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West 17th Street and Superior Avenue Live/Work Project

Initial Study/Mitigated Negative Declaration

Prepared for

Prepared by

RBF CONSULTING

A Baker Company

PUBLIC REVIEW DRAFT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

West 17th Street & Superior Avenue Live/Work Project

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1.0 INTRODUCTION

Following a preliminary review of the proposed West 17th Street & Superior Avenue Live/Work Project (i.e., Project), the City of Costa Mesa determined that the Project is subject to the guidelines and regulations of the California Environmental Quality Act (CEQA). This Initial Study addresses the direct, indirect, and cumulative environmental effects associated with the Project, as proposed.

The Project involves construction of a 29-unit, three-story, attached live/work development in place of commercial/industrial uses that currently exist at 643-651 West 17th Street and 1677 Superior Avenue. The required entitlements for the Project include the 643-651 West 17th Street & 1677 Superior Avenue Master Plan, deviations from the Urban Plan development standards/regulations, Demolition Permit, Grading Permit and Building Permit(s), and Vesting Tentative Tract No. 17639. Section 2.0, *Project Description*, provides a detailed description of the Project.

1.1 STATUTORY AUTHORITY AND REQUIREMENTS

In accordance with the *California Environmental Quality Act* (*CEQA*) (Public Resources Code Sections 21000-21177) and pursuant to Section 15063 of Title 14 of the California Code of Regulations (CCR), the City of Costa Mesa, acting in the capacity of Lead Agency, is required to undertake the preparation of an Initial Study to determine if the Project would have a significant environmental impact. If the Lead Agency finds that there is no evidence that the Project, either as proposed or as modified to include the mitigation measures identified in the Initial Study, may cause a significant effect on the environment, the Lead Agency must find that the Project would not have a significant effect on the environment and must prepare a Negative Declaration (or Mitigated Negative Declaration) for that project. Such determination can be made only if *"there is no substantial evidence in light of the whole record before the Lead Agency"* that such impacts may occur (Section 21080(c), Public Resources Code).

The environmental documentation, which is ultimately selected by the City of Costa Mesa in accordance with *CEQA*, is intended as an informational document undertaken to provide an environmental basis for subsequent discretionary actions upon the Project. The resulting documentation is not, however, a policy document and its approval and/or certification neither presupposes nor mandates any actions on the part of those agencies from whom permits and other discretionary approvals would be required.

The environmental documentation and supporting analysis is subject to a public review period. During this review, public agency comments on the document should be addressed to the City of Costa Mesa. Following review of any comments received, the City of Costa Mesa will consider these comments as a part of the Project's environmental review and include them with the Initial Study documentation for consideration by the Planning Commission of the City of Costa Mesa.

1.2 PURPOSE

The purpose of the Initial Study is to: (1) identify environmental impacts; (2) provide the Lead Agency with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR) or Negative Declaration; (3) enable an applicant or Lead Agency to modify a project, mitigating adverse

impacts before an EIR is prepared; (4) facilitate environmental assessment early in the design of a project; (5) provide documentation of the factual basis for the finding in a Negative Declaration that a project would not have a significant environmental effect; (6) eliminate needless EIRs; (7) determine whether a previously prepared EIR could be used for a project; and (8) assist in the preparation of an EIR, if required, by focusing the EIR on the effects determined to be significant, identifying the effects determined not to be significant, and explaining the reasons for determining that potentially significant effects would not be significant.

Section 15063 of the *CEQA Guidelines* identifies specific disclosure requirements for inclusion in an Initial Study. Pursuant to those requirements, an Initial Study must include: (1) a description of the project, including the location of the project; (2) an identification of the environmental setting; (3) an identification of environmental effects by use of a checklist, matrix or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries; (4) a discussion of ways to mitigate significant effects identified, if any; (5) an examination of whether the project is compatible with existing zoning, plans, and other applicable land use controls; and (6) the name of the person or persons who prepared or participated in the preparation of the Initial Study.

1.3 INCORPORATION BY REFERENCE

Pertinent documents relating to this Initial Study/Mitigated Negative Declaration (IS/MND) have been cited and incorporated, in accordance with Sections 15148 and 15150 of the *CEQA Guidelines*, to eliminate the need for inclusion of voluminous engineering and technical reports within the Initial Study. Of particular relevance are those previous environmental documents that present information regarding descriptions of environmental settings, and future development-related growth and cumulative impacts. The references outlined below were utilized during preparation of this Initial Study. The documents are available for review at the City of Costa Mesa Development Services Department located at 77 Fair Drive, Costa Mesa, California 92626.

<u>City of Costa Mesa 2000 General Plan (Adopted January 22, 2002)</u>. The City of Costa Mesa 2000 General Plan (General Plan) is the primary source of long-range planning and policy direction intended to guide growth and preserve the quality of life within the community. The General Plan contains goals, policies, and plans that are intended to guide land use and development decisions. It consists of a Land Use Plan Map and the following Elements, which together fulfill the state requirements for a General Plan: Land Use; Circulation/Transportation; Housing; Conservation; Noise; Safety; Open Space and Recreation; Growth Management; Community Design; and Historic and Cultural Resources. The General Plan was used throughout this Initial Study as a source of baseline data.

<u>City of Costa Mesa 2000 General Plan Environmental Impact Report (SCH No. 2000031120) (Adopted January 22, 2002)</u>. The *City of Costa Mesa 2000 General Plan Environmental Impact Report* was certified on January 22, 2002 through City Council Resolution No. 02-07. The General Plan EIR analyzed the potential environmental impacts that would result from implementation of the City of Costa Mesa 2000 General Plan. General Plan EIR Table 3-6, *Growth Increases Over Existing Conditions (2000) Associated with 2000 General Plan Implementation (2020)*, identifies new development projected between 2000 and 2020. The environmental impact analysis contained in the General Plan EIR assumes 42,469 dwelling units and 46,683,237 square feet of non-residential land uses, which represents a growth of 1,892

additional dwelling units and 12,643,695 additional square feet of non-residential uses by 2020. The General Plan EIR concluded that impacts in the following areas would be significant and unavoidable (see General Plan EIR Section 8.0):

- Transportation and Circulation (roadway capacity at Gisler Avenue, west of Harbor Boulevard);
- Noise (long-term mobile sources); and
- Air Quality (short- and long-term emissions).

The General Plan EIR was used in this Initial Study as a source of baseline data.

City of Costa Mesa Municipal Code. The City of Costa Mesa Municipal Code (CMMC) consists of regulatory, penal, and administrative ordinances of the City of Costa Mesa. It is the method the City uses to implement control of land uses, in accordance with General Plan goals and policies.

The City of Costa Mesa Zoning Code is found in CMMC Title 13, *Planning, Zoning, and Development*. The purpose of CMMC Title 13 is to promote the public health, safety, and general welfare, and preserve and enhance the aesthetic quality of the City by providing regulations to ensure that an appropriate mix of land uses occur in an orderly manner. The CMMC and CMMC Title 13 are referenced throughout this Initial Study for descriptions and requirements of the City's regulatory framework.

19 West Urban Plan (adopted March 2005). The 19 West Urban Plan is one of three Urban Plans created as part of the Westside Implementation Plan, in order to establish overlay zones in specific areas of the City's Westside. The 19 West Urban Plan was identified as a commercial/residential hybrid overlay area. This approximately 106.3-acre area is north and south of West 19th Street and between Newport Boulevard and Superior Avenue. The 19 West Urban Plan does not propose any major intensification of land uses. The Plan emphasizes improving the area by providing visual enhancement and encouraging the development of mixed-use urban villages along specified areas of West 17th Street, West 19th Street, and Superior Avenue. The Project site is located in the southeast portion of the 19 West Urban Plan; refer to 19 West Urban Plan Figure 2, *Westside Urban Plan Areas*.

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2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The West 17th Street & Superior Avenue Live/Work Project site is located in the southernmost portion of the City of Costa Mesa, in the County of Orange; refer to *Exhibit 2-1*, *Regional Context*. The site is located approximately 1.5 miles northeast of the Pacific Ocean. The site is more specifically located south of 17th Street and west of Superior Avenue, at 643-651 West 17th Street and 1677 Superior Avenue; refer to *Exhibit 2-2*, *Local Context*.

Regional access to the site is provided via California State Route 55 (SR-55)/Newport Boulevard, which is located to the east. Pacific Coast Highway (CA-1), which is located approximately 1.3 miles south of the site, also provides regional access. Local access to the site is provided via 17th Street to the north and Superior Avenue to the east.

2.2 ENVIRONMENTAL SETTING

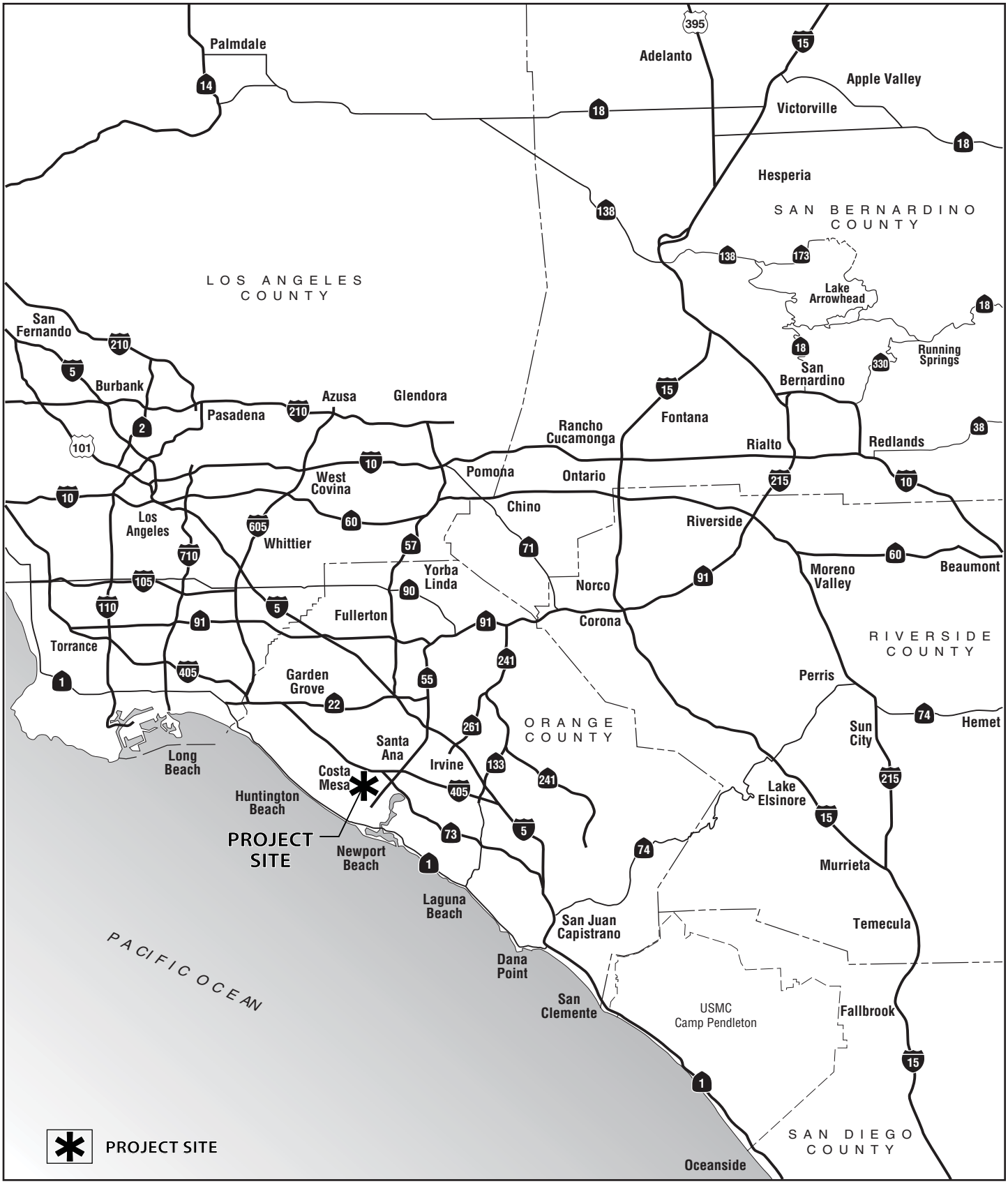
The Project site (Assessor's Parcel Numbers 424-301-01 and 424-301-04) consists of two parcels totaling 1.6 gross acres (1.5 net acres). The relatively flat Project site is at an elevation of approximately 88 feet above mean sea level. The surrounding topography generally slopes to the west. The Project site is currently utilized for commercial and industrial uses and consists of four single-story structures, a small vacant lot, and surface parking; refer to Exhibit 2-3, *Existing Site Conditions* and Table 2-1, Existing *Onsite Uses*.

Table 2-1
Onsite Uses

APN	Address	Occupant	Structure[1]	Development (square feet)
424-301-01	643 West 17th Street	Paddle Surf	1	2,681
	645 West 17th Street	Blinn & Young, Inc. Canvas Products	2	2,688
	647 West 17th Street	Coast Affordable Glass Wood Working Shop	3	3,390
	649 West 17th Street			
	651 West 17th Street	Vacant Lot	Not Applicable	Not Applicable
424-301-04	1677 Superior Avenue	Orange Coast Crossfit, Wood Working Shop, Coast Affordable Glass and TJs Property Maintenance	4	10,800
			Total	**19,559**

Source: Leighton and Associates, Inc., *Phase I and Limited Phase II Environmental Site Assessment 643 through 651 West 17th Street and 1677 Superior Avenue*, Revised September 24, 2013, and Intracorp Socal-1, August 23, 2013.

1. Structure number corresponds to structures identified on Exhibit 2-3, *Existing Site Conditions*.



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WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Regional Context

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Exhibit 2-1

Source: Google Earth, August 2013.

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WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Local Context

Exhibit 2-2

Source: Google Earth, August 2013.

(#) - Structure number corresponds to Table 2-1, Onsite Uses.

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WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Existing Site Conditions

Exhibit 2-3

Sidewalks are located adjacent to the Project site, along Superior Avenue. There are no sidewalks located adjacent to the Project site, along 17th Street. Landscaping is provided along the eastern Project boundary, adjacent to Superior Avenue, and at the northwest corner of the Project site. Power poles are located within the Project site and immediately adjacent to the northern, southern, and southeastern Project boundaries. Chain link fencing is along the site's western boundary, a portion of the eastern boundary, and at various locations within the interior of the Project site.

An east-west alleyway extends from Superior Avenue within the northern portion of APN 424-301-04, providing access to the southern parcel. Access to APN 424-301-01 is provided from 17th Street via two driveways, which extend south through the site connecting to the east-west alleyway. A fence separates the two parcels north of the east-west alleyway.

According to the Westside Urban Plan Areas Map, the Project site is located within the 19 West Urban Plan.[1] However, because the proposal involves a live/work development, the development standards referenced in the Mesa West Urban Plan are applicable.

GENERAL PLAN AND ZONING

General Plan

According to the City of Costa Mesa General Plan Land Use Map, the site's land use designation is Light Industry.[2] The Light Industry designation is intended for a variety of light and general industrial uses. The Land Use Element further notes the following regarding mixed-use development projects:

> *Mixed-use development projects are intended to provide additional housing opportunities in the City (such as the Westside) by combining residential and nonresidential uses in an integrated development….. Mixed-use developments shall be implemented through an adopted urban plan (such as the 19 West Urban Plan) and shall be identified on the City's Zoning Map by designating either the CL, C1 and/or C2 base zoning districts with the mixed-use overlay district. The mix of uses can occur in either a vertical or horizontal design, up to four stories in height. Product types shall be identified in the applicable urban plan and may include live/work units and commercial/residential units where the residential uses are located above or adjacent to the nonresidential component. Nonresidential uses may include office, retail, business services, personal service, public spaces and uses, and other community amenities.*

Zoning

According to the Official Zoning Map, the Project site is zoned MG General Industrial District.[3] Additionally, with adoption of the 19 West Urban Plan, the 19 West Village Mixed-Use Overlay District was applied to the

[1] City of Costa Mesa Website, Westside Urban Plan Areas Map, http://www.costamesaca.gov/index.aspx?page=110, Accessed August 23, 2013.

[2] City of Costa Mesa Website, City of Costa Mesa General Plan Map, http://www.costamesaca.gov/modules/showdocument. aspx?documentid=369, Accessed August 23, 2013.

[3] City of Costa Mesa Website, City of Costa Mesa Zoning Map, http://www.costamesaca.gov/modules/showdocument.aspx?documentid=367, Accessed August 23, 2013.

property; refer to *19 West Urban Plan* Section below. Because urban plan standards are applied, the underlying zoning requirements of the base zoning districts are not applicable. The CMMC describes the MU Mixed-Use Overlay District, as follows:

> *This [MU Mixed Use Overlay] district may overlay the R2-MD, R2-HD, R3, CL, C1, C2, MG, PDR-HD, PDR-MD, or I&R districts, and it is intended to allow development of residential and nonresidential uses as mixed, integrated projects. This overlay district shall only be applied to the zoning map in conjunction with the adoption of an urban plan for the designated area. The urban plan is a regulating plan that shall define the unique characteristics of the overlay area, include a matrix of permitted, conditionally permitted, and prohibited uses and provide development standards. The provisions of the mixed-use overlay shall be activated by adoption of a master plan.* (CMMC Section 13-20(s))

19 West Urban Plan

The 19 West Urban Plan is one of three Urban Plans created as part of the Westside Implementation Plan, in order to establish overlay zones in specific areas of the City's Westside. The 19 West Urban Plan was identified as a commercial/residential hybrid overlay area. The 19 West Urban Plan Figure 9B indicates the site's underlying zoning district as General Industrial and the overlay zone as 19 West Village Mixed-Use Overlay District.

The overlay zones, which are intended to promote the 19 West Urban Plan's long-term goals, apply zoning provisions to the 19 West Urban Plan area. When activated by an approved Master Plan, the underlying zoning district is superseded by the 19 West Urban Plan zoning regulations (unless otherwise indicated). The 19 West Urban Plan's mixed-use development standards are provided in 19 West Urban Plan Table A-19. The maximum floor area ratios (FAR) for mixed-use development are provided in 19 West Urban Plan Table B. A listing of the land uses that are permitted and conditionally permitted within the overlay zone's mixed-use developments is provided in 19 West Urban Plan Table C. Any other type of mixed-use development not specified in 19 West Urban Plan Table C requires a Conditional Use Permit.

Mesa West Urban Plan

MESA WEST BLUFFS URBAN PLAN AREA

In April 2006, the Costa Mesa City Council unanimously approved several revitalization strategies aimed to improve the Westside. City Council identified the Mesa West Bluffs Urban Plan area as a live/work or residential overlay area. The Zoning Map reflects this overlay zone for the plan area. The Mesa West Bluffs Urban Plan area is approximately 277 acres in size. Major roadways in the plan area include West 17th Street, West 18th Street, Placentia Avenue, and Pomona Avenue. The Live/Work and Residential Overlay Zone in the Mesa West Bluffs area is identified in Figure 9 of the Mesa West Bluffs Urban Plan.[4]

[4] City of Costa Mesa Website, Mesa West Bluffs Urban Plan Areas Map http://www.costamesaca.gov/modules/showdocument.aspx?documentid=313, Accessed August 23, 2013.

Overlay zoning is a useful tool in promoting the long-term goals of the Mesa West Bluffs Urban Plan. By giving a plan the weight of law, an overlay zoning district helps ensure successful implementation of the plan's strategies. The overlay zone applies zoning provisions to the Mesa West Bluffs Urban Plan area. When activated by an approved Master Plan, the underlying zoning district is superseded by the zoning regulations of the Mesa West Bluffs Urban Plan, unless otherwise indicated.

The Mesa West Bluffs Urban Plan does not propose any significant intensification of land uses. The emphasis is on improving the Urban Plan area by providing visual enhancement and encouraging the development of live/work units or residential development within the plan area. Thus, future traffic is to be supported by the General Plan roadway network.

With regard to the Live/Work development, the Mesa West Bluffs Urban Plan implements General Plan goals/objectives/policies for live/work development by regulating allowable land uses and development standards.

Objectives

The objectives of the Mesa West Bluffs Urban Plan include:

- Identify development regulations to realize the vision of the Urban Plan. These regulations address mixed-use development standards as well as public streetscapes and urban design improvements and amenities.

- Provide a Land Use Matrix of allowable uses for live/work development that recognizes the development potential of the plan area and need to sensitively integrate new development with the surrounding areas, and therefore, promote both resident and business community confidence in the long term.

- Encourage the construction of Live/Work Units that combine residential and nonresidential uses in the same unit without exceeding the development capacity of the General Plan transportation system.

- Attract more residents and merchants by allowing mixed-use development in the form of a live/work loft, which offers first floor retail/office uses and upper story living spaces in the same unit.

- Stimulate improvement in the Mesa West Bluffs Urban Plan area through well-designed and integrated urban residential development that is nontraditional in form and design with flexible open floor plans and which complements the surrounding existing development.

- Meet demand for a new housing type to satisfy a diverse residential population comprised of artists, designers, craftspeople, professionals and small-business entrepreneurs.

- Encourage the design and development of urban residential structures reflecting the urban character of the surrounding industrial context both in the interior and exterior areas.

Live/Work Development

The Mesa West Urban Plan defines live/work development as follows:

> *"Live/Work Loft or Live/Work Unit. A mixed-use development composed of commercially- or industrially-oriented joint work and living quarters in the same building, where typically the primary use is a place of work and where there are separately-designated residential and work areas. A live/work unit consists of the following: (a) living/sleeping area, kitchen, and sanitary facilities in conformance with the Uniform Building Code and (b) adequate work space accessible from the living area, reserved for, and regularly used by the resident(s)."*

Because the live/work developments standards are specified in the Mesa West Urban Plan (and not the 19 West Urban Plan), these regulations are being applied to the proposed 17th Street and Superior Avenue Project.

EXISTING SURROUNDING LAND USES

Surrounding land uses generally consist of commercial and light industrial uses. Land uses immediately adjacent to the Project site consist of the following:

North: 17th Street is immediately to the north. North of 17th Street is a Trader Joe's store. Pet Smart and Michaels are located to the northeast. Light industrial/warehouse land uses are located to the northwest. These properties are zoned General Business and General Industrial.

South: Light industrial land uses (Brothers Plumbing, Heating, and Air Conditioning) are to the south. These properties are zoned General Industrial.

East: A commercial property, vacant lot (former service station), and Superior Avenue are located to the east. These properties are zoned Local Business. A variety of commercial land uses, including Growers Direct, Ramada Inn, and Bayside Motors OC are situated to the east of Superior Avenue. These properties are zoned Commercial Limited, Local Business, and General Industrial.

West: Argo-Tech Corporation Costa Mesa/JC Carter Company, Inc. (JC Carter), a commercial/industrial use, is located to the east. This property is zoned General Industrial.

2.3 BACKGROUND AND HISTORY

The subject site is occupied by four single-story structures. Since the early 1950s, the structures have been occupied by a variety of commercial/light industrial tenants. Two of the structures within the northern portion of the Project site were built in the early- to mid-1950s. A third structure was built in the early- to mid-1960s. The western portion of the fourth structure, located in the southern portion of the Project site, was built in the early 1960s. In the mid-1990s the eastern portion of the structure was constructed.

2.4 PROPOSED PROJECT/WEST 17TH STREET AND SUPERIOR AVENUE MASTER PLAN

The proposal involves a 29-unit development consisting of live/work units at 643-651 West 17th Street and 1677 Superior Avenue. *Exhibit 2-4*, *Site Plan*, illustrates the proposed development. The Project requires City of Costa Mesa approval of the West 17th Street & Superior Avenue Master Plan, Vesting Tentative Tract Map No. 17639, two deviations from the Urban Plan development standards/regulations, Demolition Permit, Grading Permit, and Building Permit(s). These Project components are described below.

WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK DEVELOPMENT

The City is processing a planning application from Intracorp Socal-1, LLC for a 29-unit live/work development at 643-651 West 17th Street and 1677 Superior Avenue. The proposed Project involves the following:

1. CEQA clearance, requiring adoption of an Initial Study/Mitigated Negative Declaration.

2. Planning Application PA-13-22 – Urban Master Plan for development of a 29-unit live/work Project at the site of existing commercial/light industrial uses within the 19th West Urban Plan area. The Project consists of the development of 29 live/work units with a total gross density of 19.03 units per acre and an FAR of 0.85; refer to *Exhibit 2-5*, *Master Plan*.

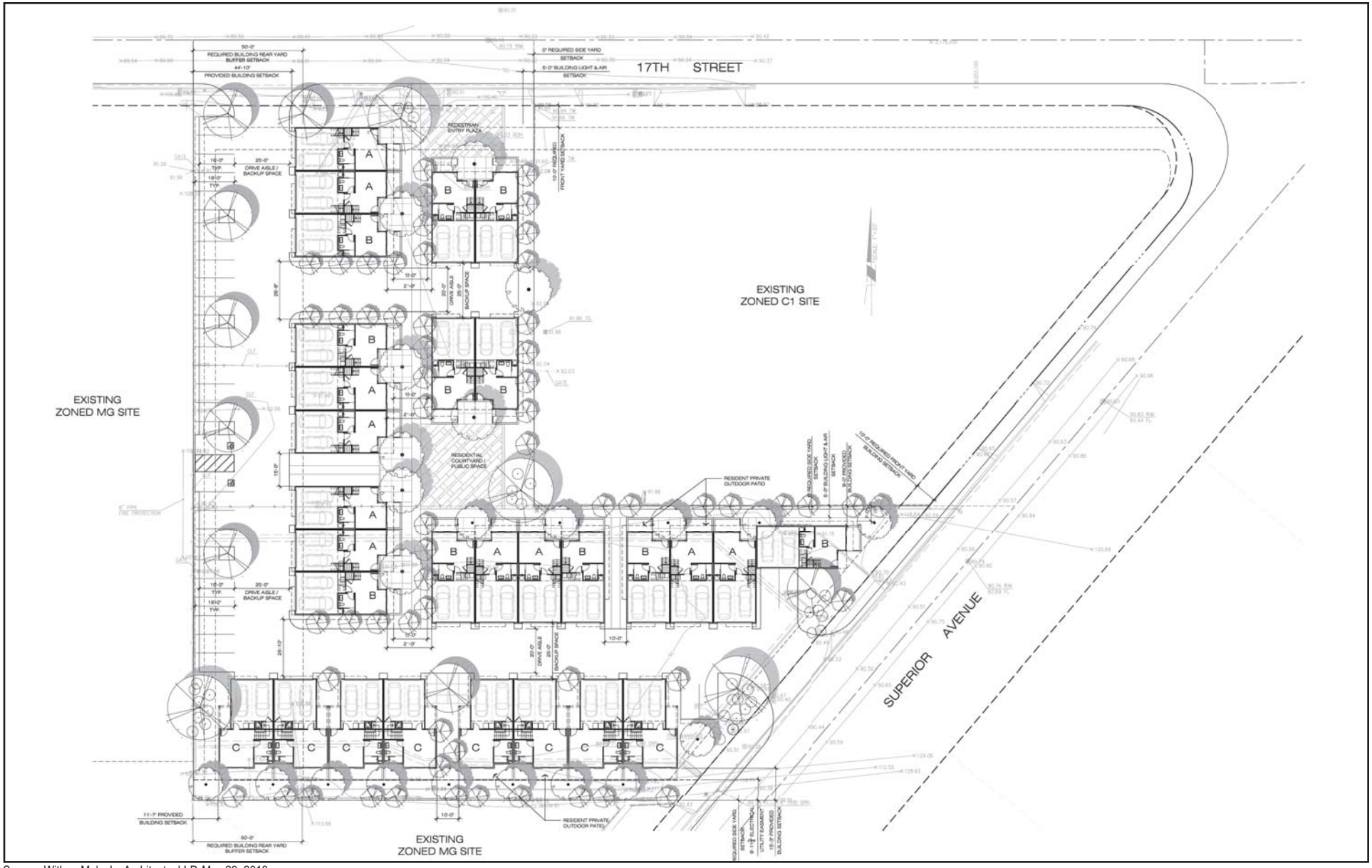
   The buildings are designed in duplex, three-plex, and four-plex clusters. The proposal includes an attached three-story development with roof decks, two-car garages and open parking areas, commercial "work" space on the ground floor, and living space and bedrooms on the upper levels. The proposed live/work units are comprised of three floor plans with two bedrooms, including some with dens, and either 2.5 or 3.5 bathrooms (1,875, 1,945 and 1,998 square feet). A total of 58 garage parking spaces and 29 open parking spaces are proposed (87 parking spaces or 3 spaces per unit). Table 2-2, *Project Summary*, summarizes the proposed units and their sizes. The overall lot coverage, including buildings, driveways, and guest parking is approximately 70 percent of the site (46,405 square feet). The remaining 30 percent (19,969 square feet) consists of landscaping and common open space.

   The Project requests approval of the following deviations:

   - A deviation for garage parking design standards: a minimum of 20 by 20 feet is required; 19 by 19 feet is proposed); and

   - A deviation for the buffer zone from the JC Carter industrial property (671 West 17th Street): a minimum 50-foot setback is required; 11 units are proposed within the setback area

   Refer to the *Deviations from Development Standards* Section below for further discussion.



Source: Withee Malcolm Architects, LLP, May 29, 2013.

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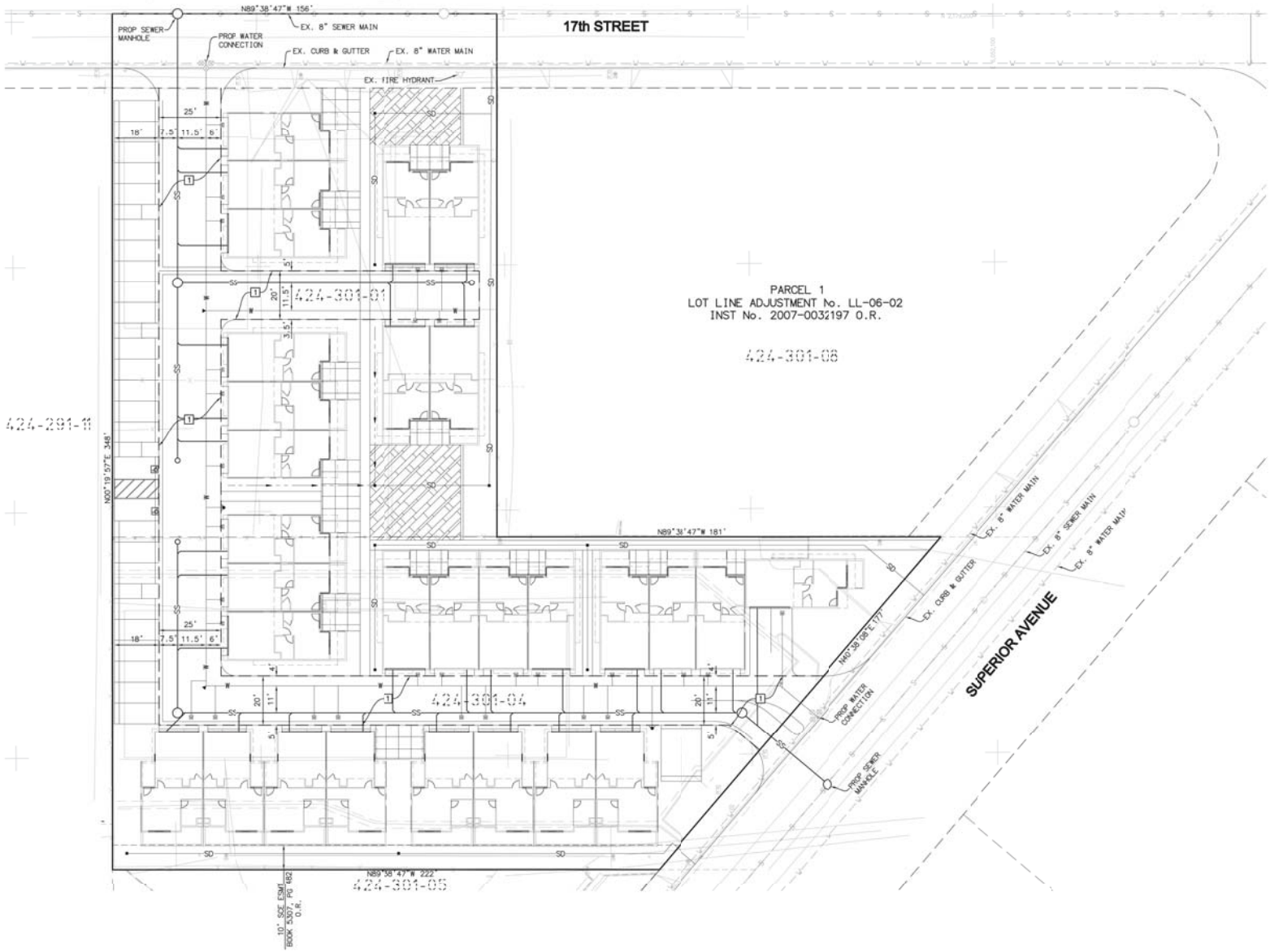
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Site Plan

Exhibit 2-4



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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Master Plan

Exhibit 2-5

3. Vesting Tentative Tract Map 17639 – Subdivision of a 1.52-acre property for condominium purposes to allow private sale and ownership of the live/work units.

Table 2-2
Project Summary

Plan	Description	Quantity (du)	Unit Residential Area (sf)	Unit Work Area (sf)	Unit Total Area (sf)	Area Subtotal (sf)	Parking Ratio (Resident/ Guest Spaces per unit)	Required Parking (Resident/ Guest Spaces per unit)
A	2 BR/3.5 BA Live/Work Unit Side By Side Garage	10 (34%)	1,615	260	1,875	18,750	2.0 / 1.0	20 / 10
B	2 BR / 3.5 BA / Den Live/Work Unit Side By Side Garage	11 (38%)	1,695	250	1,945	21,395	2.0	22 / 11
C	2 BR / 2.5 BA / Den Live/Work Unit Side By Side Garage	8 (28%)	1,731	267	1,998	15,984	2.0	16 / 8
	Total	29	48,643	7,486		56,129		87 (56 / 29)

du = dwelling units; sf = square feet.
Source: Withee Malcolm Architects, *643-651 W. 17th Street & 1677 Superior Avenue Master Plan*, June 3, 2013.

Architectural Features

The proposed architecture is designed for aesthetic compatibilities with existing buildings in the immediate vicinity. Exterior materials would include a combination of CMU block and stucco finishes with iron railings and details. Metal garage doors would dominate the ground level drive aisles with architectural articulations and windows included in the second and third levels. Private open spaces in the form of patios near the entries, balcony decks, and rooftop decks are proposed. Elevations of the proposed buildings are provided in *Exhibits 2-6a* thru *2-6e, Proposed Building Elevations.*

Development Standards

The relevant live/work development standards are provided in Mesa West Bluffs Urban Plan Tables A, A2, and A3, and City Council Resolution 06-34. The Project complies with the relevant development standards regarding lot area, floor area ratio, work space, building coverage, height, and setbacks, and tenant and guest parking. As previously noted, the Project requests two deviations: for the garage parking design standards; and the JC Carter industrial buffer; refer to the *Deviations From Development Standards* Section below.

BUILDING ELEVATION -4
EAST/WEST ELEVATION

BUILDING ELEVATION -2
NORTH/SOUTH ELEVATION

BUILDING ELEVATION -3
EAST/WEST ELEVATION

BUILDING ELEVATION -1
NORTH/WEST ELEVATION

Source: Withee Malcolm Architects, LLP, May 29, 2013.

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WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Proposed Building Elevations

Exhibit 2-6a

BUILDING ELEVATION -4
NORTH/SOUTH ELEVATION

BUILDING ELEVATION -2
EAST/WEST ELEVATION

BUILDING ELEVATION -3
NORTH/SOUTH ELEVATION

BUILDING ELEVATION -1
EAST/WEST ELEVATION

Source: Withee Malcolm Architects, LLP, May 29, 2013.

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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Proposed Building Elevations

Exhibit 2-6b

Source: Withee Malcolm Architects, LLP, May 29, 2013.

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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Proposed Building Elevations

Exhibit 2-6c

Source: Withee Malcolm Architects, LLP, May 29, 2013.

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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Proposed Building Elevations

Exhibit 2-6d

Source: Withee Malcolm Architects, LLP, May 29, 2013.

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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Proposed Building Elevations

Exhibit 2-6e

Site Access

The Project proposes to provide access to the property from 17th Street and Superior Avenue; refer to Exhibit 2-4. A 20-foot internal driveway would extend west from Superior Avenue connecting to a 25-foot driveway that would extend south from 17th Street.

Parking

Parking would be provided within enclosed two-car garages for the individual units and surface parking spaces for guests. A total of 29 onsite surface parking spaces are proposed. The minimum drive aisle is 20 feet for two-way traffic with a 25-foot back-up space between garages.

VESTING TENTATIVE TRACT MAP NO. 17639

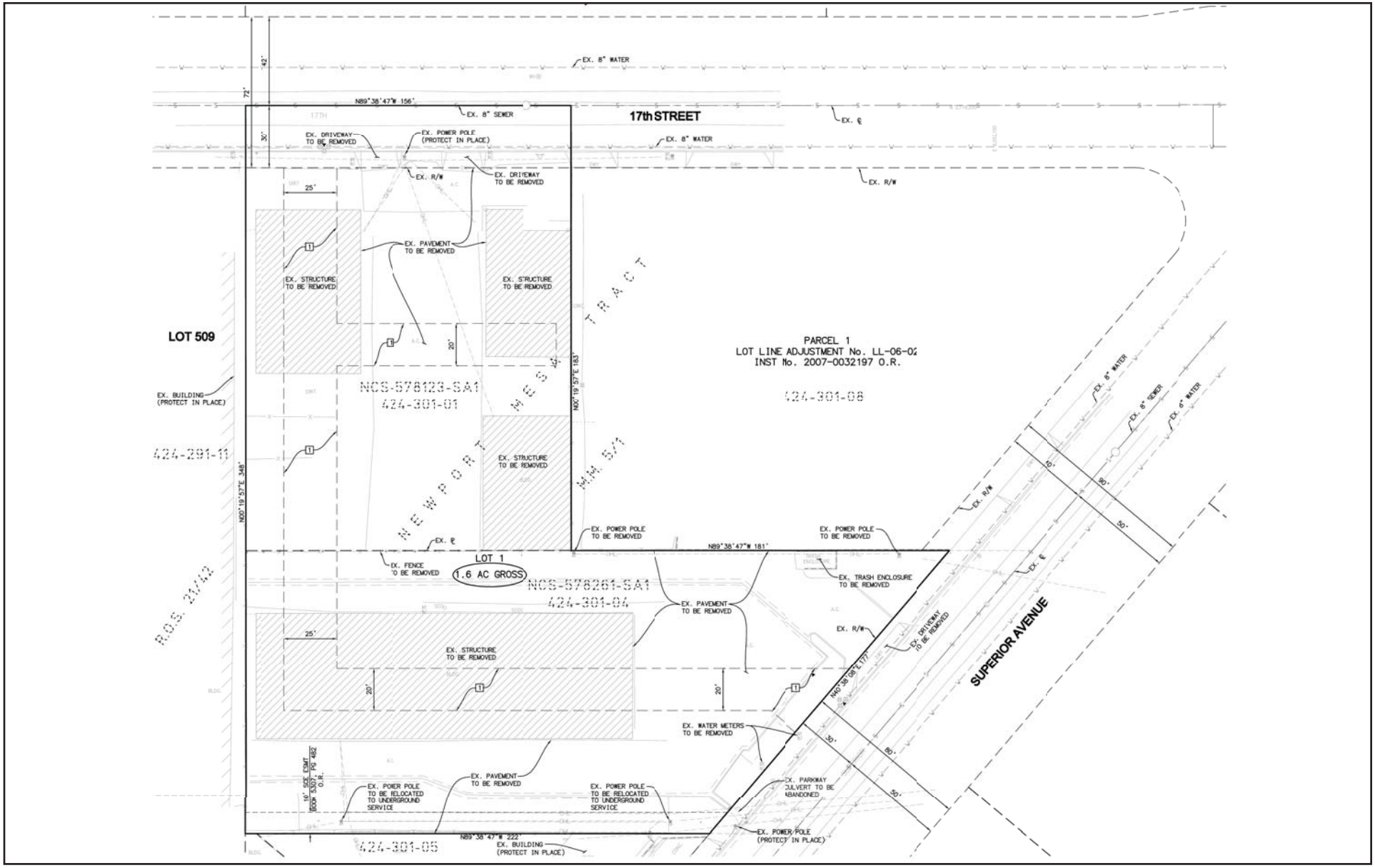
Vesting Tentative Tract Map No. 17639 (VTTM 17639) is proposed to create a single lot for condominium purposes; refer to *Exhibit 2-7*, *Vesting Tentative Tract Map*. VTTM 17639 also dedicates various easements, including easements for ingress and egress.

