E. CHECKLIST

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	❒	❒	■	❒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	❒	❒	❒	■
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	❒	❒	■	❒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	❒	■	❒	❒

The visual resources analysis in this section is based on a reconnaissance of the project site and surrounding roadways and neighborhoods, and plans and architectural elevations of the proposed project dated August 3, 2009 as prepared by Ellerbe Becket for Wareham Development. The project site plan and representative elevations are included in this IS/MND as Figures 3 through 6. In addition, computer-generated visual simulations that illustrate the mass and scale of the buildings have been prepared to portray representative "before" and "after" visual conditions at the project site. The locations of the viewpoints for the visual simulations are shown in Figure 7 and the visual simulations are shown in Figures 8 through 13.

a) Have a substantial adverse effect on a scenic vista? ***(Less-than-Significant Impact)***

While views of the East Bay Hills, natural areas along the shoreline of San Francisco Bay, and the San Francisco city skyline and other landmarks adjacent to the Bay are generally considered scenic views, no scenic views or viewsheds in the vicinity of the project site are explicitly identified in the City of Emeryville General Plan or other local planning documents.

The project site consists of two parking lots located in an urbanized neighborhood within the flat coastal plain that extends along the eastern shore of San Francisco Bay. Because the project site does not contain significant topographical variation, views from the project site are limited by urban development in the vicinity. In particular, the seven-story EmeryStation North building on the corner of Horton Street and 59th Street constrains views to the east of the EmeryStation West building site and south of the parking structure site. The Amtrak Station to the south, the two- and three-story industrial buildings to the north, and other industrial buildings to the east constrain views in other directions from public spaces in the area. No views of San Francisco Bay are available from the site or streets immediately adjacent to the project site.

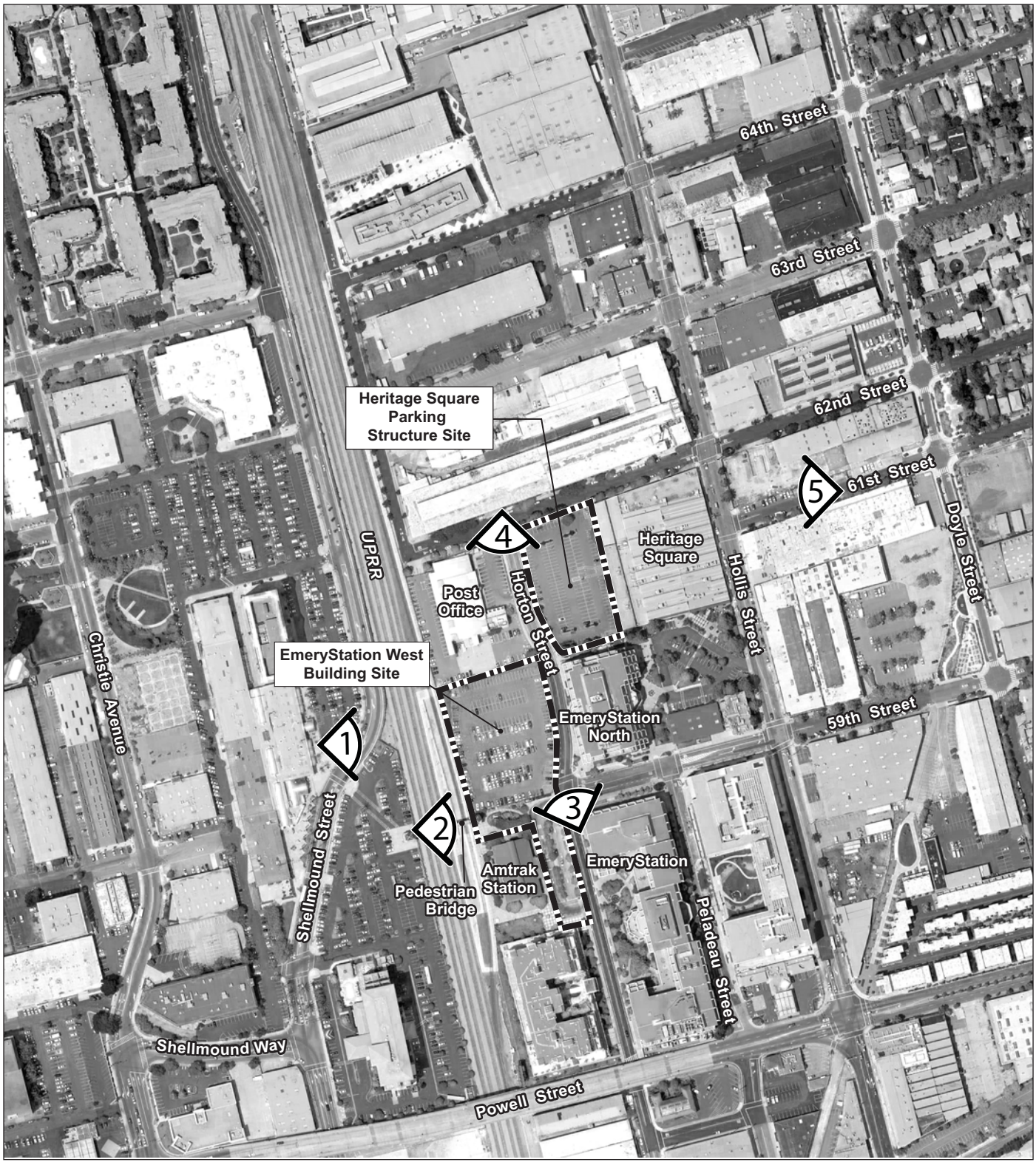

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FIGURE 7

1 VIEW EAST FROM EMERYBAY MARKETPLACE (FIG. 8)

2 VIEW EAST FROM THE RAILROAD PEDESTRIAN BRIDGE (FIG. 9)

3 VIEW NORTH FROM HORTON AND 59TH STREETS (FIGS. 10 & 11)

4 VIEW SOUTH ALONG HORTON STREET FROM 62ND STREET (FIG. 12)

5 VIEW WEST FROM 61ST STREET PARK (FIG. 13)

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EmeryStation West at the Emeryville Transit Center Project IS/MND

Viewpoints for Visual Simulations

SOURCE: GOOGLE EARTH, 2007; LSA ASSOCIATES, INC., 2009.

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Existing View

Conceptual Visual Simulation of the Proposed Project

LSA

FIGURE 8

EmeryStation West at the
Emeryville Transit Center Project IS/MND
View East from EmeryBay Marketplace

SOURCE: ANDREW McNICHOL, 2009

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Existing View

Conceptual Visual Simulation of the Proposed Project

LSA

FIGURE 9

EmeryStation West at the
Emeryville Transit Center Project IS/MND
View East from the Railroad Pedestrian Bridge

SOURCE: ANDREW McNICHOL, 2009

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Existing View

Conceptual Visual Simulation of the Proposed Project

LSA

FIGURE 10

EmeryStation West at the
Emeryville Transit Center Project IS/MND
View North from Horton and 59th Streets

SOURCE: ANDREW McNICHOL, 2009

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Existing View

Conceptual Visual Simulation of the Proposed Project

LSA

FIGURE 11

EmeryStation West at the
Emeryville Transit Center Project IS/MND
View Northwest from Horton and 59th Streets

SOURCE: ANDREW McNICHOL, 2009

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Existing View

Conceptual Visual Simulation of the Proposed Project

LSA

FIGURE 12

EmeryStation West at the
Emeryville Transit Center Project IS/MND
View South Along Horton Street from 62nd Street

SOURCE: ANDREW McNICHOL, 2009

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Existing View

Conceptual Visual Simulation of the Proposed Project

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FIGURE 13

EmeryStation West at the
Emeryville Transit Center Project IS/MND
View West from 61st Street Park

SOURCE: ANDREW McNICHOL, 2009

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The proposed nine-story EmeryStation West building and seven-level Heritage Square parking structure would be similar in height to the EmeryStation North and EmeryStation buildings to the south and southeast (see Figures 2 and 3), but taller than the industrial buildings to the north and east, as well as the Amtrak Station to the south. Although the proposed buildings would be taller than most surrounding development, they would not substantially block views of the East Bay Hills from Shellmound Street (to the west of the train tracks), Horton Street (in regards to the Heritage Square parking structure), or the pedestrian bridge crossing the train tracks; these limited scenic hillside views are already obscured by surrounding development – particularly the EmeryStation and EmeryStation North buildings – and the proposed project would not result in a significant impact to these views. Therefore, the proposed project would not result in an adverse effect to a scenic vista.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway? ***(No Impact)***

The State scenic highways in Alameda County are: 1) Interstate 580 (from the San Joaquin County line to State Route 205, and from San Leandro city limits to State Route 24 in Oakland); and 2) Interstate 680 (from Mission Boulevard in Fremont to Bernal Avenue near Pleasanton, and from Bernal Avenue near Pleasanton to the Contra Costa County line).[3]

The project site is approximately 1.8 miles northwest of the western terminus of the Interstate 580 segment of the State scenic highway, at State Route 24. The project site is not visible from the intersection of I-580 and State Route 24 and the proposed nine- and seven-story structures would not likely be visible from this state scenic highway. To the extent that the buildings might be visible from this highway, they would not be clearly distinguishable from the surrounding development, particularly EmeryStation and EmeryStation North buildings, which are of comparable height and bulk to the proposed project. In addition, implementation of the project would not result in the removal of trees, rock formations, significant historic buildings, or other scenic resources in the project site. Therefore, the proposed project would not damage scenic resources within the viewshed of a designated State scenic highway.

c) Substantially degrade the existing visual character or quality of the site and its surroundings? ***(Less-than-Significant Impact)***

The existing surface parking lots on both portions of the project site do not contribute to the scenic character of surrounding development. During remediation and construction the site would be occupied by vehicles and equipment, stockpiles of excavated soil for disposal and clean soil for backfilling, building materials, and other items typically present at remediation and construction sites. Temporary fencing would be placed around the site that would visually screen the area during remediation and construction. During remediation painted plywood perimeter fencing would be installed at the northern, southern, and western property lines of the EmeryStation West building site.[4] On the eastern side of the site, the fencing would be placed at the perimeter of the work zone. The work zone may be at the property line or it may include one lane of Horton Street. Because

[3] California Department of Transportation, 2007. California Scenic Highway Program. Website: www.dot.ca.gov/hq/LandArch/scenic/schwy1.html. May 18.

[4] WSP Environment & Energy, 2009. *Traffic and Transportation Control Plan* Emeryville Mound Parcel, June

remediation and construction are temporary activities and the site would be screened, the visual impact during remediation and construction would be less than significant.

The proposed project would replace these surface parking lots with buildings that would be similar in style, design, and scale to newer development in the vicinity of the project site, particularly the EmeryStation and EmeryStation North buildings to the south of the site. The proposed buildings would achieve more visual cohesion with the surrounding development than the existing surface parking lots, and would not substantially degrade the visual character of the neighborhood (note that design aspects of the project would be considered during City's design review process). The following discussion summarizes: 1) the existing visual character of the project site; 2) applicable City of Emeryville policies that relate to visual character, and the consistency of the project with these policies; and 3) the effect of the project on visual character.

Existing Visual Character. The neighborhood in the vicinity of the project site is characterized by one- to seven-story structures, which range in age from the newly constructed to many that are over 50 years old. The seven-story (including penthouse level) EmeryStation North development is located directly east of the EmeryStation West site and directly south of the Heritage Square parking structure site. Development further to the south, including the EmeryStation development, is of a similar scale to the EmeryStation North building. Development to the north of the project site (and to the east of the EmeryStation North building) is characterized by a mix of industrial and commercial buildings, which are primarily one, two, and three stories tall. The project site's existing surface parking lots are paved and contain minimal landscaping; they do not contain scenic resources, nor do they offer visual interest to pedestrians.

Effects on Visual Character. The proposed project would develop one site with a nine-story building clad primarily in glass and metal on its upper floors and masonry on its two-story podium level, and would develop the other with a seven-story parking structure clad in masonry similar to the EmeryStation North building located adjacent to both portions of the project site. Street trees and other landscaping would be added along Horton Street, and the transit plaza – which would incorporate a translucent covered walkway that would "flow" out horizontally from the south façade of the EmeryStation West building – would increase pedestrian and visual connectivity with the Amtrak Station to the south.

In addition, both proposed buildings would incorporate design features that would limit differences in scale with surrounding development, primarily to the north and east. The upper floors of the parking structure would be stepped back on the north and south ends where they would face adjacent buildings, and would consist of screens or trellises upon which vegetation would be grown. The tower component of the EmeryStation West building, which would be taller than surrounding buildings – though comparable in bulk to the adjacent EmeryStation North and EmeryStation buildings – would be stepped back from the two-story podium parking level.

Overall, the proposed project would enhance the local visual environment (both within and in the vicinity of the project site) in the following ways:

- The project would introduce new buildings comparable in architectural style to surrounding development to a site that does not currently contribute to the scenic value of the area;

Table 1: Project Consistency with Applicable Visual Resources Policies

General Plan Policy/Objective	Consistent with Project?
Emeryville General Plan – Urban Design Element	
UD-P-11: A pedestrian and bicycle-friendly mixed use district will be developed in North Hollis, consistent with the policies and guidelines defined in the North Hollis Area Urban Design Program.	Yes. The proposed project would increase pedestrian and bicycle connectivity in the vicinity of the site, particularly in connection with the Amtrak Station. In addition, the proposed buildings would enhance the local pedestrian environment through landscaping and other architectural design measures, particularly the transit plaza on the south side of the EmeryStation West site (please note that design aspects of the project would be considered during City's design review process). The proposed project would be consistent with the North Hollis Area Urban Design Program.
UD-P-32: Bulky and monolithic buildings shall be prevented through: • Vertical articulation, such as step backs at higher floors, and less floor area as heights increase to reduce the apparent bulk of buildings. • Horizontal articulation, such as varied setbacks, recessions/projections, change in materials, and building transparency, especially in Pedestrian Priority Zones.	Yes. As previously described, the upper floors of both proposed structures would be set back in order to reflect the scale of surrounding development. The EmeryStation West building, which is located within a Pedestrian Priority Zone, would improve the pedestrian environment through the introduction of the transit plaza, in addition to other design and landscaping elements.

Source: LSA Associates, 2009.

- The project would increase pedestrian activity in the area, particularly through the transit plaza, which would create a logical connection to the Amtrak Station; and
- The proposed buildings would be similar in scale to other new development in the vicinity of the Amtrak Station.

Applicable Policies. Table 1 lists objectives and policies from the City of Emeryville General Plan that are applicable to visual resources in and around the project site, and the consistency of the project with these policies.

The proposed building would improve the character and vitality of the area through the construction of a laboratory/office building and a parking structure on existing surface parking lots with little visual appeal. The project would not result in a significant impact to the visual quality of the project site and its surroundings. Nevertheless, the design components of the project (including references to surrounding industrial-style architecture) would be considered during the design review process.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? ***(Potentially Significant Unless Mitigation Incorporated)***

The proposed EmeryStation West building would be clad primarily in glass and metal on its upper floors and masonry on the two-story podium level, while the Heritage Square parking structure would be clad in masonry similar to the adjacent EmeryStation North building. Proposed building materials would not be highly reflective or produce substantial glare. The project applicant has not yet submitted site lighting plans. However, proposed lighting on the site is anticipated to be similar to that used in other redevelopment projects in Emeryville. This new lighting could cumulatively add to existing

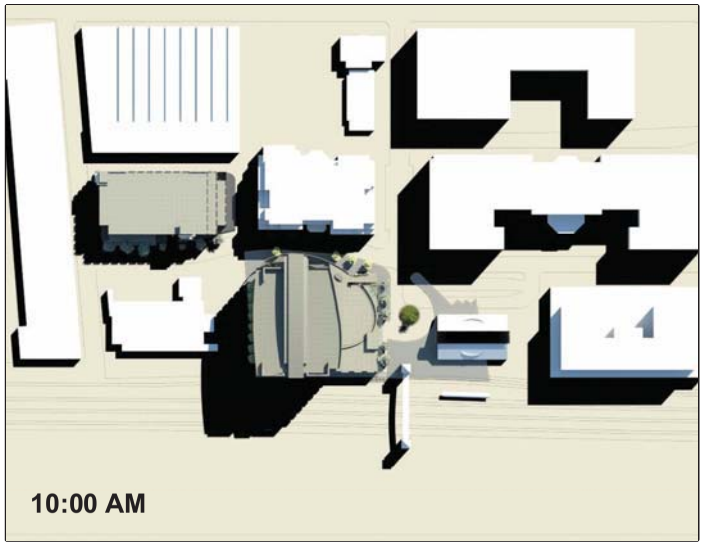
lighting associated with urban uses in the vicinity of the site and could adversely affect nighttime views. Implementation of the following mitigation measure would reduce the impacts of the project on light and glare to a less-than-significant level:

> Mitigation Measure AES-1: The project applicant shall prepare project lighting plans and submit them to the City of Emeryville for review. City staff shall review and approve these plans to ensure that proposed lighting would be low-intensity, downward-directed, and located only in places where it is necessary.

Shadows. A study was performed to determine where shadows would fall at various times of the day during the spring, summer, fall and winter. Shadows that would be cast by buildings that conform to the City's design guidelines are considered less than significant. Shadows cast by buildings that don't conform to the design guidelines may be considered a significant impact if they substantially impair the beneficial use of any public or quasi-public park lawn, garden, or open space or if they substantially impair the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors. The results of the study are shown in Figures 14 through 17.

The EmeryStation West building and the Heritage Square parking structure would comply with the North Hollis Area Urban Design Program guidelines for setbacks. The EmeryStation West building would exceed the minimum setback requirements on its southeast corner where a plaza would be created to provide continuity with the plaza in front of the Amtrak Station. The public spaces nearest to the EmeryStation West building include: the Amtrak Station entry plaza located to the south and the EmeryBay Marketplace located 300 feet west of the project site across the railroad tracks. Because the EmeryStation West building and the Heritage Square parking structure are located north of the Amtrak Station entry, shadows from the buildings would have minimal effects on this area; shadows would be cast in this area by the podium level of the EmeryStation West building only during late summer evenings. Because of its height the tower portion of the EmeryStation West building would cast a shadow on the EmeryBay Marketplace pedestrian plaza in the very early morning hours around the time of spring and fall equinoxes. The shadows would retreat from this area quickly and the plaza would not be affected by shadows for most of the morning.

Based on recent aerial views of the site and a visual reconnaissance of the area, the buildings surrounding the project site do not use passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors. If these were installed in the future, the buildings to the south such as the Amtrak Station and EmeryStation building would not be affected by shadows cast by the building. The building with the greatest potential to be affected by shadows would be the post office located north of the project site. However, because the EmeryStation West building and the post office building are set back from the property line – a total of about 100 feet would separate the two structures – shadows from the proposed building would at most cover a small portion of the southern edge of the roof of the post office during March and September (see Figures 14 and 16), but none of its roof in June (see Figure 15). In December, when shadows are longest, the shadow from the EmeryStation West building would cover approximately half of the roof of the post office at 10 a.m. and 2 p.m., and most of its roof at 12 p.m. (see Figure 17); however, the presence of a shadow on this roof would not be considered a significant impact. The results of the shadow simulations show that any shadow effects would be less than significant.



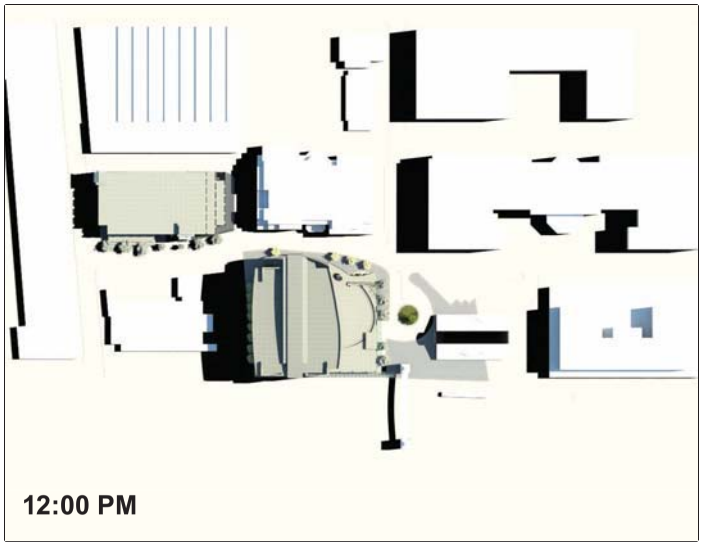


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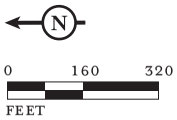
FIGURE 14



EmeryStation West at the
Emeryville Transit Center Project IS/MND
Shadow Study: March 20

SOURCE: ANDREW MCNICHOL; LSA ASSOCIATES, INC., 2009.
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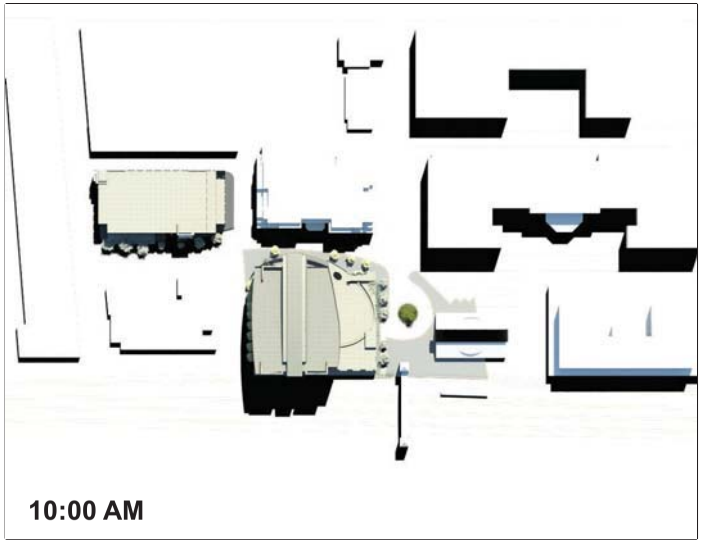

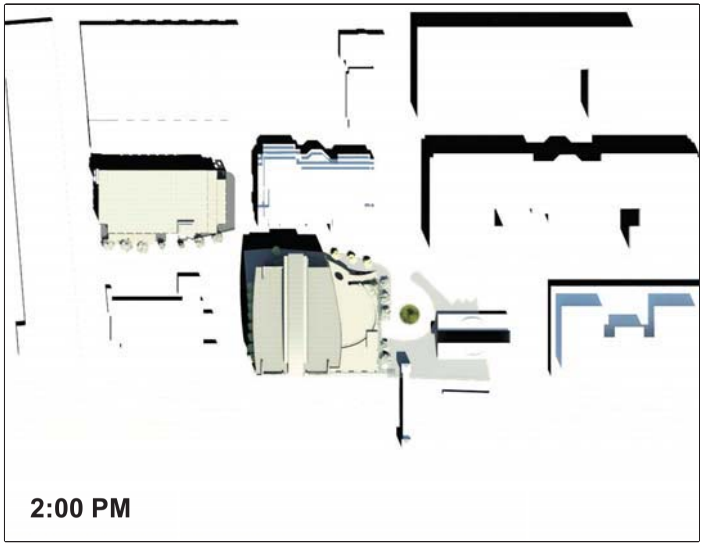

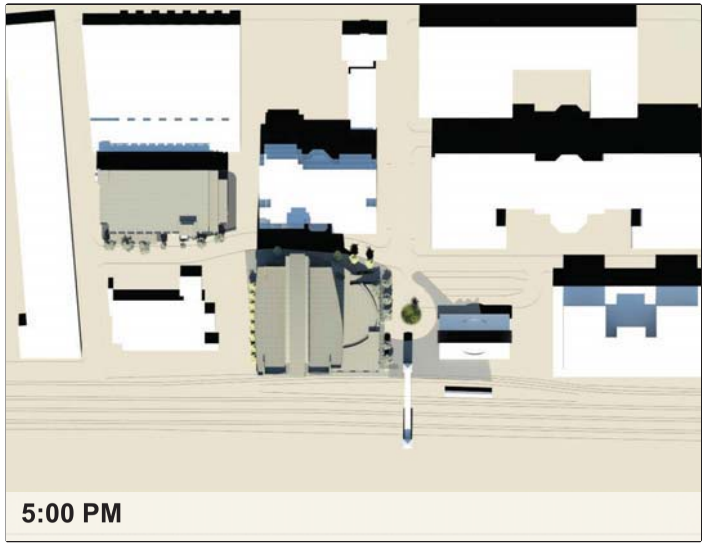

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FIGURE 15

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EmeryStation West at the
Emeryville Transit Center Project IS/MND
Shadow Study: June 21

SOURCE: ANDREW MCNICHOL; LSA ASSOCIATES, INC., 2009.

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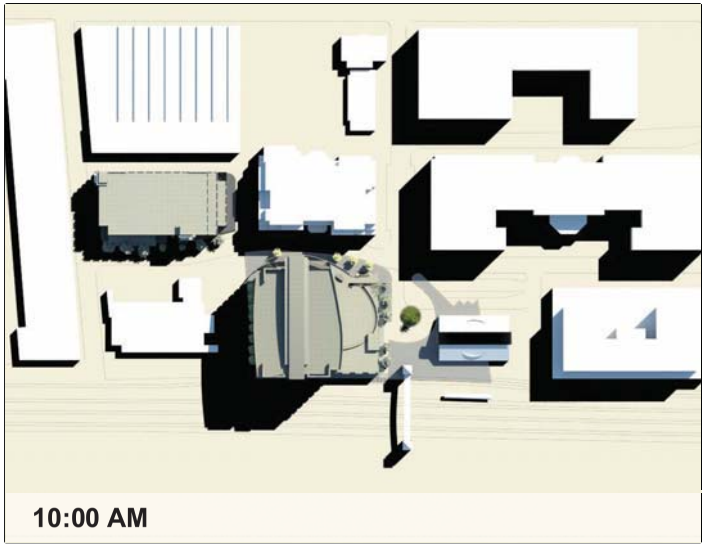

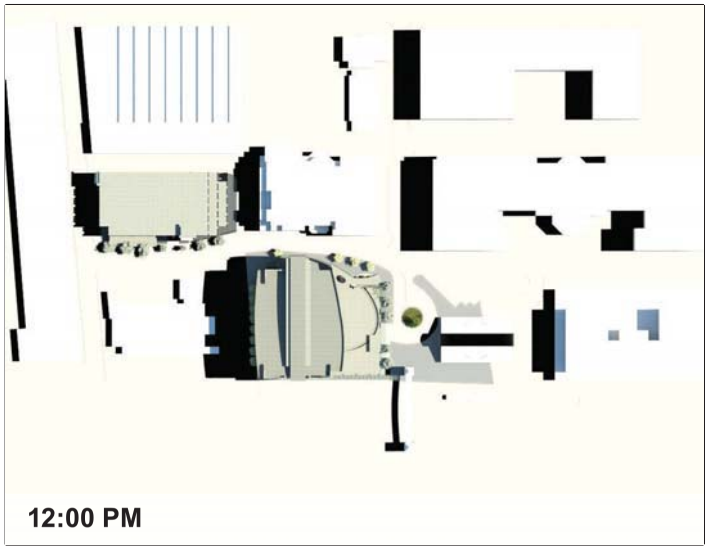

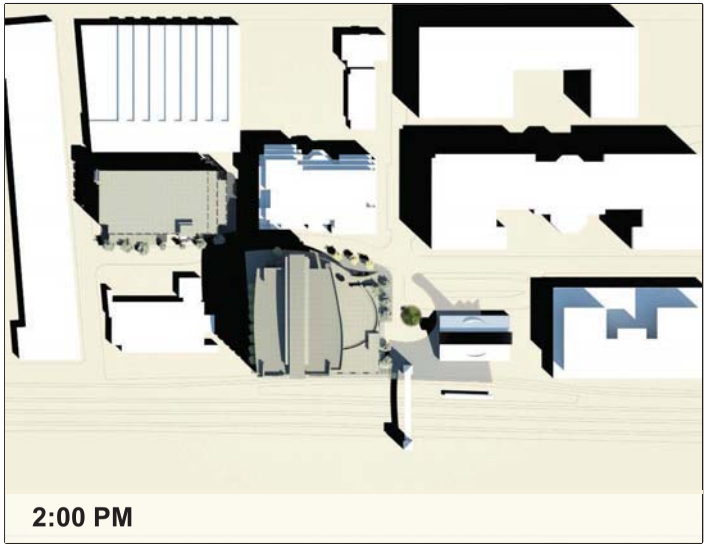

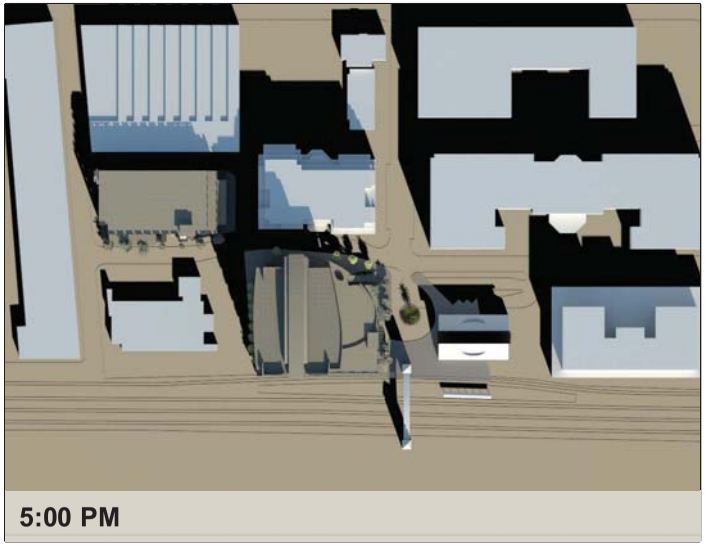

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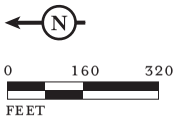
FIGURE 16



EmeryStation West at the
Emeryville Transit Center Project IS/MND
Shadow Study: September 22

SOURCE: ANDREW MCNICHOL; LSA ASSOCIATES, INC., 2009.
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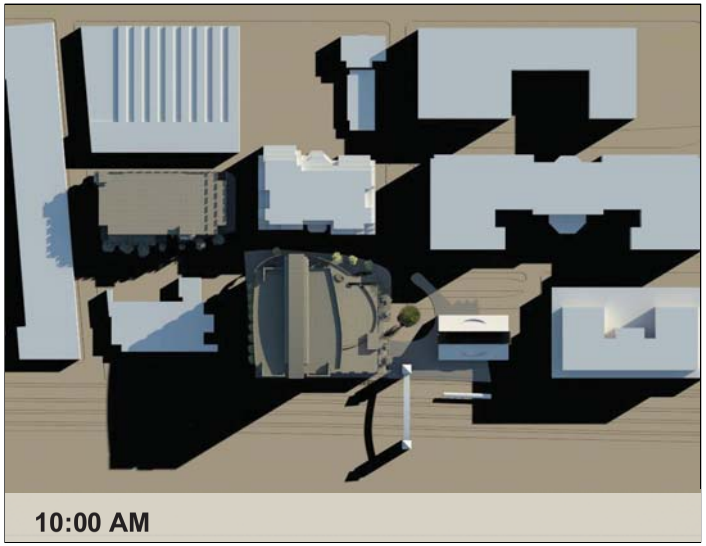

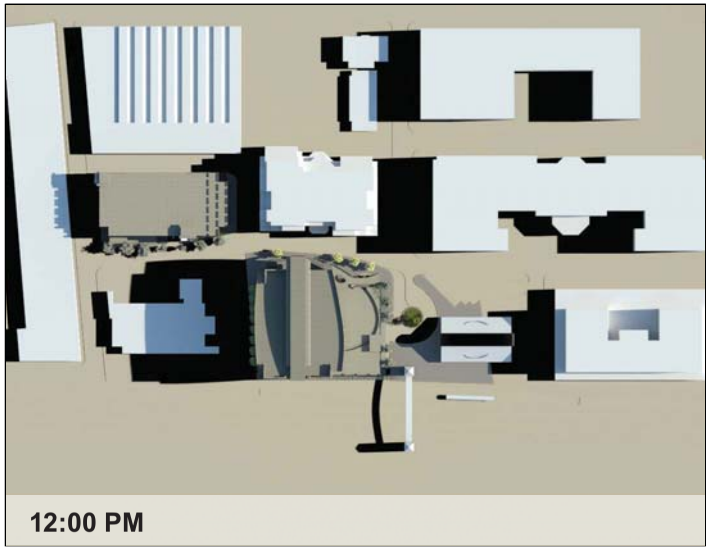

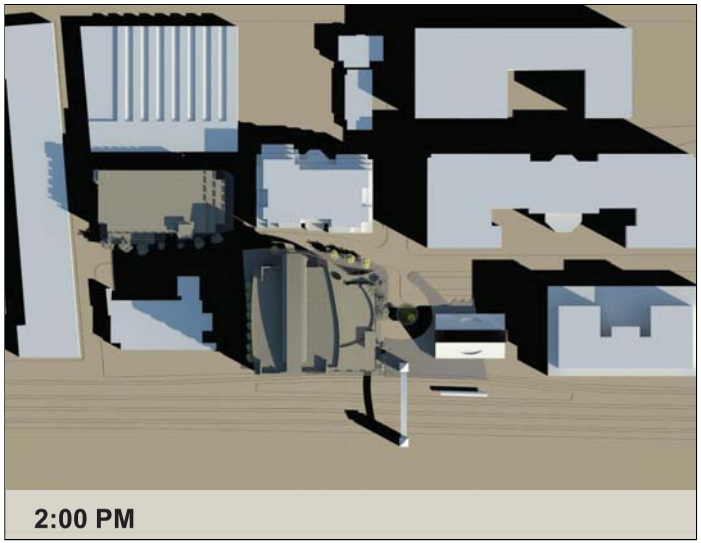

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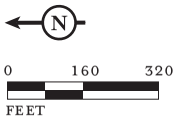
FIGURE 17



EmeryStation West at the
Emeryville Transit Center Project IS/MND
Shadow Study: December 21

SOURCE: ANDREW MCNICHOL; LSA ASSOCIATES, INC., 2009.
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	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURAL RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. 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 a non-agricultural use?	❒	❒	❒	■
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	❒	❒	❒	■
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	❒	❒	❒	■

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 a non-agricultural use? ***(No Impact)***

The project site is located in an urbanized neighborhood in Emeryville and no agricultural resources are located on or near the project site. The site is classified as "Urban and Built-Up Land" by the State Department of Conservation.[5] Therefore, implementation of the proposed project would not convert agricultural land to non-agricultural uses.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? ***(No Impact)***

The project site is not zoned for agricultural uses and is not operated under a Williamson Act contract.

c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use? ***(No Impact)***

Implementation of the proposed project would result in the redevelopment of an urban infill site and would not result in the extension of infrastructure into an undeveloped area, the development of urban

[5] California Department of Conservation, 2008. Division of Land Resource Protection, Farmland Mapping and Monitoring Program. Website: www.consrv.ca.gov/dlrp/fmmp/index.htm. March.

uses on a greenfield site, or other physical changes that would result in the conversion of farmland to non-agricultural uses.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	❒	❒	■	❒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	❒	■	❒	❒
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)?	❒	❒	■	❒
d) Expose sensitive receptors to substantial pollutant concentrations?	❒	■	❒	❒
e) Create objectionable odors affecting a substantial number of people?	❒	❒	■	❒
f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	❒	❒	■	❒
g) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	❒	❒	■	❒

Implementation of the proposed project could affect air quality in the following ways: 1) release of dust and vehicle and equipment exhaust during site remediation and project construction; and 2) release of exhaust from vehicles driven by people traveling to and from the new buildings and facilities provided by the project. This section discusses the project's potential air quality effects and its consistency with the most recent Clean Air Plan for the San Francisco Bay Area. It also discusses the project's potential greenhouse gas emissions and the project's consistency with plans, policies and regulations adopted for the purpose of reducing the emissions of greenhouse gases. Air quality effects associated with the potential release of contaminants in soil and groundwater during remediation are discussed Section VII, Hazards.

a) Conflict with or obstruct implementation of the applicable air quality plan? ***(Less-than-Significant Impact)***

The main purpose of an air quality plan is to bring an area into compliance with the requirements of federal and State air quality standards. Such plans describe air pollution control strategies to be implemented by a city, county or region. The City of Emeryville and the project site are located in the San Francisco Bay Area air basin and are within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The latest air quality plan, the *Bay Area 2005 Ozone Strategy*, was developed in order to bring the region into compliance with State and federal air quality standards. The Emeryville General Plan is consistent with the ozone strategy. All parcels within the proposed project site are designated as Mixed Use without Residential and Mixed Use with Residential in the City's General Plan. The proposed project is consistent with the intent of the General Plan and therefore the project would not conflict with the *Bay Area 2005 Ozone Strategy*.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? ***(Potentially Significant Unless Mitigation Incorporated)***

Pollutant monitoring results for the years 2006 to 2008 at the nearest ambient air quality monitoring stations indicate that air quality in the region has generally been good. There was one recorded violation of the State 1-hour O_3 standard in the year 2008 at the San Leandro (County Hospital) monitoring station. For each of the years 2006 and 2007, there was one violation of the State PM_{10} standard recorded at the Fremont – Chapel Way monitoring station; however, no violation of the federal PM_{10} standard was recorded during the 3-year period. No exceedances of the federal or State CO, $PM_{2.5}$, NO_2, or SO_2 standards were recorded in this area during the 3-year period.

Air pollutant emissions associated with the proposed project would occur over the short term in association with construction activities such as site remediation, demolition, grading, and vehicle/equipment use. Long-term emissions would result from vehicle trips to and from the project site associated with employee trips to work. The discussion below describes potential air quality violations that could occur as a result of construction equipment exhaust emissions, fugitive dust, long-term vehicle emissions, and local carbon monoxide hot spots.

