeological consultant shall prepare and implement a plan, subject to review and approval by the City of Alameda Planning Division, for evaluation, recovery, and/or documentation of the discovered resource.

The results of any additional archaeological effort required through the implementation of Mitigation Measures CR-1 through CR-3 shall be presented in a professional-quality report, to be submitted to the project sponsor, the City of Alameda, and the Northwest Information Center at Sonoma State University in Rohnert Park. The project sponsor shall fund and implement the mitigation in accordance with Section 15064.5(c)-(f) of the CEQA Guidelines and Public Resources Code Section 21083.2.

Mitigation Measure CR–3: In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and a qualified archaeologist shall notify the Office of the Alameda County Coroner and advise that office as to whether the remains are likely to be prehistoric or historic period in date. If determined to be prehistoric, the Coroner's Office will notify

the Native American Heritage Commission of the find, which, in turn, will then appoint a "Most Likely Descendant" (MLD). The MLD in consultation with the archaeological consultant and the project sponsor, will advise and help formulate an appropriate plan for treatment of the remains, which might include recordation, removal, and scientific study of the remains and any associated artifacts. After completion of analysis and preparation of the report of findings, the remains and associated grave goods shall be returned to the MLD for reburial.

Mitigation Measure CR–4: If any paleontological resources are encountered during site grading or other construction activities, all ground disturbance shall be halted until the services of a qualified paleontologist can be retained to identify and evaluate the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s). The project sponsor shall immediately notify City of Alameda Planning Division staff and the City building inspector assigned to the project upon discovery of paleontological resources. If a fossil find is confirmed, it shall be recorded with the U.S. Geological Survey and curated in an appropriate repository, as determined by the paleontologist.

<u>Geology and Soils</u>

Mitigation Measure GS–1: Prior to issuance of a grading permit, per the recommendation of the preliminary geotechnical investigation prepared for the project, the project sponsor shall retain the services of a qualified geotechnical engineer or engineering geologist to prepare a design-level geotechnical investigation for purposes of clarifying site preparation and design recommendations related to liquefaction potential, foundations, undocumented fill, shallow ground water, expansive soil, and abandoned below-grade improvements such as buried debris, pipelines, railroad ties and tracks, and old foundations and slabs. The recommendations in the preliminary geotechnical investigation report shall be updated or modified as appropriate to reflect the design-level geotechnical investigation.

Mitigation Measure GS–2: The proposed project design and construction shall incorporate all of the site preparation, foundation design, structural design, drainage, ground improvement performance testing, exterior flatwork, asphalt concrete pavement, and other recommendations presented in the June 14, 2012 geotechnical investigation prepared for the project by Cornerstone Earth Group, unless modified during construction, based on field conditions, by a qualified registered geotechnical or civil engineer. In addition, the final grading plans shall be reviewed by a qualified registered geotechnical or civil engineer, and any resulting additional recommendations shall be incorporated into the project. All site preparation work shall be performed under the observation of the Geotechnical Engineering firm of record.

All design and construction shall conform to the requirements of the latest Uniform Building Code. All structural design and construction shall be subject to final approval by the City of Alameda Land Development and Permit Review Program of the Public Works Department.

Mitigation Measure GS–3: Grading activities shall be restricted to the summer construction season (April 15th through October 15th). Any site earthwork after October 15th shall be limited to activities related to erosion control unless authorized in writing by the City of Alameda.

Mitigation Measure GS–4: A Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and Stormwater Control Plan (SCP) shall be prepared and submitted along with grading permit applications. The SWPPP shall provide for temporary measures to control sediment and other pollutants during construction and the SCP shall specify permanent controls (such as drainage ditches) that should last for the life of the project. The requisite plans shall be prepared in accordance with the standards provided in the *Manual of Erosion and Sedimentation Control Measures* (2005) or the California Stormwater Quality Association's (CASQA) Best Management Practice (BMP) Handbooks for Construction and for New Development and Redevelopment (2009). Implementation of the plan will help stabilize graded and stockpile areas and reduce erosion and sedimentation. The plans shall identify Best Management Practices (BMPs) that will be adhered to during construction activities. Erosion-minimizing features such as hay bales, water bars, covers, sediment fences, sensitive area access restrictions (for example, flagging), and/or retention/settlement areas shall be implemented as necessary before the onset of inclement weather. Mulching, seeding, or other suitable stabilization measures shall be used to protect exposed areas during construction activities. The plans shall incorporate requirements of the Clean Water Program Alameda County and other applicable federal, State, and local requirements.