DEVIATIONS FROM DEVELOPMENT STANDARDS

The proposed Project requests the following deviations:

- *Parking, Garage Size (Inside Dimension)*. CMMC Section 20.40.090, *Parking Standards for Residential Uses*, specifies that the minimum interior dimensions for parking spaces in residential zoning districts with lot widths of 40 feet or more is 20 by 20 feet. The Project proposes garages with interior dimensions of 19 by 19 feet. Therefore, the Applicant is requesting approval of deviations from development standards, in order to allow a deviation from the required minimum garage dimensions. Unit A, B, and C provide additional space within the garage for the water heater and storage of trash and recycling carts, in addition to the 19 by 19 feet of space. Unit C also provides additional storage space.

- *Industrial Property Buffer Zones*. City Council Resolution 06-34 established buffer zones from the JC Carter industrial property (671 West 17th Street) and the CLA-VAL industrial property (1701 Placentia Avenue) requiring a minimum 50-foot distance between property lines. The Project site's westerly property line is located approximately 0.45 miles east of the CLA-VAL property line. The Project site's westerly property line is common/shared with the JC Carter easterly property line. Eleven (11) units are proposed within the setback area (the garage areas of nine units are setback 41 feet 11 inches and the living areas of two units are setback a minimum of 11 feet 7 inches). Therefore, the Applicant is requesting approval of deviations from buffer zone requirements, in order to allow a deviation from the required minimum setback from the JC Carter industrial property line.



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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Vesting Tentative Tract Map

Exhibit 2-7

CONSTRUCTION ACTIVITIES AND GRADING PLAN

The Project proposes to demolish the existing onsite structures, pavement, and driveways. Interior fencing would be removed and existing power poles within the Project site would either be removed or relocated to underground service.

According to the Preliminary Grading Plan, construction activities would require the export of soil. A Construction Access and Circulation Plan would be submitted to the City to ensure that the construction traffic would not impact the public roadways in proximity to the site and the vicinity.

2.5 PROJECT PHASING

The Project is estimated to be constructed over approximately 15 months, beginning approximately March 2014 and ending approximately June 2015.

2.6 PROJECT APPROVALS

The City of Costa Mesa, as Lead Agency for the Project, has discretionary authority over the primary Project proposal. In order to implement this Project, the Applicant would need to obtain, at a minimum, the following discretionary permits/approvals:

- Planning Commission approval of an Initial Study/Mitigated Negative Declaration;
- Approval of the West 17th Street & Superior Avenue Master Plan, a mixed-use development allowing a hybrid live and work space in the same unit;
- Approval of Deviations from the standard garage dimensions (20' by 20' required, 19' by 19' proposed) and Residential Living Area within the 50-foot Industrial buffer zone;
- Approval of Vesting Tentative Tract Map 17639 for a subdivision for condominium purposes;
- Demolition Permits for on-site utilities and any other structures, as applicable;
- Grading & Building Permits to grade and construct the Project;
- Site Plan approval from the Costa Mesa Fire Department; and
- On-site and off-site utility plans and any improvements within the public right-of-way.

3.0 INITIAL STUDY CHECKLIST

3.1 BACKGROUND

1.	**Project Title:** West 17th Street & Superior Avenue Live/Work Project
2.	**Lead Agency Name and Address:** City of Costa Mesa Development Services Department 77 Fair Drive, Costa Mesa, California 92626
3.	**Contact Persons and Phone Number:** Mr. Antonio Gardea Senior Planner Tel: 714.754.5610 E-mail: Antonio.gardea@costamesaca.gov
4.	**Project Location:** 643-651 West 17th Street and 1677 Superior Avenue, City of Costa Mesa, County of Orange
5.	**Project Sponsor's Name and Address:** Intracorp Socal-1, LLC Mr. Ken Benson, Vice President Project Management 4041 MacArthur Boulevard, Suite 250 Newport Beach, California 92660
6.	**General Plan Designation:** Light Industry
7.	**Zoning:** General Industrial, 19 West Mixed-Use Zone Overlay District
8.	**Description of the Project:** Refer to Section 2.6, *Project Characteristics*.
9.	**Surrounding Land Uses and Setting:** Refer to Section 2.2, *Environmental Setting*.
10.	**Other public agencies whose approval is required (e.g., permits).** • South Coast Air Basin • Santa Ana Regional Water Quality Control Board – Region 8

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

	Aesthetics		Land Use and Planning
	Agriculture and Forest Resources		Mineral Resources
✓	Air Quality	✓	Noise
	Biological Resources		Population and Housing
	Cultural Resources		Public Services
	Geology and Soils		Recreation
	Greenhouse Gas Emissions		Transportation/Traffic
✓	Hazards and Hazardous Materials		Utilities and Service Systems
	Hydrology and Water Quality	✓	Mandatory Findings of Significance

3.3 LEAD AGENCY DETERMINATION

On the basis of this initial evaluation:

I find that the proposed use COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that although the proposal could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described in Section 4.0, *Environmental Analysis*, have been added. A MITIGATED NEGATIVE DECLARATION will be prepared.	X
I find that the proposal MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposal MAY have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	

Gary Armstrong

Mr. Gary Armstrong, AICP
Development Services Director

City of Costa Mesa
Agency

September 30, 2013
Date

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4.0 ENVIRONMENTAL ANALYSIS

Sections 4.1 through 4.18 analyze the potential environmental impacts associated with the Project. The environmental issue areas that are evaluated are:

- Aesthetics;
- Agriculture and Forest Resources;
- Air Quality;
- Biological Resources;
- Cultural Resources;
- Geology and Soils;
- Greenhouse Gas Emissions;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Mineral Resources;
- Noise;
- Population and Housing;
- Public Services;
- Recreation;
- Transportation/Traffic;
- Utilities and Service Systems; and
- Mandatory Findings of Significance.

The environmental analysis in the following sections is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines*, as amended, and used by the City of Costa Mesa in its environmental review process. For the preliminary environmental assessment undertaken as part of this Initial Study's preparation, a determination that there is a potential for significant effects indicates the need to more fully analyze the development's impacts and to identify mitigation.

For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the development. To each question, there are four possible responses:

- *No Impact*. The development will not have any measurable environmental impact on the environment.

- *Less Than Significant Impact*. The development will have the potential for impacting the environment, although this impact will be below established thresholds that are considered to be significant.

- *Less Than Significant With Mitigation Incorporated*. The development will have the potential to generate impacts, which may be considered as a significant effect on the environment, although mitigation measures or changes to the development's physical or operational characteristics can reduce these impacts to levels that are less than significant.

- *Potentially Significant Impact*. The development could have impacts, which may be considered significant, and therefore additional analysis is required to identify mitigation measures that could reduce potentially significant impacts to less than significant levels.

The following is a discussion of potential Project impacts as identified in the Initial Study/Environmental Checklist. Explanations are provided for each item.

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4.1 AESTHETICS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?			✓	

4.1.a. Have a substantial adverse effect on a scenic vista?

No Impact. There are no General Plan-identified scenic vistas/views located in the Project area. Therefore, Project implementation would not have any effect on a designated scenic vista/view.

Mitigation Measures: No mitigation is required.

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

No Impact. The Project site is not located along a designated State scenic highway.[1] Aside from ornamental landscaping, there are no protected tree species on the property. No historic buildings or rock outcroppings are located at the Project site; refer to Response 4.5.a. Therefore, Project implementation would not damage scenic resources within a state scenic highway.

Mitigation Measures: No mitigation is required.

4.1.c. Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. The existing visual character of the Project site is defined by the existing single-story commercial/industrial uses that occupy the site. The existing visual character of the surrounding area is defined by the light industrial and commercial uses along 17th Street and Superior Avenue. The area does not exhibit a distinct architectural character and there is no uniformity of architectural styles. No unique or scenic visual resources exist on the Project site or in its surroundings.

[1] State of California, Department of Transportation, http://www.dot.ca.gov/hq/LandArch/scenic_highways/, Accessed August 26, 2013.

A project is generally considered to have a significant visual/aesthetic impact if it substantially changes the character of the project site such that it becomes visually incompatible or visually unexpected when viewed in the context of its surroundings.

The Project site is located in a mature industrial/commercial area. The Project involves construction of a 29-unit, three-story, attached live/work development in place of commercial/light industrial uses. Nine buildings containing two, three, and four attached units would be constructed. Project implementation would introduce a mid-rise scale to the existing mature industrial neighborhood. Therefore, the proposed development would be dissimilar in scale and character to the site's surroundings. However, Project implementation would enhance the character of the surrounding area through quality architectural design in place of single-story structures primarily constructed in the 1950s and 1960s. The proposed architecture has been designed for aesthetic compatibilities with existing buildings in the immediate vicinity. Exterior materials would include a combination of CMU block and stucco finishes with iron railings and details. Metal garage doors would dominate the ground level drive aisles with architectural articulations and windows included in the second and third levels. Private open spaces in the form of patios near the entries, balcony decks, and rooftop decks are proposed. Exhibit 4.1-1, *Conceptual Perspective – Superior Avenue* and Exhibit 4.1-2, *Conceptual Perspective – West 17th Street*, illustrate the buildings proposed along Superior Avenue and 17th Street, as viewed from Superior Avenue and the existing Trader Joe's north of West 17th Street, respectively. Additionally, new block walls would be provided along the western and southern boundary, in order to screen the Project from the existing industrial/commercial uses and enhance the future residents' privacy.

As previously noted, the Project site is located within the 19 West Urban Plan. The 19 West Urban Plan's emphasis is on improving the area by providing visual enhancement and encouraging the development of mixed-use urban villages along specified areas. To this end, the 19 West Urban Plan's objectives include to:

- Encourage commercial/residential mixed-use development that combines residential and nonresidential uses in a single building (vertical mixed-use development);
- Stimulate improvement in the 19 West Urban Plan area through well-designed and integrated urban residential development that is nontraditional in form and design;
- Promote new type of urban housing that would be target-marketed to people seeking alternative housing choices in an industrial area; and
- Encourage the design and development of urban residential structures reflecting the urban character of the surrounding area both in the interior and exterior design.

In furtherance of these objectives, the Project would provide a mixed-use nontraditional development that includes urban housing in a commercial/light industrial theme. Thus, Project implementation would enhance and revitalize the character of the surrounding area.

Source: Withee Malcolm Architects, LLP, June 3, 2013.

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WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Conceptual Perspective – Superior Avenue

Exhibit 4.1-1

Source: Withee Malcolm Architects, LLP, June 3, 2013.

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WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Conceptual Perspective – West 17th Street

Exhibit 4.1-2

The Project site is within a Mixed-Use Overlay District, thus, is subject to compliance with the provisions of CMMC Article 11, *Mixed-Use Overlay District*. According to CMMC Section 13-83.50, CMMC Article 11 is intended to ensure that "the appearance of buildings is complementary to the existing architectural character of the area in which they are located and that on-site residential and nonresidential uses are compatible." To this end, CMMC Section 13-83.54, *Mixed-Use Development Standards*, specifies the development regulations for mixed-use developments. The land use regulations for allowable mixed-use development are, however, activated by a Master Plan. The development regulations specified in CMMC Article 11 would be superseded by those contained in the 19 West Urban Plan and Mesa West Bluffs Urban Plan for live/work development, as applicable. Therefore, the proposed development would be subject to compliance with the development standards and requirements specified in the 19 West Urban Plan. Namely, the proposed development would be reviewed for consistency with the 19 West Urban Plan regarding standards that influence the site's visual character, including those relative to density/intensity [FAR], building height, maximum lot coverage, minimum open space, setbacks, signage, and landscaping, among others. The proposed Master Plan would be reviewed through the City's discretionary review process, in order to verify compliance with the 19 West Urban Plan standards, as well as relevant CMMC Article 11 standards.

Therefore, although the proposed development would substantially alter the visual character of the Project site and is dissimilar to the surrounding industrial/commercial land uses, the development meets the objectives of the Urban Plan by enhancing and revitalizing the site through a live/work development. The visual changes would not degrade the visual character or quality of the site or its surroundings. A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.

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

Less Than Significant Impact.

Light Impacts

There are two primary sources of light: light emanating from building interiors that pass through windows and light from exterior sources (e.g., street lighting, parking lot lighting, building illumination, security lighting, and landscape lighting). Depending upon the location of the light source and its proximity to adjacent light sensitive uses, light introduction can be a nuisance, affecting adjacent areas and diminishing the view of the clear night sky. Light spillage is typically defined as unwanted illumination from light fixtures on adjacent properties.

The Project site is located within a mature commercial/industrial area. Existing lighting conditions in the Project area include light emanating from the buildings and light from exterior sources associated with the onsite uses and the surrounding light industrial and commercial land uses, as well as nearby street lighting. There are no land uses sensitive to light and glare (i.e., schools and residential uses) located in the Project's immediate vicinity.

The proposed live/work development would involve commercial uses on the ground floor and residential uses on the 2nd and 3rd floors. The proposed development would create new sources of light due to light emanating from building interiors and light from exterior sources (e.g., building illumination, security lighting, and landscape lighting). There are no light-sensitive receptors located in the Project's immediate vicinity. However, the proposed residential uses are considered light-sensitive and could be exposed to lighting from the existing surrounding commercial/industrial uses and/or the Project's future commercial uses. Standard Condition SC 4.1-1 requires preparation of a Lighting Plan and Photometric Study, in order to demonstrate that the proposed lighting meets minimum security lighting requirements and minimizes light/glare to residents.

Additionally, the proposed development would be subject to lighting regulations specified in the 19 West Urban Plan, as well as those specified CMMC Article 11. According to the 19 West Urban Plan (page 16), "pedestrian-oriented lighting fixtures" should be used to enhance the aesthetic quality and distinguish the area. Additionally, "Carpinteria" style ornamental street lighting is recommended for the 19 West Urban Plan area; refer to 19 West Urban Plan page 23. CMMC Article 11 specifies the following regarding lighting:

- *CMMC Section 13-83.53*: A project must be consistent with the compatibility standards for residential development in that it provides adequate protection for residents from excessive light and glare (as well as noise, odors, vibration, and toxic emanations). This includes the new residents of this development.

- *CMMC Section 13-83.54*: Regarding the design features of the nonresidential component, the mixed-use development is required to incorporate lighting (as well as parking areas, service areas, buffers, entrances, exits, yards, courts, landscaping, and graphics) as integrated portions of the overall mixed-use development.

- *CMMC Section 13-83.55*: Outdoor lighting associated with light industrial/commercial uses should not adversely impact adjacent residential uses, but should provide sufficient illumination for use, access, and security. Such lighting should not blink, flash, or oscillate.

Compliance with the Urban Plan and CMMC standards and Standard Condition SC 4.1-1 would reduce the proposed commercial uses' potential spill-over light impacts on residential uses to less than significant.

As previously noted, the proposed residential uses could be exposed to lighting from the existing surrounding commercial/industrial uses. Most of the lighting from the existing uses would be shielded by building masses. Additionally, Standard Condition SC 4.1-2 requires notification to buyers that the Project is located within an area designated as Light Industry and subject to existing and potential annoyances/inconveniences (such as spill over lighting) associated with industrial land uses. Compliance with Standard Condition SC 4.1-2 would reduce the existing commercial/industrial uses' potential spill-over light impacts on residential uses to less than significant.

Glare Impacts

Buildings with large facades constructed of reflective surfaces (e.g., brightly colored building façades, metal surfaces, and reflective glass) could increase existing levels of daytime glare. The Project proposes a combination of CMU block and stucco finishes with iron railings and details, as well as metal garage doors. Architectural articulations and windows would be included in the second and third levels. The Project would involve primarily nonreflective façade treatments and the minimization of unrelieved glass surfaces. Additionally, the Project would be subject to compliance with CMMC Section 13-83.53, which specifies that a project must be consistent with the compatibility standards for residential development in that it provides adequate protection for residents from excessive light and glare. Compliance with the CMMC would ensure that the Project would not create a new source of substantial glare that would adversely affect daytime views in the area. A less than significant impact would occur in this regard.

Standard Conditions:

SC 4.1-1 Prior to the issuance of Building Permits, the Applicant shall submit a Lighting Plan and Photometric Study for the approval of the City's Development Services Department. The Lighting Plan shall demonstrate compliance with the following:

- The mounting height of lights on light standards shall not exceed 18 feet in any location on the Project site unless approved by the Development Services Director.
- The intensity and location of lights on buildings shall be subject to the Development Services Director's approval.
- All site lighting fixtures shall be provided with a flat glass lens. Photometric calculations shall indicate the effect of the flat glass lens fixture efficiency.
- Lighting design and layout shall limit spill light to no more than 0.5 footcandle at the property line of the surrounding neighbors, consistent with the level of lighting that is deemed necessary for safety and security purposes on site.
- Glare shields may be required for select light standards.

SC 4.1-2 A "Notice to Buyers" shall disclose that the Project is located within an area designated as Light Industry in the City of Costa Mesa General Plan and is subject to existing and potential annoyances or inconveniences associated with industrial land uses. The Notice shall disclose the existing surrounding industrial land uses, including but not limited to, operational characteristics such as hours of operation, delivery schedules, outdoor activities, and noise and odor generation. In addition, the Notice shall state that the existing land use characteristics are subject to change in the event that new businesses move or existing businesses change ownership. The Buyer's Notice shall be reviewed/approved by the City Attorney's office and Development Services Director prior to recordation. The Buyer's Notice shall serve as written notice of the then existing noise environment and any odor generating uses within the mixed-use development and within a 500-foot radius of the mixed use development, as measured from the legal property lines

of the development lot. The Buyer's Notice shall be remitted to any prospective purchaser or tenant at least 15 days prior to close of escrow, or within three days of the execution of a real estate sales contract or rental/lease agreement, whichever is longer.

Mitigation Measures: No mitigation is required.

4.2 AGRICULTURE AND FOREST 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 Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				✓
d. Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				✓

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

No Impact. The Project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The Project site is developed with commercial/industrial uses. Thus, Project implementation would not result in the conversion of farmland to non-agricultural use.

Mitigation Measures: No mitigation is required.

4.2.b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Project site is zoned General Industrial. The Project site and surrounding lands are not zoned for agricultural use or part of a Williamson Act Contract. Therefore, Project implementation would not conflict with existing zoning for agricultural use, or a Williamson Act contract.

Mitigation Measures: No mitigation is required.

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

No Impact. The Project site is zoned General Industrial. Project implementation would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

Mitigation Measures: No mitigation is required.

4.2.d. Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Project site is developed with commercial/industrial land uses. Thus, Project implementation would not result in the loss of forest land or conversion of forest land to non-forest use.

Mitigation Measures: No mitigation is required.

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

No Impact. The Project site is developed with commercial/industrial land uses and there are no agricultural or forest uses in the vicinity. Therefore, Project implementation would not involve changes in the existing environment that could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

Mitigation Measures: No mitigation is required.

4.3 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:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?			✓	

4.3.a. Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The Project is located within the South Coast Air Basin (Basin), which is governed by the South Coast Air Quality Management District (SCAQMD). Consistency with the SCAQMD *2012 Air Quality Management* (2012 AQMP) means that a project is consistent with the goals, objectives, and assumptions in the respective plan to achieve the Federal and State air quality standards. According to the SCAQMD *CEQA Air Quality Handbook*, in order to determine consistency with the 2012 AQMP, two main criteria must be addressed:

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) Would the Project result in an increase in the frequency or severity of existing air quality violations?

Based on the air quality modeling analysis contained in this report, there would not be significant localized long-term operational impacts. Mitigated emissions generated during Project operations would not exceed the SCAQMD's localized significance threshold (LST) criteria, and therefore, it is unlikely that Project development would increase the frequency or severity of existing air quality violations in the Project's immediate vicinity. The LST analysis demonstrates that Project operations would not cause a localized exceedance of air quality standards; refer to checklist item 4.3.b below. Therefore, the Project is not projected to contribute to the exceedance of any air pollutant concentration standards, and would be consistent with the 2012 AQMP for the first criterion.

b) Would the Project cause or contribute to new air quality violations?

The Project would result in long-term operational emissions that would be below the SCAQMD regional and local thresholds. Therefore, Project operations would not cause or affect a violation of the ambient air quality standards.

c) Would the Project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?

The Project would result in less than significant impacts with regard to long-term regional and localized pollutant concentrations during operations. As such, the Project would not delay the timely attainment of air quality standards or 2012 AQMP emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and Southern California Association of Governments (SCAG) air quality policies, it is important to recognize that air quality planning within the Basin focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining a project's consistency focuses on whether or not the project exceeds the assumptions utilized in preparing the forecasts presented in the 2012 AQMP. Determining whether or not a project exceeds the assumptions reflected in the 2012 AQMP involves the evaluation of the three criteria outlined below.

a) Would the Project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?

A project is consistent with the 2012 AQMP in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. In the case of the 2012 AQMP, three sources of data form the basis for the projections of air pollutant emissions: the *City of Costa Mesa 2000 General Plan* (*General Plan*), SCAG's *Growth Management* Chapter of the *Regional Comprehensive Plan and Guide* (RCPG), and SCAG's *2012 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS). The RTP/SCS also provides socioeconomic forecast projections of regional population growth. The Project site is located within the City's 19 West Urban Plan. 19 West Urban Plan Figure 9B indicates the site's underlying zoning district as General Industrial and the overlay zone as 19 West Village Mixed-Use Overlay District. Additionally, as the live/work development standards are specified in the Mesa West Urban Plan (and not the 19 West Urban Plan), its regulations are applied to the proposed Project. The Mesa West Bluffs Urban Plan does not propose any significant intensification of land uses, but rather proposes to improve the area by providing visual enhancement and encouraging the development of live/work units or residential development. The General Plan identifies the Mixed-Use Overlay District as a compatible zoning district in the Light Industrial land use designation. Therefore, the General Plan allows mixed-use development and residential development within a mixed-use overlay zone. Thus, the Project is consistent with City-wide plans for population growth at the Project site. The Project is consistent with the types, intensity, and patterns of land use envisioned for the site vicinity in the RCPG. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are

based on the local plans and policies applicable to the City and are used by SCAG in all phases of implementation and review. Additionally, as the SCAQMD has incorporated these same projections into the 2012 AQMP, it can be concluded that the Project would be consistent with the projections.

b) Would the Project implement all feasible air quality mitigation measures?

The Project would result in less than significant air quality impacts with regard to Project operations. Additionally, all feasible mitigation measures have been incorporated (Standard Conditions of Approval 4.3-1 and 4.3-2). As such, the Project meets this 2012 AQMP consistency criterion.

c) Would the Project be consistent with the land use planning strategies set forth in the AQMP?

The Project involves demolition of the existing on-site structures, pavement, and driveways, and construction of 29 live/work units within an urbanized portion of the City. The Project would not conflict with City of Costa Mesa or SCAG policies.

In conclusion, the determination of 2012 AQMP consistency is primarily concerned with the long-term influence of the Project on air quality in the Basin. The Project would not result in a long-term impact on the region's ability to meet State and Federal air quality standards. Also, the Project would be consistent with the 2012 AQMP goals and policies for control of fugitive dust. As discussed above, the Project is a 29-unit live/work development, and its long-term influence would also be consistent with the 2012 AQMP goals and policies.

Mitigation Measures: No mitigation is required.

4.3.b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact.

Short-Term Construction Emissions

Construction activities would involve demolition, site preparation, grading, paving, building construction, and architectural coatings. The Project would be constructed over approximately 15 months, beginning in March of 2014. Construction activities would disturb approximately 1.5 acres and would demolish the four existing on-site structures, pavement, and driveways.

Table 4.3-1, *Construction Air Emissions*, depicts the construction emissions associated with the Project. Emitted pollutants would include ROG, CO, NO_X, PM_{10}, and $PM_{2.5}$. ROG emissions would be greatest during the paving and architectural coating phases of construction. The largest amount of CO and NO_X emissions would occur during the earthwork phase. PM_{10} and $PM_{2.5}$ emissions would occur from fugitive dust (due to earthwork and excavation) and from construction equipment exhaust. The Project would be required to adhere to standard SCAQMD regulations, such as implementing SCAQMD Rule 403 (required by Standard Condition of Approval 4.3-1) which would reduce fugitive dust emissions. As depicted in *Table 4.3-1*, construction-related emissions would not exceed the established SCAQMD thresholds for criteria pollutants.

Table 4.3-1
Construction Air Emissions

Emissions Source	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
2014						
Unmitigated Emissions	13.83	50.01	36.51	0.04	7.31	4.86
Mitigated Emissions[2,3]	13.82	49.97	36.48	0.04	4.82	3.47
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Is Threshold Exceeded After Mitigation?	***No***	***No***	***No***	***No***	***No***	***No***
2015						
Unmitigated Emissions	4.20	22.09	16.84	0.026	1.78	1.52
Mitigated Emissions[2,3]	4.20	22.07	16.82	0.026	1.77	1.52
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Is Threshold Exceeded After Mitigation?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1. Emissions were calculated using CalEEMod, as recommended by the SCAQMD.
2. The reduction/credits for construction emission mitigations are based on mitigation included in the CalEEMod model and as required by Standard Conditions of Approval 4.3-1 and 4.3-2. The mitigation includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces twice daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.
3. Refer to Appendix A, *Air Quality and Greenhouse Gas Emissions Data*, for assumptions used in this analysis.

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. In accordance with the methodology prescribed by the SCAQMD, the ROG emissions associated with paving and architectural coating have been quantified using the California Emissions Estimator Model (CalEEMod). It is noted that CalEEMod accounts for the implementation of the SCAQMD Regulation XI, Rule 1113 – *Architectural Coating,* in the reported unmitigated emissions.[1] Rule 1113 provides specifications on painting practices and regulates the ROG content of paint. Based on the CalEEMod results, Project construction would not result in an exceedance of the ROG emissions threshold. Compliance with Standard Conditions of Approval 4.3-1 and 4.3-2 would ensure adherence to SCAQMD standard regulations and reduce construction-related emissions to a less than significant level.

Naturally Occurring Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by State, Federal, and international agencies and was identified as a toxic air contaminant by the California Air Resources Board in 1986.

[1] South Coast Air Quality Management District Website, http://www.aqmd.gov/rules/reg/reg11_tofc.html, Accessed on September 4, 2014.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading or demolition for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed.

Asbestos Containing Materials

The Project includes the demolition of the on-site structures, which could contain asbestos containing materials (ACMs). All demolition that could result in the release of ACMs must be conducted according to Federal and State standards. The National Emission Standards for Hazardous Air Pollutants (NESHAP) mandates that building owners conduct an asbestos survey to determine the presence of ACMs prior to the commencement of any remedial work, including demolition. If ACMs are found, abatement of asbestos would be required prior to any demolition activities. Compliance with the recommended mitigation (refer to Mitigation Measure HAZ-2) regarding the requirement for an asbestos survey and abatement, as well as compliance with SCAQMD Rule 1403, would reduce potential impacts to a less than significant level.

Long-Term (Operational) Emissions

Long-term air quality impacts would consist of mobile source emissions generated by Project-related traffic and stationary source emissions generated by Project-related electrical energy and natural gas demands. Emissions associated with each of these sources were calculated and are discussed below.

Mobile Source

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport SO_X, PM_{10}, and $PM_{2.5}$). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

As previously discussed, the Basin is a nonattainment area for Federal and State air quality standards for PM_{10}, $PM_{2.5}$, and O_3. NO_X and ROG are regulated O_3 precursors. A precursor is defined as a directly emitted air contaminant that, when released into the atmosphere, forms or causes to be formed, or contributes to the formation of, a secondary air contaminant for which an ambient air quality standard has been adopted. Project-generated vehicle emissions have been estimated using the CalEEMod model; refer to Appendix A for model data and assumptions.

The Project site consists of four one-story structures, a small vacant lot, and surface parking for commercial and industrial uses. The Project would replace these existing uses with 29 live/work units. According to the *17th/Superior Live/Work Project Traffic Impact Analysis*, the Project would result in an overall reduction in daily trips to and from the Project site. *Table 4.3-2*, *Long-Term Operational Air Emissions*, presents the anticipated mobile source emissions. Impacts from vehicle emissions would be less than significant.

Table 4.3-2
Long-Term Operational Air Emissions

Source[2]	Estimated Annual Average Emissions (pounds/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
EXISTING EMISSIONS						
Area Sources	0.53	0.00	0.00	0.00	0.00	0.00
Energy Sources	0.00	0.02	0.02	0.00	0.00	0.00
Mobile Sources	9.33	6.75	29.54	0.06	5.00	1.39
Total Existing Emissions	**9.87**	**6.77**	**29.56**	**0.06**	**5.00**	**1.39**
PROPOSED EMISSIONS						
Area Sources	8.51	0.22	17.01	0.02	2.23	2.23
Energy Sources	0.01	0.13	0.06	0.00	0.01	0.01
Mobile Sources	4.61	3.27	15.07	0.03	2.49	0.69
Total Proposed Emissions	**13.14**	**3.63**	**32.15**	**0.06**	**4.73**	**2.93**
Net Increase Over Existing	**3.27**	**-3.14**	**2.59**	**0.00**	**-0.27**	**1.54**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Is Threshold Exceeded? (Significant Impact)	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
1 – Based on CalEEMod modeling results, worst-case seasonal emissions for area and mobile emissions have been modeled.
Refer to Appendix A, *Air Quality Emissions Data*, for assumptions used in this analysis.

Stationary Source Emissions

Stationary source emissions would be generated due to an increased demand for electrical energy and natural gas with Project development. This assumption is based on the supposition that those power plants supplying electricity to the site are utilizing fossil fuels. Electric power generating plants are distributed throughout the Basin and western United States, and their emissions contribute to the total regional pollutant burden. The primary use of natural gas by the proposed land uses would be for combustion to produce space heating, water heating, other miscellaneous heating, or air conditioning, consumer products, and landscaping. As indicated in *Table 4.3-2*, stationary source emissions from the Project would not exceed SCAQMD thresholds. Thus, impacts from area source emissions would be less than significant. Moreover, the Project is subject to compliance with Standard Condition SC 4.3-3, which requires compliance with Title 24 of the California Code of Regulations.

Standard Condition:

SC 4.3-1 All construction contractors shall comply with South Coast Air Quality Management District (SCAQMD) regulations, including Rule 403, Fugitive Dust. All grading (regardless of acreage) shall apply best available control measures for fugitive dust in accordance with Rule 403. To ensure that the project is in full compliance with applicable SCAQMD dust regulations and that there is no nuisance impact off the site, the contractor would implement each of the following:

- Moisten soil not more than 15 minutes prior to moving soil or conduct whatever watering is necessary to prevent visible dust emissions from exceeding 100 feet in any direction.
- Apply chemical stabilizers to disturbed surface areas (completed grading areas) within five days of completing grading or apply dust suppressants or vegetation sufficient to maintain a stabilized surface.
- Water excavated soil piles hourly or covered with temporary coverings.
- Water exposed surfaces at least twice a day under calm conditions. Water as often as needed on windy days when winds are less than 25 miles per day or during very dry weather in order to maintain a surface crust and prevent the release of visible emissions from the construction site.
- Wash mud-covered tired and under-carriages of trucks leaving construction sites.
- Provide for street sweeping, as needed, on adjacent roadways to remove dirt dropped by construction vehicles or mud which would otherwise be carried off by trucks departing project sites.
- Securely cover loads with a tight fitting tarp on any truck leaving the construction sites to dispose of debris.
- Cease grading during period when winds exceed 25 miles per hour.

SC 4.3-2 Prior to issuance of grading permits, developer shall submit for review and approval a Construction Management Plan. This plan features methods to minimize disruption to the neighboring residential uses to the fullest extent that is reasonable and practicable. The plan shall include construction parking and vehicle access and specifying staging areas and delivery and hauling truck routes. The plan should mitigate disruption to residents and also businesses during construction.

The truck route plan shall preclude truck routes through residential areas and major truck traffic during peak hours. The total truck trips to the site shall not exceed 200 trucks per day (i.e., 100 truck trips to the site plus 100 truck trips from the site) unless approved by the Development Services Director or Transportation Services Manager.

SC 4.3-3 The Project shall comply with Title 24 of the California Code of Regulations established by the energy conservation standards. The Project Applicant shall incorporate the following in building plans:

- Solar or low emission water heaters shall be used with combined space/water heater units;
- Double paned glass or window treatment for energy conservation shall be installed in all exterior windows; and
- Building shall be oriented north/south where feasible.

Mitigation Measures: No mitigation is required.

4.3.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. The SCAQMD neither recommends quantified analysis of cumulative construction or operational emissions, nor does it provide separate methodologies or thresholds of significance to be used to assess cumulative construction or operational impacts. However, if an individual development project generates operational emissions that exceed the SCAQMD recommended daily thresholds, project-specific impacts would also cause a cumulative considerable increase in emissions for those pollutants for which the Basin is in non-attainment.

With respect to the Project's construction air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the 2012 AQMP pursuant to Federal Clean Air Act mandates. As such, the Project would comply with SCAQMD Rule 403 requirements and implement all feasible mitigation measures. Rule 403 requires that fugitive dust be controlled with the best available control measures in order to reduce dust so that it does not remain visible in the atmosphere beyond the Project site's property line. In addition, the Project would comply with adopted 2012 AQMP emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be reduced to the extent feasible, these same requirements (i.e., Rule 403 compliance, implementation of all feasible reduction measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects throughout the Basin, which would include related projects.

Cumulative Construction Impacts

As indicated in *Table 4.3-1*, mitigated construction activities for the Project would not exceed SCAQMD thresholds. Compliance with SCAQMD rules and regulations, as well as implementation of Standard Conditions of Approval 4.3-1 and 4.3-2, would reduce the Project's construction-related impacts to a less than significant level. Thus, it can be reasonably inferred that the Project-related construction emissions, in combination with those from other projects in the area, would not substantially deteriorate the local air quality. A less than significant impact would occur in this regard.

Cumulative Long-Term Impacts

As discussed previously and indicated in *Table 4.3-2*, the Project would result in less than significant air quality impacts. Additionally, adherence to SCAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Emission reduction technology, strategies, and plans are constantly being developed. Therefore, cumulative operational impacts associated with Project operations would be less than significant.

Standard Condition: Refer to Standard Conditions of Approval SC 4.3-1 through 4.3-3.

Mitigation Measures: No mitigation is required.

4.3.d. Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact With Mitigation Incorporated. Sensitive receptors are defined as 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. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

Sensitive receptors near the Project site include residential uses located approximately 240 meters to the northeast, 215 meters to the north/northwest, 220 meters to the northwest, and approximately 89 meters to the south of the Project site. Hotel uses are also considered sensitive receptors. The Ramada Inn, located approximately 33 meters east of the Project site, is the closest sensitive receptor in the Project area. In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing air toxics, as well as localized significance thresholds for construction and operations impacts (stationary sources only). Additionally, a carbon monoxide hot-spot analysis was performed for the analysis of localized mobile source impacts.

Air Toxics

The Project would introduce residential uses (sensitive receptors) to an area that is surrounded by a variety of land uses including light manufacturing and industrial uses. The SCAQMD conducted microscale air quality monitoring at 14 locations throughout the Basin, including the City of Costa Mesa, to measure the toxic air quality concentrations. The results of the monitoring showed that there are no Toxic Hot Spots within the City and the concentrations within Costa Mesa are below the Basin average. According to the SCAQMD's Facility INformation Detail (FIND) database, which is a web tool that identifies SCAQMD-regulated facilities (i.e., facilities that are required to have a permit to operate equipment that releases pollutants into the air), there are four regulated facilities within approximately 500 feet of the Project boundary. These facilities include Trader Joe's grocery store, two auto body facilities, and a pump manufacturer. It is noted, the two industrial properties (JC Carter at 671 West 17th Street and CLA-VAL at 1701 Placentia Avenue) addressed through City Council Resolution 06-34, which established 50-foot buffer zones from these properties, are not SCAQMD-regulated facilities, thus, do not operate equipment that releases pollutants into the air for which a permit is required. Although all of these facilities are compliant with their permit conditions and have not had any violations issued by the SCAQMD, Mitigation Measure AQ-1 requires that all residences be equipped with a ventilation system that will properly filter the indoor air. Compliance with Mitigation Measure AQ-1 would ensure any potential health risks associated with ambient air quality concentrations would be less than significant.

Localized Significance Thresholds (LST)

Localized Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level proposed projects. The SCAQMD provides the LST lookup tables for one, two, and five acre projects emitting CO,

NO_X, $PM_{2.5}$, or PM_{10}. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD recommends that any project over five acres perform air quality dispersion modeling to assess impacts to nearby sensitive receptors. The Project is located within Source Receptor Area (SRA) 18, North Coastal Orange County.

Based on the SCAQMD guidance on applying CalEEMod to LSTs, the Project would disturb approximately 1.5 acres; therefore, the LST thresholds for 2.0 acres were utilized for the construction LST analysis. The closest sensitive receptors to the Project site are occupants of the Ramada Inn and residential uses, located to the east and southeast, respectively, across Superior Avenue. These sensitive land uses may be potentially affected by air pollutant emissions generated during on-site construction activities. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. As the nearest sensitive uses are approximately 33 meters east of the Project site, the construction LST values were linearly interpolated. *Table 4.3-3*, *Localized Significance of Emission – Proposed Land Plan*, shows the construction-related emissions for NO_X, CO, PM_{10}, and $PM_{2.5}$ compared to the LSTs for SRA 18. As shown in *Table 4.3-3*, mitigated construction emissions would not exceed the LSTs for SRA 18. Therefore, localized significance impacts from Project construction would be less than significant with implementation of Standard Conditions of Approval 4.3-1 and 4.3-2.