As part of the remediation process, site and community health and safety plans as described in the draft RDIP that would be implemented during the remediation phase of the project, are required to be prepared in accordance with federal Occupational Safety and Health Administration (OSHA) and California Division of Occupational Safety and Health (DOSH) regulations. The health and safety plans include a Health and Safety Plan for site workers and a Dust and Odor Control Plan and Perimeter Air Monitoring Plan to ensure that off-site receptors are not exposed to site-related contaminants. These documents will be submitted to the DTSC for review and approval before remediation activities begin at the site. Implementation of the health and safety plans would ensure the safety of workers and nearby residents. Additional discussion of the remediation phase of the project is provided in Section VII, Hazards.

Equipment Exhaust and Other Emissions during Construction. Remediation and construction period emissions from equipment and other sources would occur in the form of organic gas emissions. Solvents in adhesives, non-waterbased paints, thinners, some insulating materials and caulking materials would evaporate into the atmosphere and would participate in the photochemical reaction

that creates urban ozone. Asphalt used in paving is also a source of organic gases for a short time after its application.

During remediation and construction, various diesel-powered vehicles and equipment would be in use. In 1998, the California Air Resources Board (ARB) identified particulate matter from diesel-fueled engines as a toxic air contaminant (TAC). The ARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.[6] High volume freeways, stationary diesel engines and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and truck stops) were identified as having the highest associated risk.

Health risks from TACs are a function of both concentration and duration of exposure. Unlike the above types of sources, construction diesel emissions are temporary, affecting an area for a period of days or perhaps weeks. Additionally, construction-related sources are mobile and transient in nature, and the emissions occur within the project site. Because of its short duration, health risks from construction emissions of diesel particulate would be a less-than-significant impact.

Fugitive Dust. Dust would affect local air quality at various times during remediation and construction of the proposed project. The windy climate of the area creates a high potential for dust generation when and if underlying soils are exposed. Clearing, grading and earthmoving activities have a high potential to generate dust whenever soil moisture is low and particularly when the wind is blowing.

As part of the proposed project, the applicant has prepared a document entitled Dust and Odor Control Plan for the remediation phase of the project.[7] The plan, which would be implemented as part of the project includes on-site dust controls during the soil excavation process. Controls include water sprays to active areas, limits to vehicle speed, vehicle loading recommendations, such as minimal practicable drop heights for transferring soil from excavation equipment to trucks and the staging of trucks taking material off site for disposal, and decontamination of equipment procedures. Implementation of the Dust and Odor Control Plan would reduce fugitive dust associated with the remediation of the site to a less-than-significant level.

Construction activities outside of the remediation phase, for example to construct the Heritage Square parking structure, would result in increased dustfall and locally elevated levels of particulates downwind of construction activity. Construction dust has the potential to create a nuisance at nearby properties. In addition to nuisance effects, excess dustfall can increase maintenance and cleaning requirements and could adversely affect sensitive electronic devices.

Emissions of particulate matter or visible emissions are regulated by the BAAQMD under Regulation 6 “Particulate Matter and Visible Emissions.” Specifically, visible particulate emissions (i.e., dust) are prohibited whenever they are generated in sufficient quantity to fall on off-site properties and cause annoyance to the owner(s) of such property. Demolition activities on the site would be subject to Regulation 6.

[6] California Air Resources Board (CARB), 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October.

[7] WSP Environment & Energy, 2009. *Dust and Odor Control Plan* Emeryville Mound Parcel, June.

Implementation of the following mitigation measure would reduce construction related impacts to a less-than-significant level. This measure applies to both the remediation and construction phases, although many of the dust control measures are already included as part of the remediation phase.

> Mitigation Measure AIR-1: Consistent with the guidance from the BAAQMD, the project applicant shall include dust control measures in construction specifications for the project. The City shall review the final construction specifications to verify that the requirements have been included prior to issuing a grading or building permit for the project. The City shall verify via field inspection at least twice during construction that the measures are being implemented. The following measures are required:
>
> - Water all active construction areas at least twice daily.
> - Cover all trucks hauling soil, sand, and other loose materials *or* require all trucks to maintain at least two feet of freeboard.
> - Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
> - Sweep daily (preferably with water sweepers) all paved access roads, parking areas, and staging areas at construction sites.
> - Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets.

Long-Term Emissions. Long-term air emission impacts would be those associated with changes in permanent usage of the project site. Mobile source emissions would result from vehicle trips associated with the proposed project. The Urban Emissions Model (URBEMIS 2007) computer program, which is the most current air quality model available in California for estimating emissions associated with land use development projects, was used to calculate long-term mobile source emissions.

The BAAQMD has established a significance threshold for ozone precursors reactive organic gases (ROG) and nitrous oxide (NO_x) and particulate matter of 10 microns or less (PM_{10}) at 80 lbs/day. A significance threshold for $PM_{2.5}$ has not been established; $PM_{2.5}$ emissions are provided for informational purposes only. The emissions from the proposed project are shown in Table 2.

Table 2: Project Emissions in Pounds Per Day

	Reactive Organic Gases	Nitrogen Oxides	PM_{10}	$PM_{2.5}$
Regional Emissions	20.5	32.4	35.0	6.7
BAAQMD Significance Threshold	**80.0**	**80.0**	**80.0**	**NA**
Exceed?	**No**	**No**	**No**	**NA**

Source: LSA Associates, Inc., 2009.

The Urban Emissions Model reports are provided in Appendix B. As shown in Table 2, the long-term vehicular emissions generated by the proposed project are not anticipated to exceed the BAAQMD's thresholds, and therefore the project would have a less-than-significant impact on local and regional air quality.

The proposed project could also result in the construction of stationary air pollutant sources that are not accurately accounted for in the URBEMIS2007 modeling. Such sources could include boilers used for heating and cooling, standby emergency generators, and laboratory facilities. Specific information regarding these sources is not available at this time. Those sources that emit toxic or hazardous air

pollutants, such as diesel powered emergency generators, would be required to obtain all necessary permits from the BAAQMD to ensure that such equipment would not have a significant air quality impact. Sources that pose a significant impact to other land uses would not be permitted. Sources of air pollutant emissions complying with all applicable BAAQMD regulations would not be considered to have a significant air quality impact. Stationary sources (including laboratories) that are exempt from BAAQMD permit requirements, because they fall below emission thresholds for permitting, would not be considered to have a significant air quality impact.

Local CO Hot Spots. The primary mobile source pollutant of local concern is carbon monoxide (CO), which is a direct function of vehicle idling time caused by traffic flow conditions. While CO transport is limited, it does disperse from the source under normal meteorological conditions. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthy levels affecting local sensitive receptors (e.g., residents, school children, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. Areas of vehicle congestion create pockets of high CO concentration called "hot spots." These pockets have the potential to exceed the State 1-hour standard of 20 parts per million (ppm) of CO and/or the 8-hour standard of 9.0 ppm. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels.

The impact of the proposed project on local CO levels was assessed with the California Air Resources Board-approved CALINE4 air quality model, which allows microscale CO concentrations to be estimated along roadway corridors or near intersections. This model is designed to identify localized concentrations of CO. The data in Table 3 shows the projected CO levels with and without the proposed project for the years 2009 and 2030, respectively. Options 1 and 2 represent the two traffic circulation options for entering and exiting the Heritage Square parking structure as presented in Section XV, Transportation/Traffic. Results of the analysis indicate that CO levels with or without the project at nearby intersections would be well below State and federal standards.

Therefore, the project would not violate air quality standards or contribute substantially to an existing or projected air quality violation.

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)? ***(Less-than-Significant Impact)***

See III(b) above. Based on long-term emission estimates, the proposed project would not result in substantial increases to the levels of any criteria pollutants. Therefore, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant.

Table 3: CO Hot Spot Analysis

Intersection	Existing		Existing Plus Project Access Option 1		Existing Plus Project Access Option 2		Cumulative (2030)		Cumulative Plus Project Access Option 1		Cumulative Plus Project Access Option 2	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
Hollis Street and Powell Street	3.2	2.6	3.3	2.7	3.3	2.7	3.6	3.0	3.7	3.1	3.7	3.1
Doyle Street and Powell Street	2.9	2.3	3.0	2.4	3.0	2.4	3.2	2.6	3.2	2.6	3.2	2.6
Hollis Street and Stanford Avenue	2.8	2.2	2.8	2.2	2.8	2.2	3.1	2.5	3.1	2.5	3.1	2.5
Hollis Street and 59th Street	2.8	2.2	2.8	2.2	2.9	2.3	3.1	2.5	3.2	2.6	3.2	2.6
San Pablo Avenue and Stanford Avenue	3.9	3.3	3.9	3.3	3.9	3.3	5.1	4.5	5.1	4.5	5.1	4.5
Hollis Street and 40th Street	3.2	2.6	3.2	2.6	3.2	2.6	3.7	3.1	3.7	3.1	3.7	3.1
Seventh Street and Ashby Avenue	3.6	3.0	3.6	3.0	3.6	3.0	4.1	3.5	4.1	3.5	4.1	3.5
Christie Avenue and Powell Street	4.2	3.6	4.3	3.7	4.3	3.7	4.9	4.3	5.1	4.5	5.1	4.5
I-80 Eastbound Ramps and Powell Street	3.7	3.1	3.8	3.2	3.8	3.2	4.3	3.7	4.4	3.8	4.4	3.8
I-80 Frontage Road and Powell Street	3.8	3.2	3.9	3.3	3.9	3.3	4.4	3.8	4.4	3.8	4.4	3.8
I-80 Frontage Road and I-80 Westbound Ramps	3.5	2.9	3.6	3.0	3.6	3.0	4.5	3.9	4.6	4.0	4.6	4.0
Horton Street and 59th Street	2.4	1.8	2.4	1.8	2.4	1.8	2.5	1.9	2.6	2.0	2.5	1.9
59th Street and Peladeau Street	2.3	1.7	2.4	1.8	2.4	1.8	2.4	1.8	2.5	1.9	2.5	1.9
Horton Street and 62nd Street	2.2	1.6	2.3	1.7	2.2	1.6	2.3	1.7	2.3	1.7	2.3	1.7
62nd Street and Hollis Street	2.3	1.7	2.5	1.9	2.4	1.8	2.4	1.8	2.5	1.9	2.6	2.0
Horton Street and Stanford Avenue	2.3	1.7	2.3	1.7	2.3	1.7	2.4	1.8	2.4	1.8	2.4	1.8
59th Street and Doyle Street	2.2	1.6	2.2	1.6	2.2	1.6	2.2	1.6	2.2	1.6	2.2	1.6
59th Street and San Pablo Avenue	3.2	2.6	3.4	2.8	3.2	2.6	4.3	3.7	4.3	3.7	4.3	3.7

Source: LSA Associates, Inc. August 2009.

d) Expose sensitive receptors to substantial pollutant concentrations? ***(Potentially Significant Unless Mitigation Incorporated)***

Sensitive receptors located in the vicinity of the project site include residential uses located south of the Amtrak Station and several parks and schools located within approximately ¼ mile of the site, including Christie Park, Stanford Park, 61st Street Park, Emeryville Child Development Center, and Pacific Rim International School. Residents and employees working in the area could potentially be

affected by contaminants from the remediation site. However, implementation of the Dust and Odor Control Plan, the Perimeter Air Monitoring Plan as noted in Section III(b), and other site control measures required in the Health and Safety Plan, would prevent contamination at the project site from migrating off-site and exposing nearby residents and workers to site-related contaminants during remedial activities.

Construction activities outside of the remediation phase, such as construction of the Heritage Square parking structure, may expose surrounding, sensitive land uses to airborne particulates and fugitive dust, as well as a small quantity of pollutants associated with the use of construction equipment (e.g., diesel-fueled vehicles and equipment). Sensitive receptors are facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Since there is residential development in the project vicinity, sensitive receptors could be exposed to increased pollutant concentrations, especially during construction.

Implementation of the following two-part mitigation measure would reduce impacts to a less-than-significant level. This measure applies to both the remediation and construction phases.

> Mitigation Measure AIR-2a: Implement Mitigation Measure AIR-1.
>
> Mitigation Measure AIR-2b: Consistent with guidance from the BAAQMD, the project applicant shall require contractors to include emissions control measures in construction specifications for the project. The City shall review the final construction specifications to verify that the requirements have been included prior to issuing a grading or building permit for the project. The City shall verify via field inspection at least twice during construction that the measures are being implemented. The following actions are required:
>
> - Idling time of diesel powered construction equipment shall be limited to 5 minutes;
> - Alternative powered construction equipment (i.e., CNG, biodiesel, electric) shall be utilized when feasible;
> - Add-on control devices shall be used such as diesel oxidation catalysts or particulate filters;
> - Project construction (demolition, site preparation, and building erection) shall be phased (not occur simultaneously); and operating hours of heavy duty equipment shall be minimized.

Air pollution associated with operation of the proposed project would be primarily vehicle related, and would not necessarily be concentrated in the vicinity of the project site. Based on the relatively small amount of traffic the project would generate, long-term emissions would be less than significant. Therefore, implementation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations.

e) *Create objectionable odors affecting a substantial number of people?* ***(Less-than-Significant Impact)***

The project's Dust and Odor Control Plan includes control measures to reduce odors that may occur during the remediation excavation activities. The project would be subject to the requirements of the BAAQMD Regulation 8 Rule 40 which requires advance notification to BAAQMD regarding the soil

excavation activities. Work practices called for in the Dust and Odor Control Plan include limiting emissions of VOCs by promptly and thoroughly covering inactive soil stockpiles, applying water sprays or vapor suppressants to working surfaces, applying water spray or vapor suppressants to active stockpiles and evaluating aggregate VOC emissions and covering exposed surfaces during periods of inactivity.[8]

The proposed project would not contain any major sources of odor, and with the exception of the generally inoffensive smell of the "salt air" of San Francisco Bay, would not be located in an area with existing odors. In addition, the proposed project is not located downwind from any significant odor sources (e.g., landfills, sewage treatment plants) that could affect persons within the project site. Therefore, the proposed project would not "create objectionable odors affecting a substantial number of people" and would have a less-than-significant impact in terms of odors.

f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? ***(Less-than-Significant Impact))***

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other significant changes in climate (such as precipitation or wind) that last for an extended period of time. The term "global climate change" is often used interchangeably with the term "global warming," but "global climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures. Global surface temperatures have risen by 0.74°C ± 0.18°C over the last 100 years (1906 to 2005). The rate of warming over the last 50 years is almost double that over the last 100 years.[9] The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other greenhouse gases (GHGs) are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect.[10]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The following are the gases that are widely seen as the principal contributors to human-induced global climate change:[11]

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)

[8] WSP Environment & Energy, 2009. *Dust and Odor Control Plan* Emeryville Mound Parcel., June.

[9] Intergovernmental Panel on Climate Change (IPCC), 2007. Climate Change 2007*: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC*.

[10] The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduce the amount of heat that escapes, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the naturally occurring greenhouse effect is necessary to keep our planet at a comfortable temperature.

[11] The greenhouse gases listed are consistent with the definition in Assembly Bill (AB) 32 (Government Code 38505).

- Perfluorocarbons (PFCs)
- Sulfur Hexafluoride (SF_6)

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

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

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to carbon dioxide, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2eq). For example, sulfur hexafluoride is 22,800 times more potent at contributing to global warming than carbon dioxide.

Greenhouse gas emissions estimates for the proposed project are discussed below. Estimation of GHG emissions in the future does not account for all changes in technology that may reduce such emissions; therefore, the estimates are based on past performance and represent a scenario that is believed to be worse than that which is likely to be encountered (after energy-efficient technologies have been implemented). GHG emissions associated with implementation of the proposed project would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. There would also be long-term regional emissions associated with vehicular traffic, energy consumption, water conveyance and treatment (reflected in electricity usage and associated emissions) and waste generation.

The proposed project would develop a nine-story building for laboratory and office space as well as parking and a six-story building for parking. Additional development would include retail shops on the ground level within the project buildings and reconfiguration of the bus parking and passenger loading/unloading area at the Amtrak Station. Results from URBEMIS2007 indicate that the total project construction (including remediation) emissions would be approximately 3,424 metric tons of CO_2. To estimate future GHG emissions for the project, GHG emissions were calculated using ARB and EPA approved emission factors for the proposed project. Results indicate implementation of the proposed project would result in the generation of 4,690 metric tons per year of CO_2eq emissions, as shown in Table 4.

Table 4: Proposed Project Greenhouse Gas Emissions

	Emissions (Metric Tons Per Year)				
Emission Source	**CO_2**	**CH_4**	**N_2O**	**CO_2eq**	**Percent of Total**
Vehicles	3,100	0.200	0.330	3,200	68
Electricity Production	910	0.01	0.006	910	19
Natural Gas Combustion	300	0.0033	0.0032	300	6
Solid Waste	--	--	--	280	6
Total Annual Emissions	4,300	0.210	0.340	4,690	100

Note: Column totals may vary slightly due to independent rounding of input data.
-- Estimates not available for this pollutant and/or category.
Source: LSA Associates, Inc., August 2009.

Because no applicable numeric thresholds have yet been defined for GHGs in CEQA documentation, and because the precise link between an individual project's emissions and global climate change has not been developed, it is reasonable to conclude that an individual development project would not generate a high enough quantity of GHG emissions to affect global climate change.

The EmeryStation West at the Emeryville Transit Center project would be subject to and comply with all applicable regulatory requirements that could reduce the GHG emissions, as noted in Section III(e) below. With application of the regulatory requirements, the project would reduce GHG emissions to the extent feasible and the cumulative impact would be less than significant. In addition, as an urban in-fill project with a transit component the project would create employment close to the urban population centers of the inner San Francisco Bay. Proximity of employment and population centers has the potential to reduce the GHG emissions component derived from vehicles for any project – the major contributor to GHG emissions as noted in Table 4 – because it reduces the distance workers travel during their commutes and increases the likelihood that they will use transit or other non-automotive means of transportation (e.g., bicycling or walking). The urban in-fill character and transit component of the project would further reduce the project's contribution to GHG emissions and global climate change.

g) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? ***(Less-than-Significant Impact)***

Plans, policies and regulations applicable to the proposed project related to greenhouse gases are described in this section.

Federal Regulations. Currently there are no adopted federal regulations to address global climate change. However, authority has been granted to the EPA that may change the voluntary approach to address this issue. On April 2, 2007, the United States Supreme Court ruled that the U.S. EPA has the authority to regulate CO_2 emissions under the federal Clean Air Act (CAA).

State Regulations. In June 2005, Governor Schwarzenegger established California's GHG emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals for the State of California: GHG emissions should be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "Global Warming Solutions Act," passed by the California State legislature on August 31, 2006. This effort aims at reducing GHG emissions to 1990 levels by 2020. The ARB has established the level of GHG emissions in 1990 at 427 million metric tons (MMT) of CO_2eq. The emissions target of 427 MMT requires the reduction of 169 MMT from the State's projected business-as-usual 2020 emissions of 596 MMT. AB 32 requires ARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The Scoping Plan was approved by ARB on December 11, 2008, and includes measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures.[12] Emission reductions that are projected to result from the recommended measures in the Scoping Plan are expected to total 174 MMT of CO_2eq, which would allow California to attain the emissions goal of 427 MMT of CO_2eq by 2020. The Scoping Plan includes a range of GHG reduction actions that may include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system. The measures in the Scoping Plan will not be binding until after they are adopted through the normal rulemaking process and therefore are only recommendations at this time. The ARB rulemaking process includes preparation and release of each of the draft measures, public input through workshops and a public comment period, followed by an ARB Board hearing and rule adoption.

City of Emeryville. On May 1, 2007, the City of Emeryville adopted the goal of reducing community-wide greenhouse gas emissions by 25 percent below 2004 levels by 2020. More recently, the City Council unanimously approved and adopted the Climate Action Plan by resolution on November 18, 2008.

Project Impacts. The California Environmental Protection Agency Climate Action Team (CAT) and the ARB have developed several reports to achieve the Governor's GHG targets that rely on voluntary actions of California businesses, local government and community groups, and State incentive and regulatory programs. These include the CAT's 2006 "*Report to Governor Schwarzenegger and the Legislature*," ARB's 2007 "*Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California,*" and ARB's "*Climate Change Proposed Scoping Plan: a Framework for Change."* The reports identify strategies to reduce California's emissions to the levels proposed in Executive Order S-3-05 and AB 32. The adopted Scoping Plan includes proposed GHG reductions from direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as cap-and-trade systems.

Table 5 identifies strategies to reduce California's emissions to the levels proposed in Executive Order S-3-05 and AB 32 that are applicable to proposed project.

[12] California Air Resources Board. 2008. *Climate Change Proposed Scoping Plan: a framework for change*. October.

Table 5: Compliance with Strategies for Reducing Greenhouse Gas Emissions

Strategy	Project Compliance
Energy Efficiency Measures	
Building Energy Efficiency Standards in Place and in Progress.[13] Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings). **Energy Efficiency**.[14] Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts. Reductions could be achieved through enhancements to existing programs such as increased incentives and even more stringent building codes and appliance efficiency standards.	**Compliant.** The proposed project would construct new structures that would be built to current codes and updated Title 24 standards, ensuring efficient energy efficiency at the site.
Appliance Energy Efficiency Standards in Place and in Progress.[15] Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).	**Compliant.** Appliances within the project site would be consistent with existing energy efficiency standards.
Water Conservation and Efficiency Measures	
Water Use Efficiency.[16] Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions.	**Possibly Compliant.** Buildings would likely be designed to be water-efficient, including installation of water-efficient fixtures and appliances, including low-flow faucets, dual-flush toilets and waterless urinals.
Solid Waste Reduction Measures	
Increase Waste Diversion, Composting, and Commercial Recycling, and Move Toward Zero-Waste. Increase waste diversion from landfills beyond the 50 percent mandate to provide for additional recovery of recyclable materials. Composting and commercial recycling could have substantial GHG reduction benefits. In the long term, zero-waste policies that would require manufacturers to design products to be fully recyclable may be necessary.	**Compliant.** Data available from the California Integrated Waste Management Board (CIWMB) indicates that Emeryville has exceeded the 50 percent diversion rate since 2001.

[13] California Environmental Protection Agency. 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. March.

[14] California Air Resources Board. 2008. Climate *Change Draft Scoping Plan: a framework for change*. June.

[15] California Environmental Protection Agency. 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. March.

[16] Ibid.

Table 5 *Continued*

Strategy	Project Compliance
Transportation and Motor Vehicle Measures	
Vehicle Climate Change Standards.[17] AB 1493 (Pavley) required the State to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles and light duty trucks. Regulations were adopted by the ARB in September 2004. **Light-Duty Vehicle Efficiency Measures.** Implement additional measures that could reduce light-duty GHG emissions. For example, measures to ensure that tires are properly inflated can both reduce GHG emissions and improve fuel efficiency. **Adopt Heavy- and Medium-Duty Fuel and Engine Efficiency Measures**. Regulations to require retrofits to improve the fuel efficiency of heavy-duty trucks that could include devices that reduce aerodynamic drag and rolling resistance. This measure could also include hybridization of and increased engine efficiency of vehicles. **Low Carbon Fuel Standard.**[18] ARB identified this measure as a Discrete Early Action Measure. This measure would reduce the carbon intensity of California's transportation fuels by at least 10% by 2020.	**Compliant.** The project does not involve the manufacture, sale, or purchase of vehicles. However, vehicles that operate within and access the project site would comply with any vehicle and fuel standards that the ARB adopts.
Measures to Improve Transportation Energy Efficiency.[19] Builds on current efforts to provide a framework for expanded and new initiatives, including incentives, tools, and information that advance cleaner transportation and reduce greenhouse gas emissions.	**Compliant.** The proposed project is an urban infill project, which would be accessible by public transit. It also would make improvements to the Amtrak Station that are intended to improve passenger comfort and convenience and thus encourage the use of transit.
Measures to Reduce High Global Warming Potential (GWP) Gases. ARB has identified Discrete Early Action measures to reduce GHG emissions from the refrigerants used in car air conditioners, semiconductor manufacturing, and consumer products. ARB has also identified potential reduction opportunities for future commercial and industrial refrigeration, changing the refrigerants used in auto air conditioning systems, and ensuring that existing car air conditioning systems do not leak**.**	**Compliant.** Products used, sold, or serviced in the project site would comply with current and future ARB rules and regulations.

[17] Ibid.

[18] California Air Resources Board. 2008. op. cit.

[19] Ibid.

Table 5 *Continued*

Strategy	Project Compliance
Anti-Idling Enforcement.[20] ARB adopted a diesel particulate air toxic control measure in June 2004 to control idling of diesel-fueled commercial motor vehicles. Enforcement commenced the following year. This rule prohibits, with some exceptions, the idling of diesel-fueled commercial motor vehicles for more than 5 minutes, and applies to both trucks and buses greater than 10,000 lbs. gross vehicle weight.	**Compliant.** Vehicles that access the site during remediation and construction would comply with all anti-idling regulations, including ARB's limits on diesel-fueled commercial motor vehicle idling.

Source: LSA Associates, Inc., 2009.

In addition to reducing GHG emissions to 1990 levels by 2020, AB 32 directed ARB to identify a list of "discrete early action GHG reduction measures" that can be adopted and made enforceable by January 1, 2010. In June 2007 ARB approved a list of 37 early action measures, including three discrete early action measures (Low Carbon Fuel Standard, Restrictions on High Global Warming Potential Refrigerants, and Landfill Methane Capture). Discrete early action measures are measures that are required to be adopted as regulations and made effective no later than January 1, 2010, the date established by Health and Safety Code (HSC) Section 38560.5. The ARB adopted additional early action measures in October 2007 that tripled the number of discrete early action measures.

ARB's focus in identifying the 44 early action items was to recommend measures that ARB staff concluded were "expected to yield significant GHG emission reductions, are likely to be cost-effective and technologically feasible." The combination of early action measures is estimated to reduce State-wide GHG emissions by nearly 16 MMT. Accordingly, the 44 early action items focus on industrial production processes, agriculture, and transportation sectors. Early action items associated with industrial production, transportation and agriculture do not apply to the proposed project.

The proposed project consists of remediation and redevelopment of the project site. It is an urban infill project that would allow for new office and retail space adjacent to transit. It would make improvements to a transit facility – the Emeryville Amtrak Station. The new parking structures and office space would be built to current codes and standards, which would be energy efficient. As shown in Table 5, the project would comply with all applicable permit and planning requirements in place or adopted by the City of Emeryville and would comply with most strategies to reduce GHG emissions adopted by the State of California. Therefore, the project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

[20] Ibid.

	Potentially Significant Impact	Potentially Significant Unless 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?	❒	❒	❒	■
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?	❒	■	❒	❒
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?	❒	❒	❒	■
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	❒	❒	■	❒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	❒	❒	■	❒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan?	❒	❒	❒	■

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?* ***(No Impact)***

The project site is developed as two surface parking lots, which have no or very low wildlife habitat value. Wildlife species that would be expected to use or pass through the site are common species that are adapted to urban and suburban conditions, and would not be adversely affected by redevelopment of the project site. No protected species are known to occur on the project site. Therefore, implementation of the proposed project would not have a substantial direct or indirect effect on protected 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? ***(Potentially Significant Unless Mitigation Incorporated)***

No riparian habitat or wetlands are located within or in the immediate vicinity of the project site. The nearest creek to the project site is a branch of Derby Creek in the Temescal Watershed, which flows approximately 1,000 feet north of the project site.[21] Development on the project site would not measurably affect the water quality of Derby Creek – or other local creeks. However, the project site drains to San Francisco Bay, which hosts a variety of sensitive natural communities. Runoff from the project site could adversely affect water quality in the Bay and associated natural communities. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level:

Mitigation Measure BIO-1: Implement Mitigation Measures HYD-1a and HYD-1b.

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? ***(No Impact)***

Federally-protected wetlands, as defined by Section 404 of the Clean Water Act, are not located in the project site.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? ***(Less-than-Significant Impact)***

The two surface parking lots located on the project site do not provide wildlife nursery sites or a corridor for wildlife movements. The project site is located approximately 1 mile to the north of the Emeryville Crescent (where Temescal Creek enters San Francisco Bay), which provides important nesting and foraging grounds for shore birds. However, the parking lots provide no nesting or foraging grounds and no wildlife corridors traverse the project site.

Existing vegetation on the project site consists of a few street trees and landscaped islands within the surface parking lots. Implementation of the proposed project would preserve street trees bordering the Heritage Square parking structure site; however, the project would require the removal of two street trees in front of the Amtrak Station to the south of the EmeryStation West site. These trees could be used by common wildlife species that are adapted to urban conditions; however, the removal of two street trees would not be expected to result in long-term adverse impacts to populations of these species. Therefore, implementation of the proposed project would not substantially interfere with the movement of native or migratory wildlife species, or adversely affect native resident or migratory wildlife corridors or native nursery sites.

[21] Sowers, Janet M., 1993. *Creek and Watershed Map of Oakland and Berkeley*. Published by Oakland Museum of California. Revised 2000.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? ***(Less-than-Significant Impact)***

Street trees are located adjacent to the site along Horton Street and 62nd Street. Title 7, Chapter 10 of the City of Emeryville Municipal Code is the Urban Forestry Ordinance, which provides processes by which street trees may be removed or replaced, and imposes penalties on unauthorized tree removal. Street trees are defined as any tree growing within the public right-of-way, including unimproved public streets and sidewalks. In general, the Urban Forestry ordinance requires that an encroachment permit be granted prior to the planting or removal of street trees. If street trees are removed, the Emeryville Public Works Department normally requires the planting of replacement trees of equal or cumulative diameter to the trees approved for removal.

As previously noted, two street trees adjacent to the Amtrak Station south of the EmeryStation West site would be removed as part of the proposed project. The project applicant would be required to procure encroachment permits prior to the planting of street trees, consistent with the City's Urban Forestry Ordinance. Therefore, the proposed project would comply with this ordinance, and would not conflict with any local policies or ordinance adopted for the protection of biological resources. In addition, common open space areas within the project site would include trees and other landscaping, and several street trees would be planted along Horton Street as part of the project (see Figure 3).

Compliance with the City of Emeryville's adopted Stormwater Guidelines for Green, Dense Redevelopment is discussed in Section VIII, Hydrology and Water Quality, of this IS/MND.

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? ***(No Impact)***

The project site is located within an urbanized portion of Emeryville and is not subject to the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	❒	❒	❒	■
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	❒	■	❒	❒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	❒	■	❒	❒
d) Disturb any human remains, including those interred outside of formal cemeteries?	❒	■	❒	❒

The analysis of potential impacts of the project on cultural resources is based on a study conducted by LSA Associates, Inc.[22] Potential impacts to historical resources in the "built" environment, such as buildings and structures, are discussed in Section V.a; potential impacts to archaeological resources are discussed in Section V.b.

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? ***(No Impact)***

This section includes a description of the legislative context of historical resources in California; a summary of historical resources regulations in Emeryville; and a discussion of how the historical resources criteria apply to the project site.

CEQA Context for Historical Resources. CEQA defines a "historical resource" as a resource which meets one or more of the following criteria:

- Listed in, or eligible for listing in, the California Register;
- Listed in a local register of historical resources;
- Identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code; or
- Determined to be a historical resource by a project's lead agency.

A historical resource consists of "Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California . . . Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (CCR Title 14(3) §15064.5(a)(3)). The cultural resources study found that there are no recorded resources on the site that meet the CEQA definition of historical resources. [23]

[22] LSA Associates, Inc., 2009. *Cultural and Paleontological Resources Study for the EmeryStation West at the Emeryville Transit Center Project IS/MND*, Emeryville, Alameda County, California, August 27.

[23] Ibid.

Historic Resources Regulations in Emeryville. The City of Emeryville does not maintain a Register of Historic Resources. However, on October 3, 2006, the City Council adopted Ordinance 06-013, which amended Section 8-1.09 of Chapter 1 of Title 8 of the Emeryville Municipal Code to "preserve significant structures and to protect against the moving, removal, or demolition of significant structures unless certain findings are made by the City Council." Because there are no structures located on the project site, this portion of the Emeryville Municipal Code is not applicable to the project.

Implementation of the proposed project would not result in an adverse change in the significance of a historical (non-archaeological) resource as defined under CEQA because there are no historical structures or other recorded historical resources on the project site. Potential impacts to archaeological resources are discussed in Section V.b, below.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? ***(Potentially Significant Unless Mitigation Incorporated)***

This section includes a description of the legislative context of archaeological resources in California and a discussion of how the archaeological resources criteria apply to the project site. LSA conducted archival and background research, including a records search at the Northwest Information Center at Sonoma State University, and reviewed historical maps of the project area and the published results of geotechnical borings from the project parcels to determine if archaeological resources have been identified in and around the project site.

CEQA Context for Archaeological Resources. For archaeological resources, the lead agency must apply a two-step screening process to determine if an archaeological site meets the definition of a historical resource or a unique archaeological resource. Prior to considering potential impacts, the Lead Agency must determine whether the archaeological site meets the definition of a historical resource in *CEQA Guidelines* §15064.5(a). If the archaeological site meets the definition of a historical resource, then it must be treated like any other type of historical resource in accordance with *CEQA Guidelines* §15126.4. If the cultural resource does not meet the definition of a historical resource, the Lead Agency must then determine if the resource meets the definition of a unique archaeological resource as defined in Public Resources Code §21083.2(g). If the archaeological site meets the definition of a unique archaeological resource, then it must be treated in accordance with §21083.2(g). If the archaeological site does not meet the definition of a historical resource or a unique archaeological resource, then effects to the site are not considered significant effects on the environment.

Project Site History and Pre-History. The project site is located near the historical confluence of perennial watercourses and bay waters. Temescal Creek, whose banks saw intensive Native American settlement and use, is approximately 0.75 miles to the south. The environmental setting was conducive to Native American habitation and resource use, as evidenced by the well-documented archaeological site P-01-000086/CA-ALA-309, the Emeryville Shellmound, which is approximately 0.6 miles south of the project site. The proximity of prehistoric archaeological resources indicates that the project site is sensitive for the presence of subsurface archaeological deposits and there is a possibility of encountering such subsurface deposits during project ground-disturbing activities.

Historical aerial photographs, Sanborn fire insurance maps, and historical topographic maps, show the project site at the periphery of the historic urbanized core of Emeryville, in a small pocket of undeveloped land near former industrial facilities, warehouses, and the railroad. It does not appear that the

large-scale industrial development and warehouse construction that was typical of Emeryville took place on the EmeryStation West building site or the Heritage Square parking structure site. The project site appears to have been less intensively developed, likely resulting in a lower level of ground disturbance associated with grading and foundation preparation for large buildings and railroad structures, both of which bordered the project site historically. The evidence of land use history indicates that, prior to remediation efforts in the 1980s on the EmeryStation West building site, the project site was relatively lightly used compared to surrounding parts of Emeryville. This light use lessens the likelihood that historical and/or prehistoric archaeological deposits, should they be present, would have been disturbed by past construction. The project site's characteristics indicate that it is more likely than surrounding areas to contain deposits that underlie the terminal depth of prior construction (e.g., historical wells or buried prehistoric midden deposits that underlie past disturbance). Information contained in the draft FS/RAP[24] was used to further evaluate the potential to adversely impact archaeological resources on the project site, if any are present in the subsurface.

EmeryStation West Building Site. Alternative 2 as described in the draft FS/RAP for the EmeryStation West building site indicates that for an above-grade building, such as that proposed by Wareham Development for the site, removal of the existing cap and contaminated soil to depths of up to 8.5 to 11 feet below ground surface (bgs) with additional excavation or disturbance possible for piles, pile caps, and grade beams would be required.

A review of geotechnical data and remediation summaries for the EmeryStation West building site indicates a high level of prior fill importation and soil disturbance during previous soil remediation activities. Artificial fill was introduced to the site to facilitate historical development, and a review of 16 geotechnical borings[25] and information contained in the FS/RAP indicates that the site is underlain by approximately 8 to 12 feet of fill, consisting of an engineered clay and baserock cap over imported soil and debris. Fill depth is reportedly greater in localized areas, sometimes extending to a depth of more than 20 feet bgs, resulting in an average fill depth of 10.5 feet based on the boring data. One boring identified a piece of steel wire at 30 feet bgs, suggesting the magnitude of past subsurface disturbance on the site. In the 1980s, when contaminated soils at the site were consolidated and capped and a slurry wall was installed to prevent movement of contaminants in groundwater, Old Bay Mud, into which the base of the slurry wall extends five feet, was consistently found at a depth of approximately 35 feet throughout the parcel.

The two site characteristics discussed above (i.e., historical fill and soil remediation), as well as the fact that the deepest proposed excavations would extend to less than half the depth of past disturbance, indicate a low likelihood of intact archaeological deposits being encountered during project implementation on the EmeryStation West building site.

Heritage Square Parking Structure Site. Although boring logs or other information about subsurface conditions were not identified for the Heritage Square parking structure site, given the close proximity of this site to the EmeryStation West building site, a comparable depth of historic fill (approximately 2 to 4 feet and deeper in pockets) can be expected. No evidence was identified to suggest that the

[24] *Draft Feasibility Study and Remedial Action Plan, Mound Parcel Site, Emeryville, California.* Erler & Kalinowski, Inc., 2009.

[25] *Implementation of Exterior Remedial Action Plan, Westinghouse Property, Emeryville, California.* Woodward-Clyde Consultants, 1986.

Heritage Square parking structure site's land use history resulted in substantial ground disturbance. The lack of evidence of extensive prior disturbance, the presence of buildings on the site in the early part of the 20th Century, and an environmental setting conducive to Native American use and settlement indicate a moderate likelihood of intact archaeological deposits being encountered during project construction activities on the Heritage Square parking structure site.

Summary of Findings for Archaeological Resources. Based on the foregoing, intact archaeological deposits are not expected to be encountered on the EmeryStation West building site due to past ground disturbance and the presence of substantial amounts of fill. The potential for intact archaeological deposits is moderate, however, on the Heritage Square parking structure site due to the documented presence of buildings during the early 20th Century, a setting favorable to the occurrence of prehistoric archaeological deposits, and a lack of evidence for substantial past ground disturbance. The Heritage Square parking structure site's prehistoric sensitivity is heightened by the presence of the Emeryville Shellmound approximately 0.6 miles to the south, and the commonly documented occurrence of smaller outlying shellmounds distributed at the periphery of larger mounds.