Mitigation Measure GS–5: To the extent practicable, existing topsoil in areas to be graded shall be stockpiled and re-used in the project areas for landscaping, erosion control, or other purposes.

<u>Hazards and Hazardous Materials</u>

Mitigation Measure HM–1: Prior to issuance of a demolition permit for the existing buildings on the site, a survey for asbestos-containing building materials (ACBM) shall be conducted by a qualified asbestos abatement contractor. If ACBM is identified, all friable asbestos shall be removed prior to building demolition by a State-certified Asbestos Abatement Contractor, in accordance with all applicable State and local regulations. The Bay Area Air Quality Management District (BAAQMD) shall be notified ten days in advance of any required abatement work. To document compliance with the applicable regulations, the project sponsor

shall provide the Fremont Community Development Department with a copy of the notice required by BAAQMD for asbestos abatement work, prior to and as a condition of issuance of the building permit for the proposed project by the City of Alameda Public Works Department.

Mitigation Measure HM–2: Prior to issuance of a demolition permit for the existing buildings on the site, a survey for lead-based paint (LBP) shall be conducted by a qualified lead assessor. If LBP is identified, lead abatement shall be performed in compliance with all federal, State, and local regulations applicable to work with LBP and disposal of lead-containing waste. A State-certified Lead-Related Construction Inspector/Assessor shall provide a lead clearance report after the lead abatement work in the buildings is completed. The project sponsor shall provide a copy of the lead clearance report to the City of Alameda Public Works Department.

Mitigation Measure HM–3: The project sponsor shall provide documentation to the City of Alameda demonstrating that the lead contamination in site soils has been remediated to below the applicable environmental screening level (ESL) for residential use. Removal and disposal of lead-contaminated soil, as well as drums of motor oil, hydraulic fluid, antifreeze, propane, and other hazardous materials, shall be performed by qualified personnel in accordance with applicable State regulations.

Mitigation Measure HM–4: Prior to issuance of a grading permit for the project, the project sponsor shall prepare a soil management plan (SMP) to establish management practices to be followed during site grading in the event that any other pockets of contaminated soil, debris, or buried structures are encountered during the grading. The construction contractor shall be required to conform with the procedures identified in the SMP, as applicable.

Mitigation Measure HM–5: For all remediation work performed in compliance with Mitigation Measures HM–3 and HM–4, the project sponsor shall prepare and implement a Health and Safety Plan (HASP) and a Soil Management Plan (SMP). The HASP shall identify the measures necessary to protect workers and to prevent their exposure to hazardous contaminants that are present in the soils on the site. It shall be prepared in consultation with the San Francisco Bay Area Consultation Service Office of the California Department of Industrial Relations, Division of Occupation Safety and Health (Cal/OSHA), and in accordance with all applicable State and federal occupational safety and health standards, including Cal/OSHA's Hazardous Waste Operations and Emergency Response Guidelines (CCR Title 8, Section 5192). The SMP shall address the proper handling and disposition of potentially contaminated soils that may be encountered during excavation, and shall be reviewed and approved by the Alameda Fire Department/CUPA and/or the California Department of Toxic Substances Control (DTSC).

Hydrology and Water Quality

Mitigation Measure WQ–1: The project applicant shall prepare a C.3 Stormwater Control Plan to reference and incorporate current construction and post-construction requirements specified by SWRCB Order No. 2009-0009-DWQ and the post-construction requirements specified by NPDES Order No. R2-2009-0074 and the Clean Water Program Alameda County (CWPAC). The C.3 Stormwater Control Plan shall be developed in accordance with the provisions of CWPAC's *C.3 Stormwater Technical Guidance* manual (Version 3.0, December 11, 2011). Additionally, as required by the C.3 Provisions, building permit applications must be accompanied by a Stormwater Control Plan, for review and approval by the City Engineer, which specifies the treatment measures and appropriate source control and site design features that will be incorporated into project design and construction to reduce the pollutant load in stormwater discharges and manage runoff flows.