Table 4.3-3
Localized Significance of Emissions

Source	Pollutant (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction				
2014				
Total On-Site Unmitigated Emissions	50.01	36.51	7.37	4.86
Total On-Site Mitigated Emissions	49.97	36.48	4.82	3.47
Localized Significance Threshold	130	991	11.48	5.64
Thresholds Exceeded?	***No***	***No***	***No***	***No***
2015				
Total On-Site Unmitigated Emissions	22.09	16.84	1.78	1.52
Total On-Site Mitigated Emissions	22.07	16.82	1.78	1.52
Localized Significance Threshold	130	991	11.48	5.64
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Operational				
Stationary Source Emissions	0.03	2.44	0.05	0.05
Localized Significance Threshold	130	991	3.28	2.00
Thresholds Exceeded?	***No***	***No***	***No***	***No***

Note:
1. The Localized Significance Threshold was determined using Appendix C of the SCAQMD *Final Localized Significant Threshold Methodology* guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the anticipated daily acreage disturbance for construction, the total acreage for operational, the distance to sensitive receptors, and the source receptor area (SRA 18). Mitigated emissions are those that incorporate the requirements set forth in Standard Conditions of Approval 4.3-1 and 4.3-2.

Carbon Monoxide Hotspots

The SCAQMD requires a quantified assessment of CO hotspot when a project increases the volume to capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service (LOS) D or worse. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hotspots are typically produced at intersection locations.

As previously noted, the Project proposes 29 live/work units in place of commercial and light industrial uses. The *17th/Superior Live/Work Project Traffic Impact Analysis* indicates that the Project would result in an overall net reduction in daily trips. The Project would not increase the volume to capacity ratio by two percent at any study intersection, therefore, a CO hotspot analysis is not warranted. Thus, impacts in regards to CO hotspots would be less than significant.

For Project operations, the two-acre threshold was utilized. As the nearest sensitive use is approximately 33 meters east of the Project site, the operational LST values were linearly interpolated. As seen in *Table 4.3-3*, operational emissions are far below the LSTs, thus, a less than significant impact would occur in this regard.

Standard Condition: Refer to Standard Conditions of Approval SC 4.1-2 and 4.3-1 through 4.3-3.

Mitigation Measures:

AQ-1 Prior to issuance of Building Permits, the Building Plans shall demonstrate that all residences are equipped with a mechanical ventilation system that will properly filter the indoor air. The ventilation system can be a component of the air conditioning system, with the distinction being that clean, ventilated air flow does not necessarily need coolant. The ventilation system shall be effective with all doors and windows closed. Additionally, the ventilation system shall have a filtration efficiency of at least 90 percent and the ability to remove particulate matter with diameters equal to or greater than 0.5 micron.

4.3.e. Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact.

Short-Term Project Construction

Construction activities associated with the Project may generate detectable odors from heavy-duty equipment exhaust. Construction-related odors would be short-term in nature and cease upon Project completion. Any impacts to existing adjacent land uses would be short-term and are considered less than significant.

Long-Term Project Operations

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. Although there are four SCAQMD regulated facilities within 500 feet of the Project site, none are of the type that would typically cause an odor complaint. Notwithstanding, the Project site is located within a mature commercial/industrial area. Additionally, the Project site is located immediately east of the JC Carter industrial property and live/work units would be within the 50-foot buffer zone established by Resolution 06-34. Therefore, the proposed residential uses could be exposed to odors from the existing surrounding commercial/industrial uses. Standard Condition SC 4.1-2 requires notification to buyers that the Project is located within an area designated as Light Industry and subject to existing and potential annoyances/inconveniences (such as odors) associated with industrial land uses. Standard Condition of Approval 4.3-4 would require all trash facilities to be enclosed to eliminate potential odor impacts. Therefore, impacts are less than significant.

Standard Condition: Refer to Mitigation Measure AQ-1 and Standard Conditions SC 4.1-2 and SC 4.3-4.

SC 4.3-4 Trash facilities shall be screened from view and designed and located appropriately to minimize potential noise and odor impacts to residential areas.

Mitigation Measures: No mitigation is required.

4.4 BIOLOGICAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				✓

4.4.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 involves removal of commercial/industrial land uses and construction of a live/work development. The Project site and its surroundings are fully developed/disturbed and biological resources are not present. Therefore, Project implementation would not impact:

- Either directly or through habitat modifications, any plant or wildlife species identified as a candidate, sensitive, or special status;
- Any riparian habitat or other sensitive natural community;
- Federally protected wetlands or other jurisdictional waters; or

- Interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Mitigation Measures: No mitigation is required.

4.4.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?

No Impact. Refer to Response 4.4.a.

Mitigation Measures: No mitigation is required.

4.4.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. Refer to Response 4.4.a.

Mitigation Measures: No mitigation is required.

4.4.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?

No Impact. Refer to Response 4.4.a.

Mitigation Measures: No mitigation is required.

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

No Impact. The Project site does not contain any protected biological resources or tree species that are considered sensitive. Project implementation would not conflict with any local policies or ordinances protecting biological resources.

Mitigation Measures: No mitigation is required.

4.4.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 City of Costa Mesa is not within the jurisdiction of an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, Project implementation would not conflict with the provisions of an approved local, regional, or state habitat conservation plan.

Mitigation Measures: No mitigation is required.

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4.5 CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5?				✓
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?			✓	
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?			✓	

4.5.a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5?

No Impact. The City's historic and cultural resources are illustrated on General Plan EIR Exhibit 4.10-1, *Properties that Meet the Standards for Listing in the National Register*, and outlined in General Plan EIR Table 4.10-1, *Historic Resources Inventory.* The Project site is not identified as a historically/culturally significant resource. Additionally, the structures that exist on the property do not qualify as a historical resource pursuant to CEQA Guidelines. Therefore, Project implementation would not cause a substantial adverse change in the significance of a historical resource.

Mitigation Measures: No mitigation is required.

4.5.b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?

Less Than Significant Impact. Ground-disturbing activities, such as grading or excavation, could disturb previously unidentified subsurface archaeological resources. However, the Project site consists of, and is surrounded by, urban/developed land that has been permanently altered due to the construction of below and aboveground improvements (i.e., buildings, parking lots, roads, hardscapes, and utilities). Given the highly disturbed condition of the site, the potential for Project implementation to impact an as yet unidentified archeological resource is considered remote. Notwithstanding, the Project would be subject to compliance with Standard Condition SC 4.5-1, which provides direction, in the event archeological resources are unearthed during Project subsurface activities. Therefore, Project implementation would result in a less than significant impact involving an adverse change in the significance of an archaeological resource.

Standard Condition:

SC 4.5-1 In the event that archeological resources are archaeological materials are encountered during grading and construction, all construction activities shall be temporarily halted or redirected to permit the sampling, identification, and evaluation of archaeological materials as determined by the City, who shall establish, in cooperation with the project applicant and a certified archaeologist, the appropriate procedures for exploration and/or salvage of the artifacts.

Mitigation Measures: No mitigation is required.

4.5.c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact. There is no evidence unique geologic features present on the Project site. Given the highly disturbed condition of the site, the potential for Project implementation to impact an as yet unidentified paleontological resource is considered remote. Notwithstanding, the Project would be subject to compliance with Standard Condition SC 4.5-2, which provides direction, in the event paleontological resources are unearthed during Project subsurface activities. Therefore, Project implementation would result in a less than significant impact involving the potential destruction of a paleontological resource.

Standard Condition:

SC 4.5-2 In the event that paleontological resources are encountered during grading and construction operations, all construction activities shall be temporarily halted or redirected to permit a qualified paleontologist to assess the find for significance and, if necessary, develop a PRIMP for the review and approval by the City prior to resuming excavation activities.

Mitigation Measures: No mitigation is required.

4.4.d. Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. The probability that construction of the Project would impact any human remains is remote, given the degree of past disturbance of the site, as it is developed with commercial/industrial uses. In the event that human remains are encountered during earth removal or disturbance activities, the California Health and Safety Code Section 7050.5 requires that all activities cease immediately and a qualified archaeologist and Native American monitor be contacted immediately. The Coroner would also be contacted pursuant to Sections 5097.98 and 5097.99 of the Public Resources Code relative to Native American remains. Should the Coroner determine the human remains to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC would then be required to contact the most likely descendant of the deceased Native American, who would then serve as consultant on how to proceed with the remains. Compliance with the established regulatory framework (i.e., California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98), as required by Standard Condition SC 4.5-3, would reduce potential impacts involving disturbance to human remains would be less than significant.

Standard Condition:

SC 4.5-3 If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Mitigation Measures: No mitigation is required.

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4.6 GEOLOGY AND SOILS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1) 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.				✓
2) Strong seismic ground shaking?			✓	
3) Seismic-related ground failure, including liquefaction?			✓	
4) Landslides?				✓
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 18-1-B of the California Building Code (2004), 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?				✓

4.6.a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

4.6.a.1. 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.

No Impact. Seismically induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. Ground rupture is most likely along active faults, and typically occurs during earthquakes of magnitude five or higher. Ground rupture only affects the area immediately adjacent to a fault.

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act requires the State Geologist to establish regulatory zones, known as "Alquist Priolo (AP) Earthquake Fault Zones," around the surface traces of active faults and to issue appropriate maps. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (typically

50 feet). The Project site is not affected by a State-designated AP Earthquake Fault Zone.[1] Therefore, Project implementation would not expose people or structures to potential substantial adverse effects involving rupture of a known earthquake fault.

***Mitigation Measures*:** No mitigation is required.

4.6.a.2. Strong seismic ground shaking?

Less Than Significant Impact. Southern California is considered a seismically active region. Moderate to strong earthquakes can occur on numerous local faults. Southern California faults are classified as: active; potentially active; or inactive. Faults from past geologic periods of mountain building but do not display any evidence of recent offset, are considered "inactive" or "potentially active." Faults that have historically produced earthquakes or show evidence of movement within the past 1,000 years are known as "active faults." No known active faults traverse the Project site. The nearest known active fault to the Project site is the Newport-Inglewood Fault.

The principal seismic hazard to the subject property is strong ground shaking from earthquakes produced by local faults. It is likely that the subject property will be shaken by future earthquakes produced in Southern California. A moderate to large magnitude earthquake on a regional fault could cause moderate to severe seismic shaking in the City, thus exposing people or structures on the Project site to potential substantial adverse effects, including the risk of loss, injury, or death. The possibility of moderate to high ground acceleration or shaking in the City may be considered as approximately similar to the Southern California region, as a whole. The intensity of ground shaking on the Project site would depend upon the magnitude of the earthquake, distance to the epicenter, and the geology of the area between the epicenter and the Project site.

Numerous controls would be imposed on the proposed development through the permitting process. Pursuant to CMMC Section 5-1, *Construction Codes Adopted*, the City has adopted various codes, including the 2010 Edition of the California Building Code, for the purpose of "prescribing regulations for erecting, construction, enlargement, alteration, repair, improving, removal, conversion, demolition, occupancy, equipment use, height, and area of buildings and structures." According to Standard Condition 4.6-1, the Project is subject to compliance with the requirements of the California Code of Regulations. Also, the provisions of the various Codes specified in CMMC Section 5-1, as amended by the City, constitute the City's "Building Regulations." Therefore, the City would regulate the proposed development (and lessen potential seismic and geologic impacts) through compliance with the City's Building Regulations, as well as the Alquist-Priolo Earthquake Fault Zoning Act and local land use policies. Additionally, the Project must comply with Standard Condition SC 4.6-2, which requires preparation of a Geotechnical Investigation and a final written report. Compliance with the City's Building Regulations and Standard Conditions 4.6-1 and 4.6-2 would ensure that Project implementation would result in a less than significant impact due to the exposure of people or structures to potential substantial adverse effects involving strong seismic ground shaking.

[1] State of California, Department of Conservation California Geological Survey Website, *Regional Geologic & Hazards Mapping Program - Alquist-Priolo Earthquake Fault Zoning Act,* http://www.conservation.ca.gov/cgs/rghm/ap/Pages/Index.aspx, Accessed September 9, 2013.

Standard Condition:

SC 4.6-1 The proposed development shall be designed to comply with all applicable geological and seismic safety requirements of the California Building Code and mitigation as defined in the Public Resources Code Section 2693(c). Verification of such compliance will be confirmed during the City's plan review and building permit issuance processes.

SC 4.6-2 Prior to the issuance of Grading Permits, the Project Applicant shall provide the City of Costa Mesa Department of Building Safety with a geotechnical investigation of the project site detailing recommendations for remedial grading in order to reduce the potential of on-site soils to cause unstable conditions. Design, grading, and construction shall be performed in accordance with the requirements of the California Building Code applicable at the time of grading, appropriate local grading regulations, and the recommendations of the geotechnical consultant as summarized in a final written report, subject to review by the City of Costa Mesa Department of Building Safety.

Mitigation Measures: No mitigation is required.

4.6.a.3. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. Earthquake waves cause water pressures to increase in the sediment and the sand grains to lose contact with each other, leading the sediment to lose strength and behave like a liquid. The soil can lose its ability to support structures, flow down even very gentle slopes, and erupt to the ground surface to form sand boils. Many of these phenomena are accompanied by settlement of the ground surface — usually in uneven patterns that damage buildings, roads, and pipelines. The three factors that are required for liquefaction to occur are:

1. Loose, granular sediment - typically "made" land and beach and stream deposits that are young enough (late Holocene) to be loose.

2. Saturation of the sediment by groundwater (water fills the spaces between sand and silt grains).

3. Strong ground shaking – areas have to be shaken hard enough for susceptible sediment to liquefy.

The California Geological Survey produces seismic hazard maps as part of the Seismic Hazards Zonation Program that identify zones of required investigation for liquefaction (and earthquake-induced landslides). The liquefaction zones are areas where historic occurrence of liquefaction, or local geological, geotechnical, and groundwater conditions indicate a potential for permanent ground displacements such that mitigation would be required. According to the Seismic Hazard Zones Map – Newport Beach Quadrangle (Liquefaction Zone Released April 17, 1997), the Project site is not mapped as being in a liquefaction zone of required investigation.[2] Notwithstanding, the City would regulate the proposed development (and further minimize any potential liquefaction hazard) through compliance with the City's

[2] State of California, Department of Conservation California Geological Survey Website - Geologic & Hazards Mapping Program, http://gmw.consrv.ca.gov/shmp/html/pdf_maps_so.html, Accessed September 9, 2013.

Building Regulations. Additionally, the Project must comply with Standard Condition SC 4.6-1, which requires compliance with the California Building Code and Standard Condition SC 4.6-2, which requires preparation of a Geotechnical Investigation and a final written report.

Standard Condition: Refer to Standard Conditions SC 4.1-1 and SC 4.1-2 above.

Mitigation Measures: No mitigation is required.

4.6.a.4. Landslides?

No Impact. Due to the level topography, landslides are not anticipated to occur on the Project site. The Seismic Hazard Zones Map illustrates the earthquake-induced landslide zones, which are areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical, and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation would be required. According to the Seismic Hazard Zones Map – Newport Beach Quadrangle (Landslide Zone Released April 15, 1998), the Project site is not mapped as being in an earthquake-induced landslide zone of required investigation. Therefore, Project implementation would not expose people or structures to potential substantial adverse effects involving landslides.

Mitigation Measures: No mitigation is required.

4.6.b. Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The Project site is relatively flat with an elevation of approximately 88 feet above mean sea level. The surrounding topography generally slopes to the west.

The Project proposes to remove the existing commercial/industrial uses and associated surface parking and in its place construct an attached live/work development. Project implementation would result in ground-disrupting activities such as excavation and trenching for foundations and utilities; soil compaction and site grading; and the erection of new structures, all of which would temporarily disturb soils. The exposure of previously covered soils during these activities could lead to increased on-site erosion and off-site sediment transport, because disturbed soils are susceptible to higher rates of erosion from wind, rain, and runoff of dewatering discharge or dust control water than undisturbed soils.

Earth-disturbing activities associated with Project construction could result in substantial soil erosion or the loss of topsoil. As concluded in Response 4.9.a, the Project would be subject to compliance with the National Pollutant Discharge Elimination System (NPDES) permitting process, since one or more acres of soil would be disturbed; refer also to Standard Condition 4.6-3. Following compliance with NPDES regulatory requirements, Project implementation would result in a less than significant impact involving soil erosion or the loss of topsoil.

Standard Condition:

SC 4.6-3 The Project shall comply with the NPDES requirements, as follows:

- Construction General Permit Notice of Intent (NOI) Design: Prior to the issuance of preliminary or precise grading permits, the project applicant shall provide the City Engineer with evidence that an NOI has been filed with the Storm Water Resources Control Board (SWRCB). Such evidence shall consist of a copy of the NOI stamped by the SWRCB or Regional Water Quality Control Board (RWQCB), or a letter from either agency stating that the NOI has been filed.

- Construction Phase Storm Water Pollution Prevention Plan (SWPPP): Prior to the issuance of grading permits, the applicant shall prepare a SWPPP that complies with the Construction General Permit and will include at a minimum the following:

  - Discuss in detail the BMPs planned for the project related to control of sediment and erosion, nonsediment pollutants, and potential pollutants in non-storm water discharges;

  - Describe post-construction BMPs for the project;

- Explain the maintenance program for the project's BMPs;

- List the parties responsible for SWPPP implementation and BMP maintenance during and after grading. The Project Applicant shall implement the SWPPP and modify the SWPPP as directed by the Construction General Permit.

Mitigation Measures: No mitigation is required.

4.6.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 an on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact. Refer to Responses 4.6.a.2 and 4.6.a.3 above for discussions of potential impacts related to liquefaction and earthquake-induced landslides, respectively. As the site is relatively level, there is no potential for landslides or slope instabilities. Additionally, as the Project site has a low potential for liquefaction, the potential for lateral spreading is also low. Following compliance with the City's Building Regulations pursuant to Standard Condition 4.6-1, Project implementation would not expose people or structures to potential substantial adverse effects involving unstable geologic units or soils.

Standard Condition: Refer to Standard Condition SC 4.6-1 above.

Mitigation Measures: No mitigation is required.

4.6.d. Be located on expansive soil, as defined in Table 18-1-B of the California Building Code (2007), creating substantial risks to life or property?

Less Than Significant Impact. Expansive soils heave when moisture is introduced and contract as they dry. During inclement weather and/or excessive landscape watering, moisture infiltrates the soil and causes the soil to heave (expansion). When drying occurs the soils will shrink (contraction). Repeated cycles of expansion and contraction of soils can cause pavement, concrete slabs on grade and foundations to crack. This movement can also result in misalignment of doors and windows. Soils with the potential for expansion typically have clay minerals that expand when wet and shrink when dried. According to General Plan EIR Exhibit 4.7-2, *Soil Types*, the Project site is located within an area identified as having soils characterized as silty sand, which are not typically expansive. The Project would be required to comply with Standard Condition SC 4.6-2, which requires preparation of a Geotechnical Investigation and a final written report. The Geotechnical investigation would identify the Project site's soil characteristics and potential for expansion. If necessary, recommendations would be identified in order to mitigate the effects of expansive soils on the proposed development. The proposed buildings would be required to be designed and constructed in conformance with the City's Building Regulations pursuant to Standard Condition SC 4.6-1 and the Geotechnical Investigation's recommendations. Compliance with the Building Regulations and the Geotechnical Investigation's recommendations would ensure that Project implementation would not create substantial risks to life or property from expansive soils.

Standard Condition: Refer to Standard Conditions SC 4.6-1 and SC 4.6-2 above.

Mitigation Measures: No mitigation is required.

4.6.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. The Project does not propose the use of septic tanks. The Project would connect to the existing City sanitary sewer system for wastewater disposal.

Mitigation Measures: No mitigation is required.

4.7 GREENHOUSE GAS EMISSIONS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

4.7.a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact.

Global Climate Change

California is a substantial contributor of global greenhouse gases (GHGs), emitting approximately 450 million tons of carbon dioxide (CO_2) in 2011.[1] Climate studies indicate that California is likely to see an increase of three to four degrees Fahrenheit (ºF) over the next century. Methane is also an important GHG that potentially contributes to global climate change. GHGs are global in their effect, which is to increase the earth's ability to absorb heat in the atmosphere. As primary GHGs have a long lifetime in the atmosphere, accumulate over time, and are generally well-mixed, their impact on the atmosphere is mostly independent of the point of emission.

The impact of human activities on global climate change is apparent in the observational record. Air trapped by ice has been extracted from core samples taken from polar ice sheets to determine the global atmospheric variation of CO_2, methane (CH_4), and nitrous oxide (N_2O) from before the start of industrialization (approximately 1750), to over 650,000 years ago. For that period, it was found that CO_2 concentrations ranged from 180 parts per million (ppm) to 300 ppm. For the period from approximately 1750 to the present, global CO_2 concentrations increased from a pre-industrialization period concentration of 280 ppm to 379 ppm in 2005, with the 2005 value far exceeding the upper end of the pre-industrial period range.

Regulations and Significance Criteria

The Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. It concluded that a

[1] California Energy Commission, *California Greenhouse Gas Emissions for 2000 to 2011 – Trends of Emissions and Other Indicators,* August, 2013.

stabilization of GHGs at 400 to 450 ppm carbon dioxide equivalent (CO_2eq)[2] concentration is required to keep global mean warming below 2 degrees Celsius (ºC), which in turn is assumed to be necessary to avoid dangerous climate change.

Executive Order S-3-05 was issued in June 2005, which established the following GHG emission reduction targets:

- 2010: Reduce GHG emissions to 2000 levels;
- 2020: Reduce GHG emissions to 1990 levels; and
- 2050: Reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill (AB) 32 requires that the California Air Resources Board (CARB) determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. CARB has approved a 2020 emissions limit of 427 million metric tons (MMT) of CO_2eq.

Due to the nature of global climate change, it is not anticipated that any single development project would have a substantial effect on global climate change. In actuality, GHG emissions from a proposed project would combine with emissions emitted across California, the United States, and the world to cumulatively contribute to global climate change.

In June 2008, the California Governor's Office of Planning and Research (OPR) published a Technical Advisory, which provides informal guidance for public agencies as they address the issue of climate change in *CEQA* documents.[3] This is assessed by determining whether a proposed project is consistent with or obstructs the 39 Recommended Actions identified by CARB in its Climate Change Scoping Plan which includes nine Early Action Measures (qualitative approach). The Attorney General's Mitigation Measures identify areas were GHG emissions reductions can be achieved in order to achieve the goals of AB 32. As set forth in the OPR Technical Advisory and in the proposed amendments to the *CEQA Guidelines* Section 15064.4, this analysis examines whether the project's GHG emissions are significant based on a qualitative and performance based standard (Proposed *CEQA Guidelines* Section 15064.4(a)(1) and (2)).

SCAQMD Thresholds

The SCAQMD has formed a GHG CEQA Significance Threshold Working Group (Working Group) to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the last Working Group meeting (Meeting No. 15) held in September 2010, the SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency.[4]

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[2] Carbon Dioxide Equivalent (CO_2eq) – A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

[3] Governor's Office of Planning and Research, *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*, 2008.

[4] The most recent SCAQMD GHG CEQA Significance Threshold Working Group meeting was held on September 2010.

With the tiered approach, the project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. For all non-industrial projects, the SCAQMD is proposing a screening threshold of 3,000 $MTCO_2eq$ per year. SCAQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact.

Tier 4 consists of three decision tree options. Under the Tier 4 first option, the project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual emissions. Under the Tier 4 second option the project would be excluded if it had early compliance with AB 32 through early implementation of CARB's Scoping Plan measures. Under the Tier 4 third option, project would be excluded if was below an efficiency-based threshold of 4.8 $MTCO_2eq$ per service population (SP) per year.[5] Tier 5 would exclude projects that implement offsite mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

GHG efficiency metrics are utilized as thresholds to assess the GHG efficiency of a project on a per capita basis or on a "service population" basis (the sum of the number of jobs and the number of residents provided by a project) such that the project would allow for consistency with the goals of AB 32 (i.e., 1990 GHG emissions levels by 2020 and 2035). GHG efficiency thresholds can be determined by dividing the GHG emissions inventory goal of the State, by the estimated 2035 population and employment. This method allows highly efficient projects with higher mass emissions to meet the overall reduction goals of AB 32, and is appropriate, because the threshold can be applied evenly to all project types (residential or commercial/retail only and mixed use).

For the proposed Project, the 3,000 $MTCO_2eq$ per year non-industrial screening threshold is used as the significance threshold, in addition to the qualitative thresholds of significance from Section VII of Appendix G to the *CEQA Guidelines,* as set forth below.

Project-Related Sources of Greenhouse Gases

Project-related GHG emissions would include emissions from direct and indirect sources. The Project would result in direct and indirect emissions of CO_2, N_2O, and CH_4, and would not result in other GHGs that would facilitate a meaningful analysis. Therefore, this analysis focuses on these three forms of GHG emissions. Direct Project-related GHG emissions include emissions from construction activities, area sources, and mobile sources, while indirect sources include emissions from electricity consumption, water demand, and solid waste generation. Operational GHG estimations are based on energy emissions from natural gas usage and automobile emissions. The CalEEMod model relies upon trip data within the *17th/Superior Live/Work Project Traffic Impact Analysis* and project specific land use data to calculate

[5] The project-level efficiency-based threshold of 4.8 $MTCO_2eq$ per SP per year is relative to the 2020 target date. The SCAQMD has also proposed efficiency-based thresholds relative to the 2035 target date to be consistent with the GHG reduction target date of SB 375. GHG reductions by the SB 375 target date of 2035 would be approximately 40 percent. Applying this 40 percent reduction to the 2020 targets results in an efficiency threshold for plans of 4.1 $MTCO_2eq$ per SP per year and an efficiency threshold at the project level of 3.0 $MTCO_2eq$/year.

emissions. The Project site consists of four one-story structures, a small vacant lot, and surface parking for commercial and industrial uses. The Project would replace the existing land uses with 29 live/work units. *Table 4.7-1*, *Estimated Greenhouse Gas Emissions*, presents the Project's estimated CO_2, N_2O, and CH_4 emissions, as well as the existing uses' emissions for informational purposes. The CalEEMod computer model outputs are contained within Appendix A, *Air Quality and Greenhouse Gas Emissions Data*.

Table 4.7-1
Estimated Greenhouse Gas Emissions

Source	CO_2	CH_4		N_2O		Total Metric Tons of CO_2eq
	Metric Tons/yr[1]	Metric Tons/yr[1]	Metric Tons of CO_2eq[2]	Metric Tons/yr[1]	Metric Tons of CO_2eq[2]	
Existing Emissions						
Area Source	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source	734.26	0.03	0.70	0.00	0.00	734.94
Energy	30.56	0.00	0.03	0.00	0.10	30.69
Water Demand	18.98	0.15	3.23	0.00	1.17	23.38
Waste	3.87	0.23	4.81	0.00	0.00	8.68
Total Existing Emissions	**787.67**	**0.42**	**8.75**	**0.00**	**1.27**	**797.69**
Proposed Project Emissions						
Construction (total of 404.06 $MTCO_2eq$ which would be amortized over 30 years)	13.43	0.00	0.06	0.00	0.00	13.46
Area Source	9.49	0.01	0.20	0.00	0.07	9.76
Mobile Source	415.99	0.02	0.38	0.00	0.00	416.36
Energy	93.15	0.00	0.07	0.00	0.35	93.57
Water Demand	17.07	0.09	1.95	0.00	0.72	19.75
Waste	4.21	0.25	5.23	0.00	0.00	9.44
Total Emissions	**539.91**	**0.37**	**7.83**	**0.00**	**1.14**	**548.88**
Change From Existing	**-247.76**	**-0.05**	**-0.92**	**0.00**	**-0.13**	**-248.81**
GHG Threshold	*3,000 $MTCO_2eq/yr$*					
Is Threshold Exceeded? (Significant Impact)	**No**					

Notes:
1. Emissions calculated using CalEEMod computer model.
2. CO_2 Equivalent values calculated using the U.S. EPA Website, *Greenhouse Gas Equivalencies Calculator*, http://www.epa.gov/cleanenergy/energy-resources/calculator.html, accessed September 5, 2013.
3. Totals may be slightly off due to rounding.

Refer to Appendix A, *Air Quality and Greenhouse Gas Emissions Data*, for detailed model input/output data.

Direct Project-Related Sources of Greenhouse Gases

- *Construction Emissions*. Construction GHG emissions are typically summed and amortized over the lifetime of the Project (assumed to be 30 years), then added to the operational emissions.[6] As

[6] The Project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District (http://www.aqmd.gov/hb/2008/December/081231a.htm).

indicated in *Table 4.7-1*, the Project would result in 13.46 $MTCO_2eq$/yr (amortized over 30 years), which represents a total of 403.80 $MTCO_2eq$ from construction activities.

- *Area Source*. Area source GHG emissions associated with Project operations would directly result in 9.76 $MTCO_2eq$/yr; refer to *Table 4.7-1*.

- *Mobile Source*. The CalEEMod model relies upon trip data within the *17th/Superior Live/Work Project Traffic Impact Analysis* and Project specific land use data to calculate mobile source emissions. The Project would directly result in 416.36 $MTCO_2eq$/yr of mobile source-generated GHG emissions; refer to *Table 4.7-1*.

Indirect Project-Related Sources of Greenhouse Gases

- *Energy Consumption*. Energy Consumption emissions were calculated using the CalEEMod model and Project-specific land use data. Electricity would be provided to the Project site via the Southern California Edison system. The Project would indirectly result in 93.57 $MTCO_2eq$/year of GHG emissions due to energy consumption; refer to *Table 4.7-1*.

- *Water Demand*. Indirect energy impacts due to water supply would result in 19.75 $MTCO_2eq$/year of GHG emissions; refer to *Table 4.7-1*.

- *Solid Waste*. Solid waste associated with Project operations would result in 9.44 $MTCO_2eq$/year of GHG emissions; refer to *Table 4.7-1*.

Total Project-Related Sources of Greenhouse Gases

As indicated in *Table 4.7-1*, the Project's "business as usual" GHG emissions from direct and indirect sources combined would total 548.88 $MTCO_2eq$/yr. Additionally, the Project would result in a net decrease of 248.81 $MTCO_2eq$/yr from existing conditions. Therefore, as the emissions would be below the 3,000 $MTCO_2eq$ per year threshold, impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

4.7.b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. No applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions apply to the Project area. Therefore, the Project would not conflict with an adopted plan, policy, or regulation pertaining to GHGs. The Project would not result in substantial construction-related or operational GHG emissions. Additionally, Project implementation would not hinder the State's GHG reduction goals established by AB 32. Thus, a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.

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4.8 HAZARDS AND HAZARDOUS MATERIALS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?			✓	
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 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?				✓

This section is based on the following studies conducted for the Project site; refer to Appendix B, *Hazardous Materials Documentation*:

- *Phase I and Limited Phase II Environmental Site Assessment 643 Through 641 West 17th Street and 1677 Superior Avenue, Costa Mesa, Orange County, California* (Phase I/Phase II ESA), prepared by Leighton and Associates, Inc., Revised September 24, 2013;
- *Vapor Intrusion Risk Evaluation*, prepared by Enviro-Tox Services, Inc., May 21, 2013; and
- *Preliminary Hazardous Materials Assessment 17th Street & Superior Live/Work Project* (Assessment), prepared by RBF Consulting, Revised September 24, 2013.

4.8.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. Exposure of the public or the environment to hazardous materials could occur through the following: improper handling or use of hazardous materials or hazardous wastes particularly by untrained personnel; transportation accident; environmentally unsound disposal methods; and/or fire, explosion, or other emergencies. The severity of potential effects varies with the activity conducted, the concentration and type of hazardous material or wastes present, and the proximity of sensitive receptors.

The Project involves a 29-unit, attached live/work development. The secondary activities that would occur at the residential units (e.g., building and landscape maintenance) would involve the use of limited quantities of hazardous materials. Cleaning and degreasing solvents, fertilizers, pesticides, and other materials used in the regular maintenance of buildings and landscaping would be utilized by the proposed residential use. Thus, the Project would increase in the use of household cleaning products and other materials routinely used in building maintenance.

The proposed live/work development would also involve business areas on the ground floors of the units. 19 West Urban Plan Table C, *Land Use Matrix*, outlines the land uses that are permitted and conditionally permitted within the overlay zone's mixed-use developments, and thus, within the business areas of the proposed live/work units. The types of hazardous materials that could be utilized during operation of the future businesses are expected to include cleaning and maintenance products, pesticides and herbicides, paints, and solvents and degreasers. It is not anticipated, due to the nature of the allowable uses and size of work spaces that the future businesses would be associated with industrial types of uses or disposal of hazardous materials in reportable quantities. Also, operation of the future businesses would not require the handling of hazardous or other materials that would result in the production of large amounts of hazardous waste.

The Project site is located within a commercial/industrial area. The surrounding commercial/industrial uses may handle or require disposal of hazardous materials in reportable quantities. Standard Condition SC 4.1-2 requires notification to buyers that the Project is located within an area designated as Light Industry and subject to existing and potential issues associated with industrial land uses. Additionally, the existing commercial/industrial uses and future commercial uses would be subject to compliance with existing hazardous materials regulations, and verification of compliance would monitored by state (e.g., Occupational Safety and Health Administration in the workplace or Department of Toxic Substances Control for hazardous waste) and the local agencies (e.g., the Costa Mesa Fire Department). According to CMMC Title 7 Chapter II, the City adopted the California Fire Code 2010 Edition for the purpose of prescribing regulations governing conditions hazardous to life and property from hazardous materials or explosion (as well as fire). Compliance with existing safety standards related to the handling, use, and storage of hazardous materials, and compliance with the safety procedures mandated by applicable federal, state, and local laws and regulations (i.e., CMMC Title 7 Chapter II, the Resource Conservation and Recovery Act, California Hazardous Waste Control Law, and principles prescribed by the California Department of Health Services, Centers for Disease Control and Prevention, and National Institute of Health) would be required.

Additionally, the future businesses would be reviewed through the City's discretionary review process, upon their request for a permit to operate. The City's review would verify compliance with the 19 West Urban Plan standards pertaining to land use compatibility. The listing of allowable uses provided in 19 West Urban Plan Table C is distinct and customized for mixed-use development projects, in order to minimize the

exposure to residents to potential impacts. Overall, the future businesses would be required to comply with applicable laws and regulations that would reduce the risk of hazardous materials use, transportation, and disposal through the implementation of established safety practices, procedures, and reporting requirements. Therefore, Project implementation would result in less than significant impacts involving the creation of a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Standard Condition: Refer to Standard Condition SC 4.1-2.

Mitigation Measures: No mitigation is required.

4.8.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?

Less Than Significant Impact With Mitigation Incorporated.

Phase I and Limited Phase II Environmental Site Assessment and Vapor Intrusion Risk Evaluation

The following summarizes the findings of the Phase I and Limited Phase II Environmental Site Assessment prepared by Leighton and Associates and the Vapor Intrusion Risk Evaluation prepared by Enviro-Tox, which has also been incorporated in the Phase I and Limited Phase II Environmental Site Assessment.

Phase I ESA

The purpose of the Phase I ESA conducted by Leighton and Associates (Leighton) was to identify, to the extent feasible pursuant to the processes prescribed in ASTM International (ASTM) E1527-05, recognized environmental conditions (RECs) in connection with the Project site. Recognized environmental conditions are defined as *"the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimus conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimus are not recognized environmental conditions".*

Site Improvements. The Project site is comprised of approximately 1.53-acres. The addresses of 643 and 647 through 651 West 17th Street are currently developed with two single story structures built in the early- to mid-1950s. The address of 645 West 17th Street is currently developed with one single story structure built in the early- to mid-1960s. The address of 1677 Superior Avenue is currently developed with one single story tilt-up structure in which the western portion was constructed in the early-1960s and the eastern portion was added in the mid-1990s. An asphalt-paved parking lot fills in the areas surrounding the structures, with the exception of a vacant lot located in the southwest corner of APN 424-301-01. An alley way connecting an entrance to the Project site from West 17th Street to an entrance from Superior Avenue is located in the northern portion of APN 424-301-04.

Adjoining Properties. The Project site is bordered to the north by West 17th Street, followed by Traders Joe's and other commercial property; to the south by Brothers Plumbing, Heating, and Air Conditioning; to the east by a commercial property, a former service station (vacant lot), and Superior Avenue, followed by Growers Direct, Ramada Inn, and Turbo Ted; and to the west by Argo-Tech Corporation Costa Mesa/JC Carter, Inc., a commercial/industrial property.

Oil and Gas Fields. Leighton reviewed the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), Online Mapping System, updated June 9, 2010. Evidence of oil wells or oil field-related facilities was not depicted on the Project site. Five wells were depicted within 600-feet of the Project site. These wells are reported to be plugged.

Regulatory Records Review. A search of selected government databases was conducted by Leighton using Environmental Data Resources (EDR) Inc. Radius Report, dated April 24, 2013. The HAZNET database is comprised of facilities listed as having manifested California-hazardous waste. The Project site (1677 Superior Avenue) was listed in 2003 as having disposed of unspecified organic liquid.

Several sites with the potential to adversely impact the Project site were also identified. One CERCLIS facility is located 0.23 miles west-southwest (down and cross-gradient) from the Project site. Due to the site's location, Leighton concluded there is low potential for this facility to adversely impact the Project site.

Two Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) - No Further Action facilities are located over 0.35-miles down- or cross-gradient from the Project site. According to the database report, these facilities have received a No Further Remedial Action Planned letter from the EPA. Leighton concluded there is low potential for these facilities to adversely impact the Project site.

One Corrective Action under Resource Conservation and Recovery Act (CORRACTS) facility (also listed as the RCRA TSDF facility) is located 0.402-miles southwest (down- and cross-gradient) from the Project site. Due to the site's location, Leighton concluded there is low potential for this facility to adversely impact the Project site.

Fifteen Resource Conservation and Recovery Act (RCRA) Generator facilities are located within 0.25-miles of the Project site. One facility had a duplicate listing and eight facilities are located down- or cross-gradient from the Project site and no violations were found. Leighton concluded that there is low potential for these facilities to adversely impact the Project site. The remaining six facilities and one unmapped facility are discussed below:

- Argo-Tech Corporation Costa Mesa/JC Carter Company, Inc. are located at 671 West 17th Street, adjacent to the Project site's western boundary. According to the database report, records for the generation of various wastes were found for the facility from 1980 to 2008. Additionally, the facility had numerous notices of violation. Due to the close proximity to the Project site, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and Human Health Risk Assessment (HHRA). Based on these Assessments' findings (presented in the *Phase I/Limited Phase II and Vapor Intrusion Risk Evaluation Findings and Conclusions* Section below), Leighton concluded there is low potential for this facility to adversely impact the Project site.

- Sprint Cleaners is located at 103 East 17th Street, 371 feet east-northeast of the Project site across Superior Avenue. According to the database report, the facility had no violations. Due to the close proximity to the Project site, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Based on these Assessments' findings, Leighton concluded there is low potential for this facility to adversely impact the Project site.