Prehistoric or historical archaeological deposits on the Heritage Square parking structure site, if intact, could meet the criteria as a historical resource pursuant to Public Resources Code §21084.1. Prehistoric materials can include flaked-stone tools (e.g., projectile points, knives, choppers) or obsidian, chert, basalt, or quartzite toolmaking debris; bone tools; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials); and stone milling equipment (e.g., mortars, pestles, handstones). Prehistoric sites often contain human remains. Historical materials can include wood, stone, concrete, or adobe footings, walls, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, metal, and other refuse. Should construction activities encounter such deposits, then a substantial adverse change in the resource's significance (i.e., damage or destruction) would occur, resulting in a significant impact under CEQA. Implementation of the following mitigation measures would reduce potential impacts to archeological deposits to a less-than-significant level:

> Mitigation Measure CULT-1: Ground disturbance associated with project activities below the project site fill layer shall be monitored by a qualified archaeologist. Archaeological monitors shall be empowered to halt construction activities at the location of the discovery to review possible archaeological material and to protect the resource while the finds are being evaluated. Monitoring shall continue until, in the archaeologist's judgment, cultural resources are not likely to be encountered.
>
> If deposits of prehistoric or historical archaeological materials are encountered during project activities, all work within 25 feet of the discovery shall be redirected and a qualified archaeologist contacted to assess the finds, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. Adverse effects to such deposits shall be avoided by project activities. If avoidance is not feasible, the archaeological deposits shall be evaluated for their eligibility for listing in the California Register. If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, adverse effects on the deposits shall be avoided or mitigated.

Mitigation shall consist of, but is not necessarily limited to, systematic recovery and analysis of archaeological deposits; recording the resource; preparation of a report of findings; accessioning recovered archaeological materials at an appropriate curation facility. Public educational outreach may also be appropriate. Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the archaeological materials discovered. The report shall be submitted to the City of Emeryville and the Northwest Information Center.

Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the archaeological materials discovered. The report shall be submitted to the applicant, the City of Emeryville, and the Northwest Information Center.

Mitigation Measure CULT-2: In the event that an archaeological monitor is not present and deposits of prehistoric or historical archaeological materials are encountered during project activities, all work within 25 feet of the discovery should be redirected and a qualified archaeologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. The project proponent should also be notified. Project personnel should not collect or move any archaeological materials. It is recommended that adverse effects to such deposits be avoided by project activities. If such deposits cannot be avoided, they should be evaluated for their California Register of Historical Resources eligibility. If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, adverse effects on the deposits must be avoided or such effects must be mitigated. Mitigation may consist of, but is not necessarily limited to, systematic recovery and analysis of archaeological deposits; recording the resource; preparation of a report of findings; and accessioning recovered archaeological materials at an appropriate curation facility. Public educational outreach may also be appropriate. Upon completion of the assessment, the archeologist should prepare a report documenting the methods and results, and provide recommendations for the treatment of the archaeological materials discovered. The report shall be submitted to the City of Emeryville and the Northwest Information Center.

Implementation of Mitigation Measures CULT-1 and CULT-2 will reduce the severity of potential impacts to unique archaeological resources to less-than-significant levels through the recovery of scientifically consequential information that justifies the resource's eligibility for the California Register of Historical Resources. Should data recovery excavation be required as a result of the evaluation process described in Mitigation Measures CULT-1 and CULT-2, and as applied to unique archaeological resources, the cost and time limits described in Public Resources Code §21083.2 shall apply.

c) *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?* ***(Potentially Significant Unless Mitigation Incorporated)***

No unique geologic resources are located on the project site. A fossil locality search conducted on July 6, 2009, by Dr. Pat Holroyd of the University of California Museum of Paleontology, Berkeley identified no recorded fossil localities within or adjacent to the project site. Nine vertebrate fossil localities representing Late Pleistocene Rancholabrean fauna have been discovered within 5 miles of

the project site. These fossil localities were found in the same geologic formation – Late Pleistocene alluvial deposits – that underlies the project site.

The proximity of nine fossil localities in the same Late Pleistocene deposits that underlie the project area indicates paleontological sensitivity. There is the possibility of encountering significant paleontological resources in the fossil-bearing Late Pleistocene alluvium that is overlain by as much as 10 feet of Holocene alluvium. In the event that paleontological resources are encountered during project ground-disturbing activities, they shall be treated in accordance with Mitigation Measure CULT-3. Implementation of the following mitigation measure would reduce impacts to potential paleontological resources on the site to a less-than-significant level:

> Mitigation Measure CULT-3: The project applicant shall inform its contractor(s) of the sensitivity of the project area for paleontological resources by including the following directive in contract documents:
>
> > *The subsurface of the construction site may be sensitive for paleontological resources. If paleontological resources are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any paleontological materials. Paleontological resources include fossil plants and animals, and such trace fossil evidence of past life as tracks. Ancient marine sediments may contain invertebrate fossils such as snails, clam and oyster shells, sponges, and protozoa; and vertebrate fossils such as fish, whale, and sea lion bones. Vertebrate land mammals may include bones of mammoth, camel, saber tooth cat, horse, and bison. Paleontological resources also include plant imprints, petrified wood, and animal tracks.*
>
> The City shall verify that the language has been included in the contract documents before issuing the grading or building permit.
>
> Adverse effects to paleontological deposits should be avoided by project activities. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, project activities shall avoid disturbing the deposits, or the adverse effects of disturbance shall be mitigated. Mitigation may include monitoring, recording the fossil locality, data recovery and analysis, a technical recovery report, and accessioning the fossil material and technical report to a paleontological repository. Upon completion of the paleontological assessment and/or mitigation, a report shall be prepared documenting the methods, results, and recommendations of the study. The report shall be submitted to the applicant and the City of Emeryville and, if paleontological materials are recovered, a paleontological repository, such as the University of California Museum of Paleontology.

d) Disturb any human remains, including those interred outside of formal cemeteries? ***(Potentially Significant Unless Mitigation Incorporated)***

Nearby prehistoric archaeological sites, including CA-ALA-309, the Emeryville Shellmound, are known to contain Native American interments. Although Native American remains have not been

identified by LSA's background research, there is the possibility that human remains exist in the project site. Such remains could be uncovered during construction period activities that involve ground disturbance.

The implementation of Mitigation Measures CULT-1 and CULT-2 will address the potential for encountering human remains during archaeological monitoring. The respectful treatment of Native American human remains will be achieved through consultation regarding proper recovery techniques with descendant communities. There is the potential, however, that human remains may be encountered in areas that are not being monitoring, or after monitoring has ceased. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level:

> Mitigation Measure CULT-4: If human remains are encountered, these remains shall be treated in accordance with Health and Safety Code §7050.5. The project applicant shall inform its contractor(s) of the sensitivity of the project area for human remains by including the following directive in contract documents:
>
> > *If human remains are encountered during project activities, work within 25 feet of the discovery shall be redirected and the County Coroner notified immediately. At the same time, an archaeologist shall be contacted to assess the situation and consult with agencies as appropriate. Project personnel shall not collect or move any human remains and associated materials. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.*
>
> The City shall verify that the language has been included in the contract documents before issuing the grading or building permit.
>
> Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the most likely descendent (MLD). The report shall be submitted to the applicant, the City of Emeryville, and the Northwest Information Center.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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:	❒	■	❒	❒
b) Result in substantial soil erosion or the loss of topsoil?	❒	■	❒	❒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	❒	■	❒	❒
d) Be located on expansive soil, as defined in Table 22-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	❒	■	❒	❒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	❒	❒	❒	■

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; ii) Strong seismic ground shaking; iii) Seismic-related ground failure, including liquefaction; iv) Landslides?* ***(Potentially Significant Unless Mitigation Incorporated)***

Fault Rupture. The San Francisco Bay region is a seismically active region that is subject to large earthquakes. There are 30 known faults in the Bay Area that are considered capable of generating earthquakes. The Hayward Fault is the nearest active fault to the project site and is located approximately 5 miles northeast of the site. The project site is not within an Earthquake Fault Zone (formerly Alquist-Priolo "Special Studies" Zone) as defined by the California Division of Mines and Geology.

The project site is not located in close proximity to other faults. Other faults around the project site include: the San Andreas Fault, approximately 24 miles to the west of the site; the Calaveras Fault, approximately 25 miles to the east of the site; and the Concord Fault, which is approximately 26 miles to the east of the site. Since surface faulting or ground rupture tends to occur along previous fault lines and identified fault lines are not located within the site, implementation the proposed project would not adversely affect persons or structures due to the rupture of a known earthquake fault.

Ground-shaking. The San Francisco Bay Area is considered one of the most seismically active regions in the United States. In 2003, the Working Group on California Earthquake Probabilities, in conjunction with the United States Geological Survey, found that there is a 62 percent probability that at least one magnitude 6.7 or greater earthquake will occur in the Bay Area between 2003 and 2032. Earthquakes on any of the faults within the Bay Area could cause strong ground shaking at the project site depending upon the magnitude of the earthquake, the distance of the project site from the earthquake epicenter, the type of geologic materials that underlie the site, as well as other factors. Because it affects a much broader area, ground shaking, rather than surface fault rupture, is the cause of most damage during earthquakes. The project is likely to be subject to earthquakes during its operation period.

Structural damage to buildings results from the transmission of earthquake-induced vibrations through the ground. A large earthquake on any of the faults within 25 miles of the project site (but especially an earthquake on the Hayward Fault) would result in strong ground shaking at the project site. A magnitude 6.5 earthquake on the north segment of the Hayward Fault, for example, is predicted to create violent shaking (level IX Modified Mercalli Intensity Shaking) at the project site as it would over much of the City of Emeryville. The Uniform Building Code (UBC) Chapter 16, Division IV Earthquake Design requires that structures be designed using certain earthquake design criteria.

Ground Failure. Ground failure hazards of potential concern at the project site include densification and liquefaction. Soil liquefaction is primarily associated with saturated soil layers located near the ground surface. Soils that are most susceptible to liquefaction are relatively loose, clean, poorly-graded, fine-grained sands. These soils lose strength during ground shaking and become incapable of supporting overlying structures. Due to the loss of strength, the soil acquires "mobility" sufficient to permit both horizontal and vertical movements. Densification, a closely-related phenomenon, occurs when ground-shaking causes predominantly granular soils to become compact and occupy less volume, which results in settlement. The project site is located in an area that has been mapped as having a moderate potential for liquefaction.[26] During the remediation phase, including removal of the slurry wall, collapse of the sidewalls of the excavation is a potential hazard for on-site workers, surrounding buildings and the public. Proper shoring of the sidewalls would reduce the hazard during remediation to a less-than-significant level.

Implementation of the following mitigation measure would reduce the impacts of ground-shaking and ground-failure to less-than-significant levels:

> Mitigation Measure GEO-1: A Certified Engineering Geologist, Geotechnical Engineer or other appropriately registered professional shall be engaged by the project applicant to conduct a design-level geotechnical investigation and prepare a geotechnical and soils report for the proposed project, including remediation. The applicant shall submit a shoring plan (or evidence that shoring is not required) to the DTSC and the City of Emeryville Planning and Building Department prior to approval of the final RDIP by the DTSC. The applicant shall submit the final plans for the project and specifications for conformance with the recommendations in the geotechnical report to the City of Emeryville Planning and Building Department for review and confirmation that the proposed buildings fully comply with the California Building Code

[26] Association of Bay Area Governments (ABAG) 2009. Liquefaction Susceptibility GIS Map, accessed September 1 (http://www.abag.ca.gov/bayarea/eqmaps/liquefac/liquefac.html)

(Seismic Zone 4). The report shall identify building techniques appropriate for minimizing seismic damage. All mitigation measures, design criteria, and specifications set forth in the geotechnical and soils report shall be followed. The City shall review and approve the plans and specifications prior to issuing a building permit for the project.

Landslides. The project site is located on the coastal plain on the eastern side of San Francisco Bay, and is not located adjacent to steep slopes. Maps prepared by the California Geological Survey indicate that the site is not located in an area where there is a potential for earthquake-induced landslides. Therefore, the site would not be exposed to significant landslide hazards.

b) Result in substantial soil erosion or the loss of topsoil? ***(Potentially Significant Unless Mitigation Incorporated)***

Exposed soils on the site could be subject to erosion during remediation and post-remediation construction although the erosion potential is reduced by the flat topography of the site. The potential for soil erosion exists during the period of earthwork activities and between the time when earthwork is completed and new vegetation is established or hardscape is installed.

A Storm Water Pollution Prevention Plan (SWPPP) and Erosion Control Plan are routine conditions of projects that require grading and building permits. An SWPPP has been prepared for the remediation phase of work and would be implemented as part of the RDIP. SWPPPs identify best management practices to protect the quality of storm water runoff, while the Erosion Control Plan, which is required for the grading permit, provides the details of the erosion control measures to be applied on the site. Implementation of the following mitigation measures would reduce impacts on soil erosion or loss of topsoil to a less-than-significant level during the post-remediation period of construction:

Mitigation Measure GEO-2: The project applicant shall prepare an Erosion Control Plan in accordance with the San Francisco Bay Regional Water Quality Control Board's requirements. The City shall verify that the Erosion Control Plan has been prepared before issuing the grading or building permit for the project.

Mitigation Measure GEO-3: Implement Mitigation Measure HYD-1a and HYD-1b (Preparation of a SWPPP and a Storm Water Management Plan).

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? ***(Potentially Significant Unless Mitigation Incorporated)***

As noted in VI.a, the project site has a moderate potential for liquefaction. Implementation of the following mitigation measure would reduce impacts associated with liquefaction to a less-than-significant level:

Mitigation Measure GEO-4: Implement Mitigation Measure GEO-1.

d) Be located on expansive soil, as defined in Table 22-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? ***(Potentially Significant Unless Mitigation Incorporated)***

The soil near the existing grade is predominantly fill with underlying native soils. Some native soils in the project area exhibit shrink/swell characteristics.[27] [28] Expansive soils could cause displacement and cracking of proposed building foundations. Expansion could particularly be a problem for proposed structures on the project site during seasonal changes in moisture content. Implementation of the following mitigation measure would reduce impacts associated with soil expansion to a less-than-significant level:

Mitigation Measure GEO-5: Implement Mitigation Measure GEO-1.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? ***(No Impact)***

Sewer infrastructure is available on the site and septic tanks, or alternative wastewater disposal systems, are not proposed as part of the project.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. 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?	❒	❒	■	❒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	❒	■	❒	❒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	❒	❒	■	❒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	❒	■	❒	❒

[27] Treadwell & Rollo, Inc., 2008. *Geotechnical Investigation, Emerystation Triangle, Emeryville, CA*. September 2.

[28] USDA, 1981. *Soils of Alameda County, Western Part*, Soil Conservation Service.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	❒	❒	❒	■
f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	❒	❒	❒	■
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	❒	❒	■	❒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	❒	❒	❒	■

The following section is based on a *Draft Remedial Design and Implementation Plan (RDIP),*[29] prepared by WSP Environment & Energy, a *Draft Feasibility Study and Remedial Action Plan (FS/RAP)*, prepared by Erler & Kalinowski, Inc.,[30] and a commercial search of hazardous waste databases and other records conducted in June 2009.[31]

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? ***(Less-than-Significant Impact)***

The hazards associated with remediation and the safeguards that the remediation contractor would employ to protect on-site workers and the public are addressed in Section VII.b, below.

The expected tenants of the EmeryStation West building would be businesses that conduct biotechnology research and development, similar to some of the tenants housed in other nearby EmeryStation buildings, including the EmeryStation North building, which is located across Horton Street from the project site. The tenants may use the building for laboratory, research and development, and/or office uses. The anticipated businesses and general building maintenance and operations are expected to use commercially available hazardous materials. Based on the types of chemicals used at nearby facilities these could include solvents, corrosives, compressed gases,

[29] WSP Environment & Energy, 2009. *Draft Remedial Design and Implementation Plan, Emeryville Mound Parcel, Emeryville, California*. May 21.

[30] Erler & Kalinowski, Inc., 2009. *Draft Feasibility Study and Remedial Action Plan, Emeryville Mound Parcel, Emeryville, CA*, November.

[31] EDR, 2009. *EDR Radius Map Report with GeoCheck*, Inquiry No. 2524908, June 23.

cryogenic materials, and radioactive materials.[32] Fuels, paints, solvents and compressed gases may be used during construction. While these are commonly used laboratory and construction materials, if handled improperly they could endanger workers and the public, and are therefore considered hazardous.

Compliance with federal and State hazardous materials laws and regulations minimizes the risk to the public presented by the use of hazard materials. For example, a Hazardous Materials Business Plan is required to ensure the safe handling of chemicals that would be used in the facility and would contain facility maps, up-to-date inventories of all hazardous materials equal to or above regulatory threshold limits, emergency response procedures, equipment, and an employee training program. In Emeryville, the requirements for Business Plans are administered by the Alameda County Department of Environmental Health, which ensures that the plans are in place. Hazardous wastes that would be generated by the businesses would be required to be properly packaged, stored, manifested, and disposed of at a permitted off-site facility in accordance with local, State, and federal requirements; generators of hazardous wastes must be registered with the U.S. EPA.[33]

Because the businesses that would lease the proposed building would be required to be in full compliance with hazardous materials laws and regulations prior to receiving approval from the City to operate the facility and these requirements are intended to protect the health and safety of the public, implementation of the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? ***(Potentially Significant Unless Mitigation Incorporated)***

Historically, Westinghouse conducted operations on the EmeryStation West building site that included maintenance and repair of electrical equipment such as transformers containing polychlorinated biphenyl (PCB) fluids. The site is currently owned by CBS Corporation, which is a successor company to Westinghouse. Environmental investigations conducted since the early 1980s have identified chemicals in soil and groundwater at the site. These include PCBs, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), petroleum hydrocarbons, dioxins and furans, and metals. To protect on- and off-site personnel and the environment, the EmeryStation West building site (also referred to as the Emeryville Mound Parcel in the RDIP) was capped and sealed as part of remediation measures implemented by Westinghouse in the 1980s. Remediation measures included construction of the composite cap, which consists of geo-textile, geo-membrane, clay, aggregate base-rock, and asphalt, and a subsurface slurry wall that encloses contaminated soil. The slurry wall and cap prevent human exposure to chemicals in the soil, primarily the PCBs, and prevent the lateral movement of contaminated shallow groundwater into and out of the contained area. Contaminated soils from areas adjacent to and outside of the slurry wall were placed within the slurry wall during the 1980s remedial activities.

[32] E.O. Lawrence Berkeley National Laboratory, 2008. *Environment, Health and Safety Plan for LBNL Joint Bioenergy Institute (JBEI), 5885 Hollis Street, Emeryville, CA*. May.

[33] Title 22, CCR; 40 Code of Federal Regulations (CFR).

According to the FS/RAP, prior to remediation activities involving the excavation of soil, soil samples would be collected and analyzed for the presence of "dioxin-like" PCB congeners.[34] If dioxin-like PCB congeners are present, the Site Health and Safety Plan and the Perimeter Air Monitoring Plan included in the RDIP would be modified to ensure workers and the public are protected during remediation activities. The plans for monitoring and controlling the levels of PCBs in air during remediation would be submitted to the DTSC and EPA for review and concurrence prior to the start of remediation activities. Groundwater would be treated *in situ* during the remediation phase to enhance the growth of naturally occurring microorganisms and speed the degradation of contaminants in groundwater.

For construction of an EmeryStation West building, unsaturated soil would be excavated to approximately 12.5 feet mean sea level across the entire site. The excavation may be deeper to accommodate construction activities based on the final design for the development. Excavated soil would be transported off-site to a permitted landfill for disposal. If dewatering of the excavation is performed, groundwater generated would be treated on-site, if needed, prior to off-site treatment and/or disposal at a permitted facility or the East Bay Municipal Utility District (EBMUD) water treatment facility via truck or discharge to sanitary sewer. Following excavation of soil to the target depth the site would be backfilled, if appropriate, based upon the final development plans and a sub-slab venting system would be constructed to provide a pathway to allow soil vapor to migrate or vent to the exterior of the future EmeryStation West building, rather than entering the building.

Remediation work would be conducted in accordance with a final RDIP, including a Health and Safety Plan, a Traffic Control and Transportation Plan, a Perimeter Air Monitoring Plan, an Excavation Management and Decontamination Plan, a Dust and Odor Control Plan, and a Conceptual Storm Water Pollution and Prevention Plan, that would be implemented during remediation. The RDIP and its associated plans are currently in draft form. The DTSC would review and provide concurrence with the plans before they are implemented. In addition to protecting site workers during remediation activities, implementation of the plans is intended to eliminate the potential for nearby workers and residents to be exposed to PCBs or other hazardous waste that is present in the soil and groundwater at the site and that would be excavated or otherwise exposed during the remediation process. Specific plans that would be implemented include the following:

- The Dust and Odor Control Plan specifies the measures to be taken to limit the generation of dust, vapors, and odors and address problems encountered during execution of the work. The purpose of this plan is to ensure that off-site workers and nearby residents are not exposed to harmful concentrations of chemicals that might be released to the air. The remediation contractor would be responsible for implementing the final Dust and Odor Control Plan as approved by DTSC.
- The Perimeter Air Monitoring Plan identifies potential airborne chemicals for perimeter monitoring, develops airborne action levels, describes monitoring procedures, methods, and sampling frequencies, and specifies contingency measures to be taken by the remediation contractor should the action levels be exceeded. The purpose of this plan is to ensure that the Dust and Odor Control Plan is being properly implemented. The engineering firm overseeing the remediation would be responsible for implementing the Perimeter Air Monitoring Plan and the remediation contractor

[34] PCB congeners have a molecular structure – a biphenyl molecule – composed of two benzene rings. The biphenyl molecule can have varying numbers of chlorine atoms attached (from 1 to 10), which theoretically yield up to 209 possible combinations or congeners.

would be responsible for implementing contingency measures, as necessary, in response to potential action level exceedances.

- The Excavation Management and Decontamination Plan covers the specifics related to the removal of contaminated material from equipment and transportation vehicles, decontamination of personnel and tools, and methods for temporary storage, characterization, and off-site treatment and disposal of decontamination wastes generated during the project. The management of contaminated soil stockpiles as described in the RDIP includes the placement of plastic sheeting on the ground before stockpiling the soil in order to create a barrier between the contaminated soil and clean, underlying materials. The purpose of the Excavation Management Plan and Decontamination Plan is to ensure that contaminants are not carried off site by vehicles (for example, on their wheels) or by other means. The remediation contractor would be responsible for implementing the final Excavation Management and Decontamination Plan as approved by DTSC.

Implementation of the RDIP and its associated plans would ensure that on-site workers and off-site workers and residents who occupy nearby buildings would not be exposed to harmful levels of site-related contaminants during the remediation phase of construction. Because the RDIP and its associated plans are currently in draft form, the following mitigation measure is recommended to reduce potential impacts associated with remediation of hazardous waste at the site to a less-than-significant level.

> Mitigation Measure HAZ-1: Before issuing the grading permit for the remediation phase of the project on the EmeryStation West building site, the City shall verify that the final RDIP has been prepared and that the DTSC has reviewed and concurred with the plans presented in the RDIP. The project applicant shall be responsible for ensuring that the plans are implemented. The Operations and Maintenance Plan shall describe soil confirmation sampling and groundwater sampling to ensure that soils and groundwater remaining on site do not present an environmental or human health hazard. The site-specific Health and Safety Plan shall be prepared in accordance with federal, State and local standards governing the remediation of soil and groundwater containing hazardous waste.

The Heritage Square parking structure and Amtrak Station sites do not appear on current regulatory agency lists of hazardous waste release sites.[35] They were previously investigated and contaminated soil was removed.[36] [37] The Heritage Square parking structure site was abated in 2003 by CBS Corporation with oversight by the San Francisco Bay Regional Water Quality Control Board (Water Board). Generally the site was cleaned to commercial standards via excavation and off-haul of soils to a depth of approximately 4 feet, although some PCB-contaminated soil remains in the subsurface at depths greater than 4 feet on the south end of the site.[38] Based on the risk assessment prepared for the site, the residual concentrations do not present a risk to future site occupants associated with commercial or industrial site uses. The proposed parking structure with ground level commercial spaces would be

[35] EDR, 2009. *EDR Radius Map Report with GeoCheck*, Inquiry No. 2524908, June 23.

[36] USEPA, 2008. *From Poor Reputation to Model Mixed-Use, Emeryville, California*, EPA-560-F-08-301. September.

[37] SOMA, 2004. *Characterization and Remediation of Polychlorinated Biphenyl-impacted Soils Beneath the North and East Parking Lots at Heritage Square*, 6121 Hollis Street, Emeryville, California, March 1.

[38] Ibid.

consistent with this type of use. Upon submitting a soil remediation report in March 2004, CBS Corporation requested that the Water Board adopt "no further action" status for the site. The Water Board and Wareham Development, which currently owns the site, are negotiating the terms of a deed restriction that will restrict future site use to commercial/industrial uses.[39] Because the deed restriction has not been finalized and some residual PCB contamination remains at the site at depths of 4 feet or greater, the following two-part mitigation measure is recommended to reduce potential impacts associated with residual contaminated soil to a less-than-significant level.

Mitigation Measure HAZ-2a: Before issuing the grading or building permit for construction of the Heritage Square parking structure, the City shall confirm that the deed restriction allowing commercial development on the site has been prepared and agreed to by the property owner and the Water Board.

Mitigation Measure HAZ-2b: The project applicant shall submit final construction drawings that show maximum depths of excavation across the Heritage Square parking structure site that would be needed to accommodate the building's foundation. The City shall review the plans with respect to the residual concentrations in soil at the site as identified in the 2004 *Characterization and Remediation of Polychlorinated Biphenyl-impacted Soils Beneath the North and East Parking Lots at Heritage Square* prepared by SOMA Environmental Engineering. If excavation for the Heritage Square parking structure would extend into any areas of residual contamination then the applicant shall prepare a Site Management Plan and a Health and Safety Plan for excavation activities in areas where contaminants persist.

The Site Management Plan shall describe how contaminated materials will be excavated, handled, and segregated from the underlying soil, how contaminated materials will be disposed, and the maintenance requirements necessary to ensure that long-term soil management measures, such as capping of the soils, will remain effective during the site's use and occupancy period. The project applicant shall be responsible for ensuring that long-term soil management measures are implemented. The Site Management Plan shall describe soil confirmation sampling and groundwater sampling, if needed, to ensure that soils and groundwater remaining on site do not present an environmental or human health hazard. The site-specific Site Management Plan and the Health and Safety Plan shall be prepared in accordance with federal, State and local standards governing the remediation of soil and groundwater containing hazardous waste. The Health and Safety Plan shall describe air and dust monitoring procedures and corrective actions, as necessary, to ensure that workers and the public are not exposed to site-related contaminants in volatile air emissions or dust containing harmful concentrations of contaminants during construction.

The City shall verify that the Site Management Plan and Health and Safety Plan have been prepared and that the Site Management Plan has been conditionally approved with concurrence from the Water Board before issuing the grading or building permit.

[39] Mansour Sepehr, PhD, PE, Principal SOMA Environmental Engineering, 2009. Letter to Barbara Jakub, PG, Alameda County Environmental Health, April 10.

c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?* ***(Less-than-Significant Impact)***

The Pacific Rim International School is located approximately 1,500 feet southeast of the project site at 5521 Doyle Street; the Emeryville Child Development Center is located approximately 2,000 feet southeast of the project site at 1220 53rd Street. The proposed research and development uses at the project site would use small amounts of hazardous materials and would not emit or handle hazardous or acutely hazardous materials in quantities that would present a substantial hazard to students, teachers, or others present at the schools. Therefore, the impact would be less-than-significant.

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?* ***(Potentially Significant Unless Mitigation Incorporated)***

The project site was historically included on the hazardous materials/contaminated sites lists compiled pursuant to Government Code Section 65962.5 and the EmeryStation West building site is currently listed as a Voluntary Cleanup Site by the DTSC. Implementation of the project as proposed and the following mitigation measures would reduce the potential impact of known contamination at the site to a less-than-significant level.[40] [41]

Mitigation Measure HAZ-3: Implement Mitigation Measures HAZ-1, HAZ-2a and HAZ-2b.

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?* ***(No Impact)***

The project site is not located within an airport land use plan, or within 2 miles of a public or private airport. Therefore, implementation of the proposed project would not result in an airport-related safety hazard.

f) *For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?* ***(No Impact)***

The project site is not located within the vicinity of a private airstrip.

g) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?* ***(Less-than-Significant Impact)***

The Emeryville General Plan designates Interstates 80/580 (I-80/I-580) as "general evacuation routes" and Powell Street as a designated flood and earthquake evacuation route. San Pablo Avenue is also designated as an earthquake evacuation route. The proposed project would not restrict vehicular,

[40] California Environmental Protection Agency, 2009. *Cortese List*. Website: http://www.calepa.ca.gov/SiteCleanup/CorteseList/default.htm. August 12.

[41] EDR, 2009.

pedestrian, or bicycle access within or in the vicinity of the project site. The project's effects on traffic congestion and circulation are discussed in Section XV, Transportation/Circulation. Implementation of the proposed project would not conflict with any emergency evacuation plans.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? ***(No Impact)***

The project site is located within a completely urbanized portion of Emeryville that is not subject to wildland fires.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	❒	■	❒	❒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater Table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	❒	❒	■	❒
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?	❒	■	❒	❒
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?	❒	❒	■	❒
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	❒	■	❒	❒
f) Otherwise substantially degrade water quality?	❒	❒	❒	■

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	❒	❒	❒	■
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	❒	❒	❒	■
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding of as a result of the failure of a levee or dam?	❒	❒	❒	■
j) Inundation by seiche, tsunami, or mudflow?	❒	❒	❒	■

a) Violate any water quality standards or waste discharge requirements? ***(Potentially Significant Unless Mitigation Incorporated)***

The following section describes the agencies that regulate surface water and groundwater quality; existing storm water regulations; proposed storm water management features on the project site; and required mitigation measures to reduce the project's effects on water quality to a less-than-significant level.

Regulatory Agencies. Water quality in surface and groundwater bodies is regulated by the State and Regional Water Quality Control Boards. The project site is under the jurisdiction of the San Francisco Bay Water Board, which is responsible for implementation of State and federal water quality protection regulations. The Water Board is responsible for implementing the Water Quality Control Plan (Basin Plan),[42] a master policy document for managing water quality issues in the region. The Basin Plan establishes beneficial water uses for waterways and water bodies within the region.

Storm Water Regulations. Runoff water quality is regulated by the National Pollutant Discharge Elimination System (NPDES) Nonpoint Source Program (established through the Clean Water Act); the objective of the NPDES program is to control and reduce pollutants to water bodies from nonpoint discharges. Locally, the NPDES program is administered by the Water Board. The Water Board has conveyed responsibility for implementation of storm water regulations in the vicinity of the project site to the Alameda Countywide Clean Water Program (ACCWP). The ACCWP maintains compliance with the NPDES Permit and promotes storm water pollution prevention within that context. Compliance with the NPDES Permit is mandated by State and federal statutes and regulations.

Participating agencies must comply with the provisions of the County's NPDES permit by ensuring that new development and redevelopment projects mitigate water quality impacts to storm water runoff both during construction and operation periods. The permit held by the ACCWP is detailed in Water

[42] San Francisco Bay Regional Water Quality Control Board, 1995. *Water Quality Control Plan*. June 21.

Board Order R2-2003-0021 (NPDES Permit No. CAS0029831) and subsequent amendments. In February 2003, the Water Board revised Provision C.3 in the NPDES permit governing discharges from the municipal storm drain systems of cities and towns in the region. The C.3 requirements started in 2005. Subsequently, the Water Board identified areas with a high potential for erosion and in March 2007, issued additional requirements (a hydromodification standard) for some areas of Alameda County. Because streams and channels in Emeryville are tidally influenced and primarily receive deposits of sediment generated elsewhere, development within the City of Emeryville is not subject to the hydromodification standard.

New development and significant redevelopment projects that are subject to Provision C.3 of the County's NPDES permit are grouped into two categories based on project size. While all projects regardless of size are encouraged to consider incorporating appropriate source control and site design measures that minimize storm water pollutant discharges to the maximum extent practicable, new and redevelopment projects that do not fall into Group 1 or Group 2 are not subject to the requirements of Provision C.3. The general criteria for establishing whether a project is a Group 1 or Group 2 project is presented below (for a detailed definition, refer to the County's NPDES permit):

Group 1	New development and redevelopment projects that would create or replace more than 1 acre of impervious surface (e.g., roof area, streets, sidewalks, parking lots).
Group 2	New development and redevelopment projects that would create or replace more than 10,000 square feet of impervious surface. Projects consisting of one single-family home are excluded from Group 2.

The approximately 2.6-acre proposed project would be considered a Group 1 project and therefore would be required to fill out the City of Emeryville's Impervious Surface and Stormwater Treatment Measures Form and submit it to the Building Division at the point of building permit issuance.

On December 6, 2005, the Emeryville City Council adopted *Stormwater Guidelines for Green, Dense Redevelopment: Stormwater Quality Solutions for the City of Emeryville*. These guidelines outline ideas for meeting new storm water treatment requirements using site design, parking strategies, and storm water treatment measures to allow water to flow through plants and soil. Numeric requirements apply to development projects of 10,000 square feet or more as of August 15, 2006. The guidelines generally require vegetative storm water treatment measures, and apply city-wide.

A SWPPP has been prepared for the remediation phase of work and would be implemented as part of the RDIP. Implementation of the SWPPP contained in the RDIP would reduce the project's impact on water quality during the remediation period of construction to a less-than-significant level. Implementation of the following two-part mitigation measure would ensure the proper management of storm water during the post-remediation phase of construction and during project operation, and would reduce the project's impacts on water quality to a less-than-significant level:

> Mitigation Measure HYD-1a: The project applicant shall prepare a Storm Water Pollution Prevention Plan (SWPPP) for the post-remediation period of construction designed to reduce potential impacts to surface water quality. It is not required that the SWPPP be submitted to the Water Board, but must be maintained on site and made available to Water Board staff upon request. The SWPPP shall include specific and detailed Best Management Practices (BMPs)

designed to mitigate construction-related pollutants. At minimum, BMPs shall include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with storm water. The SWPPP shall specify properly designed centralized storage areas that keep these materials out of the rain. The SWPPP shall specify a monitoring program to be implemented by the construction site supervisor, and shall include both dry and wet weather inspections. The City shall verify that the SWPPP has been prepared before issuing the grading or building permit for the project.

Mitigation Measure HYD-1b: The project applicant shall prepare a Storm Water Management Plan that is consistent with the *Stormwater Guidelines for Green, Dense Redevelopment: Stormwater Quality Solutions for the City of Emeryville*. The City shall verify that the Storm Water Management Plan has been prepared before issuing the building permit for the project.

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

The project would not withdraw water from local groundwater or otherwise have direct impacts to groundwater supplies. The existing project site is almost entirely paved and the proposed project would increase the area of pervious surface. It would create new landscaped areas on three sides of the Heritage Square parking structure, at the southeast corner of the EmeryStation West building and at the reconfigured transit plaza. These areas would increase the percentage of the site available for water infiltration and potential groundwater recharge. The project would increase the percentage of pervious cover from the present 1 to 2 percent up to 8 to 10 percent. The proposed project would not result in a net deficit in aquifer volume or a lowering of the local groundwater level.

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?* ***(Potentially Significant Unless Mitigation Measure Incorporated)***

The nearest surface water to the project site is the San Francisco Bay, located approximately 1,500 to 1,800 feet west of the site. Surface flows are directed toward storm drains along adjoining streets. The estimated groundwater flow direction is to the west-southwest.[43]

Implementation of the proposed project would not alter the course of a stream or river or change the existing drainage pattern of the site; storm water would flow to the storm drain system located along adjoining streets. Therefore, runoff generated by the project during its operational phase would not cause substantial erosion or siltation on- or off-site. However, erosion could occur during the demolition and construction phase of the project. Implementation of the following mitigation measure would reduce the impacts associated with the drainage pattern and erosion to a less-than-significant level:

[43] EDR, 2009.

Mitigation Measure HYD-2: Implement Mitigation Measure GEO-2.

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? ***(Less-than-Significant Impact)***

Implementation of the proposed project would not alter the existing drainage pattern of the site or change the course of a stream or river; storm water would flow to the storm drain system located along adjoining streets. New landscaped areas would be created on three sides of the Heritage Square parking structure, at the southeast corner of the EmeryStation West building and at the reconfigured transit plaza, which would increase the percentage of the site available for water infiltration. Increased water infiltration would reduce runoff volumes and the potential for on- or off-site flooding. Therefore, the proposed project would not increase storm water runoff, or otherwise result in localized flooding.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? ***(Potentially Significant Unless Mitigation Incorporated)***

Landscaping would be installed on the project site in areas that are currently paved, thus increasing the area available for water to infiltrate the ground surface. Increased water infiltration would reduce storm water runoff volumes. Because the project would generate less storm water runoff, it would not exceed the capacity of existing or planned storm water drainage systems, which are currently adequate.

Polluted runoff could be generated during the project construction period due to erosion from soil stockpiles or ground disturbance, or from oil and fuel leaks. Implementation of the following mitigation measure would ensure that the project would not substantially reduce the quality of runoff from the site:

Mitigation Measure HYD-3: Implement Mitigation Measures HYD-1a and HYD-1b.

f) Otherwise substantially degrade water quality? ***(No Impact)***

No other elements of the project would generate contaminants that would cause substantial degradation of 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? ***(No Impact)***

The entire City of Emeryville is designated as Zone C (i.e., area of minimal flooding) by the National Flood Insurance Program. The City does not have a flood hazard boundary map The project site is not located within the 100-year flood hazard zone, as mapped by the Federal Emergency Management Agency (FEMA),[44] and therefore the project site would not be susceptible to storm-related flooding.