Mitigation Measure WQ–2: The project sponsor shall obtain National Pollutant Discharge Elimination System (NPDES) construction coverage as required by Construction General Permit (CGP) No. CAS000002, as modified by State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ. Pursuant to the Order, the project applicant shall electronically file the Permit Registration Documents (PRDs), which include a Notice of Intent (NOI), a risk assessment, site map, signed certification, Stormwater Pollution Prevention Plan (SWPPP), and other site-specific PRDs that may be required. At a minimum the SWPPP shall incorporate the standards provided in the Association of Bay Area Governments' *Manual of Standards for Erosion and Sedimentation Control Measures* (2005), the California Stormwater Quality Association's *California Stormwater Best Management Practices Handbook* (2009), the prescriptive standards included in the CGP, or as required by the Clean Water Program Alameda County, whichever are applicable and more stringent. Implementation of the plan will help stabilize graded areas and reduce erosion and sedimentation. The plan shall identify Best Management Practices (BMPs) that shall be adhered to during construction activities. Erosion-minimizing efforts such as hay bales, water bars, covers, sediment fences, sensitive area access restrictions (for example, flagging), vehicle mats in wet areas, and retention/settlement ponds shall be installed before extensive clearing and grading begins. Mulching, seeding, or other suitable stabilization measures shall be used to protect exposed areas during construction activities.

Mitigation Measure WQ–3: All cut-and-fill slopes shall be stabilized as soon as possible after completion of grading. No site grading shall occur between October 15th and April 15th unless approved erosion control measures are in place.

Noise

Mitigation Measure N–1: The project sponsor shall provide a suitable form of forced-air mechanical ventilation, as determined by the local building official, for units throughout the site, so that windows can be kept closed at the occupants' discretion to control interior noise and achieve the interior noise standards.

Mitigation Measure N–2: The City of Alameda shall confirm the final specifications for noise insulation during final design of the project. In addition to sound-rated windows and doors, other treatments may include, but are not limited to: sound-rated exterior wall construction methods, acoustical caulking, insulation, acoustical vents, etc. Large windows and doors should be shielded by noise barriers or oriented away from noise sources where possible.

Mitigation Measure N–3: Pursuant to the Municipal Code, noise-generating construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday and 8:00 a.m. to 5:00 p.m. on Saturdays. Construction shall be prohibited on Sundays and holidays.

Mitigation Measure N–4: The project sponsor shall require the construction contractor to equip all construction equipment driven by internal combustion engines with intake and exhaust mufflers which are in good condition, appropriate for the equipment, and no less effective than those originally installed by the manufacturer. The manufacturers' noise abatement features, such as mufflers, engine covers, and engine vibration isolators, shall be intact and operational. All construction equipment shall be inspected weekly to ensure proper maintenance and presence of noise control devices (e.g., mufflers and shrouding, etc.). Unnecessary idling of internal combustion engines shall be strictly prohibited.

Mitigation Measure N–5: Wherever possible, hydraulic tools shall be used instead of pneumatic impact tools. "Quiet" air compressors and other stationary noise sources shall be utilized when appropriate technology is available. Construction staging areas, maintenance yards, air compressors, portable power generators, and other construction-oriented operations shall be located as far as reasonably possible from noise-sensitive receptors. Temporary noise barriers shall be constructed to screen stationary noise-generating equipment when located near adjoining sensitive land uses. Noise from construction workers' radios shall be limited such that the radios are not audible at existing residences bordering the project site.

Mitigation Measure N–6: The construction contractor shall prepare and submit to the City for approval a detailed construction plan identifying the schedule for major noise-generating construction activities. The plan shall designate a "disturbance coordinator" who will be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of any noise

complaints (e.g., starting too early, bad muffler, etc.) and shall require that reasonable measures warranted to correct the problem be implemented. The contractor shall conspicuously post a telephone number for the disturbance coordinator at the construction site and include the notice sent to neighbors regarding the construction schedule.

Transportation/Traffic

Mitigation Measure T–1: The assumed Stop sign on westbound Clement Avenue at the intersection with Entrance Road shall be relocated to the northbound Entrance Road approach to the intersection. In addition, a new Stop sign shall be installed at the southern end of the Fortman Marina/Alameda Yacht Club driveway where it would join with the Clement Avenue extension to control traffic exiting from the driveway. The project sponsor does not control these private properties (Entrance Road is privately owned). Implementation of this mitigation measure will therefore require the City of Alameda to enter into agreements with the owners of the involved properties.