- Dry Clean 4 Less is located at 1704 Newport Boulevard, 1,095 feet northeast of the Project site across Superior Avenue. According to the database report, the facility had no violations. Due to the distance from the Project site, Leighton concluded there is low potential for this facility to adversely impact the Project site.

- Frank and Jimmy Auto Repair is located at 746 West 17th Street, 1,275 feet west-northwest of the Project site along 17th Street. According to the database report, the facility had no violations. Due to the distance from the Project site, Leighton concluded there is low potential for this facility to adversely impact the Project site.

- Island Auto Body Inc. is located at 1701 Pomona, 666 feet west-northwest of the Project site along 17th Street. According to the database report, the facility had no violations. Due to the distance from the Project site, Leighton concluded there is low potential for this facility to adversely impact the Project site.

- Pacific Handy Cutter Inc. is located at 720 West 17th Street, 948 feet west-northwest of the Project site along 17th Street. According to the database report, the facility had no violations. Based on the distance of the facility from the Project site, Leighton concluded there is low potential for this facility to adversely impact the Project site.

- Texaco Service Station previously located at 1695 Superior Avenue, adjacent to the east of the Project site. According to the database report, records for the generation of flammable hazardous wastes and benzene were found for the facility from 2001 to 2004. No notices of violation were found for the facility. Due to the close proximity to the Project site, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Based on these Assessments' findings, Leighton concluded there is low potential for this facility to adversely impact the Project site.

Four State Response Sites (Response) facilities are located at least 0.36 miles west (crossgradient) from the Project site. Due to the site's location, Leighton concluded there is low potential for these facilities to adversely impact the Project site.

Sixteen Envirostor database facilities are located within 1.0 mile of the Project site. Of the 16 facilities, two are located within 0.25 miles of the Project site. One facility is located down-gradient from the Project site. Leighton concluded there is low potential for this facility to adversely impact the Project site. The second facility, located at 1704 Newport Boulevard, is not under DTSC oversight; however, this facility is also listed in the Orange County Industrial Site database and received a closure certification in 2000. Therefore, Leighton concluded there is low potential for this facility to adversely impact the Project site.

One Solid Waste Landfill (SWL) facility is located within 0.5-miles of the Project site. The facility is located down-gradient from the Project site. Leighton concluded there is low potential for this facility to adversely impact the Project site.

Thirty-two (32) Leaking Underground Storage Tank (LUST) facilities are located within 0.50-miles of the Project site. Excluding duplicate listings, a total of 25 unique facilities were identified within the database report. Of the 25 facilities, 22 facilities have been remediated and received closure from a regulatory agency. One facility is located 0.402 miles from the Project site and down-gradient; therefore, Leighton concluded there is low potential for this facility to adversely impact the Project site. One facility, G&M Oil Station No. 43, is located 0.294 miles from the Project site and is up-gradient. The facility is currently under active remediation and Leighton concluded the contamination plumes do not appear to extend beneath the Project site. Based on this information, Leighton concluded there is low potential for this facility to adversely impact the Project site. One facility, Argo-Tech Corporation Costa Mesa/JC Carter Company Inc., is located at 671 17th Street adjacent to the Project site's western boundary. The facility is currently under active remediation; however, a dissolved trichloroethene (TCE) groundwater contaminant plume may extend beneath the Project site. Additionally, one LUST facility, Texaco Service Station, located at 1695 Superior Avenue, adjacent to the Project site's eastern boundary, obtained regulatory closure in 2005. Due to the close proximity of the Argo-Tech Corporation Costa Mesa/JC Carter Company, Inc. and Texaco Service Station facilities to the Project site, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Based on these Assessments' findings, Leighton concluded there is low potential for this facility to adversely impact the Project site.

Five California Facility Inspection Database Underground Storage Tank (CAL FID UST) and Statewide Environmental Evaluation and Planning System Underground Storage Tank (SWEEPS UST) facilities are located within 0.25-miles of the Project site. Four facilities are located down gradient from the Project site or do not have a corresponding LUST listing. Therefore, Leighton concluded there is low potential for these facilities to adversely impact the Project site. One facility, Texaco Service Station, located adjacent to the Project site's eastern boundary, was previously addressed under the LUST listing discussion above.

One Spills, Leaks, Investigation, and Cleanup Cost Recovery (SLIC) facility is located 0.402 miles down-gradient from the Project site. Leighton concluded there is low potential for this facility to adversely impact the Project site.

Fourteen Underground Storage Tank (UST) facilities are located within 0.25 miles of the Project site. Of the 14 facilities, 10 facilities have closed. LUST listings are located down- or cross-gradient from the Project site; therefore, Leighton concluded there is low potential for these facilities to adversely impact the Project site. One facility, Texaco Service Station, located adjacent to the Project site's eastern boundary, was previously addressed under the LUST listing discussion above. One facility, Argo-Tech Corporation Costa Mesa/JC Carter Company, Inc., located adjacent to the Project site's western boundary, was previously addressed in the LUST listing discussion above. One facility, AAMCO Automatic Transmission, is located 0.213-miles up-gradient from the Project site. This facility does not have a corresponding LUST listing and the UST was used for waste oil. Leighton concluded there is low potential for this facility to adversely impact the Project site. One facility, David Fitch Automotive Repair, is located 0.130-miles up-gradient from the Project site. This facility does not have a corresponding LUST listing and no other information regarding the UST was available. Leighton concluded there is low potential for this facility to adversely impact the Project site.

Nine Historical UST facilities are located within 0.25 miles of the Project site. Six facilities are located down- or cross-gradient from the Project site or are located at a distance greater than 0.20 miles from the Project site; therefore, Leighton concluded there is low potential for these facilities to adversely impact the Project site. One facility, James D Merrick-Firestone, is located 0.122-miles up-gradient of the Project site. This facility does not have a corresponding LUST listing and the UST was used for waste; therefore, Leighton concluded there is low potential for this facility to adversely impact the Project site. One facility, AAMCO Automatic Transmission, was discussed in the UST listing section above. The remaining facility, Agro Tech Corporation Costa Mesa/JC Carter Company, Inc., was addressed under the LUST listing discussion above.

One Aboveground Storage Tank (AST) facility, Argo Tech Corporation Costa Mesa/JC Carter Company, Inc., is located adjacent to the Project site's western boundary. The AST has a 20,000 gallon capacity. This facility was addressed under the LUST listing discussion above.

Two Drycleaners facilities are located within 0.25 miles of the Project site. One facility is located 0.222 miles southeast (down-gradient) from the Project site. Leighton concluded there is low potential for this facility to adversely impact the Project site. One facility, Sprint Cleaners, is located 371 feet east-northeast (up-gradient) from the Project site. Due to the close proximity to the Project site, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Based on these Assessments' findings, Leighton concluded there is low potential for this facility to adversely impact the Projectt site if an undocumented release has occurred on the premises.

Forty-eight (48) Historic Auto Station facilities are located within 0.25 miles of the Project site. Of the 48 listings, 35 facilities are located down- or cross-gradient from the Project site or are located at a distance greater than 0.20 miles from the Project site; therefore, Leighton concluded there is low potential for these facilities to adversely impact the Project site. The remaining 13 facilities are located adjacent, up-gradient, or at a distance from the Project site and concluded by Leighton to have low potential to adversely impact the Project site.

Five Historic Cleaners facilities are located within 0.25 miles of the Project site. Four facilities are located at a distance greater than 0.20 miles, or are down- or cross-gradient from the Project site and are therefore concluded by Leighton to be unlikely to adversely impact the Project site. One of the Historic Cleaners, Sprint Cleaners, is located 371 feet east-northeast (upgradient) from the Project site. Due to the close proximity to the Project site, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Based on these Assessments' findings, Leighton concluded there is low potential for this facility to adversely impact the Project site if an undocumented release has occurred on the premises.

Other Reports. As part of their Phase I assessment, Leighton reviewed several reports associated with the adjacent property to the east located at 1695 Superior Avenue. The facility located at the southwest corner of the intersection of Superior Avenue and 17th Street was a former gasoline service station. The facility was under the regulatory oversight of the Orange County Health Care Agency. Between August 1991 and January 2005, numerous investigations were conducted to assess the extent of subsurface contamination in soil and groundwater at onsite and adjacent properties.

In 1991, during the first UST removal event, petroleum hydrocarbon contaminated soil was encountered during the removal of one 10,000-gallon diesel UST and four 4,000-gallon USTs. A total of approximately 584 yards of contaminated soil was removed from the facility. In January 2003, during the second UST removal event, three 10,000 gallon gasoline USTs, one 10,000 gallon diesel UST, one 550 gallon waste oil UST, and five fuel dispensers and associated piping were removed from the facility. Approximately 1,575 tons of soil was removed from the facility during the UST closures.

Remedial activities at the facility included soil vapor extraction between June 1995 and April 1997, with resumption of soil vapor extraction in January 2000. Approximately, 20,431 pounds of hydrocarbons were removed by intermittent vapor extraction activities. In 2002, an ozone sparging pilot test was performed and was shown to be an effective means of remediation. Ozone sparging was conducted at the facility between 2003 and 2004.

Following the vapor extraction and ozone sparging, three confirmation soil borings extending into groundwater were drilled in worst case areas. Soil sample concentrations of contaminants of concern were non-detect or below actionable levels. All groundwater monitoring wells had either non-detect, below maximum contaminant levels, or at "low-risk" levels since September 2000. The facility was granted regulatory closure in January 2005 and all wells associated with the remediation activities were abandoned in June 2005.

Site Reconnaissance. As part of their Phase I assessment, Leighton conducted a reconnaissance–level assessment of the Project site. The property reconnaissance consisted of the observation and documentation of existing site conditions and nature of the neighboring development within 0.25 miles of the Project site.

One, 5-gallon container of acetone was observed within the structure at 643 West 17th Street. No leaks or stains were observed on the concrete flooring beneath the container. Numerous small containers of hazardous substances, ranging from one quart to five gallons in size, were observed in the suite occupied by a wood working shop at 1677 Superior Avenue. The containers consisted of paints, solvents, oils, wood stains, lacquer, and general cleaning solutions. Minor staining was noted on the concrete beneath the containers; however, most material was stored within secondary cabinets and evidence of major spills was not observed.

Four pole-mounted transformers were observed along the southern boundary of the Project site. No leaks were observed on the exterior of the transformers or on the ground beneath the transformers.

One compressor was observed within the suite occupied by a wood working shop at 1677 Superior Avenue. No leaks or stains were observed beneath the compressor.

Based on the age of the onsite structures it is possible that ACMs and lead-based paint may be present in the structures.

Limited Phase II ESA

The purpose of the Limited Phase II ESA conducted by Leighton was to assess the Project site for the presence of contaminants and gas in the onsite soil originating from offsite sources identified in the concurrent Phase I ESA such that potential health risks can be evaluated prior to residential development.

Summary of Assessment. Seven soil borings (LB1 through LB7) were advanced to a total depth of approximately 16 feet below ground surface (bgs) at the Project site; refer to Appendix B for a location map. The borings were advanced using direct push drilling equipment. Continuous soil cores from boring LB2 were obtained for observation and lithologic description. The remaining borings were similar in soil type and not logged. During boring advancement, a photoionization detector (PID) was used to evaluate the soil cuttings for the presence or absence of volatile organic hydrocarbon vapors. Contamination was not visually observed during boring advancement or with the PID; however; one soil sample was collected at a depth of five feet bgs in boring LB4 based on a slight change in color noted in the soils. The soil sample was retained in an acetate sleeve, capped with Teflon sheets and plastic end caps, placed in an ice cooled chest, and transported to TestAmerica Laboratories, Inc. (TestAmerica) for analysis.

Upon reaching the total depth of the borings, soil gas probes were installed in each of the seven soil boring locations. A soil gas survey was performed in accordance with the California Environmental Protection Agency – Department of Toxic Substances Control (DTSC) and California Regional Water Quality Control Board – Los Angeles and San Francisco Region's (LARWQCB and SFRWQCB) Advisory – Active Soil Gas Investigations, 2012. Soil gas samples were obtained from soil gas probes located at five feet and 15 feet bgs.

Laboratory Analysis. A soil sample was collected from the Project site using EPA Method 5035 preparation procedures. This soil sample was analyzed for volatile organic compounds (VOCs) by EPA Method 8260B. VOCs were not detected above the laboratory reporting limit in the soil sample analyzed.

The soil sample collected from the Project site was also analyzed for TPH by EPA Method 8015M. The soil sample had a TPH diesel (also referred to as diesel range organics [DRO]) concentration above the laboratory reporting limit, as detailed in the *Vapor Intrusion Risk Evaluation* Section below. The soil sample analyzed had a TPH gasoline (also referred to as gasoline range organics [GRO]) below the laboratory reporting limit.

Soil gas samples, including the duplicate, were analyzed for the tracer gas and VOCs by modified EPA Method 8260B with a laboratory reporting limit at or below residential California Human Health Screening Levels (CHHSLs) (1.0 microgram per liter (µg/L) or less). VOCs were detected in the soil gas samples collected from the Project site, and analyzed, as detailed in the *Vapor Intrusion Risk Evaluation* Section below.

Human Health Risk Assessment. Leighton compiled all representative soil and soil gas data collected from the Project site and forwarded the information to Enviro-Tox to perform a Human Health Risk Assessment (HHRA) in order to determine whether concentrations of VOCs detected in soil gas samples taken from the Project site pose a threat to future residential occupants; refer to the *Vapor Intrusion Risk Evaluation* Section below.

Vapor Intrusion Risk Evaluation

Enviro-Tox Services, Inc. conducted a Screening-Level Health Risk Evaluation for the property in response to soil gas analytical data provided by Leighton. Risk characterization involves estimating the magnitude of the potential adverse health effects that could occur as a result of chronic, long-term exposure to chemicals

identified in soil gas at the Subject Property (Project site). The risk characterization is based on the results of the dose-response (toxicity) and exposure assessment.

The U.S. Environmental Protection Agency has established acceptable incremental cancer risk levels to be within the risk range of 1 in 10,000 (1.0E-04) and 1 in 1,000,000 (1.0E-06); risks greater than 1.0E-04 are generally considered unacceptable. The California Environmental Protection Agency has defined a risk of 1 in 100,000 (1.0E-05) as the "no significant risk level" for carcinogens under California's Safe Drinking Water and Toxic Enforcement Act (Proposition 65). Further, most California air districts use the 1.0E-05 risk level as the notification trigger level under California's AB2588 Toxic Hot Spots Program. Thus, although agencies will exercise caution in determining whether risks within the range of 1.0E-04 and 1.0E-06 require additional investigation or some form of risk management, there is a general precedent that predicted cancer risks that are on the low end of this range will generally be considered acceptable and not warrant further evaluation.

The highest cancer risk (5.0E-06 or 5 in 1,000,000) estimated for soil gas samples collected at the Project site at a depth of 5 feet bgs was obtained from soil gas sample LB1-5. Up to 100 percent of the estimated cancer risk detected in this sample was contributed by chloroform. The highest cancer risk (4.0E-06 or 4 in 1,000,000) estimated for soil gas samples collected at a depth of 15 feet bgs was obtained from soil gas sample LB5-15. Up to 99 percent of the estimated cancer risk detected in this sample was contributed by trichloroethylene (TCE) detected in the sample. It is noted that three of seven soil gas sampling locations at depths of 15 feet bgs had estimated cancer risks that exceeded 1.0E-06 (samples LB5-15, LB6-15, and LB7-15). However, their corresponding samples at depths of 5 feet bgs (LB5-5, LB6-5 and LB7-5) had estimated cancer risks equal to or below 1.0E-06. According to Enviro-Tox, these results indicate that soils at the Project site are acting as an effective barrier to soil gas migration and that VOCs detected at a depth of 15 feet bgs are not migrating in significant quantities in soil gas.

For each sampling point, chemical, and depth evaluated, the hazard quotient per sample was obtained. Hazard quotients equal to or less than 1.0 indicate that no adverse health effects are expected to occur from exposure to chemicals at the site. Enviro-Tox' evaluation found that all estimated hazard quotients were below 1.0, which indicates exposure to VOCs detected under the Project site, do not represent a health hazard to future site residents.

Phase I ESA, Limited Phase II ESA, and Vapor Intrusion Risk Evaluation Findings and Conclusions

The soil sample analyzed, LB4 at 5 feet bgs, had a TPH diesel (DRO) concentration of 70 milligrams per kilogram (mg/kg). As previously noted, TPH gasoline (GRO) and VOCs were not detected above the laboratory reporting limits in the soil sample analyzed.

The following VOCs were identified in the soil gas samples collected from the Project site and analyzed :

- Chloroform was detected above the laboratory reporting limit in two of the 16 soil gas samples analyzed at concentrations of 0.371 µg/L in LB6 at 5 feet bgs and 1.84 µg/L in LB1 at 5 feet bgs.

- sec-Butylbenzene was detected above the laboratory reporting limit in two of the 16 soil gas samples analyzed at concentrations of 0..269 µg/L in LB7 at 5 feet bgs and 0.126 µg/L in LB7 at 15 feet bgs.

- Isopropylbenzene was detected above the laboratory reporting limit in one of the 16 soil gas samples analyzed at a concentration of 0.111 µg/L in LB7 at 5 feet bgs.

- Toluene was detected above the laboratory reporting limit in four of the 16 soil gas samples analyzed at concentrations ranging from 0.125 µg/L in LB2 at 5 feet bgs to 0.238 µg/L in LB3 at 5 feet bgs.

- Tetrachloroethene (PCE) was detected above the laboratory reporting limit in 10 of the 16 soil gas samples analyzed at concentrations ranging from 0.028 µg/L in LB3 at 5 feet bgs to 2.09 µg/L in LB6 at 15 feet bgs.

- Trichloroethene (TCE) was detected above the laboratory reporting limit in 10 of the 16 soil gas samples analyzed at concentrations ranging from 0.014 µg/L in LB4 at 15 feet bgs to 3.54 µg/L in LB5 at 15 feet bgs.

- Xylenes were detected above the laboratory reporting limit in one of the 16 soil gas samples analyzed at a concentration of 0.394 µg/L in LB3 at 5 feet bgs.

The concentrations of the VOCs were compared to the CHHSLs for residential land use developed by the California Environmental Protection Agency (Cal EPA). The concentrations of VOCs detected in the soil gas samples collected from the Project site were above the following residential CHHSLs:

- PCE was detected above the residential CHHSL of 0.47 µg/L in six of the 16 soil gas samples analyzed at concentrations ranging from 0.508 µg/L in LB4 at a depth of 15 feet bgs, with a purge volume of ten, to 2.09 µg/L in LB6 at a depth of 15 feet bgs.

- TCE was detected above the residential CHHSL of 1.3 µg/L in three of the 16 soil gas samples analyzed at concentrations ranging from 0.1.54 µg/L in LB3 at a depth of 15 feet bgs to 3.54 µg/L in LB5 at a depth of 15 feet bgs.

A majority of the higher concentrations of VOCs detected in the soil gas at the Project site were collected in the deeper sample (15 feet bgs), indicating that VOCs may be off-gassing from the groundwater. Groundwater in the site vicinity is known to be impacted with PCE and TCE due to a known release of these chemicals on the adjacent property to the west of the Project site and with possible residual gasoline constituents associated with a known release of fuel-related chemicals on the adjacent property to the east of the Project site.

Results of the HHRA, conducted by Enviro-Tox, indicate that the levels of man-made chemicals detected in soil gas at the Project site slightly exceed levels considered acceptable for residential land use. However, VOCs detected are at a level that would be deemed by the DTSC to pose a “low risk.” Based on the results of the analysis, Enviro-Tox concluded that site mitigation engineering controls, such as a Liquid Boot® barrier, should be implemented as a precaution in order to prevent vapor intrusion into the future onsite buildings (see mitigation measure HAZ-1). Liquid Boot is a cold, spray-applied, water-based membrane that contains no VOCs and provides a seamless barrier against vapor intrusion into structures. Liquid Boot

is installed under slab and on below grade vertical walls as a gas vapor barrier to minimize vapor and nuisance water (non-hydrostatic conditions) migration into buildings.[1]

The following surrounding properties of environmental concern were identified by Leighton as having a low potential to adversely impact the Project site:

- Texaco Service Station (1695 Superior Avenue) - Due to the close proximity to the Project site, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Gasoline constituents were not detected in onsite soil gas at concentrations above the CHHSLs nor at levels which present a health risk to future occupants of the Project site. Therefore, based on these findings, Leighton concluded there is low potential for this facility to adversely impact the Project site.

- Argo-Tech Corporation Costa Mesa/JC Carter Company, Inc. (671 West 17th Street) - The facility is currently under active remediation; however, a dissolved trichloroethene (TCE) groundwater contaminant plume may extend beneath the Project site. Due to the close proximity to the Project site, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Chlorinated solvents, such as TCE and PCE, were detected in onsite deeper soil gas samples (15 feet bgs) at concentrations above the CHHSLs and the DTSC's health risk benchmark value of 1.0E-06; however, the corresponding soil gas sample concentrations at a depth of 5 feet bgs were all below the CHHSLs and estimated to be equal to or less than the health risk benchmark value of 1.0E-06. These results indicate that soils at the Project site are acting as an effective barrier to soil gas migration and that chlorinated solvents detected at a depth of 15 feet bgs are not migrating to the surface in significant quantities in soil gas. Therefore, Leighton concluded there is low potential for this facility to adversely impact the Project site.

- Sprint Cleaners (103 East 17th Street) - Due to the close proximity to the Project site, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA. Chlorinated solvents, such as TCE and PCE which are typically associated with drycleaning facilities, were detected in onsite deeper soil gas samples (15 feet bgs) at concentrations above the CHHSLs and the DTSC's health risk benchmark value of 1.0E-06; however, the corresponding soil gas sample concentrations at a depth of 5 feet bgs were all below the CHHSLs and estimated to be equal to or less than the health risk benchmark value of 1.0E-06. These results indicate that soils at the Project site are acting as an effective barrier to soil gas migration and that chlorinated solvents detected at a depth of 15 feet bgs are not migrating to the surface in significant quantities in soil gas. Therefore, based on these findings, Leighton concluded there is low potential for this facility to adversely impact the Project site.

Leighton has concluded that the following evidence of RECs associated with the Project site and surrounding properties have been identified:

- Three nearby facilities, Texaco Service Station, Argo-Tech Corporation Costa Mesa/JC Carter Company, Inc., and Sprint Cleaners with known or potential releases of solvents and petroleum

[1] CETCO Website, http://remediation.cetco.com/LeftSideNavigation/Applications/VaporIntrusionMitigation/LiquidBoot System/tabid/2750/Default.aspx, Accessed September 26, 2013.

hydrocarbons to groundwater were identified. Due to their close proximity, the potential for adverse impact was evaluated during the concurrent Limited Phase II ESA and HHRA.

- A site-wide soil vapor survey was conducted by Leighton in May 2013 per the DTSC/RWQCB Advisory to determine if releases from adjacent properties have impacted the Project site. Elevated concentrations of chloroform, sec-butylbenzene, isopropylbenzene, toluene, PCE, TCE, and xylenes were detected in the soil gas samples collected from the Project site. The higher concentrations of VOCs detected in the soil gas at the Project site were primarily associated with the deeper soil sample gas samples (15 feet bgs), indicating that VOCs may be off-gassing from the groundwater.

- A HHRA prepared by Enviro-Tox indicated a cancer risk of approximately 5.0E-06 associated with chloroform in one of the seven soil gas samples collected at 5 feet bgs, which is between the USEPA established acceptable incremental cancer risk range of 1.0E-04 and 1.0E-06 not requiring remedial action; therefore, Enviro-Tox concluded that site mitigation engineering controls, such a Liquid Boot® barrier, should be considered as precaution to prevent vapor intrusion into the future onsite buildings. The source of the chloroform is unknown and could be the result of irrigation water or sewage spills that reacted with local organic matter in the onsite soils. Furthermore, concentrations of PCE and TCE detected in the deeper soil gas samples (15 feet bgs) were above the DTSC's benchmark value of 1.0E-06; however, the corresponding soil gas sample concentrations at a depth of 5 feet bgs were all estimated to be equal to or less than 1.0E-06. These results indicate that soils at the Project site are acting as an effective barrier to soil gas migration and that VOCs detected at a depth of 15 feet bgs are not migrating to the surface in significant quantities in soil gas.

Based on the findings of the Limited Phase II ESA and HHRA, Leighton concludes there is low potential for the RECs described above to adversely impact the Project site. Additionally, Leighton recommends the installation of site mitigation engineering controls, such a Liquid Boot® barrier, if the Project site is to be redeveloped for residential purposes (Mitigation Measure HAZ-1). Therefore, with mitigation, a less than significant impact is anticipated.

Although not considered a REC, Leighton recommends that a comprehensive asbestos and lead-based paint survey of the onsite structures be completed by a licensed consultant prior to demolition. This is further discussed in the *Preliminary Hazardous Materials Assessment* discussion below.

Further, Leighton recommends observations be made during future property development for areas of possible contamination such as, but not limited to, the presence of underground facilities, buried debris, waste drums, tanks, and stained soil or odorous soils. Should such materials be encountered, further investigation and analysis may be necessary at that time. This is further discussed in the *Preliminary Hazardous Materials Assessment* discussion below.

Preliminary Hazardous Materials Assessment

The following summarizes the findings of the Preliminary Hazardous Materials Assessment (Assessment) prepared by RBF Consulting.

The purpose of the Assessment prepared by RBF Consulting (RBF) was to review existing conditions, analyze potential environmental impacts, and suggest feasible mitigation measures to reduce potentially significant effects, if any, associated with hazardous materials for the Project site.

Site Improvements. Two parcels (APNs 424-301-01 and 424-301-04) and multiple associated addresses comprise the Project site. On-site land uses consist of commercial/light industrial uses.

California Department of Oil, Gas, and Geothermal Resources. According to the California Department of Oil, Gas, and Geothermal Resources (DOGGR) online mapping system, no oil or gas wells are located within the Project site. Multiple oil gas wells are located in the immediate vicinity of the Project site. These wells are reported to be plugged.

Regulatory Records Review. Regulatory records were searched by Environmental Data Resources, Inc. (EDR) and reviewed by RBF for sites within the Project site and within an approximate one-mile radius of the Project site boundaries. No regulatory sites were identified within the Project site. However, one regulatory site was reported to be located adjacent to the Project site at the southwest corner of West 17th Street and Superior Avenue. The regulatory site consists of a Texaco Service Station (with the historical address of 1695 Superior Avenue). This facility was reported in the following databases:

- Leaking Underground Storage Tank Incident Report (LUST);
- Orange County Industrial Site;
- Underground Storage Tank (UST);
- historic Cortese Hazardous Waste and Substances Sites List (HIST CORTESE);
- California Facility Inventory Database Underground Storage Tank (CA FID UST);
- Statewide Environmental Evaluation and Planning System Underground Storage Tank (SWEEPS UST); and
- EDR Exclusive Historic Gas Stations (EDR US Hist Auto Stat).

This facility is reported as a LUST cleanup site and has received a case closed status as of January 2005. Therefore, based on regulatory records review, this facility has a moderate potential to affect the Project site due to the previous groundwater contamination history. Review of the Case Closure Summary for this LUST facility indicates that two tank removal events took place at this site. High TPH and benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations were detected in both soil and groundwater samples collected following the first tank removal event and subsequent site assessments. Approximately 20,431 pounds (3,143 gallons) of hydrocarbons were removed by intermittent vapor extraction activities between June 1995 and April 1997.

During the second tank removal event, high methyl tertiary-butyl ether (MTBE) and tertiary butyl alcohol (TBA) concentrations were detected in soil samples collected from the tank excavation at 18 feet below grade (fbg). The tank area was further excavated to 21 to 22 fbg. However, due to residual MTBE and TBA concentrations remaining in the capillary fringe and continued increasing MTBE and TBA concentrations in groundwater samples, ozone sparging was conducted from August 2003 to May 2004.

Following, completion of vapor extraction and ozone sparging, three soil verification borings extending beneath the water table were drilled in worst case areas, with the exception of the northern dispenser island area. All soils sampled were non-detect for all constituents except for .053 ppm ethylbenzene at 30 fbg in the boring located to the northeast of the tank excavation. After tank removal incidents, Texaco installed monitoring wells on this site. The soil contamination in the northern dispenser area appears to have been remediated since BTEX concentrations in the down-gradient well MW-7 have been below MCLs since December 2000.

In addition to the wells installed by Texaco, four wells associated with an adjacent cleanup were incorporated in groundwater monitoring events. All wells have had either non-detect, below MCLs or "low-risk" BTEX concentrations since at least the September 2000 sampling event. Also, 13 of the 22 wells sampled have had non-detect MTBE and oxygenates since the June 2000 sampling event. The MTBE and TBA concentrations in the other remaining wells have continued decreasing to non-detect or below 10 ppb, except for two wells showing MTBE concentrations of 43 and 100 ppb during the last sampling event.

According to GeoTracker, no further work is recommended for this site with the following considerations:

- Source removal by excavation, vapor extraction and ozone sparging has taken place at the site.
- The soil verification boring results indicate that the remediation activities were effective.
- BTEX, MTBE and oxygenates concentrations have continuously decreased to non-detect or below the MCLs for majority of the wells.
- There are no production wells within a one mile radius of this site.

The regulatory records review identified approximately 145 off-site regulatory properties within a one-mile radius of the Project site. The majority of the listed regulatory sites are considered to have a low potential of affecting the Project site for one or more of the following reasons: distance to the Project site; direction of anticipated groundwater flow; and/or site status; refer to Appendix B.

In addition to the Texaco Service Station site discussed above, based on regulatory records review, the following sites are considered to have a moderate to high potential to affect the Project site:

- *Argo-Tech Corporation Costa Mesa/JC Carter Company, Inc. (671 W. 17th Street)*. This facility adjoins the Project site to the west and cross-gradient. This facility was reported in the HIST CORTESE, LUST, RCRA-LQG, Cortese, ENF, NPDES, HIST UST, EMI, WDS, EDR US Hist Auto Stat, UST, AST, and FINDS databases.

  The facility is reported in the LUST database as a LUST cleanup site due to affected groundwater. The primary chemical contaminant at the site is TCE; however, other compounds were detected at concentrations of concern. The status is reported to be open and is undergoing pollution characterization. As part of the remedial action plan for this facility, vapor exposure to occupants of buildings on the property would be mitigated through engineered controls and/or land use restrictions.

According to GeoTracker, the facility is currently under active remediation; however, a dissolved TCE groundwater contaminant plume may extend beneath the Project site. Based on regulatory records review, this facility has a moderate potential to affect the Project site as a result of contaminated groundwater.

- *Sprint Cleaners (103 East 17th Street)*. This facility is located approximately 500 feet to the east of the Project site. This facility was reported in the RCRA-SQG, FINDS, and DRYCLEANERS databases. This facility has not reported any violations. However, based on regulatory records review, this facility has a moderate potential to affect the Project site due to its proximity and type of use (potential for undocumented releases).

Overall, the regulatory database search indicated a moderate potential for regulatory properties to adversely impact the Project site. However, as concluded above by Leighton, based on the concurrent Limited Phase II ESA and HHRA, there is a low potential of adverse impacts within the Project site. Therefore, no impacts are anticipated in this regard. Also, although groundwater is known to have been impacted by contaminants underneath the Project site, the Project is not expected to encounter groundwater; therefore, there is a low potential for adverse impacts to occur within the Project site due to contaminated groundwater.

No listed Unmapped Properties are located within the boundaries of the Project site. Potentially contaminated groundwater underlying the Project site, as a result of the reported Unmapped Properties, is considered to be low due to the distance from the Project site, gradient, and/or the status of the identified sites.

Site Inspection. RBF conducted a visual site inspection in order to obtain information indicating the likelihood of identifying potential hazardous materials-related conditions, including hazardous substances and petroleum products, in connection with the Project site (including soils, surface water, and groundwater).

Three single-story buildings are located within APN 424-301-01. Coast Affordable Glass and a wood working shop are within one building located on the northwest portion of this parcel, at 647 and 649 West 17th Street. This building's exterior is stucco. Paddle Surf is within building located on this parcel, at 643 West 17th Street. The Paddle Surf's interior was observed and noted to consist of concrete flooring and an inventory of fiberglass surfboards and miscellaneous accessoried. This building's exterior is concrete. Blinn & Young Inc. Canvas Products are within the third building located on this parcel, at 645 West 17th Street. Blinn & Young, Inc. Canvas Products' Interior was observed and noted to consist of wood and concrete, as well as canvas materials. One additional address is associated with this parcel and consists of a vacant lot where a boat is being stored. All buildings were located on concrete pads. Additional areas consist of asphalt paved parking areas.

One single-story concrete building is located within APN 424-301-04. This building was associated with Orange Coast Crossfit, Wood Working Shop, Coast Affordable Glass, The Medicine Chest Services, and TJs Property Maintenance. The interior of Orange Coast Crossfit consisted of miscellaneous exercise equipment. The wood working shop consisted of wood materials, as well as cutting equipment including saws. Paint, lacquers, waxes, and degreasers in small (under 5-gallon) containers on shelves in the interior of the Wood Working Shop were observed. One air compressor within the Wood Working Shop

was also noted. Medical supplies were observed in the interior of the building associated with The Medicine Chest Services. One fenced storage yard in the southwestern portion of APN 424-301-04 consisting of equipment and tools associated with TJs Property Maintenance were noted. Tools and equipment consisted of rakes, shovels, stream washers, ladders, trailers, road cones, and pressure washers. Dark staining was observed on the asphalt near the storage area. The on-site structure was surrounded by paved asphalt parking areas and an alley located along the north parcel boundary. One power pole with a pole-mounted transformer was visible in the southeastern portion of APN 434-301-04. One additional pole-mounted transformer was observed in the southwestern portion of this APN.

Dumpsters and trash cans associated with on-site commercial practices were observed. Signs of dumping or solid waste disposal on bare soil or asphalt during the site visit were not apparent.

Water utilities were noted along the northern boundary of APN 424-301-01. No staining or leaking was noted in association with on-site utilities during the site inspection.

Asbestos-Containing Materials. Asbestos is a strong, incombustible, and corrosion resistant material, which was used in many commercial products since prior to the 1940s and up until the early 1970s. If inhaled, asbestos fibers can result in serious health problems. Asbestos Containing Materials (ACMs) are building materials containing more than one percent asbestos (some state and regional regulators impose a one-tenth of one percent threshold). Due to historical documentation reviewed during the course of this Assessment, including historical aerial photographs and topographic maps, most of the structures within the Project site were built during or prior to 1970. Due to the age of the structures, the potential for ACMs to be present is likely. The structures appeared to be in fair condition and no flaking or pealing was noted.

Lead-Based Paint. Until 1978, when the U.S. Consumer Product Safety Commission (CPSC) phased out the sale and distribution of residential paint containing lead, many homes were treated with paint containing some amount of lead. It is estimated that over 80 percent of all housing built during or prior to 1978 contains some Lead-Based Paints (LBP). The mere presence of lead in paint may not constitute a material to be considered hazardous. In fact, if in good condition (no flaking or pealing), most intact LBP is not considered to be a hazardous material. In poor condition LBPs can create a potential health hazard for building occupants, especially children. Due to historical documentation reviewed during the course of this Assessment, including historical aerial photographs and topographic maps, most structures within the Project site were built prior to 1970. Due to the age of the structures, the potential for LBPs to be present is likely. The structures appeared to be in fair condition and no flaking or pealing was noted.

Polychlorinated Biphenyls (PCBs). One power pole with three pole-mounted transformers was noted within the southeastern portion of APN 424-301-04. During the site visit, one additional power pole and associated pole-mounted transformer was noted in the southwestern portion of APN 424-301-04. Pole-mounted transformers appeared to be in fair condition. No staining or leaking was noted in association with the pole-mounted transformers.

Preliminary Hazardous Materials Assessment Findings and Conclusions

Construction of the proposed Project would require demolition of existing buildings. Demolition of structures could expose construction personnel and the public to hazardous substances such as ACMs or LBPs. Given the age of the buildings and other structures (primarily constructed prior to 1978), it is likely

that these structures could contain LBPs and/or ACMs. As a result, construction workers and the public could be exposed. Federal and state regulations govern the renovation and demolition of structures where ACMs and LBPs are present. All demolition that could result in the release of ACMs or LBPs must be conducted according to federal and state standards.

The National Emission Standards for Hazardous Air Pollutants (NESHAP) mandates that building owners conduct an asbestos survey to determine the presence of ACMs prior to the commencement of any remedial work, including demolition (Mitigation Measure HAZ-2). Prior to demolition activities, removal and/or abatement of ACMs would be required to be conducted by a qualified environmental professional in consultation with the Costa Mesa Fire Department (Mitigation Measure HAZ-2). An asbestos and hazardous materials abatement specification would be developed by the qualified environmental professional, in order to clearly define the scope and objective of the abatement activities. The abatement specifications would also serve as the basis for establishing performance-based contracting requirements for the licensed abatement contractor. Additionally, Standard Condition SC 4.8-1 specifies requirements for worker safety while handling ACM. With implementation of the recommended Mitigation Measure HAZ-2 and compliance with Standard Condition SC 4.8-1, potential impacts involving ACMs would be reduced to less than significant levels.

If paint is separated from building materials (chemically or physically) during demolition/relocation of the structures, the paint waste would be required to be evaluated independently from the building material by a qualified Environmental Professional (Mitigation Measure HAZ-3). If lead-based paint is found, abatement would be required to be completed by a qualified Lead Specialist prior to any demolition/renovation activities. Additionally, Standard Condition SC 4.8-2 specifies requirements for worker safety while handling LBP. With implementation of recommended Mitigation Measure HAZ-3 and compliance with Standard Condition SC 4.8-2, potential impacts involving LBP would be reduced to less than significant levels.

In addition, although the Texaco Service Station site received regulatory closure for a LUST in 2005, development of the Project site could expose construction workers (during site disturbance activities) and the public (during operations) to hazardous materials should soil and/or groundwater be encountered. A Phase II/site characterization specialist would be required to review available documentation for the Texaco Service Station site and coordinate with the RWQCB to confirm that the regulatory closure in 2005 meets current residential use standards. If deemed necessary by the RWQCB, sampling would need to take place at the corner parcel to determine the level of remediation and/or mitigation measures that would be required (Mitigation Measure HAZ-4). Additionally, installation of site mitigation engineering controls (Mitigation Measure HAZ-1) would reduce potential operational impacts associated with vapor intrusion to a less than significant level.

Excavation/grading activities and/or site disturbance of existing building materials may result in the offsite transport and disposal of hazardous substances. Offsite transport and disposal of hazardous substances would be short-term in nature, only occurring during demolition/renovation or grading/excavation activities, and would be subject to Federal, State, and local health and safety regulations that protect public safety. Handling, transport, and disposal of these substances are regulated by the DTSC, CalEPA, CalOSHA, HCA, and City of Costa Mesa Fire Department. The Project construction contractor would also be subject to the requirements of the CalOSHA and HCA governing removal actions. DTSC regulations require specific hazardous materials handling methods, truck haul routes, and schedules to minimize potential

exposure during hazardous materials removal actions. With adherence to the requirements of affected regulatory agencies regarding the handling, transport, and disposal of hazardous materials, the proposed Project would not create a significant hazard to the public or the environment. As such, impacts related to the temporary offsite hauling and disposal of hazardous building materials during demolition would be less than significant.