[44] Federal Emergency Management Agency (FEMA)/Environmental Systems Research Institute, 2008. U.S. Flood Hazard Maps: Website: www.esri.com/hazards/. October 8.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? ***(No Impact)***

See Section VIII.g.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding of as a result of the failure of a levee or dam? ***(No Impact)***

The project site is located outside of the inundation area for Lake Temescal, which would pose the only significant threat of dam failure in the vicinity of the project site.[45] Therefore, the project site would not be exposed to hazards associated with failure of levees or dams.

j) Inundation by seiche, tsunami, or mudflow? ***(No Impact)***

The project site, which is located between 1,500 and 1,800 feet from San Francisco Bay at approximately 15 feet National Geodetic Vertical Datum (NGVD), is outside the area of potential tsunami inundation.[46] In addition, the site is not located in an area subject to inundation by seiches or mudflows.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	❒	❒	❒	■
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 purpose of avoiding or mitigating an environmental effect?	❒	❒	■	❒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	❒	❒	❒	■

a) Physically divide an established community? ***(No Impact)***

The physical division of an established community would typically involve the construction of large features (such as freeways) that then function as physical or psychological barriers between communities, or the removal of roads (e.g., through the assembly of numerous parcels and the creation of "superblocks") such that access from one neighborhood to another is diminished.

[45] Emeryville, City of, 2009. *Emeryville General Plan*, October.

[46] Ibid.

The project applicant proposes to develop the following buildings on two existing surface parking lots: 1) the EmeryStation West building, consisting of a seven-story laboratory/office tower constructed over a two-level "podium" parking structure; and 2) a Heritage Square parking structure that would provide seven levels of parking. The project would not change access patterns around the project site or otherwise restrict traffic flow on Horton Street, 62nd Street, 59th Street, or other streets in the vicinity of the project site. In addition, ease of pedestrian movement in the vicinity of the site would remain unchanged under project conditions, as sidewalks would continue to be provided along surrounding streets. In addition, the transit plaza on the south side of the EmeryStation West site would enhance the local pedestrian environment, and maintain pedestrian access to the station. Therefore, the proposed project would not divide an established community.

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 purpose of avoiding or mitigating an environmental effect?* ***(Less-than-Significant Impact)***

The site for the EmeryStation West building is designated "Mixed Use with Non-Residential" in the City of Emeryville General Plan.[47] The General Plan states that Mixed Use with Non-Residential contains "one or more of a variety of nonresidential uses, including but not limited to offices, retail and hotels. On larger sites, a single use may be permitted." The maximum Floor Area Ratio (FAR) for the EmeryStation West site is 3.0/4.0, which can be increased to 4.0/6.0 for "transit center." "Transit Center" is defined in the General Plan as having bus bays, wide sidewalks, and improved pedestrian circulation and activation, plus some of the following:

- Car share pod
- Public parking for Amtrak
- Connection across the tracks
- Bicycle station/storage/parking
- Passenger pick-up and drop-off
- Taxi stands
- Recharging stations for electric cars
- Alternative transit/transportation station

The maximum building height for this site is 75 feet/100 feet, which can be increased to 100+ feet for "transit center." The General Plan states that "high rises over 100 feet are required to have exemplary design, cause minimal impacts (e.g., wind, shadows) and provide community amenities."[48] The proposed EmeryStation West building, which would contain laboratory/office uses, a parking structure, ground-floor retail, and a new transit plaza for the adjacent Amtrak train station, would be consistent with this land use designation.

[47] Emeryville, City of, 2009. *Emeryville General Plan*. October.

[48] Ibid.

The site for the Heritage Square parking structure is designated "Office/Technology" in the General Plan. The General Plan states that Office/Technology contains "administrative, financial, business, professional, medical and public offices, research and development, biotechnology, and media production facilities." The maximum FAR for the site is 2.0/3.0 and the maximum building height for development on the site is between 75 and 100 feet.[49] The proposed parking structure that provides parking for office and laboratory uses at the EmeryStation West building would be considered accessory to the main uses and would generally be consistent with the Office/Technology land use designation.

The project site is part of the North Hollis Overlay (N-H) zoning district as identified in the City of Emeryville Municipal Code. The purpose of the N-H overlay district is to apply the North Hollis Area Urban Design program, including the Design Guidelines, to all properties within the district. The off-street parking requirement in the Interim Zoning Regulation is 1.5 spaces per every 1,000 square feet. The parking provisions in the two buildings would be consistent with this requirement.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan? ***(No Impact)***

The project site is not located within an area that is included in a habitat conservation plan or natural community conservation plan. Therefore, the proposed project would not conflict with any of these plans.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
X. 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?	❒	❒	❒	■
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?	❒	❒	❒	■

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State? ***(No Impact)***

No known mineral resources are present at the project site. Implementation of the proposed project would not result in the loss of availability of a known mineral resource.

[49] Ibid.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? ***(No Impact)***

The project site is not designated by a general plan, specific plan, or other land use plans as a locally-important mineral recovery site.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. 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?	❒	■	❒	❒
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	❒	■	❒	❒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	❒	❒	■	❒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	❒	■	❒	❒
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?	❒	❒	❒	■
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?	❒	❒	❒	■

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? ***(Potentially Significant Unless Mitigation Incorporated)***

The City of Emeryville sets noise standards in the Emeryville General Plan and noise ordinance of the Municipal Code. The City identifies exterior noise thresholds up to 70 dBA L_{dn} as "normally acceptable" for office and commercial land uses, while exterior noise levels between 70 and 75 dBA Ldn are "conditionally acceptable."

The City of Emeryville regulates construction noise, which includes noise generated during remediation activities, in the City's Municipal Code Section 5-13.05, Construction Noise Limits ordinance. This ordinance limits construction and demolition activities to 7:00 a.m. to 6:00 p.m. on weekdays; pile driving and extremely loud activities are limited to weekdays from 8:00 a.m. to 5:00 p.m. Construction and demolition activities are not permitted on weekends. Zoning Ordinance Section 9.4.59 states that noise at lot lines shall not exceed the maximum permitted sound level as set forth in the Noise Standards Table adopted by the City Council.

Ambient Noise Environment. The primary noise source in the vicinity of the project site is traffic on the surrounding roadways and noise from the Union Pacific Railroad that lies approximately 60 feet west of the EmeryStation West building and about 300 feet from the Heritage Square parking structure. Freight and Amtrak trains on the UPRR tracks bordering the site on the west operate as line-haul vehicles, with speeds ranging from 15 to 20 miles per hour. Noise from the freight trains on the railroad tracks can reach 90 dBA at 100 feet (without horn). Sounding of train horns could generate short-term noise levels of up to 95 dBA at 100 feet from the tracks. These intermittent noise measurements reflect the peak noise levels that occur when trains pass the site. Long-term (24-hour) noise measurements taken in 2005 in Emeryville show that noise contours for the averaged day and night ambient noise levels from the railroad tracks do not exceed 70 dBA L_{dn} on the project site.[50]

Short-Term Noise Impacts. Two types of short-term noise impacts would occur during remediation and project construction. The first type would result from the increase in traffic flow on local streets, associated with the transport of workers, equipment, and materials to and from the project site. Heavy equipment for remediation and construction is expected to be moved to the site and remain for the duration of remediation/construction. There would be short-term intermittent high noise levels associated with trucks arriving at and departing from the project site, especially during the remediation phase.

The second type of short-term noise impact is related to the noise generated by heavy equipment operating on the project site. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 6 lists typical construction equipment noise levels recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor.

[50] Emeryville, City of, 2005. *Opportunities and Challenges Report, Chapter 9: Environmental Resources and Challenges*, Figure 9-10. October.

Remediation and construction activities at the project site are expected to require the use of earthmovers such as bulldozers and scrapers, loaders and graders, water trucks, and pickup trucks. As shown in Table 6, the typical maximum noise level generated by each bulldozer on the project site is assumed to be 88 dBA L_{max} at 50 feet from the operating earthmover. The maximum noise level generated by hydraulic backhoes is approximately 86 dBA L_{max} at 50 feet. The maximum noise level generated by water and other trucks is approximately 86 dBA L_{max} at 50 feet from these vehicles. The use of pile drivers is not expected during construction of this project.

Table 6: Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Range of Maximum Sound Levels (dBA at 50 feet)	Suggested Maximum Sound Levels for Analysis (dBA at 50 feet)
Pile Drivers	81 to 96	93
Rock Drills	83 to 99	96
Jackhammers	75 to 85	82
Pneumatic Tools	78 to 88	85
Pumps	74 to 84	80
Scrapers	83 to 91	87
Haul Trucks	83 to 94	88
Cranes	79 to 86	82
Portable Generators	71 to 87	80
Rollers	75 to 82	80
Dozers	85 to 90	88
Tractors	77 to 82	80
Front-End Loaders	77 to 90	86
Hydraulic Backhoe	81 to 90	86
Hydraulic Excavators	81 to 90	86
Graders	79 to 89	86
Air Compressors	76 to 89	86
Trucks	81 to 87	86

Source: *Bolt, Beranek & Newman, 1987.* Noise Control for Buildings and Manufacturing Plants.

Each doubling of the sound sources with equal strength would increase the noise level by 3 dBA. Assuming each piece of construction equipment operates at some distance apart from the other equipment, the worst-case combined noise level at the nearest uses to the site during this phase of construction would be 91 dBA L_{max} at 50 feet from the operating equipment. The nearest existing sensitive receivers in the vicinity of the project site include the residences located approximately 300 feet south of the project site. Due to the short-term nature of this construction-related impact, the City would consider it a less-than-significant impact if each of the noise-reducing measures, described under Mitigation Measure NOISE-1, is implemented.

Mitigation Measure NOISE-1: The project contractor shall comply with the following measures:

Hours. Unless the City Council grants a waiver allowing different remediation and construction hours pursuant to Section 5-13.06 of the Emeryville Municipal Code, remediation and construction hours shall be limited to 7:00 a.m. to 6:00 p.m., Monday through Friday. In an urgent situation, the City Manager, Planning and Building Director, or Public Works Director may approve weekend or night work pursuant to Section 5-13.05(e) of the Emeryville Municipal Code.

Equipment. All heavy remediation and construction equipment used on the project shall be maintained in good operating condition, with all internal combustion, engine-driven equipment equipped with intake and exhaust mufflers that are in good condition as deemed to be practically feasible. All non-impact tools shall meet a maximum noise level of no more than 85 dB when measured at a distance of 50 feet. All stationary noise-generating equipment shall be located as far away as possible from neighboring property lines, especially residential uses.

Noise Disturbance Coordinator. The applicant shall designate a "Noise Disturbance Coordinator" who shall be responsible for responding to any complaints about remediation or

construction noise. The Noise Disturbance Coordinator shall determine the cause of the noise complaint and shall require that reasonable measures warranted to correct the problem be implemented. The applicant shall conspicuously post a telephone number for the Noise Disturbance Coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule.

Long-Term Noise Impacts. As outlined in the ambient noise environment discussion, railroad noise in the project vicinity falls within the acceptable range for new office development. Therefore, this noise source would be considered less than significant and is not further analyzed. Implementation of the proposed project would result in an increase in vehicle trips in the vicinity of the project site and potential increases in traffic noise along access roads leading to the project site. Tables 7 and 8 show the existing and existing plus project traffic noise levels for roadway segments in the project site vicinity for the two traffic circulation options proposed for entering and exiting the Heritage Square parking structure as presented in Section XV, Transportation/Traffic. Tables 9 and 10 show the cumulative and cumulative plus project traffic noise levels. As shown in the with-project tables, the project would not generate enough traffic to create a perceptible change (at least 3 dBA) in traffic noise in the vicinity of the project site. A substantial long-term increase in ambient noise levels is not expected as a result of project implementation.

As shown in Table 10, cumulative plus project traffic noise levels could reach up to 65.3 dBA L_{dn} along roadway segments adjacent to the project site. These roadway noise levels are within the City's acceptable noise environment standards for new office development and therefore traffic noise impacts would be less than significant.

Table 7: Existing (2009) Traffic Noise Levels

Roadway Segment	ADT[a]	Centerline to 70 L_{dn} (feet)	Centerline to 65 L_{dn} (feet)	Centerline to 60 L_{dn} (feet)	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane[b]
62nd Street - Horton Street to Hollis Street	2,000	< 50	< 50	< 50	56.8
Horton Street - 62nd Street to 59th Street	2,300	< 50	< 50	< 50	57.4
Hollis Street - 62nd Street to 59th Street	8,700	< 50	< 50	90	63.1
59th Street - Horton Street to Hollis Street	3,600	< 50	< 50	50	59.3

[a] Average Daily Trips.
[b] Traffic noise within 50 feet of roadway centerline requires site specific analysis.
Source: LSA Associates, Inc., August 2009.

Table 8: Existing Plus Project Traffic Noise Levels

Roadway Segment	ADT [a]	Centerline to 70 L_{dn} (feet)	Centerline to 65 L_{dn} (feet)	Centerline to 60 L_{dn} (feet)	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane	Increase from Existing Conditions
Existing Plus Project Option 1						
62nd Street - Horton Street to Hollis Street	2,600	< 50	< 50	< 50	57.9	1.1
Horton Street - 62nd Street to 59th Street	2,900	< 50	< 50	< 50	58.4	1.0
Hollis Street - 62nd Street to 59th Street	9,700	< 50	< 50	97	63.6	0.5
59th Street - Horton Street to Hollis Street	4,600	< 50	< 50	59	60.4	1.1
Existing Plus Project Option 2						
62nd Street - Horton Street to Hollis Street	2,600	< 50	< 50	< 50	57.9	1.1
Horton Street - 62nd Street to 59th Street	2,800	< 50	< 50	< 50	58.2	0.8
Hollis Street - 62nd Street to 59th Street	10,200	< 50	< 50	100	63.8	0.7
59th Street - Horton Street to Hollis Street	4,300	< 50	< 50	57	60.1	0.8

[a] Average Daily Trips.
[b] Traffic noise within 50 feet of roadway centerline requires site specific analysis.
Source: LSA Associates, Inc., August 2009.

Stationary Noise Impacts. Implementation of the proposed project would result in an increase in ambient noise levels in the vicinity of the project site with development of the office component of the project. This component of the project would include the installation and use of heating, air conditioning, and ventilation (HVAC) systems including compressors and ventilation or cooling fans. The nearest sensitive receptors are the residents of the Terrace condominium development located more than 300 feet from the project site. The noise environment at these residences is dominated by traffic noise on Powell Street and train noise from the adjacent tracks. Given the existing high ambient noise levels and distance attenuation of noise, the project's HVAC systems would not be a significant noise source for these residential receptors. Additionally, any equipment used on the project site would be subject to the City's Noise Ordinance which prohibits commercial noise sources from disturbing or causing discomfort to any reasonable person of normal sensitivity located at the property line of the property from which such noises are emanating before 7:00 a.m. or after 9:00 p.m. on a weekday (Monday through Friday) or before 8:00 a.m. or after 9:00 p.m. on Saturday or Sunday. Therefore, stationary noise sources associated with the proposed project would be less than significant.

Table 9: Cumulative No Project Traffic Noise Levels

Roadway Segment	ADT [a]	Centerline to 70 L_{dn} (feet)	Centerline to 65 L_{dn} (feet)	Centerline to 60 L_{dn} (feet)	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane [b]
62nd Street - Horton Street to Hollis Street	2,700	< 50	< 50	< 50	58.1
Horton Street - 62nd Street to 59th Street	3,200	< 50	< 50	< 50	58.8
Hollis Street - 62nd Street to 59th Street	12,700	< 50	54	116	64.8
59th Street - Horton Street to Hollis Street	5,200	< 50	< 50	64	60.9

[a] Average Daily Trips.
[b] Traffic noise within 50 feet of roadway centerline requires site specific analysis.
Source: LSA Associates, Inc., August 2009.

Table 10: Cumulative Plus Project Traffic Noise Levels

Roadway Segment	ADT [a]	Centerline to 70 L_{dn} (feet)	Centerline to 65 L_{dn} (feet)	Centerline to 60 L_{dn} (feet)	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane	Increase from Existing Conditions
Cumulative Plus Project (Option 1)						
62nd Street - Horton Street to Hollis Street	3,300	< 50	< 50	< 50	58.9	0.8
Horton Street - 62nd Street to 59th Street	2,800	< 50	< 50	52	59.5	0.7
Hollis Street - 62nd Street to 59th Street	13,800	< 50	57	123	65.1	0.3
59th Street - Horton Street to Hollis Street	6,200	< 50	< 50	72	61.7	0.8
Cumulative Plus Project (Option 2)						
62nd Street - Horton Street to Hollis Street	3,300	< 50	< 50	< 50	58.9	0.8
Horton Street - 62nd Street to 59th Street	3,800	< 50	< 50	52	59.5	0.7
Hollis Street - 62nd Street to 59th Street	14,300	< 50	59	126	65.3	0.5
59th Street - Horton Street to Hollis Street	5,900	< 50	< 50	70	61.5	0.6

[a] Average Daily Trips.
[b] Traffic noise within 50 feet of roadway centerline requires site specific analysis.
Source: LSA Associates, Inc., August 2009.

b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels? ***(Potentially Significant Unless Mitigation Incorporated)***

Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings. As the vibration propagates from the foundation throughout the remainder of the building, the vibration of floors and walls may cause perceptible vibration from the rattling of windows or a rumbling noise. The rumbling sound caused by the vibration of room surfaces is called ground-borne noise. When assessing annoyance from ground-borne noise, vibration is typically expressed as root mean square (rms) velocity in units of decibels of 1 micro-inch per second. To distinguish vibration levels from noise levels, the unit is written as "VdB." Ground-borne vibration is almost never annoying to people who are outdoors. Although the motion of the ground may be perceived, without the effects associated with the shaking of the building, the motion does not provoke the same adverse human reaction.

Human perception of vibration generally starts at levels as low as 67 VdB and sometimes lower. Annoyance due to vibration in residential settings starts at approximately 70 VdB. For office buildings, the Federal Transit Administration (FTA) has established a ground-borne vibration significant impact threshold of 75 VdB for frequent events[51] and 80 VdB for infrequent events.[52] Most rapid transit operations fall into the frequent event category. However, when long freight trains are involved, the FTA guidelines recommend the frequent event criterion of 75 VdB due to the duration of the freight car vibration, even though the number of daily events may be significantly less than the 70 events that define "frequent."

In extreme cases, excessive ground vibration has the potential to cause structural damage to buildings. When assessing the potential for building damage, vibration levels are expressed as peak particle velocity (PPV) in units of inches per second. Common sources of ground-borne vibration include trains and construction activities such as blasting, pile driving and operating heavy earthmoving equipment.

Based on the vibration measurements taken at the railroad tracks near the project site, vibration levels would be below 0.10 in/sec PPV and, therefore, would have virtually no risk of architectural damage to normal buildings. As a result, exterior building mitigation is not required.

Vibration levels inside proposed buildings would depend on the vibration levels in the ground and building construction. Based on the methodology for a "general vibration assessment" in the FTA guidance manual, vibration levels inside buildings are typically less than the vibration levels in the ground.

To determine vibration levels in structures, FTA methods take into account how the building is tied to the ground. Large masonry structures have natural frequencies in the range of 20 to 30 Hz. Spread footings, including spread footings on widely-spaced columns (which would be used in the construction of the proposed parking garage) reduce vibration from the ground to the upper level of the building podium by 13 dB. However, depending on construction materials/methods, vibration may increase by 6 dB due to floor resonances. Vibration is also reduced as it travels from the ground up through the building at the rate of 2 dB for each floor. Therefore, vibration levels on the first floor of the proposed office building structures would be 15 dB lower than levels measured on the ground surface of the project site.

Based on prior measurements conducted by LSA at these tracks, vibration from freight trains at the project site would be from 76 VdB to 90 VdB. As described above, vibration would be reduced due the widely spaced columns construction planned for the podium-level parking structure. Thus, the vibration levels would be well within the 75 VdB limits of the FTA guidelines for commercial uses exposed to frequent groundborne vibration events and no significant impact would result.

No permanent noise sources that would expose persons to ground borne vibration or ground borne noise would be created by the project. Remediation and construction activities associated with

[51] The FTA defines "Frequent Events" as more than 70 vibration events per day and "Infrequent Events" as fewer than 70 vibration events per day.

[52] Federal Transit Administration, U.S. Department of Transportation, 1995. *Transit Noise and Vibration Impact Assessment.*

implementation of the proposed project could temporarily expose persons in the vicinity of the project site to excessive ground borne vibration or ground borne noise levels. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

Mitigation Measure NOISE-2: Implement Mitigation Measure NOISE-1.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? ***(Less-than-Significant Impact)***

The proposed long-term use of this project site would be parking and office space in addition to some retail uses. The project would not generate enough traffic to create a perceptible change (at least 3 dBA) in traffic noise in the vicinity of the project site. No substantial long-term increase in ambient noise levels is expected as a result of project implementation.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? ***(Potentially Significant Unless Mitigation Incorporated)***

Project-related remediation and construction activities could result in high intermittent noise up to 75 dBA L_{max} at nearby residences. This noise would result from the temporary use of construction equipment. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

Mitigation Measure NOISE-3: Implement Mitigation Measure NOISE-1.

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? ***(No Impact)***

The project site is located approximately 8 miles north of Oakland International Airport (the nearest airport) and 15 miles northeast of San Francisco International Airport. Due to the distance from these two airports and the orientation of the runways and flight patterns, the project site does not lie within the 55 dBA CNEL noise contours of any airport. Therefore, the impact of noise levels from aviation sources would be less than significant.

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? ***(No Impact)***

The project site is not located in the vicinity of a private airstrip.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. 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)?	❒	❒	■	❒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	❒	❒	❒	■
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	❒	❒	❒	■

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)? ***(Less-than-Significant Impact)***

The project does not propose any housing units on the project site, and implementation of the proposed project would not directly induce population growth in Emeryville. However, the project could indirectly induce some population growth through the creation of new jobs on the project site. These new jobs could cause new employees to relocate to Emeryville. Employment generation for the proposed project was developed using empirical data collected as part of a comprehensive study prepared for the Southern California Association of Governments, which estimates employment densities for various land uses.[53] Based on an average employee generation rate of 1 employee per every 311 square feet for "High-Rise Office," the project would generate approximately 655 employees.[54]

For the purposes of this analysis (i.e., in order to be highly conservative so as not to underestimate the potential impacts) it is assumed that the 655 employees who would work at the EmeryStation West building would relocate to the inner east San Francisco Bay area, consisting of Emeryville, Oakland, and Berkeley. This population growth would not be considered substantial in the context of the

[53] The Natelson Company, Inc., 2001. *Employment Density Study*. October 31. Although employee-per-square-foot ratios are very common inputs for regional planning and economic analyses, relatively little formal research has been done to compile such statistics. This study is intended for use in estimating employment impacts from certain types of development projects and for projecting the demand for new office and industrial space. The study derives "building area per employee" factors for ten major land use categories. Although the land use categories used in the study do not directly correspond to the land uses described in this environmental document, the study is a useful tool in developing assumptions for employee generation that would occur with implementation of the proposed project.

[54] This calculation is based upon: 200,000 square feet of square feet of laboratory, research and development, and/or office uses within the EmeryStation West building; 2,235 square feet of ground floor space for transit, retail and/or office uses within the EmeryStation West building; and 1,605 square feet of f ground floor space for retail, office, office services or other uses that relate to the Post Office use across the street, within the Heritage Square parking structure.

combined estimated 2005 population of these three cities (523,400). Between 2005 and 2035, the total population of Emeryville, Oakland, and Berkeley is projected to increase by 145,200, and the proposed project would compromise approximately half of 1 percent of that growth. As such, the direct employment growth and potential indirect residential growth is consistent with the growth projections in Emeryville and surrounding region over the long-term.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? ***(No Impact)***

The project site does not currently contain residential units. Therefore, the project would not displace housing.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? ***(No Impact)***

The project site does not contain a residential population. Therefore, implementation of the project would not displace people.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. PUBLIC SERVICES.				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	❒	❒	■	❒
Fire protection?	❒	❒	■	❒
Police protection?	❒	❒	■	❒
Schools?	❒	❒	■	❒
Parks?	❒	❒	■	❒
Other public facilities?	❒	❒	■	❒

a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection, police protection, schools, parks, other public facilities?* ***(Less-than-Significant Impact)***

The following section includes a discussion of the project's potential effects on: fire service; police service; schools; and parks and other public facilities. Impacts to public services would occur if the project were to cause an increase in demand for services such that new or expanded facilities would be required, and these new facilities would themselves cause environmental impacts.

Fire. The Emeryville Fire Department would be the primary responder to emergency calls for fire and ambulance service on the project site. The proposed project would not increase the local residential population on the site; however, the project would introduce new employees and new buildings to the site, which would incrementally increase demand for emergency service. In addition, the Fire Department has identified that they may require some specialized equipment be installed in the building prior to occupancy and that the project may need to pay its fair share of specialized equipment that would be needed to provide emergency service to the buildings. These needs would be identified at the time of project approval and included as conditions of approval.[55] However, increased demand would not require the construction of new fire fighting facilities.

Police. The Emeryville Police Department would be the primary responder to emergency calls within the project site. The City of Emeryville Police Department currently responds to non-emergency calls within 6 minutes; average response to emergency calls is 2 minutes. Implementation of the project would incrementally increase demand for police services, particularly to respond to incidents of theft. According to the Police Department, the proposed project, in combination with other planned projects in the area, could result in the need for one additional traffic/patrol vehicle equipped with a license plate reader and a mobile digital system to assist the Police Department in policing the project site.[56] However, the addition of these personnel would not require the alteration of existing police facilities. Therefore, the project would not result in an adverse environmental impact related to demand for police services.

Schools. Public schools in Emeryville are run by the Emery Unified School District. The district had a total enrollment of 783 students in the 2008/2009 school year.[57] Since implementation of the proposed project would not result in any new housing units, the project would not directly increase the population of Emeryville or generate additional school-aged children. Therefore, the project would not result in an adverse effect on school facilities.

[55] Warren, George, Deputy Fire Marshall, and Stephen Cutright, Fire Chief, 2009. Emeryville Fire Department. Written communication with LSA Associates, Inc. via project planner, Miroo Desai, September.

[56] Quan, Jeannie, 2009. Commander, Field Services Division, Emeryville Police Department. Written communication with LSA Associates, Inc. August 25.

[57] California Department of Education, 2009. Dataquest. Website: dq.cde.ca.gov/dataquest/ Accessed August 5.

Parks. Parks in the vicinity of the project site include the following: Christie Park on Christie Street (directly west of Emeryville Marketplace, across the railroad tracks to the west of the site); Doyle Hollis Park at the corner of Hollis; 61st Street (one block east of the site); Stanford Avenue Park, located at the corner of Stanford Avenue and Doyle Street; the Greenway on Doyle Street (one block east of the site). Employees who would work at EmeryStation West building would likely use these parks, along with the on-site common landscaped areas that would be provided as part of the proposed project. In addition, employees could use portions of the San Francisco Bay Trail and Eastshore State Park, which extends from Oakland to Richmond, and regional parks in Oakland and Berkeley.

Implementation of the project would incrementally increase the use of these parks. However, since the employees would generally use the facilities on a day-use basis, for example as a place to eat their lunch, or walk or rest during breaks, this potential increase in use is not expected to adversely affect the physical conditions of local and regional open space areas, or require the provision of new park facilities. In addition, use of public neighborhood and regional parks by occupants of the project would likely be reduced due to the provision of the common open space areas within the project site. Therefore, the project would not result in adverse impacts to parks.

Other Public Facilities. Implementation of the project would not directly increase demand for other public services, including libraries, community centers, and public health care facilities. The increased indirect residential population that would result from the project is not expected to result in substantially increased usage of these facilities, such that new facilities would be needed to maintain service standards.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. 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?	❒	❒	■	❒
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?	❒	❒	■	❒

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? ***(Less-than-Significant Impact)***

As previously discussed, the proposed project does not include residential units and it would not directly increase the Emeryville population. New employees would use local parks and community facilities in Emeryville, in addition to regional recreational facilities such as the San Francisco Bay Trail, regional parks in the Berkeley/Oakland Hills, and Eastshore State Park. Since these employees would not necessarily live in Emeryville, the slight increase in demand resulting from the project

would not result in a substantial increase in use of these facilities. In addition, it is likely that employees of the project site would primarily utilize the new on-site common landscaped areas created by the project because of their proximity to the workplace. As such, the marginal increase in use is not expected to result in substantial physical deterioration of local parks, trails, and community centers.

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? ***(Less-than-Significant Impact)***

The proposed project would not include the construction of any recreational facilities.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. 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)?	❒	■	❒	❒
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency or designated roads or highways?	❒	❒	■	❒
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?	❒	❒	❒	■
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	❒	❒	■	❒
e) Result in inadequate emergency access?	❒	❒	■	❒
f) Result in inadequate parking capacity?	❒	❒	■	❒
g) Conflict with adopted polices, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	❒	❒	■	❒

On October 13, 2009, the City of Emeryville adopted a new General Plan. The new General Plan states that an efficient multi-modal transportation plan, coupled with wise land use planning, is essential to improving quality of life, supporting economic vitality, and reducing greenhouse gas emissions. The General Plan's Transportation Element seeks to create a well-connected transportation network that accommodates cars, public transit, walking, and biking.

To further the goal of optimizing travel by all modes, the General Plan incorporates the concept of "Complete Streets." Complete Streets are designed and operated to enable safe, attractive and comfortable access and travel for all users. Pedestrians, bicyclists, motorists and public transit users of all ages and abilities are able to safely and comfortably move along and across a complete street. Complete Streets also create a sense of place and improve social interaction, while generally improving the values of adjacent property. The Governor signed into law the California Complete Streets Act of 2008 (AB 1358) in September 2008, requiring that General Plans develop a plan for a multi-modal transportation system.

As such, the General Plan acknowledges that some rethinking of past policies that emphasized automobile circulation and prioritized motor vehicle improvements is needed. Because automobile travel has been the dominant form of transportation, "Level of Service" (LOS) has traditionally been measured for vehicle drivers, with minimal regard to bicycle, pedestrian, and transit users. This bias unintentionally but inherently ignores overall mobility and conditions for non-auto road users and perpetuates a system that focuses on expanding vehicle capacity, which can reduce the quality of service for pedestrians and bicyclists. Specifically, General Plan Policy T-P-3 states:

> *A "Quality of Service" standard that seeks to optimize travel by all transportation modes shall be developed and used to measure transportation performance. The City does not recognize "Level of Service" (LOS) as a valid measure of overall transportation operations, and sets no maximum or minimum acceptable LOS levels, with the exception of streets that are part of the regional Congestion Management Agency network.(These streets may change, but as of 2008 include San Pablo Avenue, Frontage Road, and Powell and Adeline Streets). LOS shall not be used to measure transportation performance in environmental review documents or for any other purpose unless it is mandated by another agency over which the City has no jurisdiction (such as Caltrans, Berkeley, Oakland, and the Congestion Management Agency), and then it shall only be used for the purposes mandated by that agency.*

Emeryville, like most if not all cities in California, has historically used LOS as a measure of whether transportation impacts are significant under CEQA. To reduce this historic bias, General Plan Policy T-P-3 mandates eliminating the traditional LOS methodology and replacing it with an alternative "Quality of Service" (QOS) standard that optimizes travel by all modes of transportation, not just vehicle travel. Emeryville has not yet developed a QOS methodology. Nevertheless, the analysis that follows considers multi-modal transportation effects in determining whether transportation impacts would be significant. For roadways and intersections within the Alameda County Congestion Management Agency (ACCMA) network and/or under the jurisdiction of others (specifically, the California Department of Transportation [Caltrans]), LOS is considered when determining the level of impact.

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)? ***(Potentially Significant unless Mitigation Incorporated)***

The project applicant is proposing to construct two buildings – an office tower and an associated podium-level parking structure to be known as the EmeryStation West building and a parking structure at Heritage Square located to the east across Horton Street. The EmeryStation West building would include the majority of the project land uses and approximately 148 parking spaces. The project land uses would be primarily office, with a small amount of ticket buying, security and information service land uses provided on the ground floor. This building would be located on the west side of Horton Street, immediately north of 59th Street. The building would replace an existing surface parking lot with capacity of approximately 215 spaces. Vehicular site access to the parking garage would be provided via a driveway which would connect to the external road network as the western leg of the intersection of Horton Street/59th Street. Some space within the laboratory/office tower might be used for research activities, which previous studies in Emeryville have shown generate fewer vehicle trips and create less parking demand than office use. The office use is applied to the traffic and parking analyses in order to provide an upper estimate of potential project impacts.

Table 11: Project Land Use Summary

Land Use	Unit	Amount
EmeryStation West Building		
Office	SF	219,622
Ticket Buying, Security and Information	SF	2,367
Outdoor Open Space Sitting Area	SF	15,642
Ground Floor Lobby	SF	3,200
Heritage Square Parking Structure		
Retail	SF	1,605

SF = Square Feet
Source: LSA Associates Inc, 2009.

The Heritage Square parking structure would include a total of approximately 599 parking spaces and a small amount of ground level retail space. This parking structure would be located on the east side of Horton Street, immediately south of 62nd Street. The parking structure would replace an existing surface parking lot with capacity of approximately 170 spaces. Two potential vehicular site access options to this site will be discussed and evaluated in this section. The first option is to provide vehicular entry from Horton Street and vehicular exit onto 62nd Street. The second option is to provide a right-in and right-out only access on 62nd Street.

Table 12: Project Parking Summary

Parking		Unit	Amount
EmeryStation West Building			
Existing	Amtrak	spaces	215
Proposed	Amtrak	spaces	125
	Project	spaces	23
Heritage Square Parking Structure			
Existing	Private	spaces	170
Proposed	Project	spaces	599

Source: LSA Associates Inc, 2009.

The project land use program is summarized in Table 11. The existing parking being replaced and the new parking proposed at each of the project site parcels is summarized in Table 12. The project would replace (and provide a net increase to) the existing parking at each site. Approximately 622 parking spaces in total would be provided for the new project land uses.

Existing Roadway Network. The regional and local roadway network around the project site is discussed below. The location of the two project parcels and the 18 study intersections which have been evaluated are shown in Figure 18. Impacts to these study intersections are analyzed in this section. Impacts to roadway segments that are designated as part of the ACCMA's Congestion Management Plan (CMP) and Metropolitan Transportation System (MTS) roadway networks are analyzed in Section XV.b.

Regional Access. A brief description of the regional roadway network serving the project site is provided below. The traffic volumes presented are from the *Caltrans Traffic Volumes on the State Highway System, 2006 reference.*

- ***Interstate 80 (I-80)*** is a regional freeway extending west to San Francisco via the San Francisco-Oakland Bay Bridge, and east through Berkeley, Sacramento and into Nevada. Four to five lanes are generally provided in each direction on this freeway west of the project site. Access to and from I-80 from the project site is provided by on- and off-ramps at Powell Street, with average daily traffic just south of the Powell Street ramps reaching 294,000 vehicles per day.
- ***Interstate 580 (I-580)*** is a regional freeway located west of the project site, stretching from U.S. 101 in Marin County to Interstate 5 (I-5) south of Tracy. I-580 joins I-80 just south of the project site, splitting off further north near Richmond. Access to and from I-80/I-580 is provided at the Powell Street ramps. Average daily traffic just south of the Powell Street ramps is 294,000 vehicles per day.
- ***Interstate 880 (I-880)*** is a regional freeway extending between San Jose to the south and I-80 in Oakland to the north. Four lanes are generally provided in each direction on this freeway near Emeryville. Access to I-880 from the project site is provided via I-80. Average daily traffic on I-880 just south of the I-80 junction is 127,000 vehicles per day.
- ***State Route 24 (SR-24)*** is a regional freeway extending between Walnut Creek to the east and downtown Oakland to the west. SR-24 becomes I-980 at the I-580 interchange. Three lanes are generally provided in each direction on this freeway near the project site. Primary access from the project site to SR-24 is provided by I-580. Average daily traffic on SR-24 just east of the I-580/I-980 interchange is 135,000 vehicles per day.
- ***Interstate 980 (I-980)*** is a 2.5-mile stretch of freeway extending from I-880 to I-580. Three to four lanes are generally provided in each direction on this freeway, with auxiliary lanes available at some locations. I-980 becomes SR-24 at the I-580 interchange. Average daily traffic on I-980 south of the I-580 junction is 97,000 vehicles per day.
- ***State Route 13 (SR-13)*** is a regional freeway extending from I-580 in East Oakland to I-80/I-580 in Berkeley. It consists of three contiguous segments: the Warren Freeway from I-580 to SR-24 in Oakland; Tunnel Road, a narrow two-lane road from SR-24 to Claremont Avenue in Berkeley; and Ashby Avenue, a main east-west arterial from Claremont Avenue to I-80/I-580. Average daily traffic on SR-13 just east of I-80 is 26,000 vehicles per day.