Construction activities could also encounter unknown waste or suspect materials. If unknown wastes or suspect materials are discovered during construction by the contractor, which he/she believes may involve hazardous wastes/materials, the contractor would be required to complete the following (Mitigation Measure HAZ-5):

- Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area;
- Notify the Project Engineer of the implementing agency;
- Secure the areas as directed by the Project Engineer; and
- Notify the implementing agency's Hazardous Waste/Materials Coordinator.

Compliance with Mitigation Measure HAZ-5 would reduce potential impacts associated with unknown waste or suspect materials to a less than significant level.

Although, the Project would include the development of live/work units, long-term Project operations are not anticipated to result in a release of hazardous materials into the environment. During short-term construction, there is a possibility of accidental release of hazardous substances such as petroleum-based fuels or hydraulic fluid used for construction equipment. The level of risk associated with this potential accidental release would be minor. Standard construction practices would be observed such that any such materials released are appropriately contained and remediated as required by local, State, and Federal law.

Surrounding Commercial/Industrial Uses

The Project site is located within a mature commercial/industrial area that includes businesses that use or generate hazardous materials. The existing commercial/industrial uses surrounding the Project site could create a significant hazard to future residents/patrons of the proposed live/work development through upset and accident conditions involving the release of hazardous materials into the environment. The use of hazardous materials is controlled and permitted by the Costa Mesa Fire Department (CMFD), which conducts Uniform Fire Code inspections of these facilities, regulates these facilities, and otherwise ensures that risks associated with the use of hazardous materials in the community are minimized.

The CMFD has a dedicated hazardous materials response team. In the event of a hazardous materials upset, CMFD is responsible, as a first responder to arrive that the site within three to five minutes. CMFD as a joint powers authority also works with Orange County Fire Authority (OCFA), who provides additional emergency response resources. CMFD has indicated their ability to provide adequate response time to the Project site and surrounding areas. As noted above, compliance with safety standards related to the handling, use, and storage of hazardous materials, and compliance with the safety procedures mandated by applicable federal, state, and local laws and regulations would be required. Additionally, Standard

Condition SC 4.1-2 requires notification to buyers that the Project is located within an area designated as Light Industry and subject to existing and potential issues associated with industrial land uses.

Overall, compliance with the established regulatory framework, Standard Conditions SC 4.1-2 and 4.8-1, and the specified Mitigation Measures would ensure that Project implementation would create a less than significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Standard Condition: Refer also to Standard Condition SC 4.1-2 above.

SC 4.8-1 During demolition, grading, and excavation, workers shall comply with the requirements of Title 8 of the California Code of Regulations, Section 1529, which provides for exposure limits, exposure monitoring, respiratory protection, and good working practices by workers exposed to asbestos. Asbestos-contaminated debris and other wastes shall be managed and disposed of in accordance with the applicable provision of the California Health and Safety Code.

Mitigation Measures:

HAZ-1 Site mitigation engineering controls, such as a Liquid Boot® barrier, shall be installed at the Project site in order to prevent vapor intrusion into proposed structures.

HAZ-2 Prior to demolition and/or rehabilitation activities, an asbestos survey shall be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and Cal OSHA certified building inspector to determine the presence or absence of asbestos containing-materials (ACMs). If ACMs are located, abatement of asbestos shall be completed prior to any activities that would disturb ACMs or create an airborne asbestos hazard. Asbestos removal shall be performed by a State certified asbestos containment contractor in consultation with the Costa Mesa Fire Department and in accordance with the South Coast Air Quality Management District (SCAQMD) Rule 1403.

HAZ-3 If paint is separated from building materials (chemically or physically) during demolition of the structures, the paint waste shall be evaluated independently from the building material by a qualified Environmental Professional. If lead-based paint is found, abatement shall be completed by a qualified Lead Specialist prior to any activities that would create lead dust or fume hazard. Lead-based paint removal and disposal shall be performed in accordance with California Code of Regulation Title 8, Section 1532.1, which specifies exposure limits, exposure monitoring and respiratory protection, and mandates good worker practices by workers exposed to lead. Contractors performing lead-based paint removal shall provide evidence of abatement activities to the City Project Engineer.

HAZ-4 A Phase II/site characterization specialist shall review available documentation for the Texaco Service Station site and coordinate with the RWQCB to confirm that the regulatory closure in 2005 meets current residential use standards. If deemed necessary by the RWQCB, sampling would need to take place at the corner parcel to determine the level of remediation and/or mitigation measures that would be required.

HAZ-5 If unknown or suspect materials are discovered during construction by the contractor that are believed to involve hazardous wastes or materials, the contractor shall:

- Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area;
- Notify the City Engineer and Costa Mesa Fire Department;
- Secure the area(s) in question; and
- Implement required corrective actions, including remediation if applicable.

4.8.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. There are no schools located within 0.25 mile of the Project site. Due to the nature of the allowable uses, it is not anticipated that the future businesses would emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste in reportable quantities. Moreover, the future businesses would be reviewed through the City's discretionary review process, upon their request for a permit to operate. The future businesses would also be required to comply with applicable laws and regulations that would reduce the risk associated with hazardous materials emissions and handling. Therefore, Project implementation would result in less than significant impacts involving hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste.

Mitigation Measures: No mitigation is required.

4.8.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?

Less Than Significant Impact. As concluded in Response 4.8.b above, no regulatory sites were identified within the Project site. Therefore, the Project would not create a significant hazard to the public or the environment associated with a government listing of hazardous materials sites.

Mitigation Measures: No mitigation is required.

4.8.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?

Less Than Significant Impact. The Project site is located approximately 3.3 miles southwest of John Wayne Airport, within the Airport Environs Land Use Plan (AELUP) Planning Area.[2] Although the Project site is located within the AELUP Height Restriction Zone, it is located outside of the John Wayne Airport Impact Zones and the Safety Zone. In accordance with Federal Aviation Regulation Part 77, Section 77.13(a), notice to the Federal Aviation Administration (FAA) is required for any proposed structure more

[2] John Wayne Airport Website, Orange County Land Use Commission, *FAR Part 77 Notification Area for John Wayne Airport Map*, http://www.ocair.com/commissions/aluc/docs/jwanotf.pdf, Accessed September 9, 2013.

than 200 feet Above Ground Level (AGL) of its site. Notices to the FAA provide a basis for evaluating project impacts on operational procedures and air navigation. The proposed structures would not exceed three stories. Therefore, Project implementation would not result in an airport-related safety hazard for people residing or working at the proposed live/work development.

Mitigation Measures: No mitigation is required.

4.8.f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The Project site is not located within the vicinity of a private airstrip. Therefore, Project implementation would not result in an airstrip-related safety hazard for people residing or working at the proposed live/work development.

***Mitigation Measures*:** No mitigation is required.

4.8.g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The Costa Mesa Disaster Plan serves as the City's Emergency Operations Plan (EOP). The EOP provides guidance during emergency situations associated with natural disasters, technological incidents, and nuclear defense operations. The Plan does not address normal day-to-day emergencies or the well-established and routine procedures used in coping with such emergencies. Rather, the EOP analyzes potential large scale disasters that require a coordinated and immediate response. The EOP considers the City's evacuation routes in its planning. General Plan Safety Element Exhibit SAF-9, *Emergency Evacuation Routes*, illustrates the City's emergency evacuation routes and identifies SR-55/Newport Boulevard, located to the east of the Project site, as a designated emergency evacuation route. Construction activities associated with the proposed Project would not involve road closures or interfere with the City's emergency evacuation routes.

Access to the Project site would occur from West 17th Street and Superior Avenue. A 20-foot internal driveway would extend west from Superior Avenue connecting to a 25-foot driveway that would extend south from 17th Street. The proposed Master Plan would be reviewed through the City's discretionary review process and by the Costa Mesa Fire Department, in order to verify adequate emergency vehicle access is provided. Therefore, Project implementation would not physically interfere with site access by emergency personnel.

Mitigation Measures: No mitigation is required.

4.8.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 an urban area and not adjacent to wildlands. Therefore, Project implementation would not expose people or structures to a significant risk involving wildland fires.

Mitigation Measures: No mitigation is required.

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4.9 HYDROLOGY AND WATER QUALITY

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 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 storm water drainage systems or provide substantial additional sources of polluted runoff?			✓	
f. Otherwise substantially degrade water quality?			✓	
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				✓
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 as a result of the failure of a levee or dam?			✓	
j. Inundation by seiche, tsunami, or mudflow?				✓

4.9.a. Violate any water quality standards or waste discharge requirements?

Less Than Significant Impact. Impacts related to water quality range over three different periods:

- During the earthwork and construction phase, when the potential for erosion, siltation, and sedimentation would be the greatest;
- Following construction, before the establishment of ground cover, when the erosion potential may remain relatively high; and
- Following Project completion, when impacts related to sedimentation would decrease markedly, but those associated with urban runoff would increase.

A reduction of impervious surfaces would be considered a water quality benefit, as impervious surfaces do not allow for rain and runoff to infiltrate into the ground. Infiltration both reduces the amount of flow that is capable of washing off additional pollutants and filter water removing potential pollutants. These changes have the potential to affect long-term water quality.

The Project involves replacement of the existing commercial/industrial uses with a 29-unit live/work development. Under the proposed conditions, approximately 41 percent of the modified site (27,274 square feet) would be covered with impervious surfaces (building coverage).[1] The Project proposes permeable pavers on the driveways/open parking areas. Therefore, the pervious surfaces (the common open space/landscaping and driveways/open parking areas) would cover approximately 59 percent (39,100 square feet). Under proposed conditions, the Project site's impervious areas would decrease by approximately 52 percent (29,144 square feet), as compared to existing conditions. Project implementation would decrease the site's impervious surfaces, since more of the site would be covered with pervious surfaces. The decrease in impervious surfaces would be considered a water quality benefit. Notwithstanding, for analysis purposes, it is assumed that proposed conditions on the Project site would be generally similar to existing conditions with respect to impervious surfaces. Implementation of the Project would remove the onsite commercial/industrial uses and replace them with a live/work development. Thus, the water quality issues of concern would involve storm water and nuisance water runoff associated with the proposed live/work development.

National Pollutant Discharge Elimination System

As part of Section 402 of the Clean Water Act, the U.S. Environmental Protection Agency (EPA) has established regulations under the National Pollution Discharge Elimination System (NPDES) program to control direct storm water discharges for construction activities disturbing one acre or more of land. In California, the State Water Resources Control Board (SWRCB) administers the NPDES permitting program and is responsible for developing NPDES permitting requirements. The NPDES program regulates industrial pollutant discharges, which include construction activities. The SWRCB works in coordination with the Regional Water Quality Control Boards (RWQCB) to preserve, protect, enhance, and restore water quality. The City is within the jurisdiction of the Santa Ana RWQCB (SARWQCB).

Short-Term Construction

Dischargers whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. To obtain coverage for discharges under the General Construction Permit, dischargers are required to electronically file the Permit Registration Documents (PRDs), which include a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), and other compliance related documents required by the General Permit and mail the appropriate permit fee to the State Water Board.

[1] Withee Malcolm Architects, *Project Summary and Vicinity Map, 17th Street and Superior Live/Work*, June 3, 2013.

The Construction General Permit requires the development and implementation of a SWPPP. The SWPPP is required to contain a site map(s), which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the Project site. The SWPPP is required to list Best Management Practices (BMPs)[2] the discharger will use to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP. The Project would disturb one or more acres, thus, would be required to obtain coverage under the Construction General Permit and prepare a SWPPP, pursuant to Standard Condition 4.6-3.

Additionally, pursuant to CMMC Section 8-32, *Water Quality,* all new development and significant redevelopment within the City must be undertaken in accordance with the Orange County Drainage Area Management Plan (DAMP). This includes but is not limited to the Development Project Guidance and any conditions and requirements established by the Development Services Department and the Public Services Department which are reasonably related to the reduction or elimination of pollutants in storm water runoff from the Project site. Prior to the City's issuance of a Grading or Building Permit for the Project, the Development Services Department and Public Services Department would review the plans and impose terms, conditions, and requirements, as needed, in accordance with CMMC Section 8-32. Additionally, the City enforces its Master Plan of Drainage and CMMC Title 15 Chapter III addresses drainage protocols within the City during construction of new projects.

Overall, the Project's demolition and construction activities would be subject to compliance with NPDES requirements, which include obtaining coverage under the General Construction Permit by filing the Permit Registration Documents (i.e., a NOI and SWPPP, among others), as well as the pertinent provisions of the CMMC. Compliance with the NPDES and CMMC requirements would reduce the Project's construction-related impacts to water quality to below a level of significance.

Long-Term Operations

The Municipal Storm Water Permitting Program regulates storm water discharges from municipal separate storm sewer (drain) systems (MS4s). Most of these permits are issued to a group of co-permittees encompassing an entire metropolitan area. The MS4 permits require the discharger to develop and implement a Storm Water Management Plan/Program with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP). MEP is the performance standard specified in Section 402(p) of the Clean Water Act. The management programs specify what BMPs will be used to address certain program areas. The program areas include public education and outreach; illicit discharge detection and elimination; construction and post-construction; and good housekeeping for municipal operations.

The Orange County Flood Control District, the County of Orange, and the City of Costa Mesa, along with 51 other incorporated cities therein (Permittees) discharge pollutants from their MS4s. Storm water and non-storm water enter and are conveyed through the MS4 and discharged to surface water bodies of the

[2] BMP means any program, technology, process, siting criteria, operational methods or measures, or engineered systems, which when implemented prevent, control, remove, or reduce pollution.

Orange Region. These discharges are regulated under countywide waste discharge requirements contained in Order No. R8-2009-0030 (as amended by Order No. R8-2010-0062), *Waste Discharge Requirements for the County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County within the Santa Ana Region Areawide Urban Storm Water Runoff Orange County*, which was approved on May 19, 2011.[3] Order No. R8-2009-0030, which serves as an NPDES permit, has expired but remains in effect until the Orange Water Board adopts a new permit.

The Permit requires the development and implementation of a program addressing storm water pollution issues in development planning for private projects. The primary objectives of the municipal storm water program requirements are to: 1) effectively prohibit non-storm water discharges; and 2) reduce the discharge of pollutants from storm water conveyance systems to the MEP (MEP statutory standard). The County Model Water Quality Management Plan (WQMP) was developed as part of the municipal storm water program to address storm water pollution from new Development and Redevelopment by the private sector. This WQMP contains a list of the minimum required BMPs that must be used for a designated project. Additional BMPs may be required by ordinance or code adopted by the Permittees and applied generally or on a case by case basis. The Permittees are required to adopt the Program's requirements in their own water quality regulations. Developers must incorporate appropriate WQMP requirements into their project plans. Each Permittee would approve the project plan as part of the development plan approval process and prior to issuing Grading and Building Permits for projects covered by the model WQMP requirements.

The Model WQMP describes the process for preparing Conceptual or Preliminary WQMPs and final Project WQMPs for certain new development and significant redevelopment projects called "Priority Projects." The Project site is located in the South Orange County (SOC) Permit Area. A project is considered a Priority Project in the South Orange County (SOC) Permit Area, if it results in new development that creates 10,000 square feet or more of impervious surface. This category includes commercial, industrial, residential housing subdivisions, mixed-use, and public projects on private or public property that falls under the planning and building authority or the Permittees. The Project would create approximately 39,100 square feet of impervious surface, thus, would meet the criteria of a Priority Project. As such, in order to mitigate storm water pollution from the proposed development, the Project must prepare a WQMP that specifies the proposed BMPs. Further, as noted above, the proposed development must be undertaken in accordance with the Orange County DAMP; refer to CMMC Section 8-32. Prior to issuance of a Grading or Building Permit for the Project, the Development Services Department and Public Services Department would review the Project plans and impose terms, conditions, and requirements on the Project, as needed. Additionally, the Project would be subject to compliance with the City's Master Plan of Drainage, CMMC Title 15 Chapter III, and Standard Condition 4.9-1, which addresses compliance with the 2003 DAMP.

Overall, the Project would be subject to compliance with the Orange County DAMP, which includes preparation of a WQMP that specifies the proposed BMPs. Compliance with NPDES, DAMP, CMMC, and Standard Condition 4.9-1 requirements would reduce the Project's long-term impacts to water quality to below a level of significance.

Standard Condition: Refer also to Standard Condition 4.6-3 above.

[3] State of California Website, Orange County Municipal NPDES Storm Water Permit, http://www.swrcb.ca.gov/santaana/water_issues/programs/stormwater/oc_permit.shtml, Accessed September 6, 2013.

SC 4.9-1 To comply with the 2003 DAMP, the Project shall prepare a Storm Drain Plan, Stormwater Pollution Prevention Plan (SWPPP), and Water Quality Management Plan (WQMP) conforming to the current National Pollution Discharge Elimination System (NPDES) requirements, prepared by a Licensed Civil Engineer or Environmental Engineer, which shall be submitted to the Department of Public Works for review and approval.

- The SWPPP shall be prepared and updated as needed during the course of construction to satisfy the requirements of each phase of development.
- The plan shall incorporate all necessary Best Management Practices (BMPs) and other City requirements to eliminate polluted runoff until all construction work for the project is completed. The SWPPP shall include treatment and disposal of all dewatering operation flows and for nuisance flows during construction.
- A WQMP shall be maintained updated as needed to satisfy the requirements of the adopted NPDES program. The plan shall ensure that the existing water quality measures for all improved phases of the project are adhered to.
- Location of the BMPs shall not be within the public right-of-way.

Mitigation Measures: No mitigation is required.

4.9.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. According to General Plan EIR Exhibit 4.8-2, *Water Supply Agency Boundaries*, Mesa Consolidated Water District (Mesa Water) supplies water to the Project site. In compliance with legislative requirements, Mesa Water has prepared their 2010 Urban Water Management Plan (UWMP). The UWMP provides information on the present and future water resources and demands, and assesses Mesa Water's water resource needs. According to the UWMP, Mesa Water's main sources of water supply are groundwater pumped from wells within the Lower Santa Ana River Groundwater Basin (Orange County Basin) and imported water from Metropolitan Water District of Southern California through Municipal Water District of Orange County.[4] Mesa relies on approximately 15,900 acre-feet of groundwater from the Orange County Basin each year. This local source of supply meets approximately 82 percent of Mesa's total annual demand.

As concluded in Response 4.17.d, the Project would result in a less than significant increase in water demand (approximately 11,456 gallons per day). Mesa Water has concluded they are capable of meeting the water demands of their customers in normal, single dry, and multiple dry years between 2015 and

[4] Malcolm Pirnie, Inc., *Mesa Consolidated Water District 2010 Urban Water Management Plan*, May 2011, Executive Summary Page 2.

2035.[5] Mesa Water's groundwater supply is anticipated to significantly increase with completion of the Colored Water Treatment Facility expansion.[6] Therefore, Project implementation would not substantially deplete groundwater supplies. The Project would not interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level, since the site is not located within a groundwater recharge area and would not decrease the site's permeable surface. Project implementation would result in a less than significant impact involving groundwater.

Mitigation Measures: No mitigation is required.

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

Less Than Significant With Mitigation Incorporated. The City's storm water collection system includes catch basins, drainage basins, pumping stations, and force mains. The site is generally level and developed with commercial/industrial uses, associated parking lot, and ornamental landscaping. Under existing conditions, stormwater at the site percolates into landscaped areas or drains across the surface parking lot and enters the City-maintained storm drains in adjacent streets bordering the site.

As concluded above, Project implementation would result in a reduction of impervious surfaces, however, the proposed conditions would be similar to existing conditions. Mitigation Measure HYD-1 requires preparation of a detailed Hydrology Study demonstrating that Project implementation would not substantially alter the existing drainage pattern of the site or area. Further, no stream or river traverses the Project site or is located in its vicinity, thus, Project implementation would not result in substantial erosion or siltation on- or off-site.

Mitigation Measures:

HYD-1 Prior to the issuance of any Grading Permit, the Applicant shall:

- Prepare a detailed Hydrology Study, approved by the City Engineer.
- Design all storm drain facilities, approved by the City Engineer, for 25- year storm event protection.
- Design all storm drains in the public right-of-way to be a minimum of 24 inches in accordance with City of Costa Mesa requirements and in accordance with the Orange County Local Drainage Manual including a minimum spacing between manholes of 300 feet.

[5] Ibid.

[6] Ibid.

4.9.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. As concluded in Response 4.9.c above, Project implementation would result in a reduction of impervious surfaces, however, the proposed conditions would be similar to existing conditions. Further, no stream or river traverses the Project site or is located in its vicinity. Project implementation would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

CMMC Section 15-64 notes that the City has adopted and has in effect a Master Drainage Plan. The official copy of the Master Drainage Plan is on file in the offices of the City Engineer. The Project's drainage facilities would be subject to compliance with the Master Drainage Plan (pursuant to Standard Condition 4.9-2) and review/approval by the City Engineer. Further, CMMC Section 15-64 establishes a Drainage Fee for development within the City that would require construction of additional drainage facilities. The Drainage Fee would be imposed "on a pro rata, per acre basis, upon any parcel or other piece of property for which an owner, developer or other applicant has requested approval to develop or redevelop, or to construct or reconstruct any structure upon such property, prior to, and as a condition of, approval being granted for such development or construction." The Project would not result in a significant reduction of impervious surfaces on the site and would be subject to compliance with the CMMC provisions, thus, would result in less than significant impacts.

Standard Condition:

SC 4.9-2 Prior to approval of Plans, the Project shall fulfill the City of Costa Mesa Drainage Ordinance No. 06-19 requirements.

Mitigation Measures: No mitigation is required.

4.9.e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. As concluded in Response 4.9.c above, Project implementation would result in a reduction of impervious surfaces, however, the proposed conditions would be similar to existing conditions. Thus, Project implementation would not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems. Refer also to Responses 4.9.a and 4.9.d.

Mitigation Measures: No mitigation is required.

4.9.f. Otherwise substantially degrade water quality?

Less Than Significant Impact. Refer to Response 4.9.a. above.

Mitigation Measures: No mitigation is required.

4.9.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. Flood hazard areas identified on the Flood Insurance Rate Map (FIRM) are identified as a Special Flood Hazard Area (SFHA). A Special Flood Hazard Area is defined as the area that will be inundated by the flood event having a one (1) percent chance of being equaled or exceeded in any given year. The one-percent annual chance flood is also referred to as the base flood or 100-year flood.

The Project site has been placed in Zone X, pursuant to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel 0268J, Map No. 06059C0268J.[7] Zone X (unshaded) is an area of minimal flood hazard. It includes the areas located outside the Special Flood Hazard Area and higher than the elevation of the 0.2-percent-annual-chance (or 500-year) flood. The Project is not located within a Special Flood Hazard Area. Therefore, Project implementation would not place housing within a Special Flood Hazard Area.

Mitigation Measures: No mitigation is required.

4.9.h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. Refer to Response 4.9.g.

Mitigation Measures: No mitigation is required.

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

Less Than Significant Impact. The Project site is not located within the inundation area of a levee or dam, or the City's coastal areas that are subject to coastal storm surges, according to General Plan EIR Exhibit 4.8-5. Therefore, Project implementation would not expose people or structures to a significant risk involving flooding associated with the failure of a levee or dam, or coastal storm surges.

Mitigation Measures: No mitigation is required.

[7] Federal Emergency Management Agency Website, Map Service Center, https://msc.fema.gov/webapp/wcs/stores/servlet/CategoryDisplay?catalogId=10001&storeId=10001&categoryId=12001&langId=-1&userType=G&type=1&dfirmCatId=12009&future=false, Accessed September 6, 2013.

4.9.j. Inundation by seiche, tsunami, or mudflow?

No Impact. A seiche is an earthquake or slide-induced wave that can be generated in an enclosed body of water of any size from swimming pool, to a harbor, or lake. There is no enclosed body of water that is located in the vicinity of the Project site.

A tsunami is a sea wave generated by an earthquake, landslide, volcanic eruption, or even by a large meteor hitting the ocean. An event such as an earthquake creates a large displacement of water resulting in a rise or mounding at the ocean surface that moves away from this center as a sea wave. Tsunamis generally affect coastal communities and low-lying (low-elevation) river valleys in the vicinity of the coast. Buildings closest to the ocean and near sea level are most at jeopardy. According to General Plan EIR Exhibit 4.8-5, the Project site is not located within an area subject to a seiche, tsunami, or mudflow. According to the California Geological Survey Orange County Tsunami Inundation Maps,[8] the Project site is not located within a tsunami inundation area.

Potential risk from mudflow (i.e., mudslide, debris flow) does not exist within the Project area, as steep slopes are not located on or in proximity to the Project site.

Therefore, Project implementation would not expose people or structures to potential hazards from inundation by seiche, tsunami, or mudflow. No impact is anticipated.

Mitigation Measures: No mitigation is required.

[8] State of California, Department of Conservation, Orange County Tsunami Inundation Maps, http://www.quake.ca.gov/gmaps/tsunami/tsunami_maps.htm, Accessed August 31, 2013.

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4.10 LAND USE AND PLANNING

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				✓

4.10.a. Physically divide an established community?

Less Than Significant Impact. The Project site is located at the southern extent of the City of Costa Mesa, and surrounded by commercial, industrial, and light industrial uses. The site is occupied by 19,559 square feet of commercial and industrial uses. The Project involves construction of a 29-unit, attached live/work development in place of the existing commercial and industrial uses. Thus, Project implementation would not divide an established community. Additionally, the Project site is located within the 19 West Urban Plan. The 19 West Urban Plan's emphasis is on improving the area by providing visual enhancement and encouraging the development of mixed-use urban villages along specified areas. To this end, the 19 West Urban Plan's objectives include to:

- Provide a Land Use Matrix of allowable uses that recognizes the development potential of the Plan Area and the need to sensitively integrate new development with the surrounding areas;
- Encourage commercial/residential mixed-use development that combines residential and nonresidential uses in a single building (vertical mixed-use development);
- Stimulate improvement in the 19 West Urban Plan area through well-designed and integrated urban residential development that is nontraditional in form and design;
- Promote new type of urban housing that would be target-marketed to people seeking alternative housing choices in an industrial area; and
- Encourage the design and development of urban residential structures reflecting the urban character of the surrounding area both in the interior and exterior design.

In furtherance of these objectives, the Project would provide a mixed-use nontraditional development that includes urban housing in a commercial/light industrial artisan village theme. The Project has been designed to be a desirable live/work environment for the future residents in terms of site features and amenities. Additionally, Standard Condition SC 4.1-2 requires notification to buyers that the Project is

located within an area designated as Light Industry and subject to existing and potential annoyances/inconveniences (such as odors, dust, noise and vibration) associated with industrial land uses. Therefore, impacts are less than significant.

Mitigation Measures: No mitigation is required.

Standard Condition: Refer to Standard Condition SC 4.1-2.

4.10.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.

City of Costa Mesa 2000 General Plan

The Land Use Element of the General Plan directs long-range development in the City by indicating the location and extent of development to be allowed. The General Plan sets forth land use goals, policies, and objectives that guide new development.

According to the City of Costa Mesa General Plan Land Use Map (July 2004),[1] the site's land use designation is Light Industry. The Light Industry designation is intended for a variety of light and general industrial uses. The Land Use Element further notes the following regarding mixed-use development projects:

> *Mixed-use development projects are intended to provide additional housing opportunities in the City (such as the Westside) by combining residential and nonresidential uses in an integrated development….. Mixed-use developments shall be implemented through an adopted urban plan (such as the 19 West Urban Plan) and shall be identified on the City's Zoning Map by designating either the CL, C1 and/or C2 base zoning districts with the mixed-use overlay district. The mix of uses can occur in either a vertical or horizontal design, up to four stories in height. Product types shall be identified in the applicable urban plan and may include live/work units and commercial/residential units where the residential uses are located above or adjacent to the nonresidential component. Nonresidential uses may include office, retail, business services, personal service, public spaces and uses, and other community amenities.*

The General Plan identifies the Mixed-Use Overlay Zoning District as a compatible zoning district in the Light Industrial land use designation. Therefore, the General Plan allows mixed-use development and residential development within a mixed-use overlay zone. Redevelopment of the subject property relates to the conversion of marginal nonresidential properties into a mixed-use residential development, and is therefore consistent with the General Plan in this regard.

[1] City of Costa Mesa Website, City of Costa Mesa Zoning Map, http://www.costamesaca.gov/modules/showdocument.aspx?documentid=369, Accessed September 10, 2013.

The Project is further analyzed for consistency with the Costa Mesa General Plan, as follows:

- *Mix of Uses/Four Story Maximum*. The Project involves construction of a 29-unit, three-story, attached live/work development, in compliance with the intended use and building height for the property.

- *Product Types*. The Project includes live/work units with residential uses located above the nonresidential component, in compliance with the intended product types for the property.

- *Types of Nonresidential Uses*. The future businesses that would occupy the proposed live/work units would be subject to compliance with the listing of land uses that are permitted and conditionally permitted within the overlay zone's mixed-use developments. A specific list of allowable land uses (i.e., land use matrix) is to be approved during the entitlement process. As discussed in the *Permitted Land Uses* Section below, the land use matrix shown in Mesa West Bluffs Table C provides a list of permitted and conditionally permitted in mixed-use developments, including live/work units. According to the Mesa West Bluffs Urban Plan, a variety of small-scale services are encouraged with limited larger offices and commercial uses being permitted in ground-level units. No proposed nonresidential uses shall be designed or operated so as to expose residents to offensive odors, dust, electrical interference, and/or vibration.

The following analysis evaluates the Project for consistency with specific goals and objectives of the General Plan Land Use Element. Because of the expansive nature of the General Plan, it cannot be expected that every goal and objective would apply to each project. The following analysis focuses on those issues, which are salient for reasons of relevance.

- ***Goal LU-1, Land Use*:** *It is the goal of the City of Costa Mesa to provide its citizens with a balanced community of residential, commercial, industrial, recreational, and institutional uses to satisfy the needs of the social and economic segments of the population and to retain the residential character of the City; to meet the competing demands for alternative developments within each land use classification within reasonable land use intensity limits; and, to ensure the long term viability and productivity of the community's natural and man-made environments.*

  ***Consistency*:** The mixed-use Project would provide a live/work development on a site designated for industrial uses. The Project would create a diverse land use in the Project area and provide additional housing opportunities. The infill nature of the Project protects the viability of the natural environment and decreases the need for infrastructure improvements. The Project is consistent with this General Plan goal.

- ***Objective LU-1A*:** *Establish and maintain a balance of land uses throughout the community to preserve the residential character of the City at a level no greater than can be supported by the infrastructure.*

  ***Consistency*:** The Project is an infill redevelopment project with live/work uses. As concluded in Sections 4.14, *Public Services*, and Section 4.17, *Utility and Service Systems*, adequate infrastructure would be available to serve the Project. Therefore, the Project is consistent with this General Plan objective.

- ***Goal LU-2, Development*:** *It is the goal of the City of Costa Mesa to establish development policies that will create and maintain an aesthetically pleasing and functional environment and minimize impacts on existing physical and social resources.*

  ***Consistency*:** The Project would allow for the redevelopment of property containing commercial and industrial uses. The on-site vegetation is limited. The Project would enhance the site's visual appearance through implementation of a Landscape Plan. Additionally, the Project would provide a high-quality architectural design to the Project area. Therefore, the Project is supportive of this General Plan goal.

- ***Objective LU-2A*:** *Encourage new development and redevelopment to improve and maintain the quality of the environment.*

  ***Consistency*:** As is evidenced throughout this Initial Study, the Project would not result in significant adverse environmental impacts, with mitigation incorporated. Because the Project is an infill development, it would not result in the loss of any habitat or require extensive infrastructure improvements to provide service to the site. The Project is consistent with this objective.

Based on the analysis presented above, the Project would not conflict with the *General Plan* and a less than significant impact would occur in this regard.

City of Costa Mesa Municipal Code Title 13, *Planning, Zoning, and Development*

According to the Official Zoning Map (July 2004),[2] the Project site is zoned MG General Industrial District. Additionally, with adoption of the 19 West Urban Plan, the 19 West Village Mixed-Use Overlay District was applied to the property; refer to *19 West Urban Plan* Section below. CMMC Section 13-20(s) specifies the following regarding the MU Mixed-Use Overlay:

> *This district may overlay the R2-MD, R2-HD, R3, CL, C1, C2, MG, PDR-HD, PDR-MD, or I&R districts, and it is intended to allow development of residential and nonresidential uses as mixed, integrated projects. This overlay district shall only be applied to the zoning map in conjunction with the adoption of an urban plan for the designated area. The urban plan is a regulating plan that shall define the unique characteristics of the overlay area, include a matrix of permitted, conditionally permitted, and prohibited uses and provide development standards. The provisions of the mixed-use overlay shall be activated by adoption of a master plan.*

According to the Westside Urban Plan Areas Map,[3] the Project site is specifically located within the 19 West Urban Plan. The 19 West Village Mixed-Use Overlay District was applied to the property at the time of the 19 West Urban Plan adoption. The Project entitlements include the 17th Street & Superior Avenue Master Plan, among others; refer to Section 2.3, *Project Characteristics*. Adoption of the proposed Master

[2] City of Costa Mesa Website, City of Costa Mesa Zoning Map, http://www.costamesaca.gov/modules/showdocument.aspx?documentid=367, Accessed September 10, 2013.

[3] City of Costa Mesa Website, Westside Urban Plan Areas Map, http://www.costamesaca.gov/index.aspx?page=110, Accessed September 10, 2013.

Plan would activate the provisions of the mixed-use overlay, as specified in the 19 West Urban Plan. Therefore, the Project is analyzed below for consistency with the 19 West Urban Plan.

19 West Urban Plan/Mesa West Bluffs Urban Plan

When activated by an approved Master Plan, the underlying zoning district is superseded by the Urban Plan's zoning regulations (unless otherwise indicated). The development standards that apply for live/work developments are primarily specified in the Mesa West Bluffs Urban Plan. However, City Council Resolution 06-34 added language to the 19 West Urban Plan that established buffer zones around industrial properties. Therefore, the Project is subject to compliance with the Mesa West Bluffs Urban Plan development standards and regulations, as well as Resolution 06-34.

Development Standards

The Mesa West Bluffs Urban Plan's mixed-use development standards are provided in Mesa West Bluffs Urban Plan Tables A1 and A2. The Project is analyzed for consistency with the specified development standards in *Table 4.10-1*, *Consistency with Live/Work Development Standards*. As indicated in *Table 4.10-1*, the proposed development plan complies with the Mesa West Bluffs Urban Plan's mixed-use development standards, with one exception: required garage dimensions; refer to the *Deviations From Development Standards* Section below.

Permitted Land Uses

According to the Mesa West Bluffs Urban Plan, a variety of small-scale services are encouraged with limited larger offices and commercial uses being permitted in ground-level units. No proposed nonresidential uses shall be designed or operated so as to expose residents to offensive odors, dust, electrical interference, and/or vibration. Proposed new development will be required to provide onsite mitigation of impacts associated with surrounding nonresidential land uses. The land use matrix shown in Mesa West Bluffs Table C provides a list of permitted and conditionally permitted in mixed-use developments, including live/work units. This land use matrix provides a distinct listing of allowable uses that is customized for mixed-use developments.

The proposed live/work development would involve business areas on the ground floors of the units. The future businesses would be reviewed through the City's discretionary review process, upon their request for a permit to operate. The City's review would verify that the future business is permitted or prohibited. Issuance of a Permit (i.e., Minor or Conditional) would ensure consistency. The Mesa West Bluffs Urban Plan expressly discourages reversion of live/work units to residential lofts.

Industrial Property Buffer Zones

City Council Resolution 06-34 established buffer zones from the JC Carter industrial property (671 West 17th Street) and the CLA-VAL industrial property (1701 Placentia Avenue) requiring a minimum 50-foot distance between property lines. The Project site's westerly property line is located approximately 2,352 feet east of the CLA-VAL property line, thus, the proposed development is located outside of the CLA-VAL 50-foot buffer zone. The Project site's westerly property line is common with the JC Carter easterly property line, thus, the western portion of the proposed development is located within the JC Carter 50-foot

buffer zone. Therefore, the Applicant is requesting approval of a deviation from the JC Carter buffer zone requirement to allow residential units within the 50-foot buffer zone; refer to the following Section for further discussion.

Table 4.10-1
Consistency with Live/Work Development Standards

Mesa West Bluffs Urban Plan Live/Work Standards[1]	Project	Complies
Overall Building Height: Maximum 4 Stories / 60 feet	3 stories and roof deck / 44 feet	Yes
Distance Between Buildings: Minimum 10 feet	10 feet	Yes
Lot Size: None	1.6 gross acres/1.5 net acres	Yes
Size of Work Space: Minimum 250 square feet	Unit A = 260 square feet Unit B = 250 square feet Unit C = 267 square feet	Yes
Floor Area Ratio: Maximum 1.0 FAR	0.85	Yes
Development Lot Coverage: Maximum 90%	70% (27,274 square feet buildings + 19,131 square feet driveways/open parking)	Yes
Open Space of Development Lot: Minimum 10%	30% (19,969 square feet)	Yes
Front Build-to-Line and Setbacks • Front Build-to-Line Abutting a Public Street: Min. 10 feet • Side Setback, Interior: 0 feet • Side Setback, Abutting a Public Street: Min. 10 feet • Rear Setback, All Other Property Lines: 0 feet	10 feet (Superior Avenue) 15 feet 3 inches (south setback) 10 feet (17th Street) 11 feet 7 inches (west setback)	Yes
Parking • Garage Dimensions, Interior (per CMMC Section 13-85): 10 x 20 feet each space • Unit to 2,000 square feet - Tenant: Minimum 1.5 space per unit - Guest: Minimum 1.5 space per unit - Total: Minimum 3 spaces per unit, 87 spaces	19 feet x 19 feet Tenant, Garage = 58 spaces Guest, Open = 29 spaces Total = 87 spaces	No[2] Yes

Notes:
1. Mesa West Bluffs Urban Plan Tables A1 and A2.
2. Approval of a Deviation is required.

Deviations From Development Standards

According to CMMC Section 13-83.53(d), *Deviation From Development Standards*, a deviation from the mixed-use development standards may be approved through the master plan process provided that the following findings are made:

1. The strict interpretation and application of the Mixed-Use Overlay District's development standards would result in practical difficulty inconsistent with the purpose and intent of the general plan and urban plan, while the deviation to the regulation allows for a development that better achieves the purposes and intent of the general plan and urban plan.

2. The granting of a deviation results in a mixed-use development which exhibits excellence in design, site planning, integration of uses and structures and compatibility standards for residential development.

3. The granting of a deviation will not be detrimental to the public health, safety, or welfare, or materially injurious to properties or improvements in the vicinity.

Additional on-site and off-site amenities contributing to the project's overall design excellence may enable the necessary findings for approval of the requested deviations to be made. In exchange for any deviation from any current standard, the project must provide quality environments and substantial on-site (development lot) and off-site (public realm) amenities.

CMMC Section 13-85, Required Garage Dimensions. This Section requires that each garage space have interior dimensions that are a minimum 10 feet wide by 20 feet long [minimum 20 feet wide by 20 feet long for a two-car garage], unobstructed inside measurements. The proposed garage spaces would have interior dimensions of 20 feet by 20 feet. Therefore, the Applicant is requesting approval of a deviation from the garage dimensions standard to allow a smaller interior dimension. This deviation is considered a less than significant impact, since the decrease in garage dimension is nominal (one foot), additional space is provided in all garages for water heaters and trash and recycling cart storage, and additional space is provided in Unit C garages for storage. Additionally, granting of this deviation would not be detrimental to the public or materially injurious to nearby properties or improvements.

City Council Resolution 06-34, Industrial Property Buffer Zones. As previously noted, City Council Resolution 06-34 established buffer zones from the JC Carter and CLA-VAL industrial properties requiring a minimum 50-foot distance between property lines. The proposed development is located outside of the CLA-VAL 50-foot buffer zone. However, the western portion of the proposed development is located within the JC Carter 50-foot buffer zone. Specifically, 11 units would be located within the buffer zone: two units at the southwest corner (setback a minimum of 11 feet 7 inches from property line); and nine units along the western boundary (setback 44 feet 10 inches). Therefore, the Applicant is requesting approval of a deviation from the JC Carter buffer zone requirement to allow residential units within the 50-foot buffer zone. This deviation is considered a less than significant impact, based on the following factors:

1. The strict interpretation and application of the minimum 50-foot buffer zone requirement along the western portion of the property would preclude development in approximately 26 percent of the Project site,[4] thus, resulting in practical difficulty in site planning and significantly limiting the area available for circulation and amenities. As concluded above, the proposed development provides a mixed-use nontraditional development that furthers the 19 West Urban Plan's objectives and complies with General Plan Policies, and complies with the Mesa West Bluffs Urban Plan's mixed-use development standards (with only one exception). Additionally, the proposed development has been designed to be a desirable live/work environment for the future residents in terms of site features and amenities. Thus, granting this deviation would better achieve the purposes and intent of the Urban Plan and General Plan, and enable a mixed-use development that exhibits excellence

[4] Based on the following calculations: 348 foot western boundary x 50 foot buffer zone = 17,400 square feet / 66,374 Project site area = 26 percent.

in design, site planning, and integration of uses and structures, and achieves land use compatibility through compliance with live/work development standards.

2. The granting of this deviation would not be detrimental to the public health, safety, or welfare, or materially injurious to future residents of the proposed live/work development. As concluded in Section 4.1, *Aesthetics*, the proposed development would not be exposed to substantial light or glare from the existing industrial and commercial land uses. As concluded in Section 4.3, *Air Quality*, future residents would not be exposed to offensive odors, excessive dust, or potentially significant pollutant concentrations, with mitigation incorporated. At a minimum, the Mesa West Urban Plan requires that all units be mechanically ventilated. As concluded in Section 4.8, *Hazards and Hazardous Materials*, impacts associated with potential upset/accident conditions involving the release of hazardous materials into the environment (potential VOCs in the soil) would be less than significant, with mitigation incorporated. The Urban Plan also requires that a Noise Study be conducted to document onsite interior and exterior noise levels and vibration from surrounding land uses. In compliance with this requirement, a Noise Study has been conducted to document potential impacts; refer to Section 4.12, *Noise*. As concluded in Section 4.12, future residents would not be exposed to excessive noise levels from off-site mobile and stationary noise sources, or excessive vibration from offsite land uses. It is also noted, Project implementation would reduce traffic volumes, as compared to existing conditions, thus, slightly improving the levels of service at study area intersections. Overall, future residents would not experience significant impacts with mitigation incorporated, involving air quality, hazardous materials, noise, vibration, or traffic from the surrounding non-residential land uses. Additionally, the live/work units would be oriented toward common courtyards that face away from the adjacent industrial property. Moreover, the Urban Plan requires that adequate notice be given in conjunction with the sale of any unit of the existing surrounding industrial land uses, including but not limited to, operational characteristics such as hours of operation, delivery schedules, outdoor activities, noise, and odor generation; refer to Standard Condition SC 4.1-2.

3. The granting of this deviation would not be detrimental to the public health, safety, or welfare, or materially injurious to properties or improvements in the vicinity. The future businesses would be reviewed through the City's discretionary review process, upon their request for a permit to operate. The City's review would verify that the future business is permitted and that it designed and operated such that nearby properties and improvements are not exposed to offensive odors or excessive dust, or excessive noise levels or vibration. Additionally, compliance with Standard Condition SC 4.1-2 would support operations at existing surrounding industrial land uses and minimize potential future conflicts/complaints in that future residents of the proposed development would receive with the sale of any unit, adequate notice of the existing surrounding industrial land uses and potential annoyances/inconveniences.

As concluded above, with approval of the requested deviations and implementation of Standard Condition 4.1-2, the Project meets the purpose and intent of the Mixed-Use Overlay District, and complies with the 19 West Urban Plan/Mesa West Bluffs Urban Plan, and thus with CMMC Title 13. A less than significant impact would occur in this regard.

As a live/work development in the 19 West Urban Plan area, the Project requires approval of the proposed Master Plan pursuant to CMMC Title 13, Chapter II, *Planning Applications*. As concluded above, the proposed Master Plan is consistent with Urban Plan objectives and General Plan Policies, meets the purpose and intent of the Mixed-Use Overlay District, and includes adequate onsite amenities in the common open space areas and/or private open space areas. As concluded throughout this Initial Study, the future residents would not experience excessive noise, odors, vibration, light and glare, or toxic emanations.

Compatibility With Surrounding Land Uses

As a mixed-use development in a mature industrial area, the Project's compatibility with the surrounding area must be evaluated. As discussed in Section 2.1, the Project site is located in a highly industrialized area consisting of industrial operations and commercial uses. The Project would introduce a mixed-use development to this industrial of portion Costa Mesa, adding new height and scale to the surrounding community. Land use compatibility issues are addressed prior to redevelopment of a project site from designated industrial/commercial uses to a mixed-use development. Land use compatibility between sensitive land uses and existing industrial businesses pertain to industrial business activities in a mature industrial area that would result in potential impacts involving aesthetics, air quality/odors, hazardous materials, and noise/vibration. As concluded in Sections 4.1, 4.3, 4.8, and 4.12, respectively, less than significant impacts would occur to the proposed residential uses following compliance with the established regulatory framework, Standard Conditions, and specified mitigation measures. Standard Condition SC 4.1-2 requires notification to buyers that the Project is located within an area designated as Light Industry and subject to existing and potential annoyances/inconveniences associated with industrial land uses. Therefore, the Project would not be incompatible with the surrounding land uses.

Standard Condition: Refer to Standard Condition SC 4.1-2 above.

Mitigation Measures: No mitigation is required.

4.10.c. Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. Refer to Response 4.4.f.

Mitigation Measures: No mitigation is required.

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4.11 MINERAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				✓

4.11.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. The Project involves construction of an attached live/work development in place of the commercial/industrial uses that exist on the property. There are no known mineral resources on the property. Therefore, Project implementation would not 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.

Mitigation Measures: No mitigation is required.

4.11.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. Refer to Response 4.11.a.

Mitigation Measures: No mitigation is required.

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4.12 NOISE

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 groundborne vibration or groundborne 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?				✓

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air, and is characterized by both its amplitude and frequency (or pitch). The human ear does not hear all frequencies equally. In particular, the ear deemphasizes low and very high frequencies. To better approximate the sensitivity of human hearing, the A-weighted decibel scale (dBA) has been developed. On this scale, the human range of hearing extends from approximately three dBA to around 140 dBA.

Noise is generally defined as unwanted or excessive sound, which can vary in intensity by over one million times within the range of human hearing; therefore, a logarithmic scale, known as the decibel scale (dB), is used to quantify sound intensity. Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Noise generated by mobile sources typically attenuates (is reduced) at a rate between three dBA and 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of three dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance. Noise generated by stationary sources typically attenuates at a rate between 6 dBA and about 7.5 dBA per doubling of distance.

There are a number of metrics used to characterize community noise exposure, which fluctuate constantly over time. One such metric, the equivalent sound level (L_{eq}), represents a constant sound that, over the specified period, has the same sound energy as the time-varying sound. Noise exposure over a longer period of time is often evaluated based on the Day-Night Sound Level (L_{dn}). This is a measure of 24-hour noise levels that incorporates a 10-dBA penalty for sounds occurring between 10:00 p.m. and 7:00 a.m.

The penalty is intended to reflect the increased human sensitivity to noises occurring during nighttime hours, particularly at times when people are sleeping and there are lower ambient noise conditions. Typical L_{dn} noise levels for light and medium density residential areas range from 55 dBA to 65 dBA.

Two of the primary factors that reduce levels of environmental sounds are increasing the distance between the sound source to the receiver and having intervening obstacles such as walls, buildings, or terrain features between the sound source and the receiver. Factors that act to increase the loudness of environmental sounds include moving the sound source closer to the receiver, sound enhancements caused by reflections, and focusing caused by various meteorological conditions.

STATE OF CALIFORNIA

The State Office of Planning and Research Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the Community Noise Equivalent Level (CNEL).

CITY OF COSTA MESA

General Plan

The Noise Element of the *City of Costa Mesa 2000 General Plan* (*General Plan*) dated January 2002, identifies and evaluates unwanted noise sources in the City, and establishes goals and policies for reducing noise levels in the City. The City has modified the U.S. Department of Housing and Urban Development (HUD) Guidelines and the State's noise standards in its *General Plan* to serve as the basis for the land use compatibility guidelines presented in *Table 4.12-1*, *Noise and Land Use Compatibility Matrix*. *Table 4.12-2*, *State Interior and Exterior Noise Standards*, indicates specific quantitative standards and criteria that specify acceptable limits of noise for various land uses throughout the City.

Municipal Code

Title 13 Chapter XIII, *Noise Control*, of the Costa Mesa Municipal Code (CMMC) is known as the City's Noise Ordinance, which includes standards and regulations pertaining to noise. The Noise Ordinance establishes outdoor and indoor noise standards, and is designed to control unnecessary, excessive, and annoying sounds generated on one piece of property from impacting an adjacent property, and to protect residential areas from noise sources other than transportation sources. *Table 4.12-3*, *Noise Ordinance Standards*, outlines the interior and exterior noise standards for residential uses.

Table 4.12-1
Noise and Land Use Compatibility Matrix

Land Use Category	Community Noise Exposure (CNEL)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low Density	50 – 60	60 – 70	70 – 75	75 – 85
Residential – Multiple Family	50 – 65	65 – 70	70 – 75	75 – 85
Transient Lodging – Motel, Hotel	50 – 65	65 – 70	70 – 80	80 – 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 60	60 – 65	65 – 80	80 – 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 – 70	NA	70 – 85
Sports Arenas, Outdoor Spectator Sports	NA	50 – 75	NA	75 – 85
Playgrounds, Neighborhood Parks	50 – 67.5	NA	67.5 – 75	75 – 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 – 70	NA	70 – 80	80 – 85
Office Buildings, Business Commercial and Professional	50 – 67.5	67.5 – 77.5	77.5 – 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 – 70	70 – 80	80 – 85	NA

CNEL = community noise equivalent level; NA = not applicable

Zone A: Normally Acceptable. Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Zone B: Conditionally Acceptable. New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Zone C: Normally Unacceptable. New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise-insulation features must be included in the design.

Zone D: Clearly Unacceptable. New construction or development should generally not be undertaken.

Source: City of Costa Mesa 2000 General Plan Table N-3, *Noise and Land Use Compatibility Matrix*.

Table 4.12-2
State Interior and Exterior Noise Standards

Land Use Categories		CNEL (dBA)	
Categories	**Uses**	**Interior[1]**	**Exterior[2]**
Residential	Single-Family, Duplex, Multiple-Family	45[3]	65[5]
	Mobilehome	--	65[4]
Commercial, Industrial, Institutional	Hotel, Motel, Transient Lodging	45	--
	Commercial Retail, Bank, Restaurant	55	--
	Office Building, Research and Development, Professional Offices, City Office Buildings	50	--
	Amphitheater, Concert Hall, Auditorium, Meeting Hall	45	--
	Gymnasium (Multipurpose)	50	--
	Sports Club	55	--
	Manufacturing, Warehousing, Wholesale, Utilities	65	--
	Movie Theaters	45	--
Institutional	Hospital, Schools' Classrooms/Playgrounds	45	65
	Church, Library	45	--
Open Space	Parks	--	65

Notes:
1 – Indoor environment including: bathrooms, closets, corridors.
2 – Outdoor environment limited to: Private yard of single-family; multi-family private patio or balcony which is served by a means of an exit from inside the dwelling; balconies six feet deep or less are exempt; mobilehome park; park's picnic area; school's playground.
3 – Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as of Chapter 12, Section 1205 of UBC.
4 – Exterior noise levels should be such that interior noise levels will not exceed 45 dBA CNEL.
5 – The City Noise Ordinance further specifies exterior residential areas in a Mixed-Use Overlay District for live/work and multi-family residential development which are approved pursuant to a Master Plan and which are subject to these exterior noise standards. The City Noise Ordinance specifically states "*Exception: For multi-family residential development or live/work units approved pursuant to a master plan in a mixed-use overlay district where the base zoning district is nonresidential, the exterior residential noise environment does not include the following areas: Private balconies or patios regardless of size, private or community roof decks/roof terraces, internal courtyards and landscaped walkways that do not include resident-serving, active recreational uses such as community pool, spa, tennis courts, barbeque, and picnic areas.*"

Source: City of Costa Mesa 2000 General Plan Table N-4, *State Interior and Exterior Noise Standards*.

Table 4.12-3
Residential Noise Ordinance Standards

Time	Exterior Noise Standards	Interior Noise Standards
7:00 a.m. – 11:00 p.m.	55 dBA	55 dBA
11:00 p.m. – 7:00 a.m.	50 dBA	45 dBA

Source: City of Costa Mesa Municipal Code, Chapter XIII, *Noise Control*.

The Noise Ordinance prohibits stationary noise sources to exceed:

- The noise standard for a cumulative period of more than thirty (30) minutes in any hour;
- The noise standard plus five dBA for a cumulative period of more than 15 minutes in any hour;
- The noise standard plus 10 dBA for a cumulative period of more than five minutes in any hour;
- The noise standard plus 15 dBA for a cumulative period of more than one minute in any hour; or
- The noise standard plus 20 dBA for any period of time.

The Noise Ordinance also notes that the exterior standards specified in *Table 4.12-3* should not apply to private balconies or patios, private or community roof decks/terraces, or internal courtyards and landscaped walkways associated with multi-family residential development or live/work units within a Mixed-Use Overlay District where the base zoning district is nonresidential. The Project involves a live/work development within the 19 West Village Mixed-Use Overlay District and the base zoning is MG General Industrial District.

CMMC Section 13-279, *Exceptions for Construction*, describes the following exemptions to the Noise Ordinance, which are applicable to the Project:

The provisions of this chapter shall not apply to the following:

(a) Emergency machinery, vehicles, or work; or
(b) Construction equipment, vehicles, or work between the following approved hours, provided that all required permits for such construction, repair, or remodeling have been obtained from the appropriate City departments.

Hours for Construction Activities:

7:00 a.m. – 7:00 p.m., Mondays through Fridays
9:00 a.m. – 6:00 p.m., Saturdays
Prohibited all hours, Sundays and the following specified federal holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

(c) Waiver procedure. An applicant may request approval of a minor modification for a temporary waiver for construction equipment, vehicles, or work outside these permitted hours. The minor modification may be granted by the development services director or his/her designee. Any temporary waiver shall take into consideration the unusual circumstances requiring construction activity outside the permitted hours and the short-term impacts upon nearby residential and business communities.

Minor modification findings shall indicate whether or not the extended construction hours will be materially detrimental to the health, safety, and general welfare of persons residing or working within the immediate vicinity of the construction site.

Unless a temporary waiver is approved, construction activity outside the permitted hours shall still be subject to the city's noise regulations.

EXISTING CONDITIONS

Noise Measurements

In order to quantify existing ambient noise levels in the Project area, RBF Consulting conducted three noise measurements on September 3, 2013; refer to *Table 4.12-4*, *Noise Measurements*. The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the Project site. Ten-minute measurements were taken, between 1:30 p.m. and 2:30 p.m., at each site during the day. Short-term (Leq) measurements are considered representative of the noise levels in the Project vicinity.

Table 4.12-4
Noise Measurements

Site No.	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Peak (dBA)	Time
1	Commercial property next to Paddle Surf Warehouse	66.4	49.4	78.9	101.5	1:31 p.m.
2	Southern boundary of vacant lot on corner of West 17th and Superior Avenue (across from Ramada Inn)	68.1	52.4	81.9	106.2	1:49 p.m.
3	Orange Coast Crossfit parking lot	67.4	51.8	79.8	101.8	2:01 p.m.

Source: RBF Consulting, Noise Measurements, September 3, 2013.

Meteorological conditions were clear skies, warm temperatures, with light wind speeds (0 to 5 miles per hour), and low humidity. Measured noise levels during the daytime measurements ranged from 66.4 to 67.4 dBA L_{eq}. Noise monitoring equipment used for the ambient noise survey consisted of a Brüel & Kjær Hand-held Analyzer Type 2250 equipped with a Type 4189 pre-polarized microphone. The monitoring equipment complies with applicable requirements of the American National Standards Institute (ANSI) for Type I (precision) sound level meters. The results of the field measurements are included in Appendix A, *Noise Measurement Sheets*, of Appendix D, *Noise Data*. At each of the measurement sites, the primary source of noise was produced by vehicular traffic along adjacent roadways.

Sensitive Receptors

Certain land uses are particularly sensitive to noise, including schools, hospitals, rest homes, long-term medical and mental care facilities, and parks and recreation areas. Residential and hotel uses are also considered noise sensitive, especially during the nighttime hours. Existing sensitive receptors located in the Project vicinity include residential uses located approximately 786 feet to the northeast, 704 feet to the north/northwest, 740 feet to the northwest, and approximately 300 feet to the south of the Project site. The Ramada Inn, located approximately 110 feet east of the Project site, is the closest sensitive receptor to the Project site.

Stationary Sources

The primary stationary noise sources in the Project vicinity are those associated with the operations of nearby industrial and commercial uses.

4.12.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?

Less Than Significant Impact With Mitigation Incorporated.

Short-Term Construction Impacts

The Project's construction activities would involve demolition of the existing on-site structures, pavement, and driveways, removal of existing interior fencing, and either removal or relocation of existing power poles. Other construction activities would include site preparation, grading, building construction, paving, and architectural coating. These activities would require the use of equipment such as concrete/industrial saws, tractors, dozers, water trucks, excavators, graders, scrapers, forklifts, cranes, generator sets, welders, pavers, rollers, and air compressors. *Table 4.12-5*, *Maximum Noise Levels Generated by Construction Equipment,* indicates the anticipated noise levels of construction equipment based on a distance of 50 feet between the equipment and noise receptor. It is noted that the noise levels identified in *Table 4.12-5* are maximum sound levels (L_{max}), which are the highest individual sound occurring at an individual time period. Operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three or four minutes at lower power settings.

Table 4.12-5
Maximum Noise Levels Generated by Construction Equipment

Type of Equipment	Acoustical Use Factor[1]	L_{max} at 50 Feet (dBA)
Concrete/Industrial Saw	20	90
Crane	16	81
Dozer	40	82
Excavator	40	81
Forklift	40	79
Generator	50	81
Grader	40	85
Other Equipment (greater than five horse power)	50	85
Paver	50	77
Roller	20	80
Tractor	40	84
Truck	40	80
Welder	40	73

Note:
1 – Acoustical use factor (percent): Estimates the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.
Source: Federal Highway Administration, *Roadway Construction Noise Model (FHWA-HEP-05-054),* dated January 2006.

Pursuant to the City's Noise Ordinance, construction activities are permitted between 7:00 a.m. and 7:00 p.m. on weekdays, between 9:00 a.m. and 6:00 p.m. on Saturdays, and are prohibited on Sundays and federal holidays. As noise levels from point sources typically attenuate at a rate of 6 dB per doubling of distance, noise levels during construction as a result of construction equipment would be below the noise levels in Table 4.12-5 and would likely be masked by traffic along West 17th Street, and Superior Avenue. Nighttime construction would not be required for the Project. Compliance with the Noise Ordinance regarding the specified hours of construction, pursuant to Standard Condition 4.12-1, would ensure that construction-related noise impacts would be less than significant.

Long-Term Operational Impacts

If the ambient noise environment is quiet and the new noise source increases the noise exposure, an impact may occur even though a criterion level might not be exceeded. The Project would result in a significant noise impact if a permanent increase in ambient noise levels of 3.0 dB[1] would occur upon Project implementation, and the resulting noise level exceeds the applicable exterior standard at a noise sensitive use.

Off-Site Mobile Noise

An off-site traffic noise impact typically occurs when there is a discernible increase in traffic and the resulting noise level exceeds an established noise standard. In community noise considerations, changes in noise levels greater than 3 dB are often identified as substantial, while changes less than 1 dB are not discernible to local residents. Thus, a project would result in a significant noise impact when a permanent increase in ambient noise levels of 3 dB occurs upon project implementation, and the resulting noise level exceeds the applicable exterior standard at a noise sensitive use.

Based on the *17th/Superior Live/Work Project Traffic Impact Analysis*, the Project would result in an overall net reduction in daily trips to and from the Project site. Traffic generally must double in volume to result in a 3 dB increase. Therefore, due a decrease in daily trips, the Project would not result in a 3 dB increase at off-site uses as a result of traffic noise. Off-site noise impacts associated with mobile noise sources would be less than significant.

On-Site Mobile Noise

The Project would result in 29 live/work units at the site. The future residents of the proposed on-site live/work units could be exposed to elevated noise levels from traffic noise along West 17th Street and Superior Avenue. As noted above, Project implementation would result in nominal traffic on adjacent roadways, as compared to the existing conditions. The Future (Year 2015 With Project) traffic volumes along West 17th Street and Superior Avenue are 10,743 average daily trips and 21,342 average daily trips, respectively. The Federal Highway Administration (FHWA) TNM 2.5 model was used to evaluate the noise impacts to the future on-site uses from traffic along West 17th Street and Superior Avenue; refer to the TNM 2.5 outputs in Appendix B, *Modeling Data*, of Appendix D, *Noise Data*. Noise levels from typical daily traffic along West 17th Street and Superior Avenue were modeled at a total of 29 receptor locations on the

[1] According to the California Department of Transportation's *Traffic Noise Analysis Protocol,* dated May 2011, a 3.0 dB difference in noise level is generally the point at which the human ear will perceive a difference in noise levels.

Project site, including the first floor work component, the second and third story residential components, and the rooftop deck areas.

As noted in *Table 4.12-2*, the City does not consider exterior balconies or deck areas of mixed uses or live/work units to be exterior areas subject to the noise standards. However, interior standards remain applicable to the commercial and residential floors of the proposed live/work units. The exterior noise levels were modeled using the Federal Highway Administration's Traffic Noise Model (TNM) 2.5 model to obtain the interior noise levels using a standard exterior to interior attenuation rate of 20 dB from standard construction materials and windows. The anticipated exterior noise levels at the receptor locations on the ground floors (work component) would range from 48.9 to 67.3 dBA, resulting in interior noise levels ranging between 28.9 and 47.3 dBA, which would be below the City's 50 dBA CNEL standard for commercial office uses (i.e., the work area of the live/work units). The anticipated exterior noise levels at the receptor locations on the second and third floors (residential component) would range from 53.8 to 67.7 dBA CNEL, thus, resulting in interior noise levels ranging between 33.8 and 47.7 dBA, which could exceed the City's residential interior standard of 45 dBA. Recommended Mitigation Measure NOI-1 requires that the residential use areas exposed to West 17th Street and Superior Avenue include windows with a minimum Sound Transmission Class (STC) of 33, in order to ensure interior noise levels are below the City's 45 dBA CNEL interior standard. The anticipated exterior noise levels between 53.8 and 67.7 dBA on the second and third floors are representative of the expected noise levels at the balconies and roof decks of the units facing the adjacent roadways. However, as previously noted, the City has exempted exterior balconies or deck areas of mixed uses or live/work units to be exterior areas from being subject to noise standards, and no mitigation for these areas would be required. With implementation of the recommended mitigation, on-site noise impacts to the proposed live/work uses from mobile noise sources would be less than significant.

Operational Stationary Source Noise

Stationary noise sources would include noise associated with mechanical equipment and parking areas, as well as noise from adjacent uses. Noise impacts from these sources would be intermittent and occur primarily during daytime hours.

Mechanical Equipment

Typically, mechanical equipment noise is 55 dBA at 50 feet from the source. Heating, ventilation, and air conditioning (HVAC) units would be included on the roof of the structures throughout the site. As the Project is not located in proximity to sensitive receptors, noise from the Project's HVAC units would not be perceptible at the nearest residents located across Superior Avenue to the southeast. Thus, impacts from the Project's mechanical equipment would be less than significant.

Parking Areas

Traffic associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are based on a time-averaged scale such as the CNEL scale. However, the instantaneous maximum sound levels generated by a car door slamming, engine starting up and car passbys may be an annoyance to adjacent noise-sensitive receptors. Estimates of the maximum noise levels associated with some parking lot activities are presented in *Table 4.12-6*, *Typical Noise Levels*

Generated by Parking Lots. Conversations in parking areas may also be an annoyance to adjacent sensitive receptors. Sound levels of speech typically range from 33 dBA at 48 feet for normal speech to 50 dBA at 50 feet for very loud speech.

Table 4.12-6
Typical Noise Levels Generated by Parking Lots

Noise Source	Maximum Noise Levels at 50 Feet from Source
Car door slamming	63 dBA L_{eq}
Car starting	60 dBA L_{eq}
Car idling	61 dBA L_{eq}

Impacts associated with parking would be considered minimal, since the parking areas are not located in the vicinity of any sensitive receptors. It is noted that parking lot noise involves instantaneous noise levels compared to noise standards in the CNEL scale, which are averaged over time. As a result, actual noise levels over time resulting from parking lot activities would be far lower. Noise associated with parking lot activities is not anticipated to exceed the City's Noise Standards or the California Land Use Compatibility Standards during operation, thus, would be less than significant.

Adjacent Uses

The Project site is surrounded by commercial uses to the north/northeast, light industrial/warehouse uses to the northwest, a commercial property (vacant lot formerly a service station) and Superior Avenue to the east, and JC Carter, a commercial/industrial use to the west. It is noted, JC Carter is one of two industrial properties with a 50-foot buffer zone from the industrial property line established through City Council Resolution 06-34. The second industrial property with an industrial buffer zone, CLA-VAL, is located at 1701 Placentia Avenue, approximately 2,352 feet northwest of the Project site. As noted in Table 4.12-4, noise measurements were conducted at the Project site (Site 1, 66.4 dBA L_{eq}, and Site 3, 67.4 dBA L_{eq}), as well as near the vacant lot to the east (Site 2, 68.1 dBA L_{eq}). Noise levels experienced on-site as a result of the surrounding land uses would be similar to the measurements taken at Site 1 and Site 3 due to the location of the measurements. It is also noted that noise from the surrounding uses was not discernible above the vehicular traffic noise produced along the adjacent roadways. Therefore, because of the existing traffic noise levels, the existing adjacent commercial uses would not cause an exceedance of the City's interior noise standards for on-site residential or commercial uses. Impacts would be less than significant in this regard. Additionally, Standard Condition SC 4.1-2 requires notification to buyers that the Project is located within an area designated as Light Industry and subject to existing and potential annoyances/ inconveniences (such as noise) associated with industrial land uses.

Although the Project has been analyzed with respect to the existing surrounding industrial and commercial uses, there is also a potential for the surrounding businesses to change ownership and business operations. Therefore, future stationary noise impacts may increase or decrease accordingly. As noted above, the Project would be subject to compliance with Mitigation Measure NOI-1 and Standard Condition 4.1-2, which require upgraded windows and prior notification to buyers regarding existing and potential

annoyances/inconveniences (such as noise) associated with industrial land uses. Compliance with Mitigation Measure NOI-1 and Standard Condition SC 4.1-2 would ensure that noise impacts from future industrial uses have been addressed. Impacts would be less than significant in this regard.

Standard Condition:

SC 4.12-1 During construction, the contractor shall ensure that construction activity complies with the City's Noise Ordinance. Exceptions may be made for activities that will not generate noise audible from off-site, such as painting and other quiet indoor work.

Mitigation Measures:

NOI-1 For Project residential areas immediately adjacent to West 17th Street and Superior Avenue (i.e., along the roadway or with a direct line of sight), all exterior walls and floor ceiling assemblies (unless within a unit) shall be constructed with double paned glass or an equivalent windows in a manner to provide an airborne sound insulation system achieving a minimum Sound Transmission Class of 33. The Applicant, as an alternative, may retain a qualified acoustical consultant whom shall submit a report for an alternative means of sound insulation satisfactory to the City of Costa Mesa which achieves a maximum interior noise level of 45 CNEL.

4.12.b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact.

Short-Term

Construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The types of construction vibration impact include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. The vibration produced by construction equipment is illustrated in *Table 4.12-7*, *Typical Vibration Levels for Construction Equipment*.

The Project site contains on-site buildings that would be demolished. However, the anticipated demolition activities (buildings, pavement, and driveway removal) could occur within 25 feet of the nearest adjacent structure. Groundborne vibration decreases rapidly with distance. As indicated in *Table 4.12-7*, based on the Federal Transit Administration (FTA) data, vibration velocities from typical heavy construction equipment operation that would be used during construction range from 0.003 to 0.089 inch-per-second peak particle velocity (PPV) at 25 feet from the source of activity. The nearby structures would not be exposed to significant vibration from construction activities, as the proposed construction activities would not be capable of exceeding the 0.2 inch-per-second PPV significance threshold for vibration. Therefore, vibration impacts would be less than significant.

Table 4.12-7
Typical Vibration Levels for Construction Equipment

Equipment	Approximate peak particle velocity at 25 feet (inches/second)[1]
Large bulldozer	0.089
Loaded trucks	0.076
Small bulldozer	0.003

Notes:
1 – Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006. Table 12-2.
2 – Calculated using the following formula:

$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$
where: PPV (equip) = the peak particle velocity in in/sec of the equipment adjusted for the distance
PPV (ref) = the reference vibration level in in/sec from Table 12-2 of the FTA *Transit Noise and Vibration Impact Assessment Guidelines*
D = the distance from the equipment to the receiver

Long-Term

The Project proposes live/work units, which would not generate ground-borne vibration that could be felt at surrounding uses. The Project does not involve railroads or substantial heavy truck operations, and therefore would not result in vibration impacts at surrounding uses. The Project site is, however, located within a mature commercial/industrial area. The surrounding commercial/industrial uses may expose the Project's future residents/patrons to groundborne vibration or groundborne noise levels. Standard Condition SC 4.1-2 requires notification to buyers that the Project is located within an area designated as Light Industry and subject to existing and potential issues associated with industrial land uses.

Standard Condition: Refer to Standard Condition SC 4.1-2.

Mitigation Measures: No mitigation is required.

4.12.c. A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?

Less Than Significant Impact With Mitigation. Refer to Response 4.12.a, above.

Mitigation Measures: Refer to Mitigation Measure NOI-1.

4.12.d. Result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above the levels existing without the Project?

Less Than Significant With Mitigation. Refer to Responses 4.12.a and 4.12.b above.

Mitigation Measures: Refer to Mitigation Measure NOI-1.

4.12.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 3.3 miles southwest of John Wayne Airport, and outside of the most recently mapped 65 CNEL impact area.[2] Therefore, Project implementation would not expose people residing or working at the proposed live/work development to excessive airport-related noise levels.

Mitigation Measures: No mitigation is required.

4.12.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 within the vicinity of a private airstrip. Therefore, Project implementation would not expose people residing or working at the proposed live/work development to excessive airstrip-related noise levels.

Mitigation Measures: No mitigation is required.

[2] John Wayne Airport Website, Orange County Land Use Commission, *Annual 65 dB CNEL Impact Area*, http://www.ocair.com/reportspublications/AccessNoise/cnelimpactarea/2012.pdf, Accessed September 9, 2013.

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4.13 POPULATION AND HOUSING

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				✓

4.13.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 City's population as of January 2013 is 111,358 persons and the City's housing stock totals 42,162 units, with an average household size of 2.72.[1] Approximately 19,559 square feet of commercial and industrial uses are located on the Project site; refer to Exhibit 2-3, *Existing Site Conditions* and Table 2-1, Existing *Onsite Uses*. The estimated employment associated with these existing uses is approximately 19 employees.[2]

The Project involves construction of a 29-unit, attached live/work development in place of the existing commercial/industrial uses. The development would include approximately 7,486 square feet of work space, or between 250 and 267 square feet per unit. The estimated employment associated with the proposed live/work development is approximately 29 employees or one employee per unit.

A project could induce population growth in an area, either directly (for example, by proposing new homes and/or businesses) or indirectly (for example, through extension of roads or other infrastructure). The Project proposes new homes, thus, would induce direct population growth within the City. It is likely that the proposed type of urban housing would appeal to a niche market of young urban professionals, recent college graduates formerly residing with their parents, or single first-time homeowners. The demand of moderately-priced, contemporary housing for this niche market could be satisfied by the proposed live/work development. Therefore, it is likely the proposed live/work units would have a smaller household size than a traditional Costa Mesa housing unit. Notwithstanding, in order to provide a conservative analysis, based on an average household size of 2.72, Project implementation could result in a population increase of

[1] State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State - January 1, 2011- 2013*. Sacramento, California, May 2013.

[2] Existing number of employees onsite calculated as follows: one employee per 1,350 square foot of warehouse land uses and one employee per 450 square feet of Other Retail/Service land uses per *Employment Density Study Summary Report*, Prepared by The Natelson Company for the Southern California Association of Governments, Table II-A, October 31, 2001.

approximately 79 persons. The potential population growth would be nominal, representing less than one-tenth of one percent increase over the City's existing 2013 population of 111,358 persons. Therefore, Project implementation would not induce substantial population growth within the City.

Mitigation Measures: No mitigation is required.

4.13.b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Less Than Significant Impact. Project implementation would not result in the displacement of existing housing, since none are present on the Project site. The proposed live/work development would result in a net increase of 29 dwelling units. Therefore, Project implementation would not necessitate the construction of replacement housing elsewhere.

Mitigation Measures: No mitigation is required.

4.13.c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. As the Project would not displace substantial numbers of people, the construction of replacement housing elsewhere would not be required and significant impacts would not occur.

Mitigation Measures: No mitigation is required.

4.14 PUBLIC SERVICES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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:				
1) Fire protection?			✓	
2) Police protection?			✓	
3) Schools?			✓	
4) Parks?			✓	
5) Other public facilities?			✓	

4.14.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:

4.14.a.1. Fire protection?

Less Than Significant Impact. The Costa Mesa Fire Department (CMFD) provides fire protection and emergency medical services to the City, which include fire prevention and suppression, paramedic, emergency medical, and hazardous materials management/environmental safety. The CMFD is comprised of three divisions: Administration; Suppression/Mobile Intensive Care (Emergency Medical Services); and Fire Prevention. There are four paramedic engine companies, two truck companies, an urban search and rescue squad, and a Battalion Chief on duty 24-hours a day, seven days a week. These fire personnel respond from six fire stations strategically located within the City.[1] The closest station to the Project is the Park Station, located at 1865 Park Avenue, approximately 0.6 mile to the north. Depending on the nature, size, and location of the alarm, units from multiple stations will respond. There are 29 fire suppression/EMS personnel on duty that work 24-hour shifts at the Park Station. According to the *GPEIR* page 4.11-4, the goal of the Costa Mesa Fire Department is to respond to fire alarms and emergencies within five minutes, 80 percent of the time.

The Project does not propose new or physically altered fire protection facilities. The Project involves construction of a 29-unit, attached live/work development in place of commercial/industrial uses that exist on the property. Therefore, Project implementation would result in an increase of 29 dwelling units that

[1] City of Costa Mesa Website, Costa Mesa Fire Department, http://www.costamesaca.gov, Accessed on September 1, 2013.

include approximately 7,486 square feet of commercial space, with a resultant increase in the demand for fire protection services. However, because the Project proposes infill redevelopment that is similar to the existing uses, Project implementation is not anticipated to increase CMFD response times to the Project site or surrounding vicinity, or require construction of new or physically altered fire protection facilities. The Project's design would be subject to compliance with 2010 California Fire Code (and all amendments) requirements, including the provision of fire sprinkler systems throughout buildings, as specified in CMMC *Title 7*, *Fire Protection and Prevention*. The development would also be subject to compliance with the fire provisions specified in the 2010 California Building Code and all incorporated amendments, and the 2009 International Fire Code. Additionally, the Project would be subject to compliance with the Standard Conditions specified below, in order to enhance fire protection measures. The Project plans would be reviewed and approved by the Costa Mesa Building and Fire Departments, which would ensure adequate emergency access, fire hydrant availability, and compliance with all applicable codes and standards.

Compliance with the City's discretionary review process and CMMC requirements would ensure that Project implementation would result in a less than significant impact to fire protection services.

Standard Conditions:

SC 4.14-1 The final master plan for development of the Project site shall provide sufficient capacity for fire flows required by the City of Costa Mesa Fire Department.

SC 4.14-2 Vehicular access shall be provided and maintained serviceable throughout construction to all required fire hydrants.

SC 4.14-3 Prior to the issuance of a Building Permit, the City of Costa Mesa Fire Department shall review and approve the developer's Project design features to assess compliance with the California Building Code and California Fire Code. Fire staff shall examine the projected demands of the proposed Project and make recommendations to ensure that adequate personnel/resources will be available to meet projected demand. Recommendations of the study shall be implemented to the satisfaction of the Fire Department to ensure that emergency response impacts are minimized to below a level of significance.

SC 4.14-4 The Project shall provide approved smoke detectors to be installed in accordance with the 2007 Edition of the Uniform Fire Code.

SC 4.14-5 The Project shall provide fire extinguishers with a minimum rating of 2A to be located within 75 feet of travel distance from all areas. Extinguishers may be of a type rated 2A, 10BC as these extinguishers are suitable for all types of fires and are less expensive.

SC 4.14-6 The Project shall provide an automatic fire sprinkler system according to NFPA 13 R.

SC 4.14-7 The Project shall provide a fire alarm system.

SC 4.14-8 The Project shall provide individual numeric signage for proposed residences with minimum 6 inches height.

Mitigation Measures: No mitigation is required.

4.14.a.2. Police protection?