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FIGURE 18

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Study Intersection

BART

EmeryStation West at the Emeryville Transit Center Project IS/MND

Project Location and Study Intersections

SOURCE: AECOM, 2009

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Local Access. A brief description of the local and arterial streets serving the project site is given below:

- ***Horton Street*** is a north-south collector running from well south of the site to 62nd Street just north of the site. Both project parcels abut Horton Street, between 59th and 62nd Streets. Horton Street operates as a two-way roadway with one lane in each direction and on-street bicycle lanes in each direction. A one-lane configuration is maintained on the approach to intersections in the vicinity of the project parcels. Currently, on-street parking is prohibited on both sides of the street in the vicinity of the project parcels.
- ***59th* Street** is a two-way undivided east-west local road running from San Pablo Avenue in the east to Horton Street in the west. Fifty-ninth Street generally provides one traffic lane in each direction and left turn pockets on key approaches to Hollis Street and Horton Street. Indented on-street parallel parking is provided on the south side of the roadway between Horton and Peladeau Streets. Forty-five degree angled on-street parking is provided on the south side of the roadway between Hollis and Doyle Streets. Parallel parking is provided on the north side of the street in this same section.
- ***62nd* Street** is a two-way undivided east-west local road running from San Pablo Avenue in the east to Overland Avenue in the west. Sixty-Second Street generally provides one traffic lane in each direction and on-street parking on both sides of the street. The single-lane configuration is maintained on the approach to intersections in the vicinity of the project site.
- ***Hollis Street*** is a north-south collector running from Peralta Street in the south to Folger Street in the north, near Ashby Avenue. Hollis Street generally provides one traffic lane in each direction and provides separate left and right turn pockets at key intersections. Currently, on-street parking is generally provided on both sides of Hollis Street in the vicinity of the project site.
- ***Peladeau Street*** is a north-south local street running from Stanford Avenue in the south to 59th Street in the north. Paladeau Street is non-continuous because a median on Powell Street prevents through access. However, this street is likely to be used as an access route to the project site by motorists coming from the freeways and using the street as a short-cut to avoid continuing onto Hollis Street and needing to make a left turn at this signalized intersection. In this regard, motorists would turn onto southbound Peladeau Street and proceed to Horton Street which proceeds continuously as an underpass beneath the Powell Street overcrossing. Peladeau Street provides one traffic lane in each direction with no additional left or right turn pockets at key intersections. Currently, on-street parking is provided on the east side of Peladeau Street between 59th Street and Powell Street.
- ***Powell Street*** is an east-west arterial that runs from Marshall Street west past I-80/I-580 to the Emeryville Marina. At Marshall Street, Powell Street joins Stanford Avenue, providing access to South Berkeley. Powell Street is a two-way, four-lane roadway, with left turn pockets at key intersections and landscaped medians east of the project site. Powell Street provides the main freeway access to Emeryville and South Berkeley and serves major commercial uses along I-80/I-580 in Emeryville, such as Powell Street Plaza and Bay Street.
- ***Ashby Avenue*** is an undivided east-west arterial that runs from Claremont Avenue to I-80/I-580. Ashby Avenue operates as a two-way, four-lane roadway with left turn pockets at key intersections. It provides a key linkage from I-80/I-580 to South Berkeley and Emeryville and is

designated as SR-13. East of Claremont Avenue, Ashby Avenue becomes Tunnel Road, which continues as SR-13 and offers connections to SR-24 and I-580 in East Oakland.

- ***40th Street*** is a four-lane, east-west arterial stretching from Hubbard Street eastward to Piedmont Avenue, providing access to North Oakland and South Berkeley. At Hubbard Street, 40th Street becomes Shellmound Street, offering access to I-80 and I-580 at Powell Street. A landscaped median separates traffic on most of 40th Street in the vicinity of the project, with left turn pockets provided at most intersections.
- ***San Pablo Avenue*** is a major north-south arterial located directly east of the project site, stretching from downtown Oakland north to the City of San Pablo. It is designated as State Route 123 (SR-123) and is part of AC Transit's Rapid Bus network. Traffic signals along the roadway provide priority to AC Transit buses. In the vicinity of the project site, San Pablo Avenue operates with two lanes in each direction, with left turn pockets provided at key intersections.
- ***Frontage Road*** is a north-south roadway that runs parallel to I-80/I-580 from Gilman Street in the north to Powell Street in the south. Frontage Road generally operates as a two-way, two-lane roadway, offering access to the I-80 Westbound (WB) ramps at Gilman Street, University Avenue, Ashby Avenue, and Powell Street.

Study Intersections. Intersection level of service conditions were analyzed at 18 key intersections in the vicinity of the project site for the AM and PM peak hours (7:00 to 9:00 a.m. and 4:00 to 6:00 p.m.). These 18 intersections, shown in Figure 18, were selected, in coordination with the City of Emeryville, because they are inclusive of all locations which could be significantly affected by project traffic. Nine of the intersections (Intersections 1, 2, 5, 7 through 11, and 18) are within the ACCMA roadway network and/or at least partly within the jurisdiction of others. The LOS at these intersections is considered within the multi-modal transportation context mandated by the City's new General Plan to determine the level of impact of the project. The 18 study intersections are listed below:

1. Hollis Street/Powell Street (*signalized*);
2. Doyle Street/Powell Street (*two-way stop controlled*);
3. Hollis Street/Stanford Avenue (*signalized*);
4. Hollis Street/59th Street (*signalized*);
5. San Pablo Avenue/Stanford Avenue (*signalized*);
6. Hollis Street/40th Street (*signalized*);
7. Seventh Street/Ashby Avenue (*signalized*);
8. Christie Avenue/Powell Street (*signalized*);
9. I-80 EB Ramps/Powell Street (*signalized*);
10. Frontage Road/Powell Street (*signalized*); and
11. Frontage Road/I-80 WB Ramps (*signalized*);
12. Horton Street/59th Street (*all-way stop controlled*);
13. 59th Street/Peladeau Street (*all-way stop controlled*);
14. Horton Street/62nd Street *(one-way stop controlled)*;
15. 62nd Street/Hollis Street *(two-way stop controlled)*;
16. Horton Street/Stanford Avenue (*all-way stop controlled*);
17. 59th Street/Doyle Street (*all-way stop controlled*); and
18. 59th Street/San Pablo Avenue (*one-way stop controlled*).

Existing Conditions Traffic Volumes. Weekday traffic counts for the AM and PM peak hours were collected in December 2007 and June 2009. Figure 19 shows the existing lane geometry and signal control for the 18 study intersections. Figure 20 shows existing traffic volumes during the AM and PM peak hours.

Level of Service Methodology. The operation of a local roadway network is commonly evaluated using the Level of Service (LOS) methodology. This methodology qualitatively characterizes traffic conditions associated with varying levels of vehicular traffic, ranging from LOS A (indicating free-flow traffic conditions with little or no delay experienced by motorists) to LOS F (indicating congested conditions where traffic flows exceed design capacity and result in long queues and delays). This LOS methodology applies to both signalized and unsignalized intersections. LOS A, B, and C are generally considered satisfactory service levels, while the influence of congestion becomes more noticeable (though still considered desirable) at LOS D. LOS E and F are generally considered undesirable.

Signalized Intersections. At signalized study intersections, traffic conditions were evaluated using the 2000 *Highway Capacity Manual* (HCM) operations methodology. The operation analysis uses various intersection characteristics (e.g., traffic volumes, lane geometry, and signal phasing/timing) to estimate the average control delay experienced by motorists at an intersection. The top half of Table 13 summarizes the relationship between delay and LOS for signalized intersections.

Unsignalized Intersections. At the unsignalized "stop" controlled study intersections, traffic conditions were also evaluated using the HCM operations methodology. With this methodology, the LOS is related to the average delay experienced at the worst minor approach. Total delay is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs the queue. This time includes the time required for a vehicle to travel from the last-in-queue position to the first-in-queue position. The bottom half of Table 13 summarizes the relationship between delay at the worst minor approach and LOS for unsignalized intersections.

Existing Conditions Intersection Levels of Service. The 18 study intersections were analyzed using Trafficware's Synchro 7 software package based on the methodologies outlined in the 2000 HCM. The existing AM and PM peak hour intersection LOS for the 18 study intersections are shown in Table 14. The LOS calculation sheets for all study intersections and for all scenarios are provided in Appendix A. As shown in Table 14, the majority of study intersections currently operate at desirable levels of service (LOS A to D) during the AM and PM peak hours. Study Intersection #8 (Christie Avenue/ Powell Street) operates at LOS E in the PM peak hour.

Project Trip Generation. Trip generation estimates are based on rates from the *Institute of Transportation Engineers* (*ITE) Trip Generation, 8th Edition*, the industry standard for land-use based trip generation.

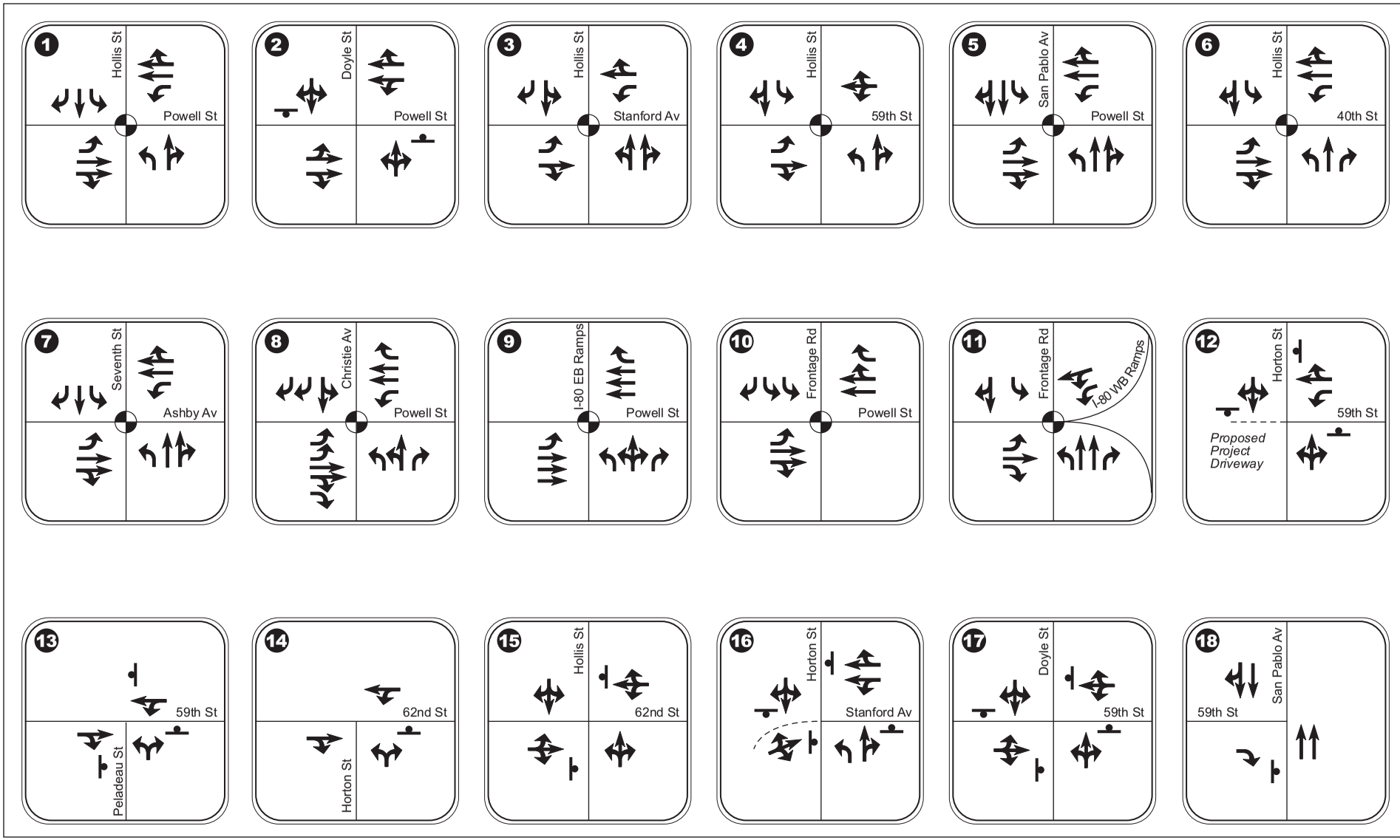

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FIGURE 19

EmeryStation West at the
Emeryville Transit Center Project IS/MND
Existing Lane Geometry and Traffic Control

SOURCE: AECOM, 2009

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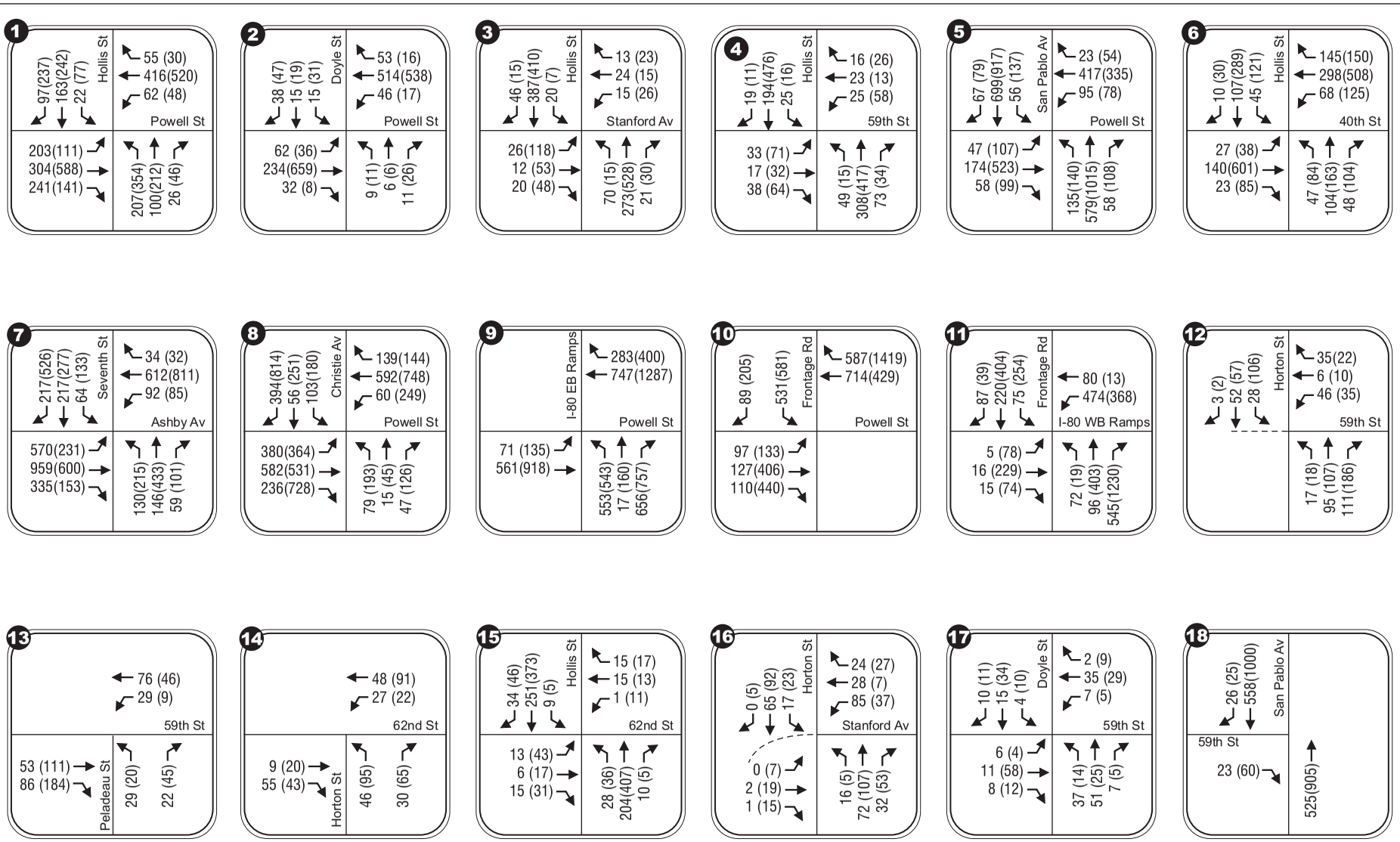

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FIGURE 20

EmeryStation West at the
Emeryville Transit Center Project IS/MND
Existing Traffic Volumesd AM (PM) Peak Hour

SOURCE: AECOM, 2009

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Table 13: Intersection Level of Service Definitions

Level of Service	Description of Traffic Conditions	Average Delay per Vehicle (seconds)
Signalized Intersections		
A	Insignificant Delays: No approach phase is fully utilized and no vehicle waits longer than one red indication.	≤10.0
B	Minimal Delays: An occasional approach phase is fully utilized. Drivers begin to feel restricted.	>10.0 and ≤20.0
C	Acceptable Delays: Major approach phase may become fully utilized. Most drivers feel somewhat restricted.	>20.0 and ≤35.0
D	Tolerable Delays: Drivers may wait through more than one red indication. Queues may develop but dissipate rapidly, without excessive delays.	>35.0 and ≤55.0
E	Significant Delays: Volumes approaching capacity. Vehicles may wait through several signal cycles and long vehicle queues form upstream.	>55.0 and ≤80.0
F	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	>80.0
Unsignalized Intersections		
A	No delay for stop-controlled approaches.	≤10.0
B	Operations with minor delay.	>10.0 and ≤15.0
C	Operations with moderate delays.	>15.0 and ≤25.0
D	Operations with some delays.	>25.0 and ≤35.0
E	Operations with high delays, and long queues.	>35.0 and ≤50.0
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	>50.0

Source: Transportation Research Board, *Highway Capacity Manual*, 2000.

The following assumptions were made in determining the vehicle trip generation of the project during the peak hours:

- The average trip generation rate for General Office (land use code 710) is applied to the ground floor lobby and office spaces proposed in the EmeryStation West building. This represents a total of 222,800 square feet of floor space.
- The average trip generation rate for Specialty Retail (land use code 814) is applied to the retail space proposed in the Heritage Square parking structure. This represents 1,600 square feet of floor space. However, a 50 percent reduction factor is applied to the trips forecast. The land uses would represent space for retail, office, office services or other uses that relate to the Post Office use across the street, which would primarily serve internal users. Accordingly 50 percent of trips generated by these land uses are assumed to be internalized.
- The ground floor space (2,300 square feet) proposed in the EmeryStation West building is assumed to only generate linked trips. This space would primarily serve transit, retail and/or office uses, such as ticket-buying, travel and transit information, bike security, and car share information.

Table 14: Existing Conditions Intersection Levels of Service

No.	Intersection	Traffic Control	Peak Hour	Existing Conditions	
				LOS	Delay
1	Hollis Street/Powell Street	Signal	AM	D	39.1
			PM	D	50.5
2	Doyle Street/Powell Street	Two-Way Stop	AM	C	19.7
			PM	C	24.2
3	Hollis Street/Stanford Avenue	Signal	AM	A	4.6
			PM	A	7.1
4	Hollis Street/59th Street	Signal	AM	B	15.4
			PM	B	18.8
5	San Pablo Avenue/Stanford Avenue	Signal	AM	C	28.9
			PM	D	36.9
6	Hollis Street/40th Street	Signal	AM	C	24.6
			PM	C	31.1
7	Seventh Street/Ashby Avenue	Signal	AM	D	46.5
			PM	D	50.9
8	Christie Avenue/Powell Street	Signal	AM	C	24.1
			PM	**E**	**57.9**
9	I-80 EB Ramps/Powell Street	Signal	AM	C	25.6
			PM	D	46.7
10	Frontage Road/Powell Street	Signal	AM	B	19.5
			PM	B	15.7
11	Frontage Road/I-80 WB Ramps	Signal	AM	B	15.2
			PM	C	23.8
12	Horton Street/59th Street	All-Way Stop	AM	A	8.5
			PM	A	9.4
13	59th Street/Peladeau Street	All-Way Stop	AM	A	7.9
			PM	A	8.7
14	Horton Street/62nd Street	One-Way Stop	AM	A	9.4
			PM	B	10.2
15	62nd Street/Hollis Street	Two-Way Stop	AM	B	13.1
			PM	D	26.0
16	Horton Street/Standford Avenue	All-Way Stop	AM	A	8.9
			PM	A	9.2
17	59th Street/Doyle Street	All-Way Stop	AM	A	7.7
			PM	A	7.6
18	59th Street/San Pablo Avenue	One-Way Stop	AM	B	10.5
			PM	B	13.8

Bold indicates intersections operating at undesirable conditions.
Stop-controlled intersections were analyzed for the worst approach.
Source: AECOM, 2009.

- A five percent discount rate was applied to the initial forecast of trip generation using the ITE Manual to account for transit usage.
- In addition to proposing approximately 400 parking spaces for the project land uses, the Heritage Square parking structure would increase the parking supply for the existing Heritage Square office buildings by approximately 29 spaces. Site observations indicate that this parking facility currently operates below capacity. Accordingly, the analysis assumes that the net increase in parking supply would not generate any net increase in peak hour trip generation.

Table 15 summarizes the trip generation rates assumed for the office and retail land uses, as derived from the ITE Manual. The ITE Manual does not provide a rate for Specialty Retail during the AM peak hour. As such, this rate was derived from comparing the trip rates for Specialty Retail and Supermarket land uses during the PM peak hour.

Table 16 summarizes the total forecast of vehicle trip generation by the project land uses.

Table 15: Trip Generation Rates

ITE Land Use Code	AM Peak Hour	PM Peak Hour
General Office Building (710)	T = 1.55(X)	T = 1.49 (X)
Specialty Retail (814)	T = 0.74 (X)	T = 2.71(X)

T = Number of trips
X = Units of land use - KSF (1,000 square feet) gross floor area
Source: ITE, *Trip Generation Manual, 8th Edition.*

Table 16: Project Vehicle Trip Generation

Land Use	Vehicle Trips		Direction	Trips	
	AM	PM		AM	PM
Office	328	315	Inbound	288.7	53.6
			Outbound	39.4	261.8
Retail	1	2	Inbound	0.4	0.9
			Outbound	0.2	1.2
Total	**329**	**317**	**Inbound**	**289**	**55**
			Outbound	**40**	**263**

Source: AECOM, 2009

Project Trip Distribution and Assignment. The project's trip distribution pattern was developed using information from the ACCMA travel demand model. The project trip distribution pattern is illustrated in Figure 21 and summarized below.

- 21 percent to/from I-580 East/I-880 South;
- 20 percent to/from I-80 East;

- 17 percent to/from I-80 West;
- 10 percent to/from Adeline Street (north-east of project site);
- 9 percent to/from San Pablo Avenue (south of project site);
- 9 percent to/from San Pablo Avenue (north of project site);
- 8 percent to/from Alcatraz Avenue (east of project site); and
- 6 percent to/from Powell Street (west of project site).

The local distribution of vehicle trips to/from the project site assumes that 80 percent of vehicle trips would access the Heritage Square parking structure and the remaining 20 percent of vehicle trips would access the EmeryStation West building parking garage. This assumption is based on the proposed parking supply provided at each site which would be available for the project land uses.

The distribution analysis also evaluates two different project access scenarios. The two access scenario options are described below and result in two sets of "Project Trips" being forecast and evaluated in this report. The project-generated AM and PM peak hour turning movement volumes for each access option scenario are shown in Figures 22 and 23.

Access Option 1

- Full vehicle access to and from the EmeryStation West building via a driveway which will form a new western leg to the existing all-way stop controlled intersection of Horton Street/59th Street.
- Vehicle entry to the Heritage Square parking structure from Horton Street and vehicle exit onto 62nd Street. Left and right turns into and out of the parking structure would be permitted.

Access Option 2

- Full vehicle access to and from the EmeryStation West building via a driveway which will form a new western leg to the existing all-way stop controlled intersection of Horton Street/59th Street (same as Access Option 1).
- Right-in and right-out only vehicle access to/from the Heritage Square parking structure from on 62nd Street.

Existing Plus Project Conditions Traffic Volumes. The project-generated traffic for the two access options described previously was added to the Existing Conditions traffic volumes to derive Existing Plus Project Conditions traffic volumes, for each access option. The resulting AM and PM peak hour turning movement volumes are shown in Figures 24 and 25 for the two access options.

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FIGURE 21

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Study Intersection

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EmeryStation West at the
Emeryville Transit Center Project IS/MND
Project Trip Distribution

SOURCE: AECOM, 2009

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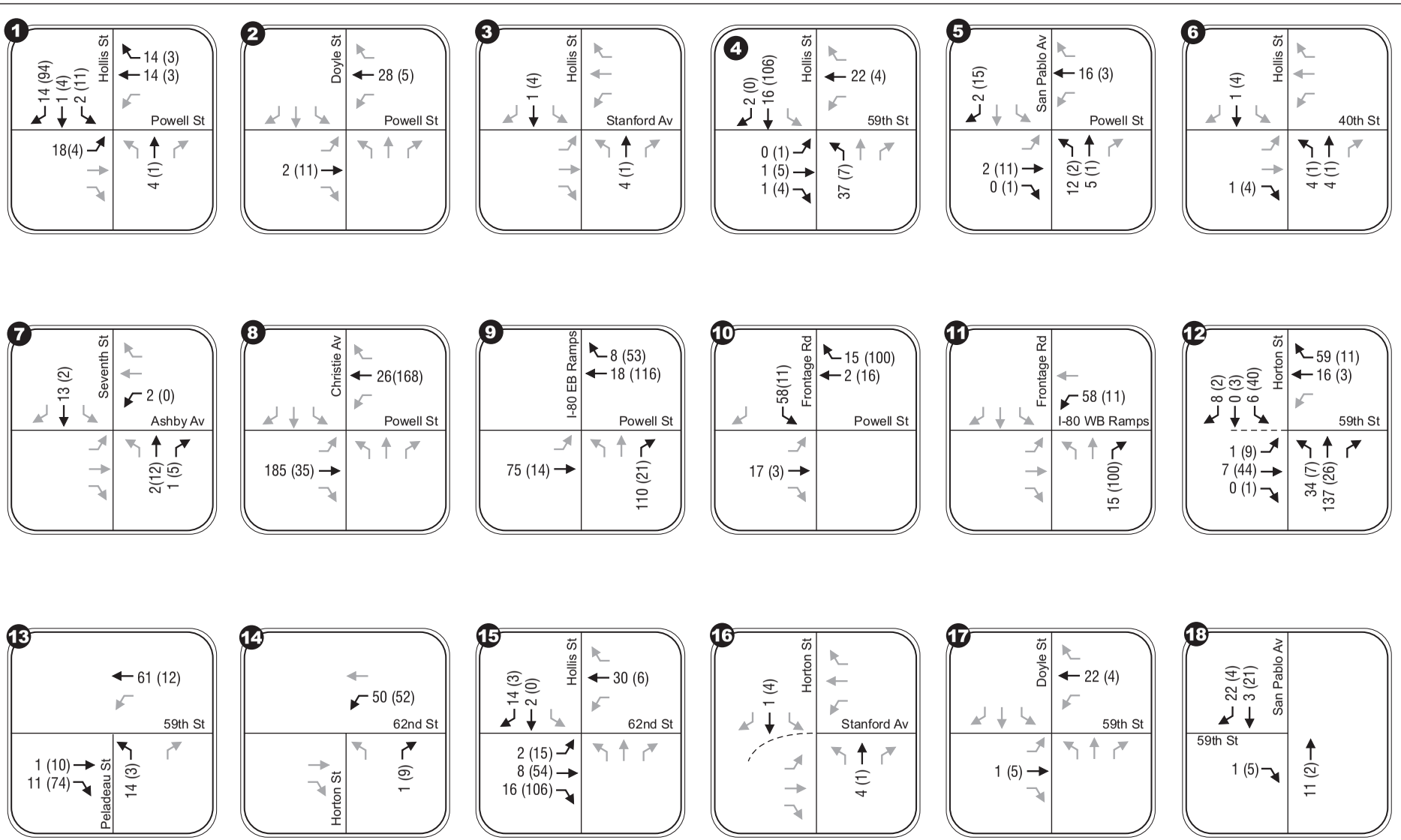

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FIGURE 22

EmeryStation West at the
Emeryville Transit Center Project IS/MND
Project Traffic Volumes - Access Option 1
AM (PM) Peak Hour

SOURCE: AECOM, 2009

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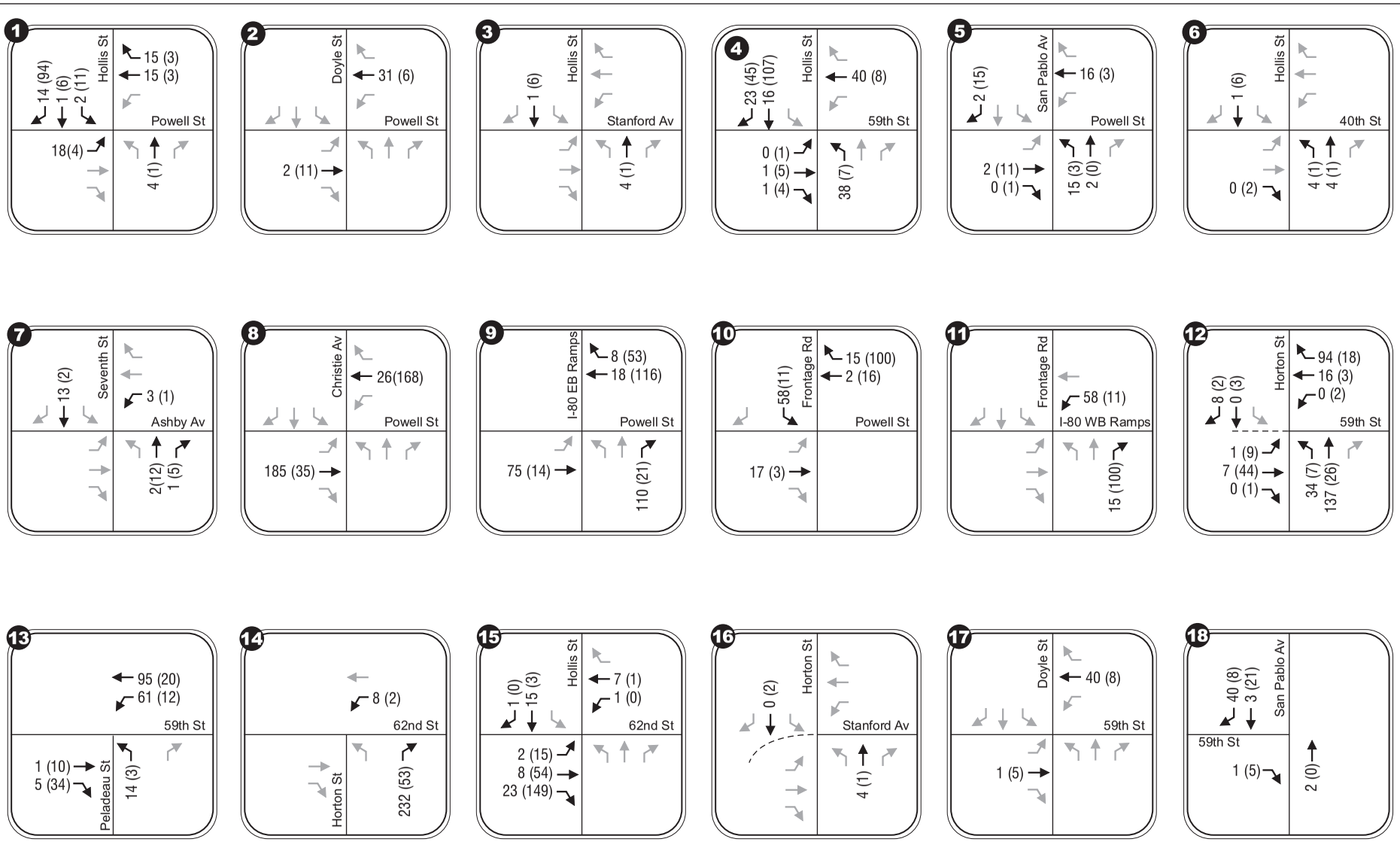

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FIGURE 23

EmeryStation West at the
Emeryville Transit Center Project IS/MND
Project Traffic Volumes - Access Option 2
AM (PM) Peak Hour

SOURCE: AECOM, 2009

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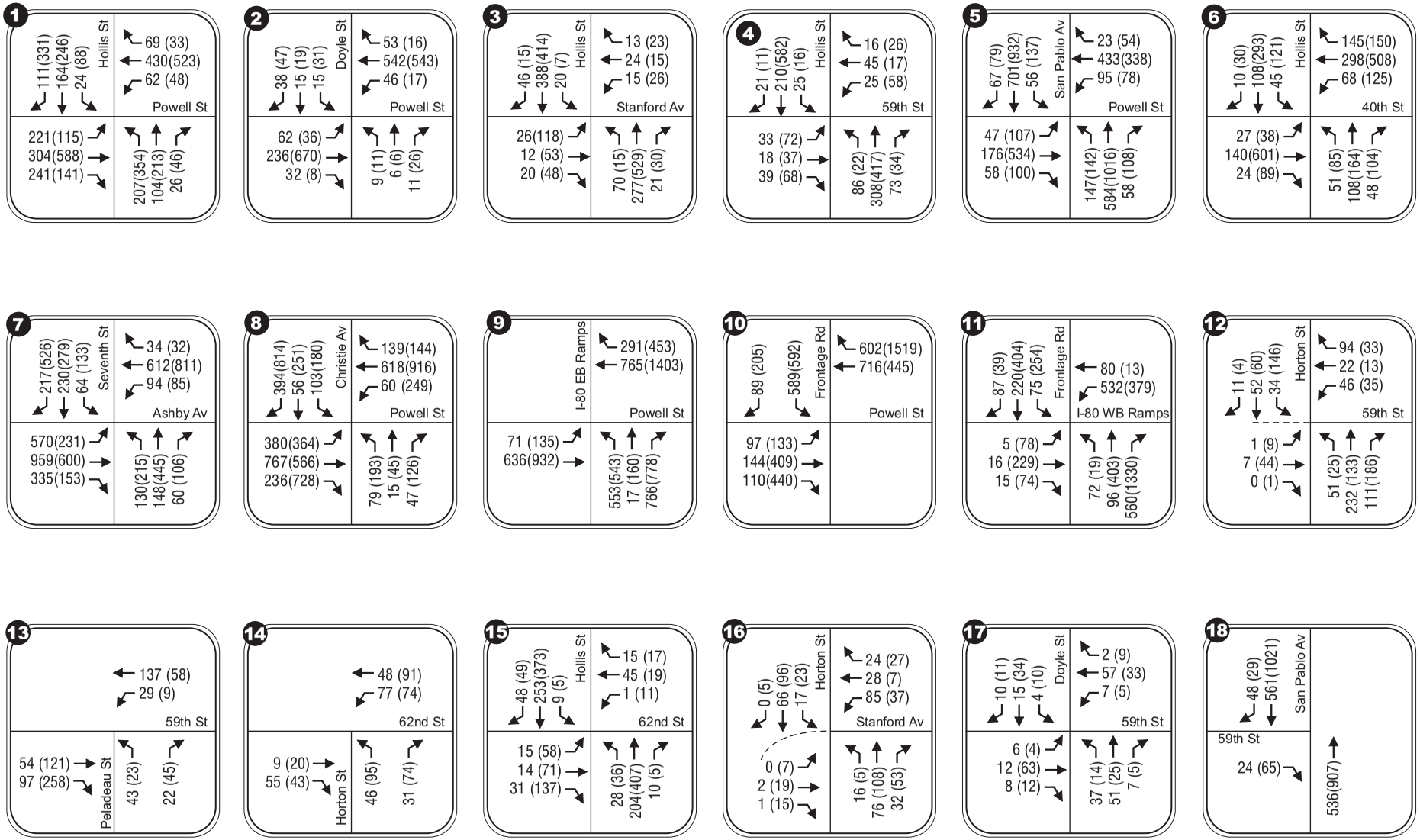

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FIGURE 24

EmeryStation West at the
Emeryville Transit Center Project IS/MND
Existing Plus Project (Access Option 1)
Traffic Volumes AM (PM) Peak Hour

SOURCE: AECOM, 2009

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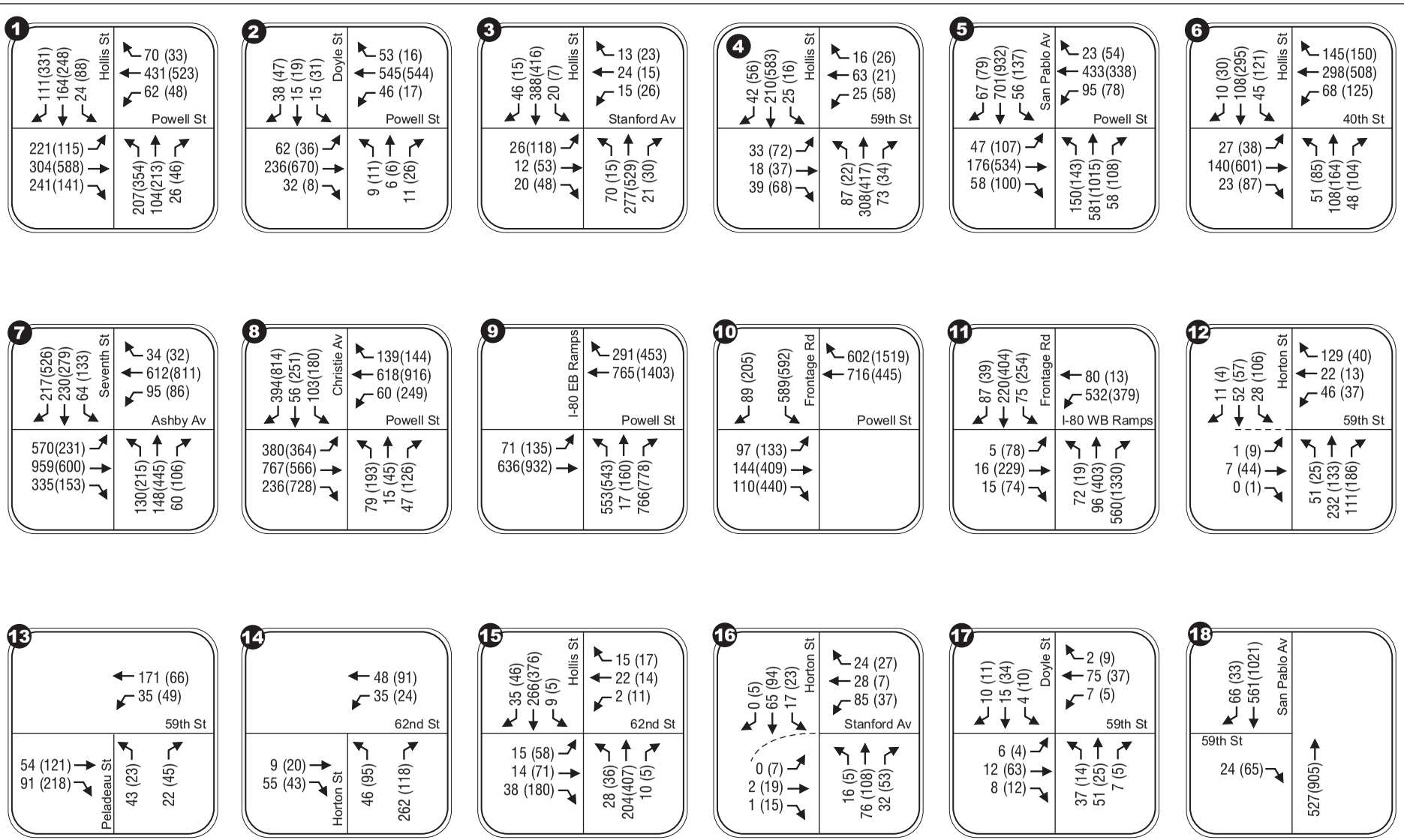

LSA

FIGURE 25

EmeryStation West at the
Emeryville Transit Center Project IS/MND
Existing Plus Project (Access Option 2)
Traffic Volumes AM (PM) Peak Hour

SOURCE: AECOM, 2009

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Level of Service Analysis for Vehicle Movements. General Plan Policy T-P-3 states that, with the exception of streets that are part of the ACCMA roadway network (currently including San Pablo Avenue, Frontage Road, and Powell and Adeline Streets), LOS is not to be used to measure transportation performance in environmental review documents unless it is mandated by another agency over which the City has no jurisdiction. In that case it shall only be used for the purposes mandated by that agency**.**

The City of Emeryville historically defined the acceptable level of service for vehicle movements through intersections as LOS D and the acceptable level of service for roadway segments as LOS E. Based on the historical thresholds of significance, a significant project impact to vehicle movements would result if any of the following conditions were to occur**:**

- The addition of project traffic would degrade an **intersection** currently operating at LOS D or better to LOS E or LOS F;
- The addition of project traffic would degrade an **intersection** currently operating at LOS E to LOS F;
- The addition of project traffic would cause the average vehicle delay to increase by more than four (4) seconds at an **intersection** operating at LOS E or LOS F; or
- The project would cause a **roadway segment** on the Metropolitan Transportation System to operate at LOS F or would increase the V/C ratio by more than five (5) percent for a roadway segment that would operate at LOS F without the project. (See Section XV.b for the analysis of roadway segments.)