Less Than Significant Impact. The Costa Mesa Police Department (CMPD) provides police protection services to the City from their headquarters located at 99 Fair Drive. The CMPD is composed of three divisions: Administration; Field Operations; and Support Services.[2] The CMPD is comprised of 196 full-time positions, of which 130 are sworn officers and 66 are civilians, with various part-time positions to aid throughout the organization.[3]

The Project does not propose new or physically altered police protection facilities. The Project involves construction of a 29-unit, attached live/work development in place of the 19,559 square feet of commercial/industrial uses that exists on the property. Project implementation would result in a net increase of 29 dwelling units that include approximately 7,486 square feet of work space, with a resultant increase in the demand for police protection services. However, because the Project proposes infill development that is similar to the existing uses, Project implementation is not anticipated to increase CMPD response times to the Project site or surrounding vicinity, or require construction of new or physically altered police protection facilities. The Project would be subject to compliance with Standard Condition SC 4.14-9, in order to enhance police protection services. Also, the Project plans would be reviewed and approved by the Costa Mesa Building and Police Departments, which would ensure adequate safety and crime prevention measures are provided. Compliance with the City's discretionary review process would ensure that Project implementation would result in a less than significant impact to police protection services.

Standard Conditions:

SC 4.14-9 As final building plans are submitted to the City of Costa Mesa for review and approval, the Costa Mesa Police Department shall review all plans for the purpose of ensuring that design requirements are incorporated into the building design to increase safety and avoid unsafe conditions. These measures focus on security measures are recommended by the Police Department, including but not limited to, the following:

- Lighting shall be provided in open areas and parking lots.
- Required building address numbers shall be readily apparent from the street and rooftop building identification shall be readily apparent from police helicopters for emergency response agencies.
- Landscaping requirements.
- Emergency vehicle parking areas shall be designated within proximity to buildings.

[2] City of Costa Mesa Website, Police Department, http://www.costamesaca.gov, Accessed September 1, 2013.

[3] Ibid.

- The applicant shall fund all costs associated with police and fire radio reception enhancement, including a Bi-Directional Amplifying 800 MHz antenna (BDA).

- Prior to the issuance of a grading permit, the City of Costa Mesa Police Department shall review and approve the developer's project design features to ensure adequate security measures are incorporated into the project design and that sufficient personnel/resources are available to meet the demands of the proposed project. Any requirements with regard to additional resources shall be completed by the Developer and shall be implemented to the satisfaction of the Police Chief to ensure that emergency response impacts are minimized to below a level of significance.

Mitigation Measures: No mitigation is required.

4.14.a.3. Schools?

Less Than Significant Impact. The Project site is situated within the Newport-Mesa Unified School District (NMUSD) (grades K thru 12). The Project site is specifically located in the Newport Heights Elementary School, Ensign Middle School, and Newport Harbor High School service areas, with school enrollments of approximately 620 students, 1,159 students, and 2,507 students, respectively.[4]

It is noted that the student generation rates provided by the Newport-Mesa Unified School District do not take into account the target market of the proposed live/work development's new residents. These types of residential uses in an industrial area are typically marketed to homeowners who do not have minor children and therefore would have no need for school services. While the proposed development would not preclude families with children, it is likely that this "new type of urban housing" would appeal to a niche market of young urban professionals, recent college graduates formerly residing with their parents, or single first-time homeowners. The demand of moderately-priced, contemporary housing for this niche market could be satisfied by the proposed live/work development. Therefore, the following analysis is based on student generation factors for traditional residences and may not necessarily address this new type of urban housing.

The Project does not propose new or physically altered school facilities. The Project involves construction of a 29-unit, attached live/work development in place of the 19,559 square feet of commercial/industrial uses that exists on the property. Therefore, Project implementation would result in an increase of 29 dwelling units, with a resultant increase in the demand for school facilities. Based on a student generation factor of 0.26 students per dwelling unit,[5] Project implementation could generate a total of approximately eight (8) students. As the Project is anticipated to generate a nominal increase in the student population, it is anticipated that the NMUSD schools would have the capacity to accommodate these students and construction of new or physically altered school facilities would not be required.

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[4] Newport-Mesa Unified School District Website, School Locator Page and School Accountability Reports for 2011-2012 School Year, http://web.nmusd.us, Accessed September 1, 2013.

[5] RBF Consulting, *City of Costa Mesa General Plan EIR*, January 22, 2002, Page 4.11-9.

Assembly Bill 2926 (AB 2926) passed in 1986 allows school districts to collect impact fees from developers of new residential and commercial/industrial building space. Senate Bill 50 (SB 50) and Proposition 1A, both of which passed in 1998, provided a comprehensive school facilities financing and reform program. The provisions of SB 50 prohibit local agencies from denying either legislative or adjudicative land use approvals on the basis that school facilities are inadequate, and reinstates the school facility fee cap for legislative actions (e.g., General Plan amendments, specific plan adoption, zoning plan amendments). According to Government Code Section 65996, the development fees authorized by SB 50 are deemed to be "full and complete school facilities mitigation."

The NMUSD collects $1.84 per square foot of residential uses from developers.[6] The Project Applicant would be subject to payment of this development fee pursuant to Standard Condition SC 4.14-10, which would fully mitigate any potential impact to NMUSD school facilities. Therefore, Project implementation would result in a less than significant impact in this regard.

Standard Condition:

SC 4.14-10 Prior to issuance of building permits, the Developer shall pay a school impact fee currently calculated at $1.84 per square foot for residential development and $0.30 per square foot for commercial development.

Mitigation Measures: No mitigation is required.

4.14.a.4. Parks?

Less Than Significant Impact. There are approximately 1,708 acres of open space and parkland in the City, including Neighborhood and Community Parks, Community Centers, Regional Nature Preserve areas, Institutional Uses, Open Space Easements, and Golf Courses.[7] The City's standard for permanent public open space is 5.76 acres per 1,000 residents.[8]

The Project does not propose new or physically altered park facilities. The Project involves construction of a 29-unit, attached live/work development in place of the commercial/industrial land uses that exists on the property. Project implementation would result in a net increase of 29 dwelling units, with a resultant population increase of approximately 79 persons. Based on a parkland demand factor of 5.76 acres per 1,000 residents, Project implementation would generate a demand for approximately 0.46 acres of parkland.

CMMC Title 13 Chapter XI Article 5, *Park and Recreation Dedications*, establishes procedures for requiring park and recreational facilities in conjunction with residential subdivisions. More specifically, CMMC Section 13-256, *Amount of Fee in Lieu of Land Dedication*, specifies that "where there is no public park or recreation facility required within the proposed subdivision, or where the subdivision contains fifty (50) lots

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[6] City of Costa Mesa Website, Development Fees Information, http://www.costamesaca.gov, Accessed September 1, 2013.

[7] Telephone Conversation: Mejia, Bart, City of Costa Mesa Parks and Recreation Department, October 17, 2012.

[8] RBF Consulting, *City of Costa Mesa General Plan EIR*, January 22, 2002, Page 4.12-7.

or fewer, the subdivider shall pay a fee in lieu of land dedication reflecting the value of land required for park and recreation purposes, in accordance with the schedule of fees as adopted by resolution of the City Council."

According to the City of Costa Mesa Parkland Impact Fee Schedule, the current fee per multi-family dwelling unit is $13,829.[9] As permitted by CMMC Section 13-256 and in compliance with Standard Condition 4.14-11, the Applicant would pay this Parkland Impact Fee in lieu of dedication of 0.46 acres of parkland. Compliance with CMMC Title 13 Chapter XI Article 5 would ensure that Project implementation would result in a less than significant impact involving parkland demand. Private open spaces in the form of balconies or decks and rooftop areas are proposed. Additionally, the Project proposes approximately 19,969 square feet square feet of open space/landscaping within the proposed development, representing approximately 30 percent of the total lot area. The provision of onsite open space would further minimize potential impacts to recreational facilities.

Standard Condition:

SC 4.14-11 Prior to issuance of occupancy permits, the Developer shall pay a park impact fee or dedicate parkland to meet the demands of the proposed development. The current park impact fee is calculated at $13,829 per new multi-family dwelling unit.

Mitigation Measures: No mitigation is required.

4.14.a.5. Other public facilities?

Less Than Significant Impact. The Orange County Public Library (OCPL) operates three public libraries within the City of Costa Mesa. The nearest public library to the Project site is the Costa Mesa/Donald Dungan Library located approximately one mile northwest, at 1855 Park Avenue, Costa Mesa.

The Project does not propose new or physically altered library facilities. Project implementation would result in an increase of 29 dwelling units, with a resultant population increase of approximately 79 persons. Given the Project's nominal growth in population, construction of new or physically altered library facilities would not be required.

The 2000 General Plan EIR identified a current standard set by the OCPL system for 0.2 square feet per capita of library space. While the Costa Mesa library facilities currently do not meet this standard in existing conditions, the General Plan EIR identified less than significant impacts to library services because the OCPL did not anticipate any direct significant impacts on these facilities. If the same analytical approach regarding library service impacts were applied to the Project, less than significant impacts to library services would also be identified. Therefore, this environmental document concludes that the Project will result in less than significant library impacts.

[9] City of Costa Mesa Website, Development Fees Information, http://www.costamesaca.gov, Accessed September 1, 2013.

In April 2005, the Costa Mesa City Council approved a request from the Friends of the Costa Mesa Libraries to set aside the 2.5 acre Civic Center Park through Year 2015 as a future library site. A 50,000-square foot central library is proposed, and fundraising efforts are underway. If this central library is constructed, impacts to library services would be further reduced.

Mitigation Measures: No mitigation is required.

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4.15 RECREATION

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?			✓	

4.15.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. Project implementation would not increase the use of existing recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Any increased demands for recreational facilities would be mitigated through compliance with CMMC requirements and the provision of onsite landscaping; refer to Response 4.14.a.4.

Mitigation Measures: No mitigation is required.

4.15.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 Project does not include or require construction or expansion of recreational facilities; refer to Response 4.14.a.4.

Mitigation Measures: No mitigation is required.

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4.16 TRANSPORTATION/TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			✓	
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for 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. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			✓	

This section is based on the 17th/Superior Live/Work Project Traffic Impact Analysis (RBF Consulting, September 3, 2013); refer to Appendix D, *Traffic Impact Analysis*. This study analyzes forecast traffic conditions associated with the Project, which is detailed in Section 2.0, *Project Description*. The Analysis considers impacts on study area intersections resulting from the Project. Mitigation measures are recommended, if necessary, to avoid or lessen Project impacts.

The following scenarios are evaluated in this analysis:

- Existing Conditions;
- Forecast Existing Plus Project Conditions;
- Forecast Opening Year (2014) Without Project Conditions; and
- Forecast Opening Year (2014) With Project Conditions.

EXISTING CIRCULATION SYSTEM

Study Roadways

The characteristics of the roadway system in the vicinity of the Project site are described below:

- 17th Street is a four-lane divided roadway trending in an east-west direction. 17th Street has a continuous left turn lane west of Superior Avenue and transitions into a raised median from Superior Avenue to approximately 520 feet east of Newport Boulevard (SR-55). The posted speed limit is 35 miles per hour on 17th Street within the Project vicinity; on street parking is prohibited.

- Superior Avenue is a four-lane divided roadway with a continuous left turn lane trending in a north-south direction south of 17th Street. Superior Avenue transitions to a two-lane undivided roadway north of 17th Street. The posted speed limit is 35 miles per hour on Superior Avenue within the Project vicinity; on street parking is prohibited.

- Newport Boulevard, designated State Route 55 (SR-55), is a six-lane divided roadway with a raised median trending in a north-south direction south of 17th Street. Newport Boulevard (SR-55) transitions into a seven-lane divided roadway (four northbound lanes and three southbound lanes) north of 17th Street. The posted speed limit is 40 miles per hour within the Project vicinity; on street parking is prohibited.

Study Intersections

This study analyzes the following two (2) intersections in the vicinity of the Project site, as identified by City staff:

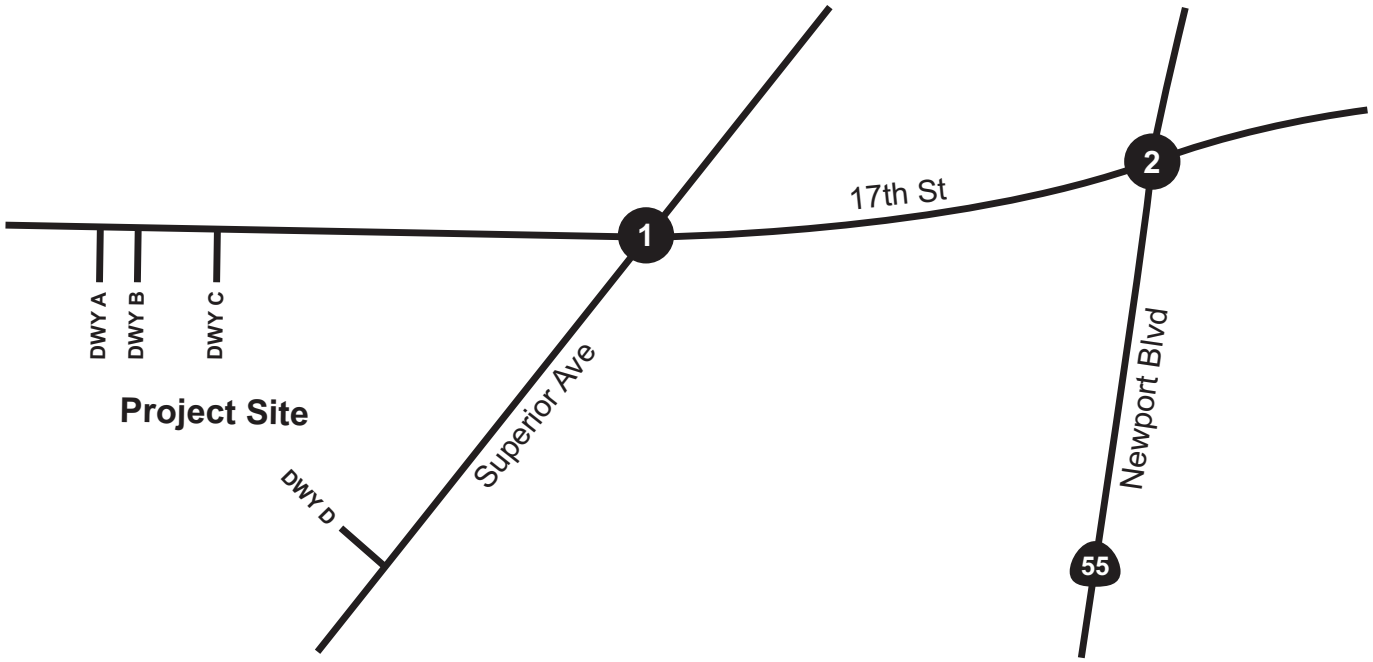
1. Superior Avenue/17th Street (signalized); and
2. Newport Boulevard (SR-55)/17th Street (signalized).

Table 4.16-1, *Study Intersection Applicable Jurisdictions*, identifies the applicable jurisdictions of the two (2) study intersections.

Table 4.16-1
Study Intersection Applicable Jurisdictions

Intersection No.	Study Intersection	City of Costa Mesa	Caltrans
1.	Superior Avenue / 17th Street	X	
2.	Newport Boulevard (SR-55) / 17th Street		X
Source: RBF Consulting, *17th/Superior Live/Work Project Traffic Impact Analysis*, September 3, 2013.			

Exhibit 4.16-1, *Study Intersection Locations*, shows the location of the study intersections.



Legend:

DWY Driveway

X Study Intersection

NOT TO SCALE

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WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Study Intersection Locations

Exhibit 4.16-1

METHODOLOGY

Costa Mesa Intersection Analysis Methodology

Level of service (LOS) is commonly used as a qualitative description of intersection operation and is based on the capacity of the intersection and the volume of traffic using the intersection. The Intersection Capacity Utilization (ICU) analysis method is utilized by Costa Mesa to determine the operating LOS of signalized intersections. The ICU analysis methodology describes the operation of an intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding volume to capacity (V/C) ratios shown in *Table 4.16-2*, *Signalized Study Intersection V/C and LOS Ranges*.

Table 4.16-2
Signalized Study Intersection V/C and LOS Ranges

V/C Ratio	LOS
≤ 0.60	A
0.61 to ≤ 0.70	B
0.71 to ≤ 0.80	C
0.81 to ≤ 0.90	D
0.91 to ≤ 1.00	E
> 1.00	F

Note: V/C Ratio = Volume to Capacity Ratio.
Source: RBF Consulting, *17th/Superior Live/Work Project Traffic Impact Analysis*, September 3, 2013.

State Highway Intersection Analysis Methodology

This intersection analysis of State-controlled study intersections has been prepared in accordance with the Caltrans *Guide for the Preparation of Traffic Impact Studies* (State of California Department of Transportation, December 2002). This section evaluates the potential forecast traffic impact of Project-generated trips at the following State-controlled study intersection:

- Newport Boulevard (SR-55) / 17th Street.

Caltrans advocates use of Highway Capacity Manual (HCM) intersection analysis methodology to analyze the operation of signalized intersections. The HCM analysis methodology describes the operation of a signalized intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding stopped delay experienced per vehicle as indicated in *Table 4.16-3*, *State Highway Signalized Study Intersection LOS and Delay Ranges*.

Table 4.16-3
State Highway Signalized Study Intersection LOS and Delay Ranges

LOS	Delay (seconds per vehicle)	Unsignalized Intersections
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: RBF Consulting, *17th/Superior Live/Work Project Traffic Impact Analysis*, September 3, 2013.

LOS is based on the average stopped delay per vehicle for all movements of signalized intersections and all-way stop-controlled intersections. For one-way or two-way stop-controlled intersections, LOS is based on the worst stop-controlled approach.

PERFORMANCE CRITERIA

Costa Mesa Intersection Performance Criteria

The City of Costa Mesa goal for peak hour intersection operation is LOS D or better.

State Highway Performance Criteria

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State Highway facilities.

THRESHOLDS OF SIGNIFICANCE

Costa Mesa Thresholds of Significance

To determine whether the addition of Project-generated trips results in a significant impact at a study intersection, and thus requires mitigation, Costa Mesa utilizes the following threshold of significance:

- A significant project impact occurs at a signalized study intersection when the addition of project-generated trips causes the peak hour LOS of the study intersection to change from acceptable operation (LOS A, B, C, or D) to deficient operation (LOS E or F).

State Highway Thresholds of Significance

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D at State-controlled facilities, however, Caltrans acknowledges that this may not always be feasible. If an existing

State-controlled facility is operating at less than the appropriate target LOS, the existing measures of effectiveness should be maintained.

While Caltrans has not established traffic thresholds of significance, this analysis utilizes the following traffic threshold of significance:

- A significant project impact occurs at a State-controlled study intersection when the addition of project-generated trips to an intersection operating at LOS D or worse causes the peak hour performance and associated LOS of the study intersection to deteriorate one letter grade or more when compared to pre-project conditions.

EXISTING CONDITIONS

Existing Conditions Traffic Volumes

To determine existing operation of the study intersections, a.m. peak period and p.m. peak period traffic movement counts were collected in June 2013 during typical weekday conditions and provided by the City of Costa Mesa. The a.m. peak period intersection counts were collected from 7:00 a.m. to 9:00 a.m.; the p.m. peak period intersection counts were collected from 4:00 p.m. to 6:00 p.m. The traffic volumes used in this analysis were taken from the highest hour within the two-hour peak period counted. Detailed traffic count data sheets are contained in Appendix A of Appendix D.

Exhibit 4.16-2, *Existing Study Intersection Geometry and Control*, shows existing study intersection geometry and control.

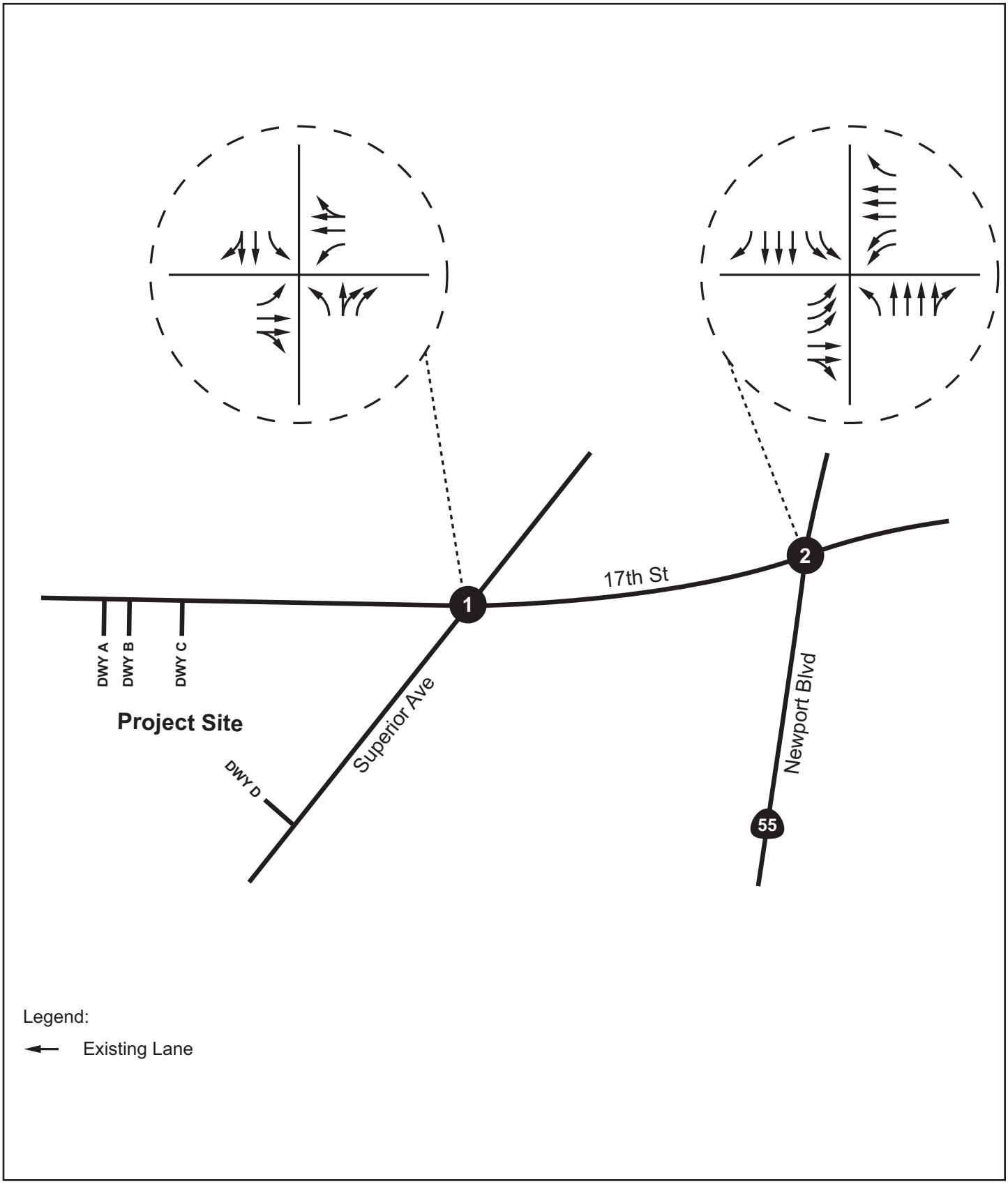
Exhibit 4.16-3, *Existing Conditions AM/PM Peak Hour Intersection Volumes*, shows existing conditions a.m. and p.m. peak hour volumes at the study intersections.

Existing Conditions City Study Intersection Peak Hour LOS

Table 4.16-4, *Existing Conditions AM/PM Peak Hour City Study Intersection LOS*, summarizes existing conditions a.m. peak hour and p.m. peak hour LOS of the City study intersection; detailed LOS analysis sheets are contained in Appendix B of Appendix D.

Table 4.16-4
Existing Conditions AM/PM Peak Hour City Study Intersection LOS

Study Intersection	V/C – LOS	
	AM Peak Hour	PM Peak Hour
Superior Avenue /17th Street	0.74 – C	0.78 – C
Note: V/C = volume to capacity ratio.		
Source: RBF Consulting, *17th/Superior Live/Work Project Traffic Impact Analysis*, September 3, 2013.		



NOT TO SCALE

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Existing Study Intersection Geometry and Control

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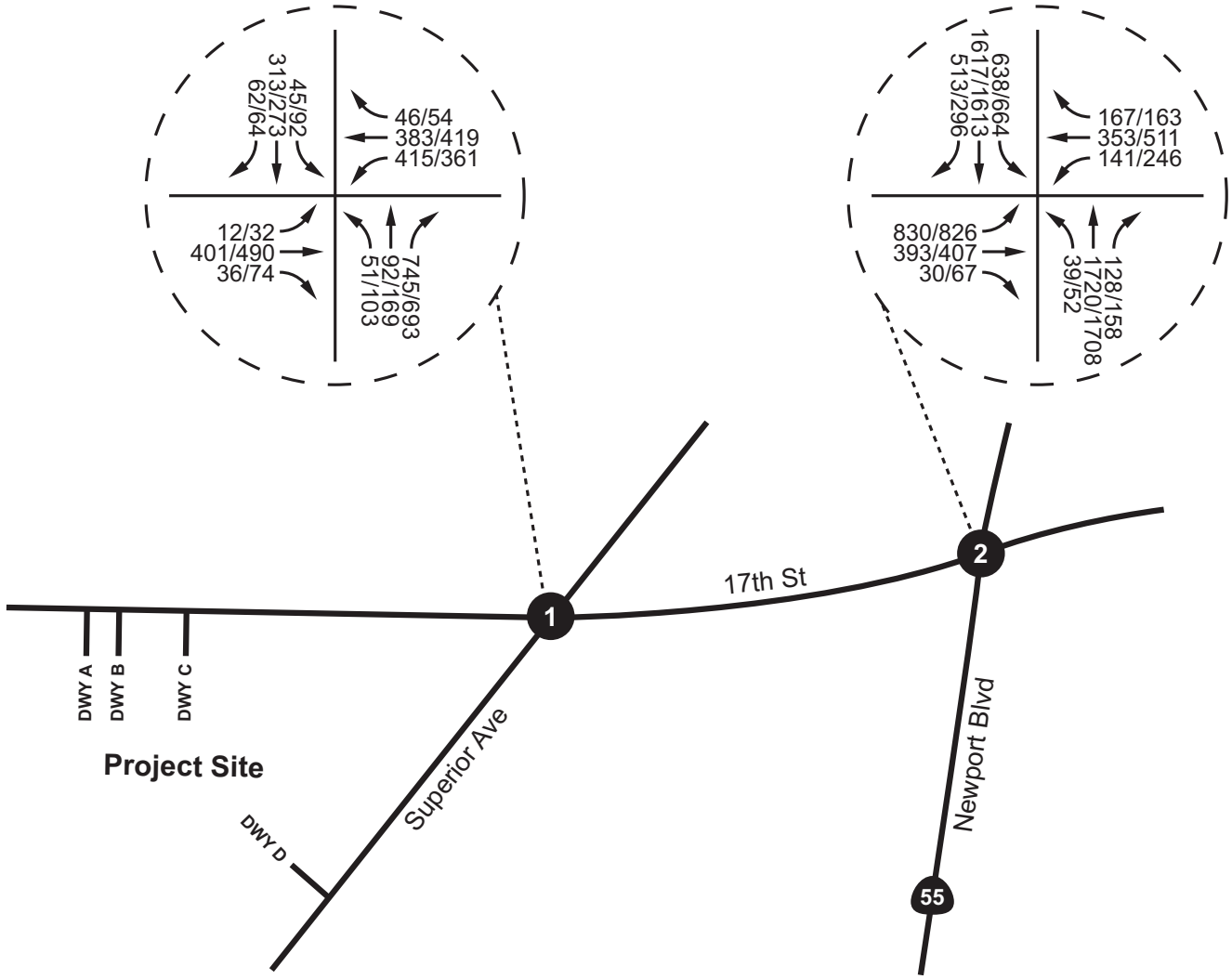
Exhibit 4.16-2



Legend:

X	Study Intersection
DWY	Driveway
XX/XX	AM/PM Peak Hour Volume

NOT TO SCALE

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
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Existing Conditions AM/PM Peak Hour Intersection Volumes

Exhibit 4.16-3

Existing Conditions State-Controlled Study Intersection Peak Hour LOS

Table 4.16-5, *Existing Conditions AM/PM Peak Hour State-Controlled Study Intersection LOS*, summarizes existing conditions a.m. peak hour and p.m. peak hour LOS of the State-controlled study intersection; detailed LOS analysis sheets are contained in Appendix B of Appendix D.

Table 4.16-5
Existing Conditions AM/PM Peak Hour State-Controlled Study Intersection LOS

State-Controlled Study Intersection	AM Peak Hour	PM Peak Hour
	Delay – LOS	Delay – LOS
Superior Avenue /17th Street	31.8 – C	34.0 – C
Note: Delay shown in seconds.		
Source: RBF Consulting, *17th/Superior Live/Work Project Traffic Impact Analysis*, September 3, 2013.		

4.16.a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

***Less Than Significant Impact*.**

PROPOSED PROJECT

This study analyzes forecast traffic conditions associated with the proposed 17th/Superior Live/Work Project located at the southwest corner of the 17th Street/Superior Avenue intersection, in the City of Costa Mesa. The Project site is currently occupied by approximately 19,559 square feet of commercial/warehouse land uses that would be displaced by the proposed 29 live/work units, which include a total of 7,486 square feet of work space. Full access for the site would continue to be provided at 17th Street and Superior Avenue. Exhibit 2-4, *Site Plan*, shows the proposed site plan for the 29 live/work unit development. The Project is planned to open in 2015.

Project Trip Generation

To determine the number of trips currently generated by the existing land uses that would be displaced by the Project, traffic counts were collected at the Project site in August 2013 during typical weekday conditions. *Table 4.16-6*, *Trip Generation of Existing Land Uses*, shows the trip generation of the existing land uses that would be displaced by the Project based on observed data.

Table 4.16-6
Trip Generation of Existing Land Uses

Land Use	AM Peak Hour Trips			PM Peak Hour Trips			Daily Trips
	In	Out	Total	In	Out	Total	
Displaced by Project (29 Live/Work Units)							
Commercial/Warehouse	7	13	20	17	11	28	538
Source: RBF Consulting, *17th/Superior Live/Work Project Traffic Impact Analysis*, September 3, 2013.							

As shown in *Table 4.16-6*, the existing trip generation that would be displaced by the 29 live/work units is approximately 538 daily trips, which includes approximately 20 a.m. peak hour trips and approximately 28 p.m. peak hour trips.

To calculate trips forecast to be generated by the proposed Project, Institute of Transportation Engineers (ITE) trip generation rates were utilized. The ITE Condominium land use category was utilized to forecast trips generated by the Project's residential component. The ITE General Office and Specialty Retail land use categories were utilized to forecast trips generated by the Project's "work" component, with the square footage of commercial use split evenly between office and retail uses.

The proposed live/work development is anticipated for small home-based businesses, which generate nominal customer traffic. These could include real estate appraisers, internet-based businesses, accountants, photographers, and other professions which require minimal customer visits or commercial visibility. The desired reduction in trip generation would occur when a resident "travels" downstairs to begin work each day, without taking a car trip to or from the site.

Consistent with other studies conducted within the City of Costa Mesa, a mixed-use reduction of 10-percent is assigned to the forecast traffic associated with the proposed Project uses.

Table 4.16-7, *ITE Trip Generation Rates for Project*, summarizes the ITE trip generation rates used to calculate the number of trips forecast to be generated by the Project.

Table 4.16-7
ITE Trip Generation Rates for Project

Land Use (ITE Code)	Units	AM Peak Hour			PM Peak Hour			Daily Trip Rates
		In	Out	Total	In	Out	Total	
Residential Condominium (230)	du	0.07	0.37	0.44	0.35	0.17	0.52	5.81
General Office Building (710)	tsf	1.37	0.19	1.56	0.25	1.24	1.49	11.03
Specialty Retail Center (826)	tsf	0.00	0.00	0.00	1.19	1.52	2.71	44.32
Notes: du = dwelling units; tsf = thousand square feet								
Source: RBF Consulting, *17th/Superior Live/Work Project Traffic Impact Analysis*, September 3, 2013.								

Table 4.16-8, *Forecast Project Trip Generation*, summarizes the forecast trip generation of the proposed Project when utilizing the ITE trip generation rates shown in *Table 4.16-7* and accounting for the displaced land uses on the Project site.

Table 4.16-8
Forecast Project Trip Generation

Project Component	AM Peak Hour Trips			PM Peak Hour Trips			Daily Trips
	In	Out	Total	In	Out	Total	
29-du Condominium	2	11	13	10	5	15	168
3.743-tsf Office	5	1	6	1	5	6	41
3.743-tsf Specialty Retail	0	0	0	4	6	10	166
Trip Generation Subtotal	7	12	19	15	16	31	375
10% Mixed Use Trip Reduction	*-1*	*-1*	*-2*	*-2*	*-2*	*-4*	*-38*
Total Trip Generation of Project	**6**	**11**	**17**	**13**	**14**	**27**	**337**
Displaced Land Use							
Commercial Land Uses[1]	-7	-13	-20	-17	-11	-28	-538
Total Forecast Net Trip Generation of Project	**-1**	**-2**	**-3**	**-4**	**3**	**-1**	**-201**

Notes: du = dwelling unit; tsf = thousand square feet.
1 – Existing trip generation determined from measured traffic counts on August 6, 2013.
Source: RBF Consulting, *17th/Superior Live/Work Project Traffic Impact Analysis*, September 3, 2013.

As shown in *Table 4.16-8*, when accounting for the displaced land uses, the Project is forecast to generate a total reduction of approximately 201 net daily trips, which includes a reduction of approximately 3 net a.m. peak hour trips and a reduction of approximately 1 net p.m. peak hour trip.

Forecast Project Trip Distribution

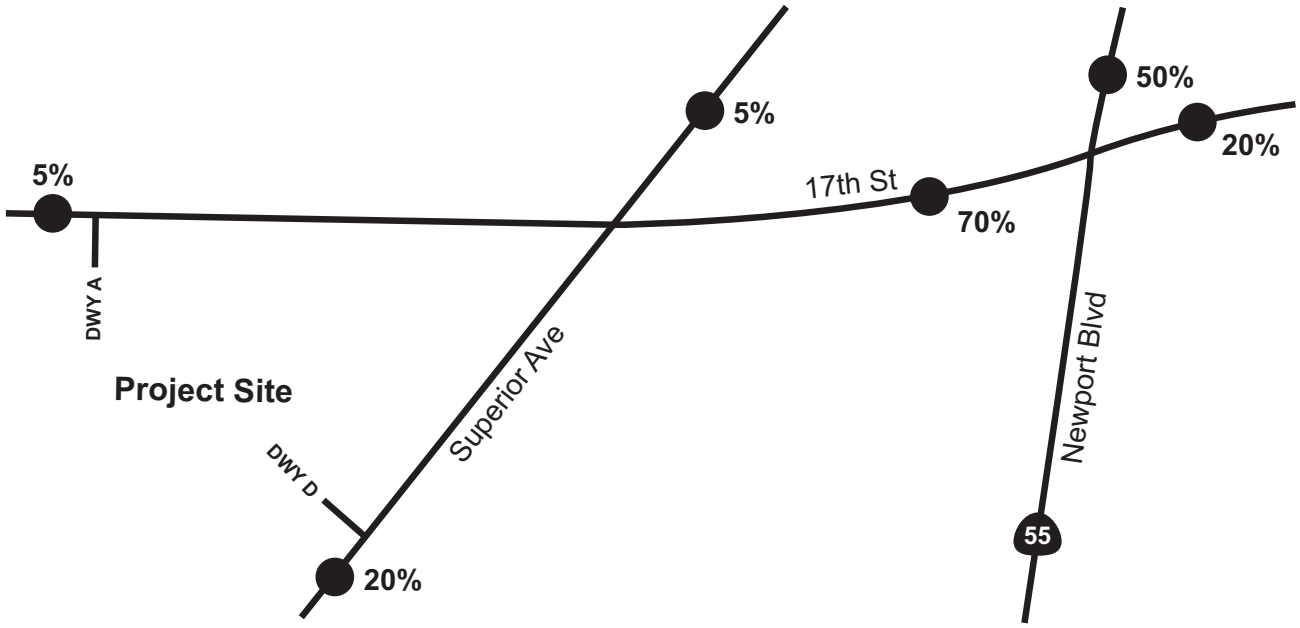
Exhibit 4.16-4, *Forecast Percent Project Trip Distribution*, shows the Project's forecast trip percent distribution.

Forecast Project Trip Assignment

Exhibit 4.16-5, *Forecast AM/PM Peak Hour Project Trip Assignment*, shows the corresponding assignment of Project-generated net peak hour trips, assuming the trip percent distributions shown in Exhibit 4.16-4.

FORECAST EXISTING WITH PROJECT CONDITIONS

Forecast existing with Project conditions a.m. and p.m. peak hour volumes were derived by adding forecast Project-generated trips to existing conditions traffic volumes.



Legend:

DWY Driveway

XX% Trip Percent Distribution

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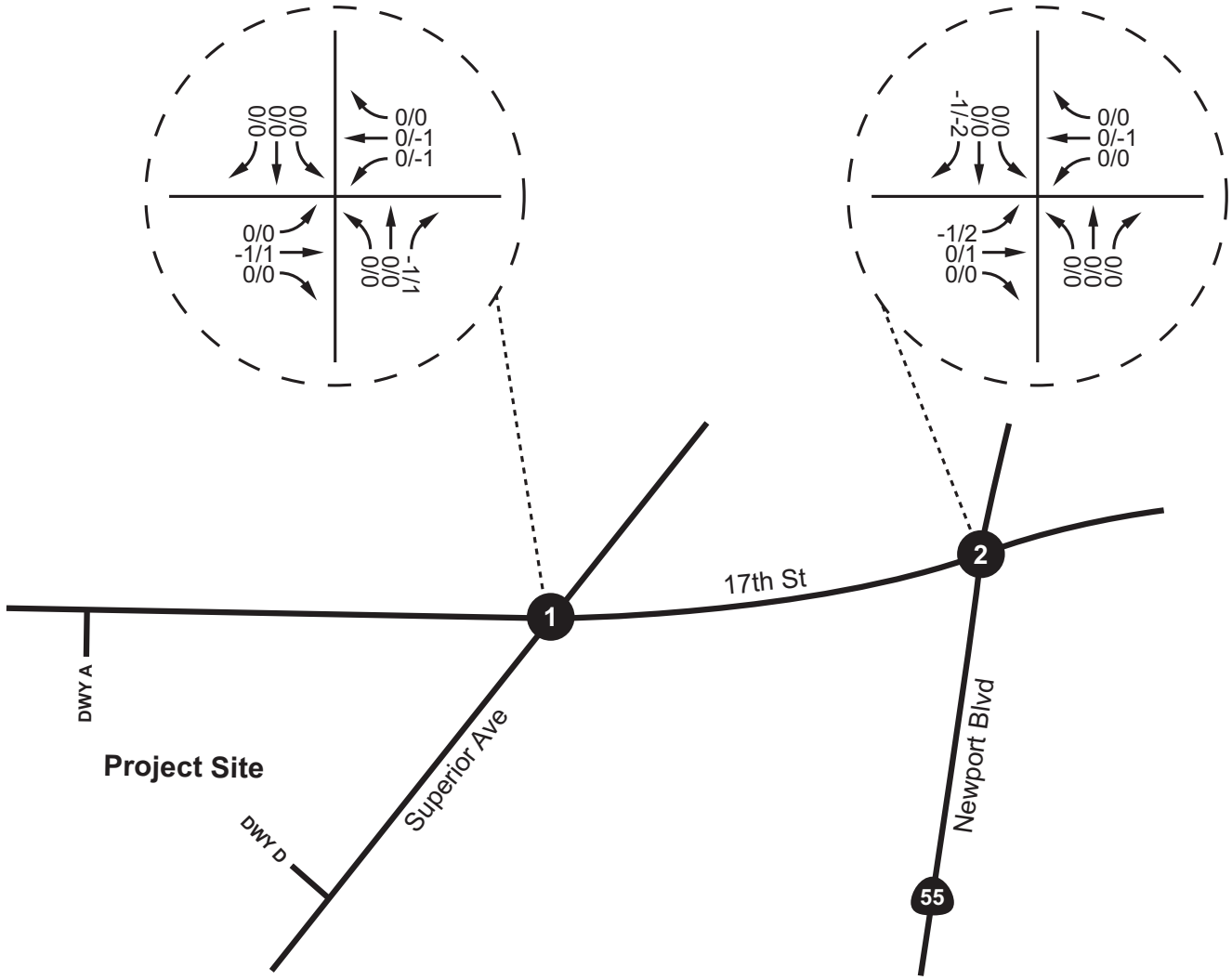
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Forecast Percent Project Trip Distribution

Exhibit 4.16-4



Legend:

X Study Intersection

DWY Driveway

XX/XX AM/PM Peak Hour Volume

NOT TO SCALE

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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

Forecast AM/PM Peak Hour Project Trip Assignment

Exhibit 4.16-5

Forecast Existing With Project Traffic Volumes

Exhibit 4.16-6, *Forecast Existing With Project AM/PM Peak Hour Study Intersection Volumes*, shows forecast existing with Project conditions a.m. and p.m. peak hour volumes at the study intersections.