For purposes of this analysis, historical thresholds of significance from the City of Emeryville are considered as one measure of whether the project would result in a transportation impact for intersections within the ACCMA roadway network and/or the jurisdiction of others.

Existing Plus Project Conditions Impacts and Mitigation Measures. The resulting AM and PM peak hour intersection LOS for the 18 study intersections are shown in Tables 17 and 18 for the two access options. Using the City's historic thresholds of significance for vehicle movements it is forecast that the project would result in impacts at the following two study intersections under Existing Plus Project Conditions.

- Intersection #8: Christie Avenue/Powell Street - Signal (PM)
- Intersection #15: 62nd Street/Hollis Street – two-way Stop (PM)

This result is predicted to be the same regardless of whether Access Option 1 or 2 is ultimately implemented. As mandated by the General Plan, impacts to transit, bicyclists and pedestrians are also considered in evaluating the level of significance of the impact. The intersection impacts and potential mitigation measures are discussed below.

Table 17: Existing Plus Project (Access Option 1) Conditions Intersection Levels of Service

No.	Intersection	Traffic Control	Peak Hour	Existing		Existing Plus Project (Access 1)		Delay Increase (sec)	Impact
				LOS	Delay	LOS	Delay		
1	Hollis Street / Powell Street	Signal	AM	D	39.1	D	45.9	6.8	No
			PM	D	50.6	D	50.6	0.0	No
2	Doyle Street / Powell Street	Two-Way Stop	AM	C	19.7	C	20.6	0.9	No
			PM	C	24.2	D	25.7	1.5	No
3	Hollis Street / Stanford Avenue	Signal	AM	A	4.6	A	4.6	0.0	No
			PM	A	7.1	A	7.1	0.0	No
4	Hollis Street / 59th Street	Signal	AM	B	15.4	B	18.0	2.6	No
			PM	B	18.8	C	23.3	4.5	No
5	San Pablo Avenue / Stanford Avenue	Signal	AM	C	28.9	C	29.5	0.6	No
			PM	D	36.9	D	37.8	0.9	No
6	Hollis Street / 40th Street	Signal	AM	C	24.6	C	24.8	0.2	No
			PM	C	31.1	C	31.3	0.2	No
7	Seventh Street / Ashby Avenue	Signal	AM	D	46.5	D	47.5	1.0	No
			PM	D	50.9	D	51.1	0.2	No
8	Christie Avenue / Powell Street	Signal	AM	C	24.1	C	24.1	0.0	No
			PM	**E**	**57.9**	**E**	**75.5**	**17.6**	**Yes**
9	I-80 EB Ramps / Powell Street	Signal	AM	C	25.6	C	27.1	1.5	No
			PM	D	46.7	D	46.7	0.0	No
10	Frontage Road / Powell Street	Signal	AM	B	19.5	C	20.2	0.7	No
			PM	B	15.7	B	19.4	3.7	No
11	Frontage Road / I-80 WB Ramps	Signal	AM	B	15.2	B	15.9	0.7	No
			PM	C	23.8	C	24.8	1.0	No
12	Horton Street /59th Street	All-Way Stop	AM	A	8.5	B	12.2	3.7	No
			PM	A	9.4	B	10.8	1.4	No
13	59th Street /Peladeau Street	All-Way Stop	AM	A	7.9	A	8.0	0.1	No
			PM	A	8.7	A	9.7	1.0	No
14	Horton Street /62nd Street	One-Way Stop	AM	A	9.4	B	10.1	0.7	No
			PM	B	10.2	B	11.1	0.9	No
15	62nd Street /Hollis Street	Two-Way Stop	AM	B	13.1	B	14.6	1.5	No
			PM	D	26.0	**F**	**>50.0**	**38.1**	**Yes**
16	Horton Street /Standford Avenue	All-Way Stop	AM	A	8.9	A	8.9	0.0	No
			PM	A	9.2	A	9.3	0.1	No
17	59th Street /Doyle Street	All-Way Stop	AM	A	7.7	A	7.8	0.1	No
			PM	A	7.6	A	7.6	0.0	No
18	59th Street /San Pablo Avenue	One-Way Stop	AM	B	10.5	B	10.6	0.1	No
			PM	B	13.8	B	14.1	0.3	No

Bold indicates intersections operating at undesirable conditions.
Stop-controlled intersections were analyzed for the worst approach. Source: AECOM, 2009.

Table 18: Existing Plus Project (Access Option 2) Conditions Intersection Levels of Service

No.	Intersection	Traffic Control	Peak Hour	Existing		Existing Plus Project (Access 2)		Delay Increase (sec)	Impact
				LOS	Delay	LOS	Delay		
1	Hollis Street / Powell Street	Signal	AM	D	39.1	D	45.9	6.8	No
			PM	D	50.5	D	50.5	0.0	No
2	Doyle Street / Powell Street	Two-Way Stop	AM	C	19.7	C	20.7	1.0	No
			PM	C	24.2	D	25.8	1.6	No
3	Hollis Street / Stanford Avenue	Signal	AM	A	4.6	A	4.6	0.0	No
			PM	A	7.1	A	7.1	0.0	No
4	Hollis Street / 59th Street	Signal	AM	B	15.4	B	18.6	3.2	No
			PM	B	18.8	C	25.0	6.2	No
5	San Pablo Avenue / Stanford Avenue	Signal	AM	C	28.9	C	29.6	0.7	No
			PM	D	36.9	D	37.8	0.9	No
6	Hollis Street / 40th Street	Signal	AM	C	24.6	C	24.9	0.3	No
			PM	C	31.1	C	31.3	0.2	No
7	Seventh Street / Ashby Avenue	Signal	AM	D	46.5	D	47.6	1.1	No
			PM	D	50.9	D	51.4	0.5	No
8	Christie Avenue / Powell Street	Signal	AM	C	24.1	C	24.1	0.0	No
			PM	**E**	**57.9**	**E**	**75.5**	**17.6**	**Yes**
9	I-80 EB Ramps / Powell Street	Signal	AM	C	25.6	C	27.1	1.5	No
			PM	D	46.7	D	46.7	0.0	No
10	Frontage Road / Powell Street	Signal	AM	B	19.5	C	20.2	0.7	No
			PM	B	15.7	B	19.4	3.7	No
11	Frontage Road / I-80 WB Ramps	Signal	AM	B	15.2	B	15.9	0.7	No
			PM	C	23.8	C	24.8	1.0	No
12	Horton Street /59th Street	All-Way Stop	AM	A	8.5	B	12.6	4.1	No
			PM	A	9.4	B	10.7	1.3	No
13	59th Street /Peladeau Street	All-Way Stop	AM	A	7.9	A	8.9	1.0	No
			PM	A	8.7	A	9.4	0.7	No
14	Horton Street /62nd Street	One-Way Stop	AM	A	9.4	B	10.5	1.1	No
			PM	B	10.2	B	10.4	0.2	No
15	62nd Street /Hollis Street	Two-Way Stop	AM	B	13.1	B	13.3	0.2	No
			PM	D	26.0	**F**	**>50.0**	**49.5**	**Yes**
16	Horton Street /Standford Avenue	All-Way Stop	AM	A	8.9	A	8.9	0.0	No
			PM	A	9.2	A	9.3	0.1	No
17	59th Street /Doyle Street	All-Way Stop	AM	A	7.7	A	7.9	0.2	No
			PM	A	7.6	A	7.6	0.0	No
18	59th Street /San Pablo Avenue	One-Way Stop	AM	B	10.5	B	10.7	0.2	No
			PM	B	13.8	B	14.2	0.4	No

Bold indicates intersections operating at undesirable conditions.
Stop-controlled intersections were analyzed for the worst approach. Source: AECOM, 2009.

Intersection #8: Christie Avenue/Powell Street - Signal (PM). As noted previously, the City's General Plan Policy T-P-3 states that the City of Emeryville seeks to optimize travel by all transportation modes. In addition, the policy states that the City no longer recognizes LOS as a valid measure of overall transportation operations, and sets no maximum or minimum acceptable LOS levels with the exception of streets that are part of the ACCMA roadway network. Because this intersection is within the ACCMA roadway network, LOS is calculated and used as one measure of transportation impacts.

This intersection would operate at LOS E in the PM peak hour under both Existing Conditions and Existing Plus Project Conditions. The increase in average delay as a result of project traffic under either Access Option 1 or 2 is approximately 18 seconds. The increased delay would be an adverse effect on transit vehicles as well as automobiles (Powell and Christie Streets are designated transit streets in the City's General Plan). Optimizing the signal timing at this intersection would reduce the average delay. The signal optimization could be achieved by maintaining the existing cycle time of approximately 100 seconds. However, modifying the signal timing at one single intersection could potentially result in reduced performance at adjacent intersections which are coordinated with this intersection. Accordingly, an optimization analysis was undertaken for Intersection #8 through #11. The results indicate that signal optimization could improve the operation of all intersections under Existing Plus Project Conditions to better than Existing Conditions operations, while still maintaining the existing 100-second cycle length.

Both Christie and Powell Streets are designated in the General Plan as transit streets and key green streets.[58] The General Plan identifies a Class 1 bike path along Powell Street in this area. The project would not directly affect pedestrian- or bicycle-serving facilities at the intersection and given the distance of the project from the intersection, the project would not have direct effects on the movement of pedestrians or bicyclists. Because the intersection is within the ACCMA network and signal optimization would reduce the project's contribution to impacts to both car and transit vehicle movements at this intersection to less-than-significant levels, the following mitigation measure is recommended:

> Mitigation Measure TRANS-1: The project applicant shall be responsible for providing the City with funds to develop and implement timing plans that optimize the operations of the coordinated signals at the following four intersections during AM peak, mid-day, and PM peak hours:
>
> - Christie Avenue /Powell Street (Intersection #8)
> - I-80 EB Ramps /Powell Street (Intersection #9)
> - Frontage Road /Powell Street (Intersection #10)
> - Frontage Road /I-80 WB Ramps (Intersection #11)
>
> Given that said intersections are also coordinated with the closely spaced intersections of Shellmound Street and Christie Avenue, Shellmound Way and Shellmound Street, Christie Avenue and Powell Street Plaza, and Shellmound Street and Christie Avenue, these intersections shall be included with signal timing optimization.

[58] Green streets are distinguished by elements such as additional trees and plantings, wide sidewalks, pedestrian pathways and public art that are intended to improve the pedestrian experience. The green streets network builds on Emeryville's network of greenways to improve connectivity along key streets.

Optimizing the signal timing to improve vehicle movements at these intersections would improve car and transit vehicle movements alike and would have only a slight effect on wait and crossing times for some pedestrian movements at the intersections. Thus, the mitigation measure would reduce the multi-modal transportation impact to a less-than-significant level.

Intersection #15: 62nd Street/Hollis Street – Two-way Stop (PM). This two-way stop controlled intersection operates at LOS D in the PM peak hour under Existing Conditions. Hollis Street is designated in the General Plan as a transit street. As a result of project generated traffic, the operation of this intersection is forecast to deteriorate to LOS F under Existing Plus Project Conditions during the PM peak hour for both Access Option 1 and 2. Therefore, the project would result in an adverse effect on vehicle movements at this intersection. Traffic signal warrants were evaluated based on the criteria presented in the *California Manual on Uniform Traffic Control Devices* (MUTCD) 2003 California Supplement for the peak hour. The peak hour warrants for traffic signals were met under Existing Plus Project Conditions, for both Access Option 1 and 2. The traffic signal warrants were not met under Existing Conditions. The signalization of this intersection would reduce impacts of the project to vehicle movements to less-than-significant levels. The intersection is projected to operate at LOS A under Existing plus Project conditions with signalization.

Given the proximity of this intersection to the project site and that Hollis Street is a transit street, the intersection is likely to experience an increase in bicycle and pedestrian use. Bicyclists and pedestrians would also benefit from signalization of the intersection because it would create a greater level of safety for pedestrians and bicycles crossing Hollis Street.

Implementation of the following mitigation measure would reduce the project impact at this intersection to a less-than-significant level:

> Mitigation Measure TRANS-2: The project applicant shall be responsible for designing and installing a traffic signal at the intersection of 62nd and Hollis Street. Said new traffic signal shall be interconnected and coordinated with the existing traffic signals on Hollis Street. The applicant shall also be responsible for providing the City with funds to develop and implement timing plans that optimize the operation of the new signal with five existing coordinated traffic signals on Hollis Street from Stanford Avenue to 65th Street during AM peak, mid-day and PM peak hours. The fee for signalizing the intersection and coordination with existing traffic signal shall be paid to the City of Emeryville prior to issuing the temporary occupancy permit for the EmeryStation West building.

Remediation and Construction Period Impacts and Mitigation Measures. During the remediation and construction period, temporary and intermittent transportation impacts would result from truck movements as well as construction worker trips to and from the project site. The construction-related traffic would result in temporary congestion on project area streets because of the slower movements and larger turning radii of construction trucks compared to passenger vehicles. The Heritage Square parking structure would be constructed first and would take approximately 7 months. The EmeryStation West building would then be constructed over approximately 24 months.

The proposed phasing allows a substantial increase in on-site parking supply to be made available (within the Heritage Square parking structure) prior to the closure of the existing Amtrak surface parking lot. Accordingly, Amtrak commuters would park within the Heritage Square parking structure

during the construction of the EmeryStation West building, which would ultimately provide Amtrak parking.

However, during the 7-month construction phase of the Heritage Square parking structure, motorists who currently park in the ground level parking lot at this site would be displaced. This site currently provides approximately 170 parking spaces and site observations indicate that the parking lot is approximately 50 percent occupied during the mid-afternoon peak period. Accordingly, approximately 85 vehicles would be displaced during the 7-month construction period. During remediation and construction, parking for construction workers and displaced users of the existing parking lots would be provided in other parking structures in the area that are operated by the applicant. The proposed project phasing would allow displaced users of the Amtrak Station parking lot and construction workers to use the Heritage Square parking structure during remediation.

The remediation process of the EmeryStation West building is forecast to result in the excavation and disposal of between approximately 25,000 and 27,000 tons of soil and other material. The volume of aggregate required to form the working surface for construction would be approximately 1,277 cubic yards. It is estimated that approximately 1,300 two-way truck trips (in this instance each truck "trip" would include a journey to and from the site – i.e. 2,600 total one-way movements) would be made during this phase of construction to export the excavated materials and import aggregate, assuming 23 tons per truck. This remediation phase of the EmeryStation West building project is expected to last approximately 3 months and would represent the peak period of truck travel to/from the site. Approximately 13 two-way truck trips would be made per day during this 3-month peak period of construction.

A draft Traffic Control and Transportation Plan has been prepared for the remediation phase of the proposed project as part of the RDIP in accordance with DTSC guidance.[59] The plan specifies procedures for handling, transporting, and disposing of excavated soil and traffic control issues at the site with respect to the remedial activities. Trucks would be loaded with soil and debris and would pass through a decontamination area before entering the City street system.[60] For at least part of the project, at least one lane on the western side of Horton Street is expected to be closed to public traffic and used for soil export purposes. Overland Avenue, heading south, may be used for staging trucks that are exporting soil, to the extent allowed by the City of Emeryville. The railroad crossing at 65th Street and Overland Avenue will limit the number of trucks allowable in the queue. The proposed local access route for trucks traveling from the EmeryStation West building site and the I-80 freeway is summarized below:

- East on 59th Avenue;
- South on Hollis Street; and
- West on Powell Street and onto I-80 freeway.

The truck route to the site from the freeway would be in reverse to that described above. While a traffic control plan has not been prepared for the post-remediation phase of construction, it would be

[59] DTSC, 2001. *Transportation Plan Guidance for Developing Transportation Plans for Removal or Remedial Actions*.

[60] WSP, 2009. *Decontamination Plan, Emeryville Mound Parcel*.

expected that any trucks traveling to or from the Heritage Square parking structure project site would also travel along Horton Street between the project site and 59th Street.

The potential temporary closure of a portion of Horton Street adjacent to the eastern edge of the EmeryStation West site during at least a portion of the remediation phase and similar temporary closures of Horton Street that may be needed during the remainder of the construction phase of the project would be a significant impact on traffic, emergency access, and pedestrian and bicycle movements in the area. On-street loading may require the temporary removal or closure of the bicycle lanes on Horton Street, for example.

Implementation of the following mitigation measure would reduce potential impacts to traffic circulation during construction to a less-than-significant level:

Mitigation Measure TRANS-3: The project applicant shall prepare and submit detailed Traffic Management Plan (TMP) drawings for each phase of construction to the City of Emeryville for approval. This shall include preparation and implementation of a parking management plan for the existing parking uses on the EmeryStation West site and the Heritage Square site. The project applicant shall consider the following items when preparing the detailed TMP drawings:

- Truck loading and unloading is strongly recommended to be conducted off-street during the remediation and post-remediation phases of construction. However, if this is determined infeasible and the applicant plans to load or unload on Horton Street, the following issues shall be considered:
    - The Horton Street roadway is approximately 30 feet wide and provides one traffic lane and an on-street bicycle lane in each direction. The project applicant shall determine whether two-way traffic could be maintained adjacent to the on-street loading area. It is desirable that two-way traffic would be maintained along this section of Horton Street and the roadway would need to be re-striped to provide a 10-foot wide loading area and two 10-foot wide traffic lanes, which would require the temporary removal of the on-street bicycle lanes on Horton Street. Adequate signage shall be installed to warn motorists and bicyclists of the changed traffic conditions along this segment of Horton Street. It is also recommended that a reduced speed limit be temporarily established to highlight the changed traffic conditions and improve road safety for motorists and bicyclists.
    - The installation of concrete K-rail barriers along the edge of any on-street loading area is recommended. The barriers would enable the area to be used safely for material loading and storage and for general construction parking. This proposal would necessitate closure of the abutting sidewalk. However, it is unknown whether the K-Rail barriers could be installed and two lanes of traffic still maintained.
    - Because the width of the required loading zone has not been designed it is unknown whether the K-Rail barriers could be installed and one lane of traffic in each direction maintained. Should two-way traffic be unable to be maintained, the applicant shall implement either “two-way stop and hold contra-flow traffic” or a “local detour route for one direction of traffic.” On-site traffic controllers shall operate the two-way contra-flow traffic arrangement. The provision of safe bicycle access shall be considered for both of these potential options.

  - Fencing shall be installed along the perimeter of the construction areas to restrict the public from entering the site.
- Safe and convenient pedestrian access shall be maintained along Horton Street. Should the sidewalk on one side of the street need to be closed, appropriate signage shall be installed and pedestrians directed to use the opposite side of the street.
- Truck traffic that occurs during the peak commute hours (7:00 to 9:00 a.m. and 4:00 to 6:00 p.m.) could result in degraded levels of service and increased delays at local intersections than during off-peak hours. Accordingly, truck trips to or from the site shall be restricted to off-peak periods, to the extent feasible.
- If construction work is proposed outside of normal allowed hours, the applicant shall obtain an out-of-hours permit from the City of Emeryville to undertake the proposed work.
- Lane detours for street improvements and utility connections may be required to undertake asphalt paving, sewer, water, phone, data, temporary power, gas and electrical works. The applicant shall provide specific and detailed TMP drawings to the City of Emeryville for these phases of construction.
- Adjacent property owners and City public safety personnel shall be notified regarding when major deliveries, detours, lane closures and out-of-hours work would occur.
- A process shall be developed for responding to and tracking complaints pertaining to construction activity, including identification of an on-site complaint manager. The manager shall determine the cause of each complaint and shall take prompt action to correct the problem. The Planning and Building Department shall be informed of the name and contact information for the complaint manager prior to the issuance of the first permit.

Cumulative Impacts Analysis Tiered from General Plan. The EmeryStation West at the Emeryville Transit Center project was one of the projects included in the 2030 cumulative build-out scenario analyzed in the City of Emeryville's General Plan EIR, which was certified on October 13, 2009. The General Plan EIR analyzed 37 intersections in the cumulative build-out condition.

The General Plan EIR states that, based on recent analyses conducted in the City of Emeryville, the majority of intersections in the City are projected to operate at acceptable service levels during the weekday AM peak hour into the future (except for the Powell Street/Christie Avenue intersection which past studies predict would operate at a deficient LOS E in 2030). For this reason only an analysis of the PM peak hour is included herein.

For 27 of the 37 intersections analyzed in the General Plan EIR it was determined that traffic impacts would be less than significant in 2030 under the growth permitted under the new General Plan. Included among these intersections are the following 6 intersections that are included within the study area for the EmeryStation West at Emeryville Transit Center Project:

- Hollis Street/59th Street
- San Pablo Avenue/Stanford Avenue
- Hollis Street/40th Street
- 7th Street/Ashby Avenue

- Frontage Road/Powell Street
- Frontage Road I-80 EB Ramps

Because the EmeryStation West at the Emeryville Transit Center project was one of the projects included in the 2030 cumulative build-out scenario analyzed in the City's recently certified General Plan EIR and because the analysis in that EIR found the cumulative impact to these intersections in the 2030 cumulative condition to be less than significant, no analysis of these intersections under the cumulative condition is provided herein.

The General Plan EIR also determined that in the cumulative build-out condition there would be significant and unavoidable traffic impacts at ten study intersections in 2030 under the growth permitted under the new General Plan. Accordingly the City Council adopted a statement of overriding considerations for those intersections. The ten intersections include:

- Ashby Avenue/San Pablo Avenue
- 65th Street/Shellmound Street
- 65th Street/Overland Avenue
- I-80 Eastbound Ramps/Powell Street
- Powell Street/Christie Avenue
- Powell Street/Hollis Street
- Shellmound Street/Christie Avenue/Ohlone Way
- 40th Street/Horton Street
- 40th Street/San Pablo Avenue
- Mandela Parkway/Horton Street

Three of these ten intersections are within the study area for this project (I-80 Eastbound Ramps/Powell Street, Powell Street/Christie Avenue, and Powell Street/Hollis Street). For Powell Street/Christie Avenue and Powell Street/Hollis Street the impact identified in the General Plan EIR occurred during the PM peak hour; for I-80 Eastbound Ramps/Powell Street the impact occurred during the Saturday peak hour.

The City Council adopted a statement of overriding considerations and identified 25 policies that reduce the cumulative traffic impact at these intersections, but not to a less-than-significant level. The project as designed or through conditions of approval would implement the relevant General Plan policies identified in the General Plan EIR as reducing the impact. Further, in accordance with the General Plan implementation program, the City will update its Traffic Impact Fee Program in a manner consistent with General Plan Policy T-P-3 and the applicant would be required to pay the applicable fee as adopted by the City.

Accordingly, the analysis requires an evaluation of whether the proposed project may have a significant effect on the environment (CEQA guidelines Section 15070). Further when assessing whether a cumulative effect requires an EIR, the lead agency shall consider whether the cumulative

impact is significant and whether the effects of the project are cumulatively considerable. An EIR must be prepared if (i) the cumulative impact may be significant and (ii) the project's incremental effect, though individually limited, is cumulatively considerable (CEQA guidelines Section 15064(h)(1)).

With respect to the three (3) intersections within the project study area, the General Plan EIR determined that the cumulative impacts were in fact significant. Accordingly the analysis is on the second prong of the test, as to whether the project's incremental effect is cumulatively considerable.

In accordance with State CEQA guidelines Section 15064 (h)(1), the City of Emeryville has determined that the proposed project's incremental contribution to a cumulative effect on traffic at these three (3) intersections is not cumulatively considerable. First, the General Plan EIR analyzed the cumulative effect on traffic as a result of build out of the City in accordance with the General Plan. Accordingly, in year 2030, the General Plan EIR assumed 3,767 new residential units, 641,263 square feet of new retail, 310,225 square feet of new hotels, and 2,372,960 square feet of new office use, less 779,177 square feet of industrial use. The proposed project encompasses 200,000 square feet of laboratory, research and development, and/or office uses and approximately 4,000 square feet of retail space. Accordingly, the proposed project represents a very small percentage of the overall build out of the City in the cumulative context as envisioned in the General Plan EIR. Second, in accordance with Section 15064(h)(3), the project would comply with the requirements in the previously approved General Plan which provides specific requirements that will avoid or substantially lessen the cumulative problem. Therefore, no analysis of these three intersections under the cumulative condition is provided because the project's effect on traffic at these three (3) study intersections would not be cumulatively considerable.

For intersections not addressed in the General Plan EIR, a LOS analysis was prepared for the cumulative condition during the PM peak hour and included as one element of the multi-modal transportation analysis.

Cumulative Conditions (2030) traffic volumes were forecast using the most recent version of the ACCMA travel demand model. The travel demand forecasting model is based on the ACCMA regional travel demand model, with refinements to the volume forecasts within the City of Emeryville to provide for more accurate representation of projected travel demand within the city limit. The model was calibrated and validated to Spring 2007 travel conditions (the most up-to-date conditions possible using available land use data) within Emeryville.

The City of Emeryville commissioned two studies in 2007 to address the cumulative impacts as a result of four nearby major projects (the Site B project, the Marketplace Redevelopment, the BRE Gateway, and the Transit Center) and developed a set of recommendations to mitigate these impacts. The recommendations required include street widening and reconfiguration and signal timing modifications for intersections on Powell Street, 40th Street, and Ashby Avenue near I-80. Only improvements for the Marketplace Redevelopment are assumed for the Cumulative scenario and have been assumed at Intersections #8 and #9 in the cumulative analysis of this report. No other planned roadway improvements were identified in the vicinity of the project site.

Cumulative Conditions Intersection Volumes. Growth factors between the model's base year (2005) and future year (2030) were calculated for each intersection approach. Annual growth factors ranged from 1.29 for local streets to 1.73 for I-80. These growth factors were applied to the Existing

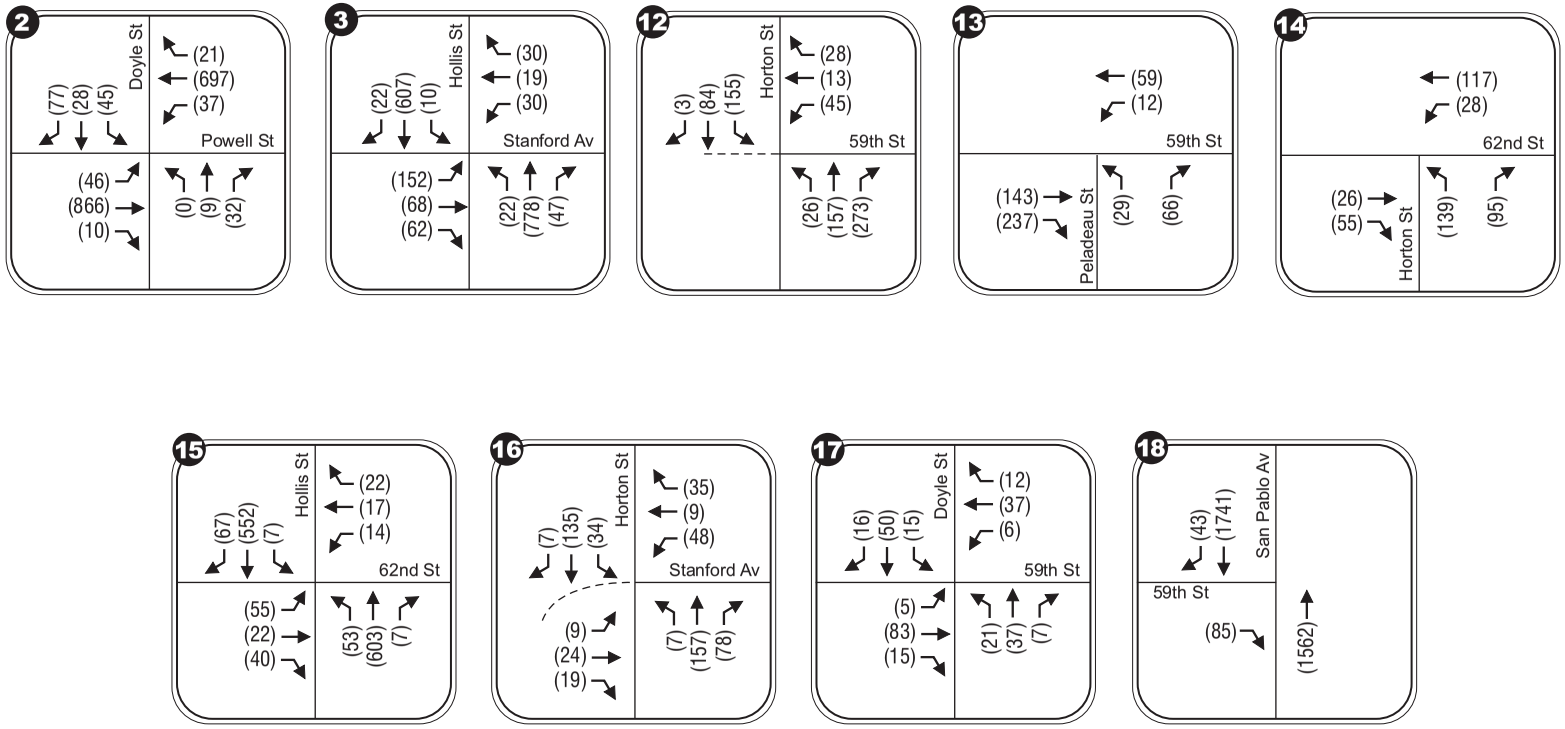
Conditions traffic volumes to derive Cumulative Conditions traffic volumes. Additionally, the cumulative scenario traffic volumes also include forecast project trips generated by the proposed Papermill mixed use project and the Greenway mixed use project. These projects have been approved and would be constructed near the proposed project. The resulting Cumulative Conditions PM peak hour volumes at the nine study intersections included in the cumulative analysis are shown in Figure 26.

Cumulative Conditions Intersection Levels of Service. Intersection LOS calculations for the Cumulative scenario assume intersection geometries and control after the proposed improvements to study Intersections #8 and #9 discussed above. The resulting PM peak hour intersection LOS for the nine study intersections are shown in Table 19. As shown in the table, two unsignalized study intersections are expected to operate at undesirable levels (LOS E or F) in at least one peak hour.

Table 19: Cumulative Conditions Intersection Levels of Service

No.	Intersection	Traffic Control	Peak Hour	Cumulative Conditions	
				LOS	Delay
2	Doyle Street/Powell Street	Two-Way Stop	PM	**F**	**>50.0**
3	Hollis Street/Stanford Avenue	Signal	PM	A	9.0
12	Horton Street/59th Street	All-Way Stop	PM	B	12.8
13	59th Street/Peladeau Street	All-Way Stop	PM	B	10.0
14	Horton Street/62nd Street	One-Way Stop	PM	B	11.4
15	62nd Street/Hollis Street	Two-Way Stop	PM	**F**	**>50.0**
16	Horton Street/Standford Avenue	All-Way Stop	PM	B	10.4
17	59th Street/Doyle Street	All-Way Stop	PM	A	7.9
18	59th Street/San Pablo Avenue	One-Way Stop	PM	D	27.2

Bold indicates intersections operating at undesirable conditions.
Stop-controlled intersections were analyzed for the worst approach.
Intersections 1 and 4 through 11 are not analyzed in the cumulative condition. See text for explanation.
Source: AECOM, 2009.



LSA

FIGURE 26

EmeryStation West at the
Emeryville Transit Center Project IS/MND
Cumulative Traffic Volumes PM Peak Hour

SOURCE: AECOM, 2009
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One of the unsignalized intersections forecast to operate at LOS F (Intersection #15) was earlier recommended to have signals installed as a mitigation measure to resolve significant impacts under Existing Plus Project conditions. This intersection met signal warrants under Existing Plus Project Conditions. Signalization of the intersection would result in LOS A at this intersection under Cumulative Conditions.

The other unsignalized intersection forecast to operate at LOS F (Intersection #2) is deemed to meet traffic signal warrants under Cumulative Conditions based on the criteria presented in the MUTCD 2003 California Supplement for the peak hour. The intersection would operate at LOS A under Cumulative Conditions with signalization.

Cumulative Plus Project Conditions Traffic Volumes. The traffic generated by the proposed project was added to the Cumulative Conditions traffic volumes to derive the Cumulative Plus Project Conditions traffic volumes, for the two respective project access options. Figure 27 and Figure 28 present Cumulative Plus Project Conditions PM peak hour turning movement volumes at the nine study intersections, for the two access options.

Cumulative Plus Project Conditions Intersection Levels of Service. The PM peak hour intersection LOS for the nine study intersections are shown in Tables 20 and 21, for the two access options. Using the City's historic thresholds of significance for vehicle movements, the project is expected to contribute to impacts at two study intersections for both Access Option 1 and 2. The intersection impacts and potential mitigation measures are discussed below.

Cumulative Plus Project Conditions Intersection Impacts and Mitigation Measures. The project is forecast to result in impacts at the following two intersections under Cumulative Plus Project Conditions, under both Access Option 1 and 2.

- Intersection #2: Doyle Street/Powell Street – Two-way stop
- Intersection #15: 62nd Street/Hollis Street – Two-way stop

This result is predicted to be the same regardless of whether Access Option 1 or 2 is ultimately implemented. As mandated by the General Plan, impacts to transit, bicyclists and pedestrians are also considered in evaluating the level of significance of the impact. The intersection impacts and potential mitigation measures are discussed below.

Intersection #2: Doyle Street/Powell Street. This intersection is within the ACCMA roadway network. In the PM peak hour, this two-way stop controlled intersection would operate at LOS F with or without the addition of project traffic, but the project would cause the average delay to increase by approximately 10 seconds in the PM peak hour. The increased delay would be an adverse effect on transit vehicles as well as automobiles (Powell Street is a designated transit street in the City's General Plan).Therefore, the project would contribute to a significant cumulative impact at this intersection.

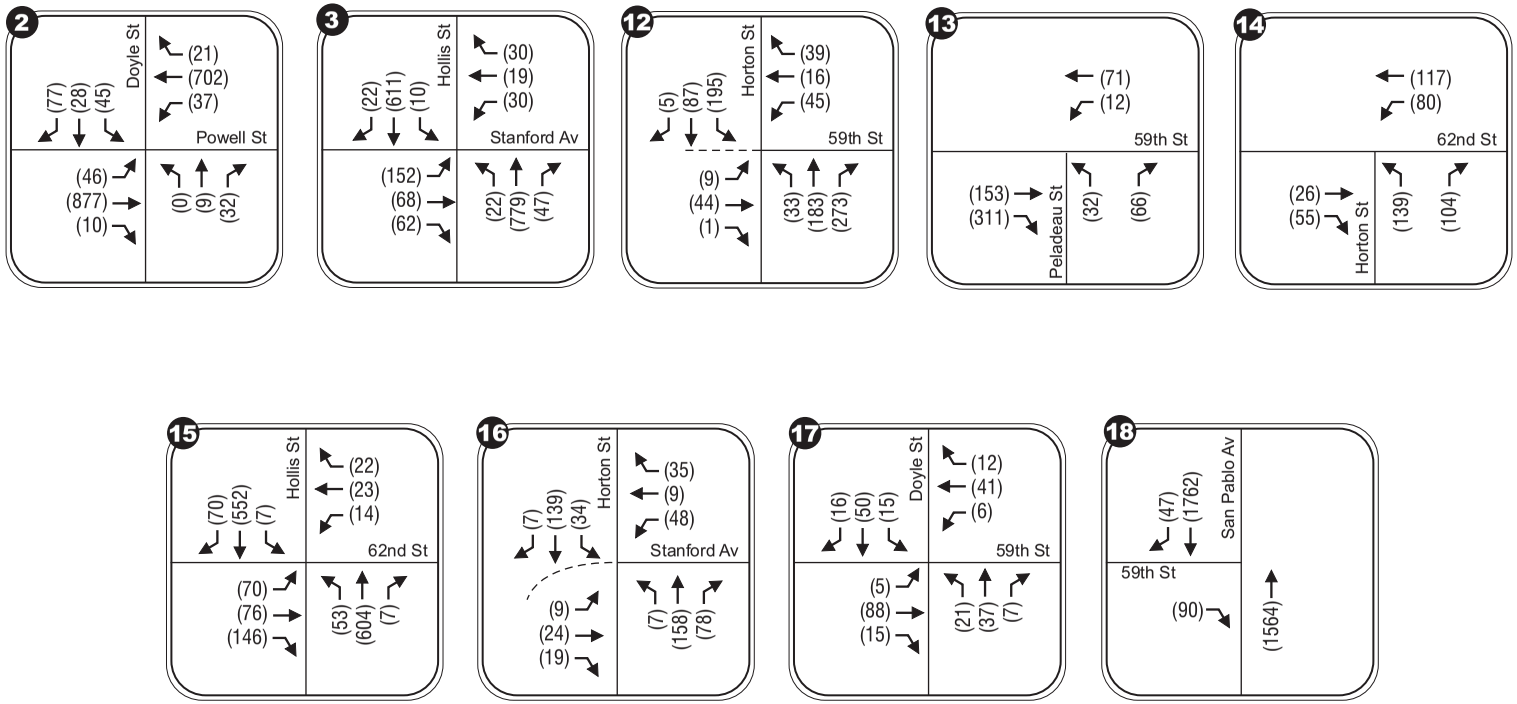

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FIGURE 27

EmeryStation West at the
Emeryville Transit Center Project IS/MND
Cumulative Plus Project (Access Option 1)
Traffic Volumes PM Peak Hour

SOURCE: AECOM, 2009

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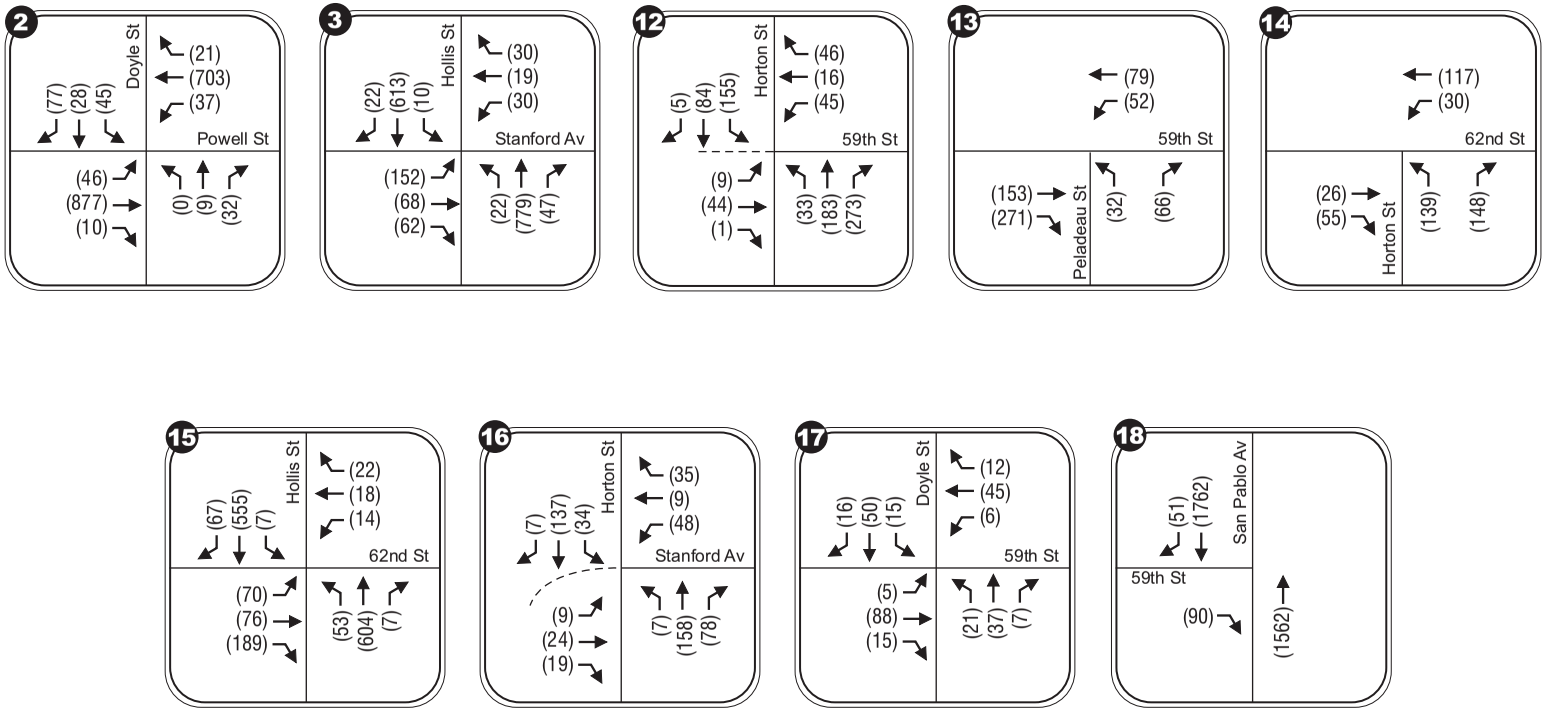

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FIGURE 28

EmeryStation West at the
Emeryville Transit Center Project IS/MND
Cumulative Plus Project (Access Option 2)
Traffic Volumes PM Peak Hour

SOURCE: AECOM, 2009

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Table 20: Cumulative Plus Project (Access Option 1) - Intersection Levels of Service

No.	Intersection	Traffic Control	Peak Hour	Cumulative		Cumulative Plus Project (Access 1)		Delay Increase (sec)	Impact
				LOS	Delay	LOS	Delay		
2	Doyle Street / Powell Street	Two-Way Stop	PM	**F**	**>50.0**	**F**	**>50.0**	**8.9**	**Yes**
3	Hollis Street / Stanford Avenue	Signal	PM	A	9.0	A	9.0	0.0	No
12	Horton Street /59th Street	All-Way Stop	PM	B	12.8	C	16.7	3.9	No
13	59th Street /Peladeau Street	All-Way Stop	PM	B	10.0	B	11.6	1.6	No
14	Horton Street /62nd Street	One-Way Stop	PM	B	11.4	B	12.7	1.3	No
15	62nd Street /Hollis Street	Two-Way Stop	PM	**F**	**>50.0**	**F**	**>50.0**	**>100.0**	**Yes**
16	Horton Street /Standford Avenue	All-Way Stop	PM	B	10.4	B	10.5	0.1	No
17	59th Street /Doyle Street	All-Way Stop	PM	A	7.9	A	8.0	0.1	No
18	59th Street /San Pablo Avenue	One-Way Stop	PM	D	27.2	D	28.7	1.5	No

Bold indicates intersections operating at undesirable conditions.
Stop-controlled intersections were analyzed for the worst approach.
Intersections 1 and 4 through 11 are not analyzed in the cumulative condition. See text for explanation.
Source: AECOM, 2009.

This intersection meets peak hour signal warrants during the PM peak hour for both Cumulative and Cumulative Plus Project scenarios. The signalization of this intersection would reduce impacts of the project to vehicle movements to less-than-significant levels. Bicyclists and pedestrians would also benefit because signalization would create a greater level of safety for pedestrians and bicycles crossing Powell Street (Powell Street is designated in the General Plan as a transit street and key green street). Therefore, implementation of the following mitigation measure would reduce the cumulative impact at this intersection to a less-than-significant level:

> Mitigation Measure TRANS-4: The City shall signalize the Doyle Street/Powell Street intersection when traffic conditions warrant. Because this impact can be attributed to existing traffic in the area, as well as traffic from approved, planned, and potential development in and around Emeryville, the applicant shall pay a pro rata share of the cost of signalization based on the project's contribution to the total cumulative growth. In the Cumulative Plus Project scenario, project traffic represents 3.6 percent of the total cumulative growth at this intersection in the PM peak hour.

Table 21: Cumulative Plus Project (Access Option 2) - Intersection Levels of Service

No.	Intersection	Traffic Control	Peak Hour	Cumulative		Cumulative Plus Project (Access 2)		Delay Increase (sec)	Impact
				LOS	Delay	LOS	Delay		
2	Doyle Street / Powell Street	Two-Way Stop	PM	**F**	**>50.0**	**F**	**>50.0**	**9.7**	**Yes**
3	Hollis Street / Stanford Avenue	Signal	PM	A	9.0	A	9.0	0.0	No
12	Horton Street /59th Street	All-Way Stop	PM	B	12.8	B	16.3	3.5	No
13	59th Street /Peladeau Street	All-Way Stop	PM	B	10.0	B	11.1	1.1	No
14	Horton Street /62nd Street	One-Way Stop	PM	B	11.4	B	11.7	0.3	No
15	62nd Street /Hollis Street	Two-Way Stop	PM	**F**	**>50.0**	**F**	**>50.0**	**>100.0**	**Yes**
16	Horton Street /Stanford Avenue	All-Way Stop	PM	B	10.4	B	10.4	0.0	No
17	59th Street /Doyle Street	All-Way Stop	PM	A	7.9	A	8.0	0.1	No
18	59th Street /San Pablo Avenue	One-Way Stop	PM	D	27.2	D	28.8	1.6	No

Bold indicates intersections operating at undesirable conditions.
Stop-controlled intersections were analyzed for the worst approach.
Intersections 1 and 4 through 11 are not analyzed in the cumulative condition. See text for explanation.
Source: AECOM, 2009.

The signalization of this intersection when traffic conditions warrant would reduce cumulative impacts of the project to vehicle movements to less-than-significant levels. The intersection would operate at LOS A under Cumulative Plus Project conditions during the PM peak hour. Signalization of this intersection would improve the movement of both transit and non-transit vehicles. In addition, it would not directly affect sidewalks or bike paths and would improve safety for some pedestrian and bicycle movements. Implementation of the mitigation measure would reduce the multi-modal transportation impact to a less-than-significant level.

However, the peak hour warrants are only one factor to be considered in determining whether an intersection should be signalized. It is recommended that a comprehensive analysis be undertaken regarding the signalization of this intersection when a revised, more accurate forecast of 2030 traffic volumes is available.

Intersection #15: 62nd Street/Hollis Street. The intersection of 62nd Street/Hollis Street is not within the ACCMA roadway network and is entirely within the City's jurisdiction. Hollis Street is designated in the General Plan as a transit street. The currently unsignalized two-way stop controlled intersection of 62nd Street/Hollis Street would experience an average delay of more than 50 seconds

(LOS F) in the PM peak hour under both Cumulative Conditions and Cumulative Plus Project Conditions. The increase in average delay as a result of project traffic would be greater than 100 seconds. Therefore, the project would contribute to a significant cumulative impact to vehicle movements at this intersection. The Existing Plus Project Conditions section of this section has already recommended the installation of signals at this intersection (Mitigation Measure TRANS-2). The intersection met signal warrants and required this mitigation measure to resolve a significant impact under Existing Conditions.

Given the proximity of this intersection to the project site and that Hollis Street is a transit street, the intersection is likely to experience an increase in bicycle and pedestrian use. Bicyclists and pedestrians would also benefit from signalization of the intersection because it would create a greater level of safety for pedestrians and bicycles crossing Hollis Street. The intersection is forecast to operate at LOS B if signalized under Cumulative Plus Project Conditions. Implementation of Mitigation Measure TRANS-2 would reduce the project impact at this intersection to a less-than-significant level.

Mitigation Measure TRANS-5: Implement Mitigation Measure TRANS-2.

In the Cumulative Plus Project scenario, project traffic represents 32.9 percent of the total cumulative growth at this intersection in the PM peak hour.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? ***(Less-than-Significant Impact)***

Based on the trip generation calculations provided in Table 17, the project would generate more than 100 trips in both the AM and PM peak hours and therefore requires an ACCMA analysis. The following roadway segments in the vicinity of the proposed project are designated as part of the Congestion Management Program (CMP) and Metropolitan Transportation System (MTS) roadway networks and were selected for analysis:

1. I-80, from University Avenue to Powell Street;
2. I-80, from Powell Street to I-580 Junction;
3. Powell Street, from I-80 to Hollis Street;
4. Powell Street, from Hollis Street to San Pablo Avenue;
5. Ashby Avenue, from I-80 to San Pablo Avenue;
6. San Pablo Avenue, from Ashby Avenue to Powell Street; and
7. San Pablo Avenue, from Powell Street to 40th Street.

The CMA analysis addresses project impacts to roadway facilities on the CMP network. The 2000 HCM provides a roadway LOS methodology, similar to intersection LOS, based on the volume-to-capacity (v/c) ratio of the roadway. This methodology is summarized in Table 22. LOS E or better is generally considered acceptable and LOS F is considered unacceptable.

Table 22: Roadway Level of Service Definitions

Level of Service	Description of Traffic Conditions	v/c Ratio
A	Vehicles travel at free-flow speeds and can maneuver almost freely within the traffic stream.	≤ 0.30
B	Vehicles travel at free-flow speeds and movement within the traffic stream is only slightly restricted	> 0.30 and ≤ 0.50
C	Vehicles travel at or near free-flow speed and movement is somewhat restricted. Incidents can cause local queuing.	> 0.50 and ≤ 0.71
D	Vehicle speed declines as density increases, and maneuverability within the traffic stream is noticeably limited	> 0.71 and ≤ 0.89
E	Roadway is operating at or near capacity, with vehicles closely spaced. Any incident can cause backups that propagate upstream.	> 0.89 and ≤ 1.00
F	Roadway operates beyond capacity, with significant queuing at bottlenecks such as key intersections or lane drops. Vehicles are closely spaced and maneuverability is extremely restricted.	> 1.00

Source: Transportation Research Board, *Highway Capacity Manual*, 2000.

Existing Conditions Roadway Segment Levels of Service. The existing AM and PM peak hour roadway segment LOS for the selected study roadway segments are shown in Table 23. All local arterial study roadway segments currently operate at acceptable conditions. The two I-80 freeway roadway segments operate at unacceptable LOS conditions during at least one peak hour period.

Existing Plus Project Conditions Roadway Segment Levels of Service. Tables 24 and 25 show the Existing Plus Project AM and PM peak hour roadway segment LOS for the study roadway segments for the two access options. It is forecast that none of the study roadway segments would experience significant impacts to vehicle movements as a result of the addition of project traffic under Existing Plus Project conditions. Only Roadway Segment #1 (I-80 from University Avenue to Powell Street westbound during the AM peak hour) is expected to operate at unacceptable conditions (LOS F). However, this roadway segment also operates at LOS F under Existing Conditions, without the project, and the increase in the v/c ratio as a result of project traffic is only 0.6 percent for both Access Option 1 and 2. This is below the threshold of significance of a five percent increase in v/c ratio for roadway segments currently operating at LOS F. No mitigation measures are required for the study roadway segments under Existing Conditions.

Cumulative Conditions Roadway Segment Volume. Similar to the intersection volume analysis, the cumulative scenario traffic volumes also include forecast project trips generated by the recently approved Papermill and Greenway mixed use projects.

Cumulative Conditions Roadway Segment Levels of Service. The AM and PM peak hour roadway segment LOS for the study roadway segments are summarized in Table 26. As shown in the table, four out of the seven study roadway segments are expected to operate at unacceptable levels (LOS F) in Cumulative Conditions in at least one peak hour.

Table 23: Existing Conditions Roadway Segment Levels of Service

No.	Intersection	Direction	Existing Conditions			
			AM Peak Hour		PM Peak Hour	
			LOS	v/c	LOS	v/c
1	**I-80** from University Avenue to Powell Street	EB	B	0.48	E	0.96
		WB	**F**	**1.03**	D	0.77
2	**I-80** from Powell Street to I-580 Junction	EB	C	0.50	**F**	**1.01**
		WB	**F**	**1.09**	D	0.82
3	**Powell Street** from I-80 to Hollis Street	EB	B	0.41	B	0.47
		WB	B	0.44	C	0.63
4	**Powell Street** from Hollis Street to San Pablo Avenue	EB	A	0.20	B	0.41
		WB	B	0.34	B	0.33
5	**Ashby Avenue** from I-80 to San Pablo Avenue	EB	C	0.60	B	0.46
		WB	B	0.41	C	0.52
6	**San Pablo Avenue** from Ashby Avenue to Powell Street	NB	B	0.36	C	0.65
		SB	B	0.46	C	0.63
7	**San Pablo Avenue** from Powell Street to 40th Street	NB	B	0.43	C	0.70
		SB	B	0.47	C	0.61

Bold indicates segments operating at unacceptable LOS F conditions.
Source: AECOM, 2009.

Cumulative Plus Project Conditions Roadway Segment Levels of Service. Tables 27 and 28 show the Cumulative Plus Project AM and PM peak hour roadway segment LOS for the study roadway segments within the ACCMA roadway network for the two access options. It is forecast that none of the study roadway segments would experience cumulative significant impacts to vehicle movements as a result of the addition of project traffic under Cumulative Plus Project Conditions. No mitigation measures are required for the study roadway segments under Cumulative Conditions.

*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? (**No Impact**)*

The proposed project would not result in a change in air traffic patterns, nor would it result in any substantial safety risks associated with aviation.

Table 24: Existing Plus Project (Access Option 1) - Roadway Segment Levels of Service

No.	Intersection		Existing Conditions		Existing Plus Project Conditions		v/c Increase (%)	Signif. Impact
			LOS	v/c	LOS	v/c		
AM Peak Hour								
1	**I-80** from University Avenue to Powell Street	EB	B	0.48	B	0.48	0.1%	No
		WB	**F**	**1.03**	**F**	**1.04**	0.6%	No
2	**I-80** from Powell Street to I-580 Junction	EB	C	0.50	C	0.51	1.1%	No
		WB	**F**	**1.09**	**F**	**1.09**	0.1%	No
3	**Powell Street** from I-80 to Hollis Street	EB	B	0.41	C	0.51	10.3%	No
		WB	B	0.44	B	0.45	1.4%	No
4	**Powell Street** from Hollis Street to San Pablo Avenue	EB	A	0.20	A	0.20	0.1%	No
		WB	B	0.34	B	0.36	1.6%	No
5	**Ashby Avenue** from I-80 to San Pablo Avenue	EB	C	0.60	C	0.60	0.1%	No
		WB	B	0.41	B	0.41	0.1%	No
6	**San Pablo Avenue** from Ashby Avenue to Powell Street	NB	B	0.36	B	0.37	0.6%	No
		SB	B	0.46	B	0.47	1.4%	No
7	**San Pablo Avenue** from Powell Street to 40th Street	NB	B	0.43	B	0.44	0.9%	No
		SB	B	0.47	B	0.47	0.1%	No
PM Peak Hour								
1	**I-80** from University Avenue to Powell Street	EB	E	0.96	E	0.96	0.5%	No
		WB	D	0.77	D	0.78	0.1%	No
2	**I-80** from Powell Street to I-580 Junction	EB	**F**	**1.01**	**F**	**1.01**	0.2%	No
		WB	D	0.82	D	0.83	1.0%	No
3	**Powell Street** from I-80 to Hollis Street	EB	B	0.47	B	0.48	1.9%	No
		WB	C	0.63	D	0.73	9.3%	No
4	**Powell Street** from Hollis Street to San Pablo Avenue	EB	B	0.41	B	0.41	0.6%	No
		WB	B	0.33	B	0.34	0.3%	No
5	**Ashby Avenue** from I-80 to San Pablo Avenue	EB	B	0.46	B	0.47	0.3%	No
		WB	C	0.52	C	0.52	0.0%	No
6	**San Pablo Avenue** from Ashby Avenue to Powell Street	NB	C	0.65	C	0.65	0.1%	No
		SB	C	0.63	C	0.64	1.4%	No
7	**San Pablo Avenue** from Powell Street to 40th Street	NB	C	0.70	C	0.70	0.2%	No
		SB	C	0.61	C	0.62	0.9%	No

Source: AECOM, 2009.

Table 25: Existing Plus Project (Access Option 2) - Roadway Segment Levels of Service

No.	Intersection		Existing Conditions		Existing Plus Project Conditions		v/c Increase (%)	Signif. Impact
			LOS	v/c	LOS	v/c		
AM Peak Hour								
1	**I-80** from University Avenue to Powell Street	EB	B	0.48	B	0.48	0.1%	No
		WB	**F**	**1.03**	**F**	**1.04**	0.6%	No
2	**I-80** from Powell Street to I-580 Junction	EB	C	0.50	C	0.51	1.1%	No
		WB	**F**	**1.09**	**F**	**1.09**	0.1%	No
3	**Powell Street** from I-80 to Hollis Street	EB	B	0.41	C	0.51	10.3%	No
		WB	B	0.44	B	0.45	1.4%	No
4	**Powell Street** from Hollis Street to San Pablo Avenue	EB	A	0.20	A	0.20	0.1%	No
		WB	B	0.34	B	0.36	1.7%	No
5	**Ashby Avenue** from I-80 to San Pablo Avenue	EB	C	0.60	C	0.60	0.1%	No
		WB	B	0.41	B	0.41	0.2%	No
6	**San Pablo Avenue** from Ashby Avenue to Powell Street	NB	B	0.36	B	0.36	0.1%	No
		SB	B	0.46	B	0.48	2.4%	No
7	**San Pablo Avenue** from Powell Street to 40th Street	NB	B	0.43	B	0.44	0.9%	No
		SB	B	0.47	B	0.47	0.1%	No
PM Peak Hour								
1	**I-80** from University Avenue to Powell Street	EB	E	0.96	E	0.96	0.5%	No
		WB	D	0.77	D	0.78	0.1%	No
2	**I-80** from Powell Street to I-580 Junction	EB	**F**	**1.01**	**F**	**1.01**	0.2%	No
		WB	D	0.82	D	0.83	1.0%	No
3	**Powell Street** from I-80 to Hollis Street	EB	B	0.47	B	0.48	1.9%	No
		WB	C	0.63	D	0.73	9.3%	No
4	**Powell Street** from Hollis Street to San Pablo Avenue	EB	B	0.41	B	0.41	0.6%	No
		WB	B	0.33	B	0.34	0.3%	No
5	**Ashby Avenue** from I-80 to San Pablo Avenue	EB	B	0.46	B	0.47	0.3%	No
		WB	C	0.52	C	0.52	0.1%	No
6	**San Pablo Avenue** from Ashby Avenue to Powell Street	NB	C	0.65	C	0.65	0.0%	No
		SB	C	0.63	C	0.65	1.6%	No
7	**San Pablo Avenue** from Powell Street to 40th Street	NB	C	0.70	C	0.70	0.2%	No
		SB	C	0.61	C	0.62	0.9%	No

Source: AECOM, 2009.

Table 26: Cumulative Conditions Roadway Segment Levels of Service

No.	Intersection	Direction	Cumulative Conditions			
			AM Peak Hour		PM Peak Hour	
			LOS	v/c	LOS	v/c
1	**I-80** from University Avenue to Powell Street	EB	C	0.50	**F**	**1.32**
		WB	**F**	**1.50**	D	0.83
2	**I-80** from Powell Street to I-580 Junction	EB	C	0.52	**F**	**1.29**
		WB	**F**	**1.70**	E	0.92
3	**Powell Street** from I-80 to Hollis Street	EB	C	0.56	C	0.63
		WB	C	0.60	D	0.85
4	**Powell Street** from Hollis Street to San Pablo Avenue	EB	A	0.26	C	0.53
		WB	B	0.45	B	0.44
5	**Ashby Avenue** from I-80 to San Pablo Avenue	EB	D	0.77	C	0.60
		WB	C	0.53	C	0.66
6	**San Pablo Avenue** from Ashby Avenue to Powell Street	NB	C	0.63	**F**	**1.13**
		SB	D	0.79	**F**	**1.10**
7	**San Pablo Avenue** from Powell Street to 40th Street	NB	D	0.75	**F**	**1.22**
		SB	D	0.82	**F**	**1.06**

Bold indicates segments operating at unacceptable LOS F conditions.
Source: AECOM, 2009.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ***(Less-than-Significant Impact)***

The project does not include design features that would increase circulation hazards in the area. The layout of the proposed parking garage access should not create any significant hazards to pedestrians, bicycles, or drivers. The proposed project site plan is shown in Figure 3.

Currently two access options are being considered, specifically relating to how vehicular access is provided to/from the Heritage Square parking structure. The two access options would modestly affect bicycle and pedestrian safety on Horton Street, but neither option would substantially increase hazards due to their design features. The effects on bicycle and pedestrian safety of the two options are discussed in greater detail in the relevant section below.

Horton Street does not contain on-street parking. In this regard, sight lines for vehicles exiting the EmeryStation West building driveway would be adequate. Although not a significant impact, it is recommended that on-street parking be prohibited on the south side of 62nd Street in the immediate vicinity of the proposed access to/from the Heritage Square parking structure.

Table 27: Cumulative Plus Project (Access Option 1) - Roadway Segment Levels of Service

No.	Intersection		Cumulative Conditions		Cumulative Plus Project Conditions		v/c Increase (%)	Signif. Impact
			LOS	v/c	LOS	v/c		
AM Peak Hour								
1	**I-80** from University Avenue to Powell Street	EB	C	0.50	C	0.50	0.1%	No
		WB	**F**	**1.50**	**F**	**1.51**	0.6%	No
2	**I-80** from Powell Street to I-580 Junction	EB	C	0.52	C	0.53	1.1%	No
		WB	**F**	**1.70**	**F**	**1.70**	0.2%	No
3	**Powell Street** from I-80 to Hollis Street	EB	C	0.56	C	0.66	10.3%	No
		WB	C	0.60	C	0.61	1.4%	No
4	**Powell Street** from Hollis Street to San Pablo Avenue	EB	A	0.26	A	0.26	0.1%	No
		WB	B	0.45	B	0.47	1.6%	No
5	**Ashby Avenue** from I-80 to San Pablo Avenue	EB	D	0.77	D	0.77	0.1%	No
		WB	C	0.53	C	0.53	0.1%	No
6	**San Pablo Avenue** from Ashby Avenue to Powell Street	NB	C	0.63	C	0.64	0.6%	No
		SB	D	0.79	D	0.81	1.4%	No
7	**San Pablo Avenue** from Powell Street to 40th Street	NB	D	0.75	D	0.76	0.9%	No
		SB	D	0.82	D	0.83	0.1%	No
PM Peak Hour								
1	**I-80** from University Avenue to Powell Street	EB	**F**	**1.32**	**F**	**1.33**	0.5%	No
		WB	D	0.83	D	0.83	0.1%	No
2	**I-80** from Powell Street to I-580 Junction	EB	**F**	**1.29**	**F**	**1.29**	0.2%	No
		WB	E	0.92	E	0.93	1.0%	No
3	**Powell Street** from I-80 to Hollis Street	EB	C	0.63	C	0.65	1.9%	No
		WB	D	0.85	E	0.94	9.3%	No
4	**Powell Street** from Hollis Street to San Pablo Avenue	EB	C	0.53	C	0.54	0.6%	No
		WB	B	0.44	B	0.44	0.3%	No
5	**Ashby Avenue** from I-80 to San Pablo Avenue	EB	C	0.60	C	0.60	0.3%	No
		WB	C	0.66	C	0.66	0.0%	No
6	**San Pablo Avenue** from Ashby Avenue to Powell Street	NB	**F**	**1.13**	**F**	**1.13**	0.1%	No
		SB	**F**	**1.10**	**F**	**1.11**	1.4%	No
7	**San Pablo Avenue** from Powell Street to 40th Street	NB	**F**	**1.22**	**F**	**1.22**	0.2%	No
		SB	**F**	**1.06**	**F**	**1.07**	0.9%	No

Source: AECOM, 2009.

Table 28: Cumulative Plus Project (Access Option 2) - Roadway Segment Levels of Service

No.	Intersection		Cumulative Conditions		Cumulative Plus Project Conditions		v/c Increase (%)	Signif. Impact
			LOS	v/c	LOS	v/c		
AM Peak Hour								
1	**I-80** from University Avenue to Powell Street	EB	C	0.50	C	0.50	0.1%	No
		WB	**F**	**1.50**	F	1.51	0.6%	No
2	**I-80** from Powell Street to I-580 Junction	EB	C	0.52	C	0.53	1.1%	No
		WB	**F**	**1.70**	F	1.70	0.2%	No
3	**Powell Street** from I-80 to Hollis Street	EB	C	0.56	C	0.66	10.3%	No
		WB	C	0.60	C	0.61	1.4%	No
4	**Powell Street** from Hollis Street to San Pablo Avenue	EB	A	0.26	A	0.26	0.1%	No
		WB	B	0.45	B	0.47	1.7%	No
5	**Ashby Avenue** from I-80 to San Pablo Avenue	EB	D	0.77	D	0.77	0.1%	No
		WB	C	0.53	C	0.53	0.2%	No
6	**San Pablo Avenue** from Ashby Avenue to Powell Street	NB	C	0.63	C	0.63	0.1%	No
		SB	D	0.79	D	0.82	2.4%	No
7	**San Pablo Avenue** from Powell Street to 40th Street	NB	D	0.75	D	0.76	0.9%	No
		SB	D	0.82	D	0.83	0.1%	No
PM Peak Hour								
1	**I-80** from University Avenue to Powell Street	EB	**F**	**1.32**	**F**	**1.33**	0.5%	No
		WB	D	0.83	D	0.83	0.1%	No
2	**I-80** from Powell Street to I-580 Junction	EB	**F**	**1.29**	**F**	**1.29**	0.2%	No
		WB	E	0.92	E	0.93	1.0%	No
3	**Powell Street** from I-80 to Hollis Street	EB	C	0.63	C	0.65	1.9%	No
		WB	D	0.85	E	0.94	9.3%	No
4	**Powell Street** from Hollis Street to San Pablo Avenue	EB	C	0.53	C	0.54	0.6%	No
		WB	B	0.44	B	0.44	0.3%	No
5	**Ashby Avenue** from I-80 to San Pablo Avenue	EB	C	0.60	C	0.60	0.3%	No
		WB	C	0.66	C	0.66	0.1%	No
6	**San Pablo Avenue** from Ashby Avenue to Powell Street	NB	**F**	**1.13**	**F**	**1.13**	0.0%	No
		SB	**F**	**1.10**	**F**	**1.11**	1.6%	No
7	**San Pablo Avenue** from Powell Street to 40th Street	NB	**F**	**1.22**	**F**	**1.22**	0.2%	No
		SB	**F**	**1.06**	**F**	**1.07**	0.9%	No

Source: AECOM, 2009.

e) Result in inadequate emergency access? ***(Less-than-Significant Impact)***

The Emeryville General Plan designates I-80 and I-580 as "general evacuation routes" and San Pablo Avenue as an earthquake evacuation route. Powell Street is also a designated flood and earthquake evacuation route. The proposed project would not permanently restrict vehicular, pedestrian, or bicycle access within or in the vicinity of the project site, including on these designated emergency routes.

f) Result in inadequate parking capacity? ***(Less-than-Significant Impact)***

Currently, on-street parking is provided along a number of streets within the vicinity of the proposed project site. In particular, on-street parking is provided on 59th Street between Hollis and Doyle Streets (approximately 31 spaces), on Peladeau Street between 59th and Powell Streets (approximately 22 spaces) and on 62nd Street between Overland Avenue and Doyle Street (approximately 40 spaces). The majority of on-street parking in the vicinity of the proposed project site is unrestricted.

Site observations indicate that most streets in the project vicinity exhibit parking occupancy rates of above 90 percent during the peak lunch-time period. Accordingly, demand for parking from the proposed project land uses should not be allowed to intrude onto on-street areas. The project proposes to include a total of approximately 622 parking stalls to be available for users of the proposed project land uses. The following section evaluates whether the proposed parking supply would be sufficient to accommodate the forecast parking demands created by the project.

Parking. The State Court of Appeals has held that parking is not part of the permanent physical environment, that parking conditions change over time as people change their travel patterns, and that unmet parking demand created by a project need not be considered a significant environmental impact under CEQA unless it would cause significant secondary effects.[61] Parking supply/demand varies by time of day, day of week, and season. Generally, where parking demand increases faster than supply, parking prices are raised as a means of maintaining a rough equilibrium between supply and demand. Decreased availability and increased costs result in changes to people's mode and pattern of travel. However, the City of Emeryville wants to ensure that the project's provision of additional parking spaces along with measures to lessen parking demand (by encouraging the use of non-auto travel modes) would result in minimal adverse effects to project occupants and visitors, and that any secondary effects (such as effects on air quality due to drivers searching for parking spaces) would be minimized. As such, although not required by CEQA, this study evaluates whether the project's estimated parking demand would be met by the project's proposed parking supply or by the existing parking supply within a reasonable walking distance of the project site.

Parking Analysis. The following discussion evaluates the proposed project's parking supply and how it compares to City of Emeryville Planning Code requirements for off-street parking. During remediation and construction, parking for construction workers and displaced users of the existing parking lots would be provided in other parking structures in the area that are operated by the applicant. During project operation, some space within the laboratory/office tower might be used for research activities, which previous studies in Emeryville have shown create less parking demand than

[61] San Franciscans Upholding the Downtown Plan v. the City and County of San Francisco (2002) 102 Cal.App.4th 656.

office use. The office use is applied to the parking analysis in order to provide an upper estimate of potential project impacts.

The project would include a total of approximately 622 parking spaces for users of the project land uses. Approximately 23 spaces would be located in the EmeryStation West building parking garage and approximately 599 spaces would be located in the Heritage Square parking structure. Both parcels would include additional parking supplies which would replace the existing Amtrak surface parking lot and a surface parking lot for an adjacent office building. Table 29 summarizes the number of code-required and proposed parking spaces for the project land uses. Table 30 summarizes the estimated vehicle parking demand for the proposed project based on ITE rates summarized in the *Parking Generation Manual*. The Average Peak Period Parking Demand was used for the calculations.

The Zoning Ordinance (EMC 9-4.55.5 and 6) requires 3 parking spaces per 1,000 square feet for offices and retail space. The proposed 222,800 square feet of office space and 1,600 square feet of retail space would require the provision of 673 parking spaces. A total of 622 parking spaces are proposed for the project land uses. The proposal would, therefore, be insufficient to meet City Code requirements. The proposal would also be insufficient to meet ITE Parking Demand forecasts.

Table 29: Parking Code Requirements

Land Use	Unit	Amount	Code	Spaces (Code)	Spaces (Proposed)
Commercial - Office	KSF	222.8 KSF	1 space per 333 SF	668	
Commercial - Retail	KSF	1.6 KSF	1 space per 333 SF	5	
Total				**673**	**622**

Source: City of Emeryville Municipal Code 9-4.55.5 and 9-4.55.6; AECOM, 2009.

Table 30: ITE Parking Demand

Land Use	Size	Parking Rates	Parking Demand	Spaces (Proposed)
Office Building (701)	222.8 KSF	2.84 stalls per KSF	633	
Retail (820)	1.6 KSF	3.76 stalls per KSF	6	
Total			**639**	**622**

Source: ITE, *Parking Generation Manual, 3rd Edition*; AECOM, 2009.

Existing levels of on-street parking were observed in the immediate vicinity of the site. In general, on-street parking in the vicinity of the project site consists of parallel parking spaces, with few restrictions outside of four-hour time periods from 8:00 a.m. to 12:00 a.m. on the first and third Thursday of each month for street sweeping. During the weekday midday period (which is the peak period for the project land uses) the on-street parking in the vicinity of the site was observed to exhibit occupancy rates of above 90 percent.

The American with Disabilities Act (ADA) Accessibility Guidelines require car parking facilities of this size (6221 spaces for project land uses) to provide a total of ten disabled parking spaces for the project land uses (two percent of the total capacity)

In total, 12 disabled parking spaces should be provided in the 599-space Heritage Square parking structure and seven disabled parking spaces should be provided in the EmeryStation West building. These figures account for all project-related and non-project-related parking spaces. The site plans indicate that the project would provide a total of 12 disabled parking spaces on the ground level of the Heritage Square parking structure and 11 disabled parking spaces on the ground floor of the EmeryStation West building in proximity to the elevators. In this regard, the project site would slightly exceed the disabled parking requirements.

The City of Emeryville specifies parking stall dimensions and limits the amount of compact spaces allowed (no more than 60 percent). Table 31 provides the City's dimension requirements for 90 degree angled regular and compact spaces. It is unclear from the site plans how many spaces would meet the compact stall requirements and how many would meet the regular stall requirements. All proposed on-site spaces must meet these standards or obtain a variance from the City.

Table 31: Required Parking Stall Dimensions

Dimension	Required Dimensions (ft)	
	Regular Stalls	Compact Stalls
Width	8.5	7.5
Depth	18	16

Source: City of Emeryville Municipal Code 9-4.55; AECOM, 2009.

According to the City of Emeryville Municipal Code Title 9, Section 9-4.55, project maneuvering aisles necessary for access into and out of required parking spaces shall have a minimum width of 22 feet. The site plans indicate that all maneuvering aisles will be greater than 22 feet wide and thus will meet this requirement.

Loading Impacts. Loading demand requirements are specified in Title 9, Section 9-4.55.8 of the City of Emeryville Municipal Code. It is understood that the City of Emeryville does not require loading berths for the proposed office or retail land uses. However, the code does specify that no loading related maneuvering should occur on public roadways.

The existing site plans indicate that the EmeryStation West building site would provide an off-street loading area which would be accessible from Horton Street at the northern end of the project site. The plans show provision for two truck loading spaces in an area that is separate from the public parking area to ensure that parking maneuvers do not conflict with general traffic movements. However, it is unclear whether the loading area is suitable to be accessed by turning truck maneuvers. It is also unknown how trucks are intended to enter and exit the loading area (in regards to reversing into or out of the area). Preferably, all loading vehicles should be permitted to enter and exit the loading area without undertaking any reversing maneuvers on-street on Horton Street.

The loading area access leads to an additional curb cut that presents a potential conflict for bicyclists using the on-street bicycle lanes on Horton Street and for pedestrians on the sidewalk. It is recommended that signage and pavement marking be installed to formalize a pedestrian crossing and pavement coloring and pavement bicycle symbols be installed on the roadway to highlight the presence of the bicycle lane to trucks turning across the bicycle lane.

g) Conflict with adopted polices, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? ***(Less-than-Significant Impact)***

The project would not conflict with adopted policies, plans or programs supporting alternative transportation, as discussed below.

Bicycle and Pedestrian Facilities. Bikeway facilities are typically classified as Class I, Class II, or Class III. A Class I bikeway (bike path) provides a completely separate right-of-way for the exclusive use of bicycles and pedestrians. A Class II bikeway (bike lane) provides exclusive usage for bicyclists with "BIKE LANE" markings and solid white striping on the roadway. Typically, striped bike lanes are 5 to 6 feet wide. A Class III bikeway (bike route) is a signed roadway where bicyclists must share the road with vehicles; pavement markings are typically not installed.

Directly abutting the two project parcels, Class II facilities are currently provided on Horton Street. This is a primary north-south route for bicyclists. Class II facilities are also provided on 59th Street west of Hollis Street. Class III facilities are provided on 59th Street east of Hollis Street. Farther from the immediate vicinity of the project site, Class II facilities are also provided on 40th Street/Shellmound Street.

A Class I facility is provided parallel to Frontage Road along the waterfront as part of the San Francisco Bay Trail. An additional Class I facility extends north of Ocean Avenue at Doyle Street, cutting diagonally to 67th Street and eventually continuing to Ninth Street. Class III facilities are also provided on 47th Street, and additional routes are provided through existing open on- and off-street parking facilities such as the paved path extending north of 53rd Street to the intersection of Hollis Street/Stanford Avenue.

Bicyclists accessing the project site from the opposite (west) side of the railroad tracks can conveniently access the project site using the Amtrak pedestrian-bicycle elevator crossing at 59th Street directly adjacent to the project or using the at-grade crossing at 65th Street to the north of the project area. In this regard, pedestrians can also cross the railroad tracks at these two points.

Sidewalks are provided along all streets in the vicinity of the project site. Sidewalks directly adjacent to the project parcels are generally five feet wide on both sides of Horton Street and the south side of 62nd Street. The intersection of 59th Street/Horton Street provides crosswalks on all three legs. All sidewalks and crosswalks in the vicinity of the project site currently provide for a safe and pedestrian-friendly environment.

Planned Bicycle and Pedestrian Facility Improvements. The City of Emeryville's *Bicycle and Pedestrian Plan (1998-2010)* details the following improvements to the bikeway network in the vicinity of the project site:

- Implement a Class II facility (bike lanes) on Adeline Street from the Oakland border to 40th Street;
- Implement a Class III facility (bike route) on 40th Street between San Pablo Avenue and Adeline Street;
- Implement a Class II facility on 40th Street between Adeline Street and the Oakland border;
- Work with the City of Oakland to extend the Class II facilities on 40th Street to the MacArthur BART station; and
- Install bicycle detectors for existing signals on 40th Street at San Pablo Avenue, Adeline Street, Hollis Street, Emery Street and Horton Street.

Bicycle and Pedestrian Facility Impacts. As detailed above, there are existing on-street Class II bike lanes along Horton Street, directly abutting the project site. There are also other Class I, II and III facilities scattered in the project area that would encourage bicycling among employees and visitors of the project. Together, these facilities provide a generally safe environment for bicyclists, despite high traffic volumes on many key roadways such as 40th Street and Powell Street.

Existing bicycle traffic on these facilities was observed to be modest, with all of the facilities operating under capacity. Therefore, the current facilities are expected to adequately accommodate the small increase in bicycle trips that would result from the project.

Sidewalks adjacent to the project site are generally 5 feet in width and crosswalks are provided at all adjacent intersections, allowing for safe pedestrian circulation. Although the project would add additional pedestrians to local streets and sidewalks, existing pedestrian facilities should adequately handle the increase in pedestrians.

As discussed above, two access options are being considered, specifically relating to providing vehicular access to/from the proposed Heritage Square parking structure. Both access options include the construction of a new western leg of the intersection of 59th Street/Horton Street to provide a driveway access to the EmeryStation West building parking garage. The two access options as they relate to the Heritage Square parking structure are summarized as:

- Access Option 1: Full access entry from Horton Street. Full access exit onto 62nd Street.
- Access Option 2: Right-in and Right-out only access on 62nd Street.

In terms of bicycle and pedestrian safety, Access Option 1 would be preferred given that this option does not include a curb-cut on Horton Street for access to the Heritage Square parking structure. This would eliminate a potential conflict between turning vehicles and bicyclists using the Class II bicycle lanes on Horton Street. This would also eliminate a potential conflict with pedestrians.

However, the existing Heritage Square parking lot currently includes a curb-cut and access point on Horton Street. In this regard, a vehicular access point already exists in this location, and therefore the project would not result in a significant impact on bicyclists or pedestrian safety and access on Horton Street.

Bicycle Parking Requirements. The Emeryville City Council recently approved an Ordinance amending the Emeryville Municipal Code to add Article 68 - Bicycle Parking Standards to Chapter 4 of Title 9, and to amend Section 9-4.55.2(e) – Motorcycle and Bicycle Spaces, of Article 55 of Chapter 4 of Title 9. Effectively, the approved ordinance specifies bicycle parking requirements for new developments. The ordinance is consistent with the Association of Pedestrian and Bicycle Professionals standards, which set physical standards for bike rack elements, along with placement and access dimensions. The standards require a rack element for every two bicycle parking spaces and sufficient area to ensure easy use of all elements.

The ordinance requires that the total number of long-term and short-term bicycle parking spaces be at least 10 percent of the required vehicle parking spaces. As discussed earlier, Section 9-4.55.9 of the Zoning Ordinance ("Parking Requirements for Unspecified Uses") allows the Planning Commission, upon recommendation of City Staff, to determine the parking requirements for a given use. As such, the project is proposing to provide 622 vehicle parking spaces. However, given that the zoning ordinance requires the provision of 673 vehicle parking spaces, it is recommended that the project provide a total of 54 bicycle parking spaces.

The site plans indicate a bicycle locker area would be provided on the street level, adjacent to the proposed EmeryStation West building. However, it is unknown how many bicycle parking spaces are proposed to be provided.

The ordinance also states that short-term bicycle parking should be located closer to primary entrances than vehicle spaces, visible from those entrances, and lighted. Long-term bicycle parking has to be in a locked area, with racks, that is accessible only to cyclists. If the area is out of sight of the entrance, employees must be notified by signage or some other means of its location. It is therefore required that the project provide bicycle parking for long-term employees and short-term visitors in accordance with the recently approved ordinance.

Transit Facilities. The project site is located immediately adjacent to a long-distance train station where service is provided by Amtrak. The Emeryville Amtrak Station serves nationwide and California-based routes. California routes include the Zephyr, Coast Starlight, San Joaquin and Capitol Corridor, which connects to San Jose in the south and Martinez, Fairfield, Davis, and Sacramento in the north. Amtrak provides bus service to transport passengers to and from downtown San Francisco 7 days a week based on the train schedule.

The site is also well served by local transit bus services. The Emery Go Round has a stop at the Emeryville Amtrak Station, immediately adjacent to the project site. This is a free shuttle service funded by commercial property owners in the City-wide transportation business improvement district. The Emery Go Round has direct connection with MacArthur BART station and various destinations within Emeryville, including Bay Street, Powell Street Plaza and the Emeryville Public Market. Most Emery Go Round routes run on 12 minute headways during the peak hour and 15 to 20 minute headways at other times.

AC Transit provides local and regional bus and transit service within Alameda and Contra Costa Counties and between the East Bay and San Francisco's Transbay Terminal. The nearest AC Transit routes to the project site are local routes 19, 57, 72, and 72M; transbay routes C, CB, and F; and Rapid route 72R.

In summary, the project site is well served by local buses, regional BART and long distance Amtrak transit services. In addition to the MacArthur BART station which is connected by the free shuttle Emery Go Round service, Ashby BART station is also located within convenient bicycling distance of the site. Bus service to and from Ashby BART is provided by AC Transit line F.

Three BART lines serve MacArthur BART (Richmond – Millbrae, Pittsburg/Bay Point – SFO, and Richmond – Fremont) and two lines serve Ashby BART (Richmond – Millbrae and Richmond – Fremont). Weekday midday and peak hour frequencies on these lines are every 15 minutes, except for the Pittsburg/Bay Point – SFO line, which runs every 5 to 10 minutes during the weekday peak periods. The Richmond – Millbrae line does not run weekday or Saturday evenings, and does not run at all on Sundays.

Existing transit services in the vicinity of the project are summarized in Table 32, while Figure 26 illustrates the existing transit network.

Planned Transit Facility Improvements. The existing Emeryville Amtrak Station bus bay area adjacent to the project site is proposed to be redeveloped in conjunction with construction of the project. The modifications would relocate the bus bay area to the western side of the interior of the ground floor of the EmeryStation West building. Busses would enter the building on its northeast corner and exit on the south side, just west of the automobile entry/exit (Figure 27). From the passenger loading/unloading area inside of the EmeryStation West building, pedestrians would have direct access to stairways to access upper levels of the EmeryStation West building, or would have direct access to pedestrian walkways leading to the Amtrak Station.

The existing bus bay area provides bus parking parallel to the curb. Capacity for approximately eight taxi zone and/or pick-up and drop-off parallel parking spaces is provided in the same general area, but on the opposite side of a median from the parallel bus bay parking. Under the proposed project the existing bus bay would become a taxi zone and the curb area nearest to the Amtrak Station, would be used by the Emery Go Round and AC Transit. The pick up and drop off of passengers from automobiles would also occur along the curb in front of the Amtrak Station. (see Figure 3).

The construction of the proposed driveway to/from the EmeryStation West building would require relocation of the existing entry to the bus bay area (currently at the location of the driveway). The entry would be relocated just south of the EmeryStation West building driveway. The revised layout of the driveways for the Amtrak Station and the EmeryStation West building would result in the presence of three curb cuts on the west side of Horton Street within approximately 220 feet. Currently, two curb cuts are present (the bus bay area entry and exit). The current plans indicate that the sidewalk would be continued along this section of Horton Street adjacent to the roadway. It is recommended that adequate signing and pavement marking be installed on the three curb cuts to formalize pedestrian crosswalks and highlight their presence to motorists and bus drivers.

The three curb cuts may increase the number of potential conflict points for bicyclists using the on-street bicycle lanes on Horton Street. It is recommended that pavement coloring and pavement bicycle symbols be installed within the bicycle lanes near the curb cuts to highlight the presence of bicycles to motorists and bus drivers.

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FIGURE 29

EmeryStation West at the Emeryville Transit Center Project IS/MND

Existing Transit Network

SOURCE: AECOM, 2009

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Table 32: Existing Transit Network

Line	Route	Service Frequencies (minutes)		
		Weekday Peak	Weekday Off-peak	Weekend
19 Hollis	From Downtown Berkeley to Fruitvale via Hollis St. and Alameda	30	30	30
57 MacArthur	From Emeryville Amtrak to Eastmont Transit Center via MacArthur BART and MacArthur Blvd.	12	12	15
72 San Pablo Avenue	From Hilltop Mall to Jack London Square via San Pablo Ave.	30	30	30
72M Macdonald	From Point Richmond to Jack London Sq. via San Pablo Ave.	30	30	30
72R San Pablo Rapid	From Contra Costa College to Jack London Square via San Pablo Ave.	12	12	--
C Moraga Avenue[a]	From Piedmont to San Francisco via Emeryville	30	--	--
CB Broadway Terrace	From Piedmont to San Francisco via Broadway	30	--	--
F Adeline	From Berkeley to San Francisco via Shattuck Ave. and Adeline Ave.	30	30	30
Emery Go Round	Various	12	15-20	30-40

[a] Peak direction only.
Source: AC Transit, 2009; Emery Go Round, 2009.

Notwithstanding the above comments, the proposed re-design of the bus bay area would not result in significant impacts in regards to auto, pedestrian or bicycle access.

Transit Facility Impacts. The vehicle trip generation analysis for the proposed project assumes that 5 percent of trips to/from the site would use transit. This is expected to generate approximately 17 transit trips during the AM peak hour and 17 transit trips during the PM peak hour.

These trips would be spread across a total of nine bus route services, each of which operate at frequencies of between 12 and 30 minutes during the peak periods, as summarized in Table 26.

Therefore, even if the transit mode split to/from the project site was ultimately 10 percent, only a minimal increase in transit ridership would be expected on any individual transit service as a result of the proposed project. Given the frequent transit service to the project site and the existing excess capacity on transit vehicles currently serving the area, the forecast increases in transit ridership would cause negligible impacts in regards to loading for transit vehicles.

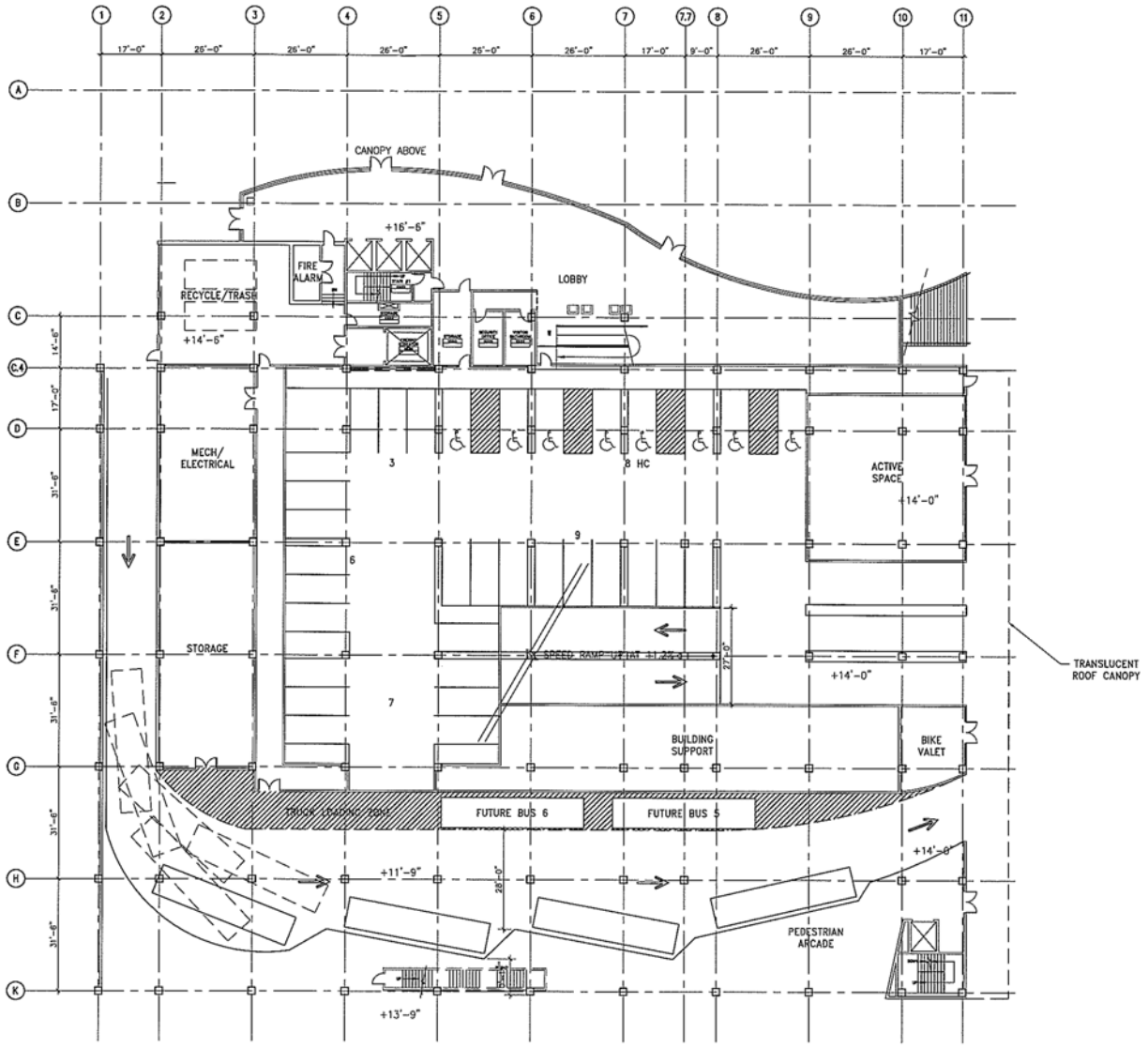

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FIGURE 30

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EmeryStation West at the
Emeryville Transit Center Project IS/MND
Ground Floor Plan for the EmeryStation West Building

SOURCE: ELLERBE BECKET, OCTOBER 2009
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Transportation Demand Management (TDM) Program. Given the number of study intersections that would experience significant adverse impacts, it is strongly recommended that the project develop and implement a transportation demand management (TDM) program in order to reduce the project's traffic-related impacts. The TDM program could consist of the following elements:

- Safe and secure on-site bicycle parking shall be provided for employees;
- Shower and locker facilities shall be provided to further encourage employee bicycling;
- Short-term bicycle parking racks shall be installed for visitors in a location that is well lit and ideally provides passive security via high volumes of pedestrians.
- Parking fees shall be implemented for the on-site parking, at a rate higher than the equivalent cost of transit, to encourage the use of alternative travel modes;
- Carpool parking spaces shall be given priority in terms of location. Two percent of the project's parking would be designated for carpool use. Carpool parking spaces would also be subject to a reduced monthly fee; and
- A project travel website shall be created providing real-time transit information and carpool matching.

Furthermore, employers should be required to offer programs to reduce auto use and support the increased use of alternative modes. Such programs and incentives would include:

- Alternative commute subsidies and/or parking cash-out, where employees are provided with a subsidy if they use transit or commute by alternative modes;
- Opportunities to purchase commuter checks, which allow employees to purchase transit tickets at discounted rates and from their before-tax income; and
- Compressed work weeks and flextime, where employees adjust their work schedule to reduce peak hour vehicle trips to/from the worksite.

Site Access and Circulation. Several aspects of site access and circulation are considered below, beginning with access to the two buildings – under each of the two access options – and continuing on to on-street parking, pedestrian and bicycle access.

EmeryStation West Building Access. The proposed driveway to/from the EmeryStation West building parking garage would form the western leg of the existing intersection of Horton Street/59th Street under both access options. The operation of this intersection was evaluated as Study Intersection #12. The intersection is forecast to operate at LOS C or better during the peak hours under Cumulative Plus Project conditions. The average delay per vehicle exiting the eastbound driveway approach to this intersection is predicted to be a modest 10 seconds during the PM peak hour under either access option scenario. Therefore, it is considered unlikely that significant queues would be generated within the parking garage facility.

Heritage Square Parking Structure – Access Option 1. The intersection of the Heritage Square parking structure exit/62nd Street is forecast to operate at LOS B under Cumulative Plus Project Conditions during the PM peak hour. Vehicles exiting onto 62nd Street would experience

approximately 11 seconds average delay and queues of less than one car length. This analysis conservatively assumes that the 200 parking spaces proposed to be provided for existing land uses are fully occupied under Cumulative Plus Project Conditions and that 50 percent of motorists exit during the PM peak hour (65 right turns and 35 left turns).

The operation of this proposed driveway exit was also evaluated assuming a single shared left/right turn lane exit onto 62nd Street. It is forecast that the driveway exit would operate at LOS B. Vehicles exiting onto 62nd Street would experience approximately 12 seconds average delay and queues of approximately two car lengths.

Therefore, if Access Option 1 is ultimately implemented, it is considered feasible to only install a single shared left/right turn lane exit from the Heritage Square parking structure. This would also improve sight lines for vehicles exiting the parking garage facility.

The intersection of the Heritage Square parking structure entry/Horton Street is forecast to operate at LOS A under Cumulative Plus Project Conditions during the AM peak hour. This assumes only one entry lane into the parking garage rather than the two lane entry proposed by the original site plans. This analysis also conservatively assumes that the 200 parking spaces proposed to be provided for existing land uses are fully occupied under Cumulative Plus Project Conditions and that 50 percent of motorists enter during the AM peak hour (75 right turns and 25 left turns).

However, it is recognized that there may be a potential for queues to spill-back onto Horton Street as a result of the processing time of the parking garage fare-gates. Approximately, 331 vehicles per hour would be expected to enter the Heritage Square parking structure during the AM peak hour, based on the assumptions described above.

The following design capacities for car parking entry points are recommended in regards to vehicles per hour per lane depending on the payment control system implemented at the entry fare-gate.

- Clear aisle. No control: 800 vph
- Ticket dispenser. No gate: 575 vph
- Ticket dispenser. With gate: 305 to 520 vph
- Coded-card operated gate: 340 vph
- Cashier – Flat rate: 195 to 310 vph
- Coin operated gate: 140 vph

A similar approach should be undertaken when designing the capacity of the exit lanes onto 62nd Street to ensure that significant internal queues are not generated within the car parking facility. Based on the assumptions described above, approximately 310 vehicles per hour would be expected to exit the Heritage Square parking structure during the PM peak hour. The recommended design capacities for the car parking facility exit lanes are provided below:

- Coded-card operated gate: 320 vph
- Cashier – Flat rate: 215 vph
- Cashier – Variable rate: 150 vph
- Coin operated gate: 140 vph

Therefore, depending on the entry and exit control systems ultimately installed at the fare-gates, the forecast vehicular demand may warrant either one or two entry lanes to the Heritage Square parking structure to ensure that queuing does not spill back onto the external Horton Street roadway or result in excessive queues within the car parking facility. This outcome is especially important given that the Emery Go Round free bus services operates along Horton Street and accordingly should not be delayed by the proposed access arrangements of the project.

Heritage Square Parking Structure – Access Option 2. The intersection of the Heritage Square parking structure access and 62nd Street is forecast to operate at LOS B under Cumulative Plus Project Conditions during the PM peak hour. This assumes a single right turn exit lane and right turn entry lane. Vehicles exiting onto 62nd Street would experience approximately 13 seconds average delay and queues of approximately two car lengths.

This analysis conservatively assumes that the 200 parking spaces proposed to be provided for existing land uses are fully occupied under Cumulative Plus Project Conditions and that 50 percent of motorists enter during the AM peak hour (100 right turns in) and 50 percent of motorists exit during the PM peak hour (100 right turns out).

The same entry and exit control considerations are recommended as summarized above for Access Option 1.

Access Option Summary. As noted in Sections XV.a and XV.b, the impacts of the project on intersections and roadway segments within the study area would be similar for the two access options being considered for the Heritage Square parking structure. With the design capacity measures for car parking entry points recommended in the preceding paragraphs delays into and out of the parking structure and queuing on nearby streets would be minimal. In terms of bicycle and pedestrian safety, neither option would substantially increase hazards due to their design features. The existing Heritage Square parking lot currently includes a curb-cut and access point on Horton Street. In this regard, a vehicular access point already exists in this location, and therefore the project would not result in a significant impact on bicyclists or pedestrian safety and access on Horton Street. Access Option 1 is recommended because allowing full movements into and out of the garage would slightly reduce vehicle miles traveled by allowing access from both the north and south.

On-Street Parking. On-Street parking is currently provided on 62nd Street. Approximately two to three parking spaces would have to be removed to accommodate the installation of the driveway for the Heritage Square parking structure. It is recommended that parking be set back 7 to 10 feet on either side of the garage driveway. This would allow adequate sight lines for vehicles exiting the parking garage. Any greater set-back distance may provide opportunities for delivery vehicles to park illegally for short periods which, given the bulky size of delivery vehicles, would diminish sight lines, possibly leading to unsafe conditions. It is recommended that trees, signs or other objects that may obstruct sight lines from the parking garage exit, not be installed directly abutting the driveway.

The site plans suggest that trees may be located on either side of the driveway, which could diminish slight lines. Placing trees farther from the driveway would improve the sight lines of drivers as they exit the garage.

Site Parking. The site plans for the two parking facilities are appropriate in regards to safety and circulation. However, while it may be physically possible to access all parking spaces, it is recommended that some parking spaces either be removed or widened due to the difficulty which motorists would have in accessing these spaces. Some of the proposed spaces abutting walls or columns may require motorists to either make many turning maneuvers or reverse out of the space and continue to reverse through to another aisle.

Pedestrian Site Access. The main pedestrian access point to the EmeryStation West building would be located on Horton Street. The plans indicate that the sidewalk would be widened in this location, which would provide adequate access and safety for pedestrians.

The project plans do not include a mid-block pedestrian crossing on Horton Street between the Heritage Square parking structure and the EmeryStation West building. While pedestrians exiting or entering the Heritage Square parking structure from the 62nd Street access point would use the existing crosswalk at 62nd Street, pedestrians accessing the parking structure from Horton Street may choose to cross Horton Street informally to/from the EmeryStation West building rather than walk to the crosswalk at 62nd Street. Installation of a mid-block pedestrian crossing on Horton Street is not recommended, however, due to the close proximity of existing pedestrian crosswalks, which are currently located at 59th Street and 62nd Street within 200 feet walking distance of the main pedestrian access. Furthermore, some research suggests that unsignalized mid-block pedestrian crossings can lead to an increase in pedestrian accidents. This is primarily due to the increased confidence of pedestrians in a scenario where a motorist fails to observe the mid-block pedestrian crossing.

Bicycle Site Access. The site plans suggest that a secure bicycle locker would be located adjacent to the site, just south of the main pedestrian access. The proposed location would be easily accessible by bicyclists accessing the project site via the on-street bicycle lanes on Horton Street and would provide a seamless connection with the main pedestrian access. The proposed location is more desirable than a location within the parking garage, as it would remove the need to negotiate steep ramps and it would avoid the potential conflict with motorized vehicles. The bicycle locker location should be well lit and under cover to improve user confidence.

Although not required to avoid or reduce a significant impact, it is recommended that these facilities or be provided or the project modified to improve the project's pedestrian, bicycle and vehicle accessibility.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	❒	❒	■	❒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	❒	❒	■	❒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❒	❒	■	❒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	❒	❒	■	❒
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?	❒	❒	■	❒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	❒	❒	■	❒
g) Comply with federal, State, and local statutes and regulations related to solid waste?	❒	❒	■	❒

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? ***(Less-than-Significant Impact)***

The project site is currently served by utility infrastructure, including sanitary sewer and water lines. Modifications to these lines would be made to enable the existing sanitary sewer infrastructure to convey wastewater away from the project site. The increase in development on the project site would increase the amount of wastewater generated on the project site.

For the purposes of this analysis, wastewater generation is assumed to be approximately 90 percent of total water usage (the 10 percent differential includes consumed water and water used for irrigation). Assuming a water demand of 0.079 gallons per minute (gpm) for every 1,000 square feet of office use and research and development use,[62] the proposed 200,000 square feet of laboratory, research and development, and/or office uses within the EmeryStation West building would generate a water demand of approximately 22,752 gallons per day (gpd). Based upon the *Land Use/Water Supply*

[62] Based on generation numbers taken from a recent detailed analysis of a similar facility: South San Francisco, City of, 2007. Genentech Facilities Ten-Year Master Plan Environmental Impact Report, Appendix F: Water Demand Assessment. March 28.

Analysis Guidebook prepared for the Northern California Water Association, each acre of "community/ neighborhood retail" land use generates an average water demand of 1 acre foot per year.[63] Thus, the proposed 2,235 square feet of ground floor space for transit, retail and/or office uses within the EmeryStation West building and the 1,605 square feet of ground floor space for retail, office, office services or other uses within the Heritage Square parking structure would together consume 0.88 acre feet per year, or approximately 786 gpd. In total, the proposed project would consume approximately 23,538 gpd of water, 21,184 gpd of which (90 percent) would be converted to wastewater.

This increase in demand for wastewater treatment would comprise a small portion of the total wastewater treated by East Bay Municipal Utility District's (EBMUD's) Wastewater Treatment Plant (WWTP) in Oakland (which has an average annual daily dry weather flow of approximately 80 million gallons per day (mgd)). The WWTP has a primary treatment capacity of 320 mgd and a secondary treatment capacity of 168 mgd.[64] The peak flows at the WWTP occur during wet weather as a result of inflow and infiltration (I/I) of rainwater from the various local agencies' collection systems. The peak wet weather flows can be up to 15 times the average daily flows and far exceed the capacity of the WWTP and the EBMUD interceptor trunk sewer. The I/I can result in sanitary sewer overflows onto the local agencies' streets or into San Francisco Bay via EBMUD's wet weather facilities. EBMUD and the local agencies are working on programs to reduce wet weather flows in the region. Programs include the replacement of the old city sanitary sewer mains and the replacement of private sanitary sewer laterals. Over the past 23 years, Emeryville has replaced more than 75 percent of its sanitary sewer mains and lower laterals in an effort to reduce I/I in its collection system. Over the next year, Emeryville will be working with EBMUD to implement a sanitary sewer lateral replacement requirement for private property owners as a means of further reducing I/I from Emeryville's collection system. The additional peak hour wastewater generated by the project represents less than 0.01 percent of the total treatment capacity of the WWTP. The wastewater would contain typical household and commercial wastes in concentrations that are routinely treated by the WWTP. As such, the project would not cause an exceedance of the Water Board's treatment standards. In addition, City staff has indicated that water conveyance infrastructure in the vicinity of the project site could accommodate increased demand associated with the proposed project.[65]

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?* ***(Less-than-Significant Impact)***

Water treatment and wastewater treatment are provided to Emeryville by EBMUD. As noted in Section XVI.a, the project site is currently served by sanitary sewer and water lines. Minor connections to these existing lines would be required to serve new structures on the project site.

[63] Tully & Young, 2007. *Land Use/Water Supply Analysis Guidebook*. Prepared for the Northern California Water Association. June.

[64] East Bay Municipal Utility District (EBMUD), 2009. Wastewater Treatment. Website: www.ebmud.com/wastewater/treatment/. Accessed July 15.

[65] Kaufman, Maurice, 2009. Public Works Director/City Engineer, Public Works Department, City of Emeryville. Personal communication with LSA Associates, Inc. via project planner, Miroo Desai. September.

Based on per capita water demand rates, the proposed project would require approximately 23,538 gpd day and would generate approximately 21,184 gpd of wastewater. The most current EBMUD Urban Water Management Plan (2005) has projected that water demand will increase to approximately 232 mgd in 2030.[66] The increased demand that would result from the proposed project is less than 1 percent of this anticipated demand. Therefore, water could be supplied to the project via existing and planned entitlements.

As noted in Section XVI.a, EBMUD's WWTP has an average daily flow of 80 mgd and a primary and secondary treatment capacity of 320 mgd and 168 mgd, respectively. The additional peak hour wastewater generated by the project represents less than 0.01 percent of the total treatment capacity of the WWTP. In addition, the local sanitary sewer subbasin has adequate capacity to accommodate flows generated by the proposed project. Therefore, increased water demand and wastewater generated by the proposed project would not require the construction of new water or wastewater treatment facilities, or the expansion of existing facilities. In addition, City staff has indicated that wastewater conveyance infrastructure in the vicinity of the project site could accommodate increased demand associated with the proposed project.[67]

c) *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?* ***(Less-than-Significant Impact)***

The nearest surface water to the project site is the San Francisco Bay, located approximately 2,600 feet west of the site. Surface flow direction is to the west towards the Bay.

Under existing conditions, almost 100 percent of the project site is covered with impervious surfaces. After project implementation, the amount of impervious surface cover would decrease by approximately 8 to 10 percent, which would reduce storm water runoff from the project site. This reduction in runoff would be achieved through pervious surface cover added by the plaza reconfiguration, other landscaped areas, and through the use of flow-through planters and permeable paving. Because the project would incrementally reduce storm water runoff, it would not require the construction or expansion of storm water facilities.

d) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?* ***(Less-than-Significant Impact)***

Refer to Section XVI.b.

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?* ***(Less-than-Significant Impact)***

Refer to Section XVI.c.

[66] East Bay Municipal Utility District, 2005. *Urban Water Management Plan*. November.

[67] Kaufman, Maurice, 2009. Public Works Director/City Engineer, Public Works Department, City of Emeryville. Personal communication with LSA Associates, Inc. via project planner, Miroo Desai. September

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? ***(Less-than-Significant Impact)***

Waste generation rates for multi-family residential uses and commercial/retail uses are maintained by the California Integrated Waste Management Board (CIWMB). According to CIWMB, the typical solid waste generation rate for an employee of Emeryville is 4.6 pounds per employee per day.[68] These generation rates estimate the total amount of waste created and include all discarded materials, whether or not they are later recycled or disposed in a landfill. Therefore, the 655 new employees would be expected to generate an additional 3,013 pounds per day of solid waste; a portion of this waste would be recycled per the City's policies that encourage recycling at businesses.[69]

Most non-hazardous solid waste generated in Emeryville is collected and disposed of by Waste Management of Alameda County. Waste from the City is collected and transported to the Davis Street Transfer Station in San Leandro. At the Davis Street Transfer Station, waste is transported for disposal at the Altamont Landfill and Resource Recovery Facility (ALRRF) in eastern Alameda County, approximately 35 miles southeast of the project site. Both the Davis Street Transfer Station and the ALRRF are owned and operated by Waste Management of Alameda County.

The Altamont Landfill is permitted to receive 11,500 tons of waste a day. The amount of solid waste generated by the proposed project represents substantially less than 1 percent of the daily permitted waste intake at the Altamont Landfill. In addition, this landfill had used 26.3 percent of its total capacity of 62,000,000 cubic yards in 2000, and is projected to have sufficient capacity until 2029.[70] Therefore, the Altamont Landfill has adequate capacity to accommodate waste generated by the proposed project.

Remediation of the EmeryStation West site would involve the removal of approximately 25,000 to 27,000 cubic yards of material (asphalt, cap material, and contaminated soil). Of this total amount, approximately 2,200 tons of asphalt would be recycled, if possible, and 13,000 tons of non-contaminated cap material, including the clean clay layer and aggregate base rock that contain less than 50 milligrams per kilogram of PCB, would be transported to the Altamont Landfill, which, as previously noted, is projected to have sufficient capacity until 2029.

Contaminated soil would be transported to an appropriately permitted landfill or landfills. Because the potential for commingled waste exists (i.e., waste as defined by the Resource Conservation and Recovery Act and/or the Toxic Substances Control Act), several different disposal destinations are being considered, which include: the Kettleman Hills facility in Kettleman City, California; the American Ecology facility near Beatty, Nevada; and the Waste Management Port Arthur Disposal Facility near Port Arthur, Texas. The final destination(s) for the contaminated materials would be determined closer to the time of excavation, depending upon factors such as PCB concentrations in the

[68] California Integrated Waste Management Board, 2008. *California Waste Stream Profiles:Emeryville*. November 4.

[69] Emeryville, City of, 2008. *Recycling for Mid-sized Businesses*. Website: http://www.ci.emeryville.ca.us/community/pdf/mid-sized_brochure.pdf. November 4.

[70] California Integrated Waste Management Board, 2009. *Active Landfills Profile for Altamont Landfills & Resource Recovery Facility*. Website: www.ciwmb.ca.gov/Profiles/Facility/Landfill/LFProfile1.asp?COID=5&FACID=16-AA-0023. Accessed September 1.

contaminated soil, the presence of other contaminants, facility permit requirements, facility capacity, cost, and timing.[71] The contaminated soil would be shipped to a facility with adequate capacity and the appropriate permits for accepting contaminated soil.

g) Comply with federal, State, and local statutes and regulations related to solid waste? ***(Less-than-Significant Impact)***

The following discussion summarizes waste reduction regulations that apply to projects in Emeryville:

California Integrated Waste Management Act (AB 939). State-mandated solid waste diversion goals are established in the California Integrated Waste Management Act (AB 939), including source reduction, composting, and recycling. AB 939 required all municipalities in the State to divert at least 50 percent of their waste streams by 2000. Source reduction, which is given the highest priority, is defined as the act of reducing the amount of solid waste generated by waste producers. Recycling and composting are given the next highest priority. AB 939 specifies that all other waste that is not diverted be properly and safely disposed of in a landfill or through incineration.

Alameda County Measure D. Approved by voters in 1990, Measure D established the Alameda County Source Reduction and Recycling Board to coordinate the creation of the Alameda County Source Reduction and Recycling Plan. This plan established a countywide goal of achieving a 75 percent solid waste diversion rate from landfills by the year 2010.

Emeryville Municipal Code Title 6, Chapter 4. To further ensure that waste is reduced, Emeryville Municipal Code Title 6, Chapter 4, Collection of Solid Waste and Recyclables, provides additional standards for solid waste collection and recycling Citywide. This ordinance provides regulations addressing the placement of solid waste and recycling receptacles, the quantity and size of recycling receptacles, and establishes performance standards for recycling service providers.
The project would comply with the State and local solid waste statutes and regulations and therefore would have a less-than-significant impact.

[71] WSP Environment & Energy, 2009. *Remedial Design and Implementation Plan; Emeryville Mound Parcel; Emeryville, California (Draft)*. May 21.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. 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?	❒	■	❒	❒
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	❒	■	❒	❒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	❒	■	❒	❒

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?* ***(Potentially Significant Unless Mitigation Incorporated)***

The proposed project site is located in an area that has been previously developed. This infill site is within an urbanized area that has little biological value. Despite the absence of biological resources on the site, the project has the potential to contribute to the degradation of water quality by storm water runoff, which may adversely affect wildlife species that use San Francisco Bay. Implementation of Mitigation Measures HYD-1a and HYD-1b would reduce this impact to a less-than-significant level. The project site does not contain important examples of California history or prehistory.

b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)* ***(Potentially Significant Unless Mitigation Incorporated)***

The proposed project would result in the redevelopment of an urban infill site. The site is located close to transit, shopping, and job centers in Emeryville, and is already served by utility infrastructure. These

characteristics of the project site would reduce the possible cumulative effects the project may have in combination with other planned development in Emeryville and surrounding communities. Two traffic impacts were identified in the Cumulative Plus Project condition. Implementation of TRANS-4 and TRANS-5 would reduce these impacts to less-than-significant levels. All other impacts of the proposed project are individually limited and not cumulatively considerable.

c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?* ***(Potentially Significant Unless Mitigation Incorporated)***

The project could have substantial adverse effects on human beings through: air quality degradation during the construction period (including potential exposure to lead and asbestos); placing people at risk from seismic and soils hazards; and creating substantial noise during the construction period. Implementation of Mitigation Measures AIR-1, AIR-2, GEO-1, GEO-2, GEO-3, GEO-4, HAZ-1, HAZ-2, NOISE-1, NOISE-2, and NOISE-3 would reduce these impacts to less-than-significant levels.