Forecast Existing With Project Conditions City Study Intersection Peak Hour LOS

Table 4.16-9, *Forecast Existing* With *Project Conditions AM/PM Peak Hour City Study Intersection LOS*, summarizes forecast existing with Project conditions a.m. peak hour and p.m. peak hour LOS of the City study intersection; detailed LOS analysis sheets are contained in Appendix B of Appendix D.

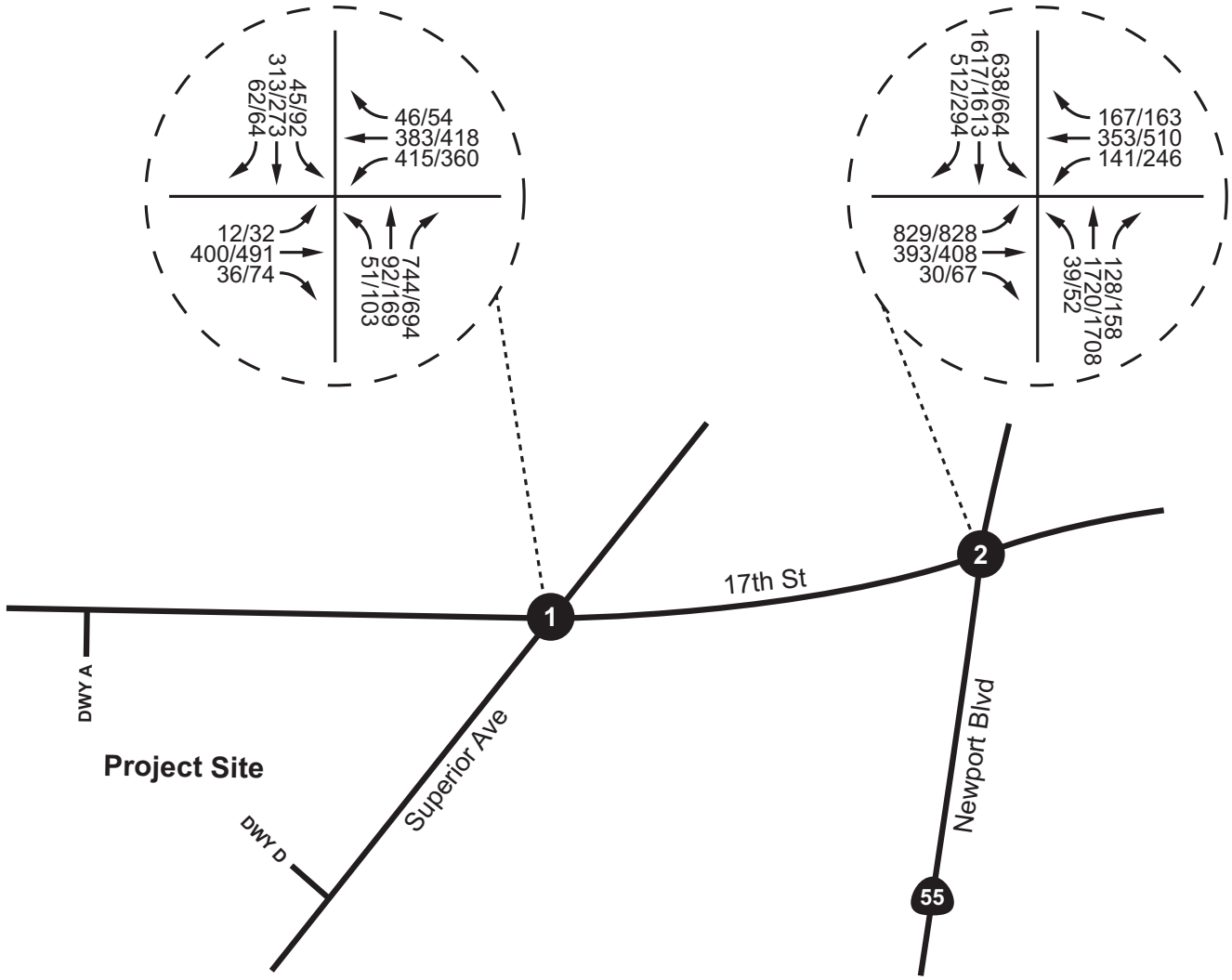
Table 4.16-9
Forecast Existing With **Project Conditions AM/PM Peak Hour City Study Intersection LOS**

Study Intersection	Existing Conditions		Forecast Existing Plus Project Conditions		Change in V/C		Significant Impact
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	V/C – LOS	V/C – LOS	V/C – LOS	V/C – LOS			
Superior Avenue/17th Street	0.74 – C	0.78 – C	0.74 – C	0.78 – C	0.00	0.00	No
Note: V/C = volume to capacity ratio.							
Source: RBF Consulting, *17th/Superior Live/Work Project Traffic Impact Analysis*, September 3, 2013.							

As shown in *Table 4.16-9*, based on the thresholds of significance, the addition of Project-generated trips is forecast to result in no significant traffic impact at the City study intersection for forecast existing plus Project conditions.

Forecast Existing With Project Conditions State-Controlled Study Intersection Peak Hour LOS

Table 4.16-10, *Forecast Existing* With *Project Conditions AM/PM Peak Hour State-Controlled Study Intersection LOS*, summarizes forecast existing with Project conditions a.m. peak hour and p.m. peak hour LOS of the State-controlled study intersection; detailed LOS analysis sheets are contained in Appendix B of Appendix D.



Legend:

X	Study Intersection
DWY	Driveway
XX/XX	AM/PM Peak Hour Volume

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

NOT TO SCALE

RBF CONSULTING A Baker Company

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Forecast Existing Plus Project
AM/PM Peak Hour Study Intersection Volumes

Exhibit 4.16-6

Table 4.16-10
Forecast Existing With Project Conditions
AM/PM Peak Hour State-Controlled Study Intersection LOS

State-Controlled Study Intersection	Existing Conditions		Forecast Existing Plus Project Conditions		Increase in Delay		Significant Impact
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	V/C – LOS	V/C – LOS	V/C – LOS	V/C – LOS			
Newport Blvd (SR-55)/17th St	31.8 – C	34.0 – C	31.8 – C	34.0 – C	0.0	0.0	No
Note: Delay shown in seconds.							
Source: RBF Consulting, 17th/Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.							

As shown in *Table 4.16-10*, based on the thresholds of significance, the Project is forecast to result in no significant traffic impact at the State-controlled study intersection for forecast existing with Project conditions.

FORECAST YEAR 2015 WITHOUT PROJECT CONDITIONS

To determine the Project's potential cumulative traffic impacts at the 2015 opening year, forecast year 2015 without Project conditions are examined prior to forecast year 2015 with Project conditions.

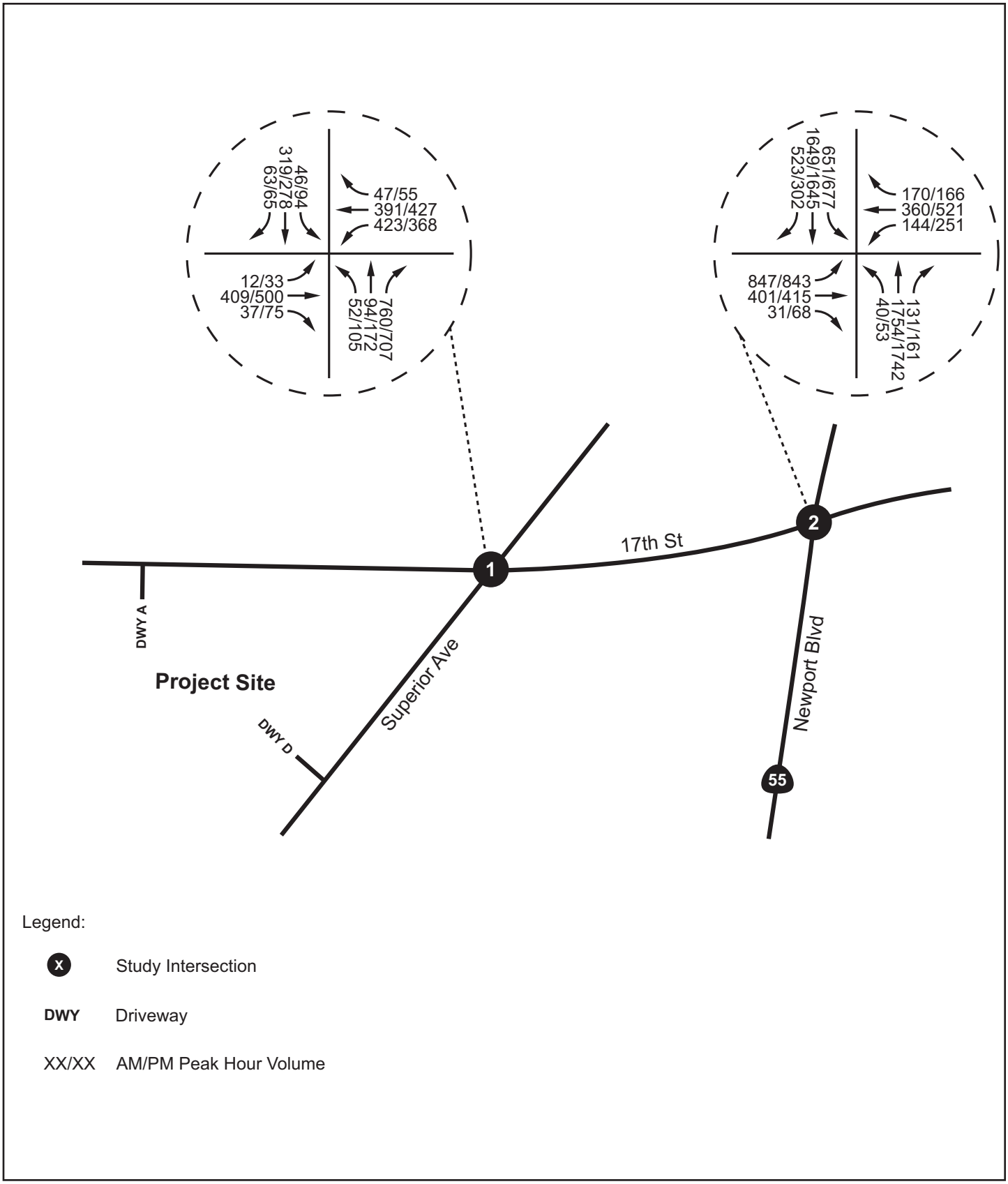
Forecast Year 2015 Without Project Conditions Peak Hour Traffic Volumes

Based on discussions with City of Costa Mesa staff, forecast year 2015 without Project traffic volumes were derived by applying an annual growth rate of 1.0 percent per year to existing traffic volumes over a two year period to account for background and cumulative growth. It is noted that this is a conservative assumption, since the growth rate is applied to all movements at the study intersections.

Exhibit 4.16-7, *Forecast Year 2015 Without Project AM/PM Peak Study Intersection Volumes*, shows forecast year 2015 without Project conditions a.m. and p.m. peak hour volumes at the study intersections.

Forecast Year 2015 Without Project Conditions City Study Intersection Peak Hour LOS

Table 4.16-11, *Forecast Year 2015 Without Project Conditions AM/PM Peak Hour City Study Intersection LOS*, summarizes forecast year 2015 without Project conditions a.m. peak hour and p.m. peak hour LOS of the City study intersection; detailed LOS analysis sheets are contained in Appendix B of Appendix D.



INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

NOT TO SCALE

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Forecast Year 2015 Without Project AM/PM Peak Hour Study Intersection Volumes

Exhibit 4.16-7

Table 4.16-11
Forecast Year 2015 Without Project Conditions
AM/PM Peak Hour City Study Intersection LOS

Study Intersection	V/C – LOS	
	AM Peak Hour	PM Peak Hour
Superior Avenue / 17th Street	0.75 – C	0.79 – C
Note: V/C = volume to capacity ratio.		
Source: RBF Consulting, 17th/Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.		

Table 4.16-12, *Forecast Year 2015 Without Project Conditions AM/PM Peak Hour State-Controlled Study Intersection LOS*, summarizes forecast year 2015 without Project conditions a.m. peak hour and p.m. peak hour LOS of the State-controlled study intersection; detailed LOS analysis sheets are contained in Appendix B of Appendix D.

Table 4.16-12
Forecast Year 2015 Without Project Conditions
AM/PM Peak Hour State-Controlled Study Intersection LOS

State-Controlled Study Intersection	AM Peak Hour	PM Peak Hour
	Delay – LOS	Delay – LOS
Newport Boulevard (SR-55) / 17th Street	32.3 – C	34.7 – C
Note: Delay shown in seconds.		
Source: RBF Consulting, 17th/Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.		

FORECAST YEAR 2015 WITH PROJECT CONDITIONS

This section analyzes the potential traffic impact of the addition of trips forecast to be generated by the Project to forecast year 2015 without Project conditions.

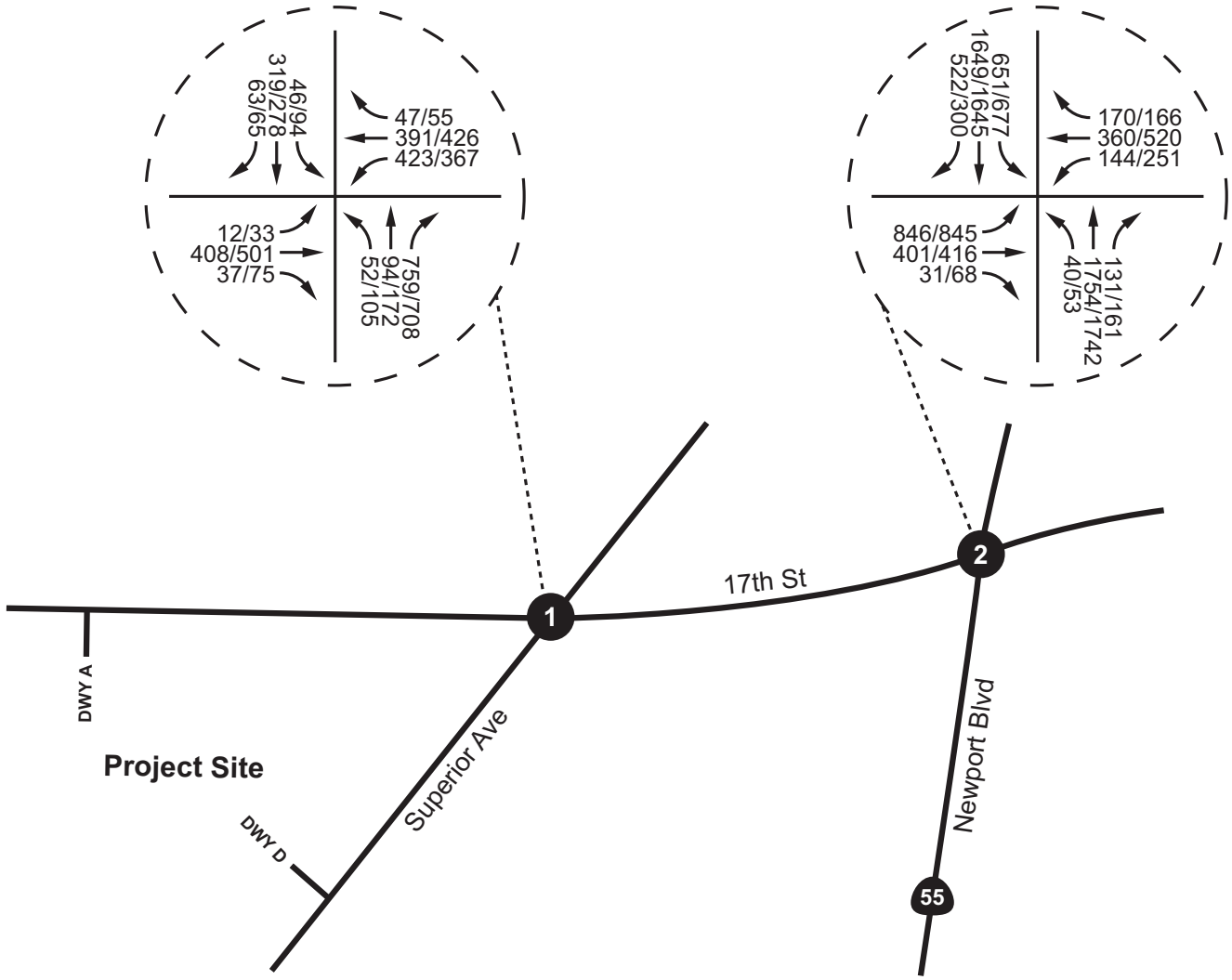
Forecast Year 2015 With Project Conditions Traffic Volumes

Forecast year 2015 with Project conditions a.m. and p.m. peak hour volumes were derived by adding forecast Project-generated trips to forecast year 2015 without Project conditions traffic volumes.

Exhibit 4.16-8, *Forecast Year 2015 With Project AM/PM Peak Hour Study Intersection Volumes*, shows forecast year 2015 with Project conditions a.m. and p.m. peak hour volumes at the study intersections.

Forecast Year 2015 With Project Conditions City Study Intersection Peak Hour LOS

Table 4.16-13, *Forecast Year 2015 With Project Conditions AM/PM Peak Hour City Study Intersection LOS*, summarizes forecast year 2015 with Project conditions a.m. peak hour and p.m. peak hour LOS of the City study intersections; detailed LOS analysis sheets are contained in Appendix B of Appendix D.



Legend:

X Study Intersection

DWY Driveway

XX/XX AM/PM Peak Hour Volume

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
WEST 17TH STREET & SUPERIOR AVENUE LIVE/WORK PROJECT

NOT TO SCALE

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Forecast Year 2015 With Project
AM/PM Peak Hour Study Intersection Volumes

Exhibit 4.16-8

Table 4.16-13
Forecast Year 2015 With Project Conditions AM/PM Peak Hour City Study Intersection LOS

Study Intersection	Forecast Year 2015 Without Project Conditions		Forecast Year 2015 With Project Conditions		Change in V/C		Significant Impact
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	V/C – LOS	V/C – LOS	V/C – LOS	V/C – LOS			
Newport Blvd (SR-55)/17th St	0.75 – C	0.79 – C	0.75 – C	0.79 – C	0.00	0.00	No
Note: V/C – volume to capacity ratio.							
Source: RBF Consulting, 17th/Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.							

As shown in *Table 4.16-13*, based on the thresholds of significance, the addition of Project-generated trips is forecast to result in no significant traffic impact at the City study intersections for forecast year 2015 with Project conditions.

Forecast Year 2015 With Project Conditions State-Controlled Study Intersection Peak Hour LOS

Table 4.16-14, *Forecast Year 2015 With Project Conditions AM/PM Peak Hour State-Controlled Study Intersection LOS*, summarizes forecast year 2015 with Project conditions a.m. peak hour and p.m. peak hour LOS of the State-controlled study intersection; detailed LOS analysis sheets are contained in Appendix B of Appendix D.

Table 4.16-14
Forecast Year 2015 With Project Conditions
AM/PM Peak Hour State-Controlled Study Intersection LOS

State-Controlled Study Intersection	Forecast Year 2015 Without Project Conditions		Forecast Year 2015 With Project Conditions		Increase in Delay		Significant Impact
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	V/C – LOS	V/C – LOS	V/C – LOS	V/C – LOS			
Newport Blvd (SR-55)/17th St	32.3 – C	34.7 – C	32.3 – C	34.7 – C	0.0	0.0	No
Note: V/C – volume to capacity ratio.							
Source: RBF Consulting, 17th/Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.							

As shown in *Table 4.16-4*, based on the thresholds of significance, the Project is forecast to result in no significant traffic impact at the State-controlled study intersections for forecast year 2015 with Project conditions.

Mitigation Measures: No mitigation is required.

4.16.b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less Than Significant Impact. The purpose of the Congestion Management Program (CMP) is to develop a coordinated approach to managing and decreasing traffic congestion by linking the various transportation, land use and air quality planning programs throughout the County. The program is consistent with that of the Southern California Association of Governments (SCAG). The CMP requires review of significant individual Projects, which might on their own impact the CMP transportation system.

Specifically, the Congestion Management Program Traffic Impact Analysis (CMP TIA) measures impacts of a proposed development Project on the CMP Highway System (CMPHS). Development Projects that generate more than 2,400 daily trips are subject to a TIA for CMP evaluation. For Projects that would directly access or be in close proximity to a CMP Highway System link, a reduced threshold of 1,600 trips per day is utilized.

As concluded in Response 4.16.a, the Project would generate approximately 201 net daily trips, thus, would not meet the criteria for CMP TIA. Therefore, no further CMP traffic analysis is warranted and a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.

4.16.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 Project involves a 29-unit live/work development. Due to the nature and scope of the proposed development, Project implementation would not result in a change in air traffic patterns.

Mitigation Measures: No mitigation is required.

4.16.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. Access to the Project site would continue to be provided at one full access location on 17th Street and one full access location at Superior Avenue. Both 17th Street and Superior Avenue are four-lane divided roadways separated by a continuous left-turn lane to efficiently facilitate full access to the Project site. Hence, the continuous left-turn lane on both roadways at the Project access driveways remove vehicles turning left into the Project site out of the through movement lanes, as well as facilitate the transitional merge of vehicles turning left out of the Project access driveways into the through movement lanes.

The *Highway Capacity Manual (HCM)* intersection analysis methodology is used to analyze the operation of unsignalized intersections, such as the Project driveways. The *HCM* analysis methodology describes the operation of an unsignalized intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding stopped delay experienced per vehicle as shown in *Table 4.16-15*, *HCM-Based Unsignalized Study Intersection LOS and Delay Ranges*.

Table 4.16-15
HCM-Based Unsignalized Study Intersection LOS and Delay Ranges

LOS	Delay (seconds/vehicles)
A	≤ 10.0
B	> 10.0 to ≤ 15.0
C	> 15.0 to ≤ 25.0
D	> 25.0 to ≤ 35.0
E	> 35.0 to ≤ 50.0
F	> 50.0
Source: RBF Consulting, 17th/Superior Live/Work Project Traffic Impact Analysis, September 3, 2013.	

HCM LOS is based on the average stopped delay per vehicle for all movements of all-way stop-controlled intersections; for one-way or two-way stop-controlled intersections, LOS is based on the worst stop-controlled approach.

Forecast Existing Plus Project Conditions Project Driveways Peak Hour LOS

Table 4.16-16, *Forecast Existing Plus Project Conditions AM/PM Peak Hour Project Driveways LOS*, summarizes forecast existing plus Project conditions a.m. peak hour and p.m. peak hour LOS of the Project driveways; detailed LOS analysis sheets are contained in Appendix B of Appendix D.

Table 4.16-16
Forecast Existing Plus Project Conditions AM/PM Peak Hour Project Driveways LOS

Study Intersection	Forecast Existing Plus Project Conditions	
	AM Peak Hour	PM Peak Hour
	Delay – LOS	Delay – LOS
Project Driveway / 17th Street	9.6 – A	10.1 – B
Superior Avenue/Project Driveway	20.9 – C	20.8 – C
Note: Delay shown in seconds.		
Source: RBF Consulting, *17th/Superior Live/Work Project Traffic Impact Analysis*, September 3, 2013.		

As shown in *Table 4.16-16*, the Project driveways are forecast to operate within the City of Costa Mesa goal for peak hour intersection operation (LOS D or better) for forecast existing plus Project conditions.

Forecast Year 2015 With Project Conditions Project Driveways Peak Hour LOS

Table 4.16-17, *Forecast Year 2015 With Project Conditions AM/PM Peak Hour Project Driveways*, summarizes forecast year 2015 with Project conditions a.m. peak hour and p.m. peak hour LOS of the Project driveways; detailed LOS analysis sheets are contained in Appendix B of Appendix D.

Table 4.16-17
Forecast Year 2015 With Project Conditions AM/PM Peak Hour Project Driveways LOS

Study Intersection	Forecast Year 2015 With Project Conditions	
	AM Peak Hour	PM Peak Hour
	Delay – LOS	Delay – LOS
Project Driveway / 17th Street	9.6 – A	10.2 – B
Superior Avenue/Project Driveway	21.4 – C	21.3 – C
Note: Delay shown in seconds.		
Source: RBF Consulting, *17th/Superior Live/Work Project Traffic Impact Analysis*, September 3, 2013.		

As shown in *Table 4.16-17*, the Project driveways are forecast to operate within the City of Costa Mesa goal for peak hour intersection operation (LOS D or better) for forecast year 2015 with Project conditions.

Mitigation Measures: No mitigation is required.

4.16.e. Result in inadequate emergency access?

Less Than Significant Impact. Refer to Responses 4.8.g. and 4.14.a.1.

Mitigation Measures: No mitigation is required.

4.16.f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Less Than Significant Impact.

Public Transit

The Project site is served by the Orange County Transportation Authority (OCTA), a multi-modal transportation agency that serves Orange County. OCTA provides countywide bus and paratransit service,

and Metrolink rail service, among other services. The bus lines located nearest the Project site travel along both 19th Street and Superior Avenue: Route 43; Route 55; and Route 173.

Person transit trips are typically estimated using a 1.4 factor to convert total vehicle trips to person trips and a 3.5 percent factor to convert person trips to total transit trips, based on CMP guidelines. However, as concluded in Response 4.16.a above, the Project is forecast to generate approximately 201 fewer daily trips, than the existing land uses. Since the Project would decrease transit trips, no impact to transit trips would occur and Project implementation would not conflict with adopted policies, plans, or programs regarding public transit.

Bicycle and Pedestrian Facilities

There are no bicycle lanes located in the vicinity of the Project site. Additionally, the Project would not alter or impact area sidewalks. Therefore, Project implementation would not conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities.

Mitigation Measures: No mitigation is required.

4.17 UTILITIES AND SERVICE SYSTEMS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			✓	
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?			✓	

4.17.a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less Than Significant Impact. The Regional Water Quality Control Board (RWQCB), Santa Ana Region, issued a NPDES permit, which includes the City as a Permittee. That NPDES permit implements federal and state law governing point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the United States. Implementation of the Project would only nominally increase wastewater generation, thus, nominally increasing the demand for wastewater treatment; refer to Response 4.17.b. Therefore, given the nature and scope of the proposed development, Project implementation would not cause an exceedance of wastewater treatment requirements of the applicable RWQCB.

Mitigation Measures: No mitigation is required.

4.17.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

The Project site is located within the Mesa Consolidated Water District (Mesa Water) service area and specifically within their Division Area 1. Mesa Water provides water service to an 18-square-mile area that includes the City of Costa Mesa (as well as parts of Newport Beach and parts of unincorporated Orange County). In compliance with legislative requirements, Mesa Water has prepared their 2010 Urban Water Management Plan (UWMP). The UWMP provides information on the present and future water resources and demands, and assesses Mesa Water's water resource needs.

Water Supplies and Demand

According to the UWMP, Mesa Water's main sources of water supply are groundwater pumped from wells within the Orange County Basin and imported water from Metropolitan Water District of Southern California through Municipal Water District of Orange County.

The Project's average water demand would be approximately 11,456 gallons per day (gpd), as indicated in Table 4.17-1, *Project Water Demand*. The increase in water demand would place an incremental increase in the demand for water supplies, as well as water treatment and conveyance, as discussed below. The increase is not considered substantial, since the Project is consistent with the site's General Plan land use designation and General Plans form the basis for evaluating the service area's future water demands. Mesa Water has concluded they are capable of meeting the water demands of their customers in normal, single dry, and multiple dry years between 2015 and 2035.[1]

Table 4.17-1
Project Water Demand

Land Use	Units	Factor GPD[1]/Unit[2]	Average Water Demand GPD
EXISTING LAND USES			
Commercial (SF)	-19,559	0.22	-4,303
Total Existing			*-4,303*
PROPOSED PROJECT			
Residential (Capita)	79	178.9	14,112
Commercial (SF)	7,486	0.22	1,647
Total Proposed Project			*15,759*
Net Change			***+11,456***

Notes:
1. GPD = Gallons per day.
2. Malcolm Pirnie, Inc., *Mesa Consolidated Water District 2010 Urban Water Management Plan*, May 2011, Page 2-8.

[1] Ibid., Executive Summary Page 2.

Water Treatment

According to the UWMP, groundwater is pumped from six wells that pump clear water from the Orange County Basin and two wells that pump colored water. The colored water is treated at the Colored Water Treatment Facility (CWTF) and imported water is treated at the Diemer Filtration Plant, then delivered to Mesa Water through the imported water connections. As concluded above, the Project would result in a negligible increase in water demand, thus, resulting in a negligible impact on the existing water treatment facilities. Therefore, Project implementation would not require or result in the construction of new water treatment facilities or expansion of existing facilities.

Water Conveyance

As concluded above, the Project would result in a negligible increase in water demand, thus, resulting in a negligible impact on the existing water conveyance facilities. The Applicant would be responsible for construction of all water conveyance facilities pursuant to current Uniform Codes, City Ordinances, Public Works standards, and Water Division criteria. Therefore, the Project would not require the construction of new water conveyance facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. A less than significant impact would occur in this regard.

Wastewater

The Project site is located within the Costa Mesa Sanitary District (Sanitary District) service area.[2] The Sanitary District boundaries include all of the City of Costa Mesa and portions of the City of Newport Beach and unincorporated County of Orange.

Wastewater Generation

The Project's average wastewater generation would be approximately 5,486 gpd, as indicated in Table 4.17-2, *Project Wastewater Generation*. The increase in wastewater generation would place an incremental increase in the demand for wastewater conveyance and treatment facilities, as discussed below. The Project is consistent with the site's General Plan land use designation and City General Plans form the basis for issuance of the County Sanitation's NPDES wastewater discharge permits; refer also to the *Wastewater Treatment* Section below.

Wastewater Conveyance

The Sanitary District's facilities include 216 miles of mainline, 114 miles of private property sewer lateral pipelines, and 20 pumping stations. As concluded above, the Project would result in a negligible increase in wastewater generation, thus, resulting in a negligible impact on the existing wastewater conveyance facilities. The Applicant would be responsible for construction of all wastewater conveyance facilities pursuant to current Uniform Codes, City Ordinances, and Public Works standards, pursuant to Standard Condition SC 4.17-1. The Sanitary District would issue a Sewer Service Confirmation Letter indicating that they will serve sanitary sewer to the proposed development. Service to the Project would be conditioned upon approval of sewer infrastructure construction plans by the Sanitary District's Engineers, processing of

[2] Costa Mesa Sanitary District Website, http://www.cmsdca.gov, Accessed September 3, 2013.

easements (if necessary), and payment of all applicable fees, pursuant to Standard Conditions SC 4.17-2 through 4.17-4. Therefore, the Project would not require the construction of new wastewater conveyance facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. A less than significant impact would occur in this regard.

Table 4.17-2
Project Wastewater Generation

Land Use	Units (Acres)	Flow Factor GPD[1]/Unit[2]	Average Wastewater Generation (GPD)
Existing Land Uses			
Commercial (-19,559 SF)	-0.45	2,262	-1,016
Total Existing			*-1,016*
Proposed Project			
Residential (48,643 SF)	1.12	5,474	6,113
Commercial (7,486 SF)	0.17	2,262	389
Total Proposed Project			*6,501*
Net Change			***+5,486***

Notes:
1. GPD = Gallons per day.
2. RBF Consulting, *Anchor Live/Work Project Final Initial Study/Mitigated Negative Declaration, Comment Letter 3,* January 2013.

Wastewater Treatment

Wastewater collected by the Sanitary District is sent to the County Sanitation Districts of Orange County (County Sanitation) plants for treatment and disposal. County Sanitation is responsible for collecting, treating, and disposing the wastewater generated within their 479-square mile service area. Wastewater is treated at County Sanitation's treatment plants in Fountain Valley and Huntington Beach. According to County Sanitation's treatment plant operational data, the combined effluent treated at both plants (2004-2005) totaled approximately 244 million gallons daily (average). County Sanitation operates under an NPDES ocean discharge permit issued by the California Regional Water Quality Control Board. The Project's increase in wastewater generation is not considered substantial, since the Project is consistent with the site's General Plan land use designation and General Plans form the basis for issuance of the NPDES wastewater discharge permits. Project implementation would not cause the treatment plants' operating capacities to be exceeded. Therefore, a less than significant impact would occur in this regard.

Standard Conditions:

SC 4.17-1 Applicant will be required to construct sewers to serve the Project, at his own expense, meeting the approval of the Costa Mesa Sanitary District.

SC 4.17-2 County Sanitation District fees, fixtures fees, inspection fees, and sewer permit are required prior to installation of sewer.

SC 4.17-3 The Applicant shall submit a plan showing sewer improvements that meets the District Engineer's approval to the Building Division as part of the plans submitted for plan check.

SC 4.17-4 The Applicant is required to contact the Costa Mesa Sanitary District to arrange final sign-off prior to Certificate of Occupancy being released.

Mitigation Measures: No mitigation is required.

4.17.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. Refer to Response 4.9.d.

Mitigation Measures: No mitigation is required.

4.17.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.

Senate Bill 610

Water Code Sections 10610 to 10656 require water suppliers to prepare an Urban Water Management Plan (UWMP) to promote water demand management and efficient use in their service areas. UWMPs are included with the environmental document for specified projects.

In regard to water supply, the Water Code (commonly referred to as SB 610, according to the enacting legislation) requires preparation of a Water Supply Assessment (WSA) for certain projects.[3] The Water Code requires that a WSA be prepared for any "project" which would consist of one or more of the following:[4]

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;

[3] Water Code Sections 10910–10915.

[4] Water Code Section 10910(b).

- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A mixed-use project that includes one or more of the projects specified above; or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

Senate Bill 221

Senate Bill 221 (SB 221)[5] amended state law to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 are companion measures which seek to:

- Promote more collaborative planning between local water suppliers and cities and counties;
- Require that detailed information regarding water availability be provided to city and county decision-makers prior to approval of specific large development projects;
- Require that this detailed information be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects; and
- Recognize local control and decision making regarding the availability of water for projects and the approval of projects.

SB 221 establishes the relationship between the WSA prepared for a project and the project approval under the Subdivision Map Act. Pursuant to Government Code, the public water system must provide a written verification of sufficient water supply before the approval of a new subdivision.[6] SB 221 prohibits a local planning agency from approving a tentative map, parcel map, or development agreement for residential subdivisions of more than 500 units unless the water supplier issues a written verification that a sufficient water supply is available for the project, or the local agency finds that alternate water supplies are, or will be, available prior to the completion of the project.

A "sufficient water supply" under SB 221 is the total water supplies available to the water provider during normal, single dry, and multiple dry years within a 20-year projection that will meet the projected demand of the proposed subdivision, in addition to existing and planned future uses, including agricultural and industrial uses.[7] The water provider's verification must be based on substantial evidence such as water supply contracts, capital outlay programs, and regulatory permits and approvals regarding the water provider's right to and capability of delivering the project supply.

[5] Business and Professions Code Section 11010 and Government Code Section 66473.4.

[6] Government Code Section 66473.7.

[7] Government Code Section 66473.7.

The Project does not satisfy the criteria outlined above, thus, preparation of a WSA, to verify that sufficient water supplies are available to serve the Project from existing entitlements/resources, is not warranted and a less than significant impact would occur in this regard; refer also to Response 4.17.b above.

Mitigation Measures: No mitigation is required.

4.17.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 Response 4.17.b.

Mitigation Measures: No mitigation is required.

4.17.f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. The Project site would continue to be served by the solid waste facilities and landfills that currently serve the City:

- Antelope Valley Public Landfill I and II;
- Azusa Land Reclamation Company Landfill;
- California Street Landfill;
- Chiquita Canyon Sanitary Landfill;
- Commerce Refuse-To-Energy Facility;
- El Sobrante Landfill;
- Frank R. Bowerman Sanitary Landfill;
- Lancaster Landfill and Recycling Center;
- Olinda Alpha Sanitary Landfill;
- Prima Desecha Sanitary Landfill;
- Puente Hills Landfill;
- San Timoteo Sanitary Landfill;
- Simi Valley Landfill & Recycling Center; and
- Southeast Resource Recovery Facility.

In total, Costa Mesa's solid waste disposal in 2012 was approximately 107,012 tons.[8]

The Project's average solid waste generation would be approximately 23 tons per year (TPY), as indicated in Table 4.17-3, *Project Solid Waste Generation*. The increase in solid waste generation would place an incremental increase in the demand for solid waste collection and disposal services. Additionally, the increased solid waste generation would contribute to incrementally shortening the lifespan of the landfills identified above. However, given the Project's scale, and since the City would continue to comply with the existing regulatory framework for reducing solid waste disposal volumes, it is anticipated that the specified

[8] State of California CalRecycle Website, *2011 Waste Stream Profile for City of Costa Mesa*, http://www.calrecycle.ca.gov/DataCentral/Materials.htm, Accessed September 6, 2013.

landfills would have the capacity to accommodate the Project's waste disposal needs. Additionally, the Project would be subject to compliance with Standard Conditions SC 4.17-5 and SC 4.17-6, which address solid waste disposal and District consultation. A less than significant impact would occur in this regard.

Table 4.17-3
Project Solid Waste Generation

Land Use	Units	Factor Lbs[1]/Day/ Unit	Average Lbs/Day Generation[2]	Average Tons/Day Generation[2]	Average Tons/Year Generation
Existing Land Uses					
Commercial (SF)	-19,559	0.005	-98	-0.05	-18
Total Existing					*-18*
Proposed Project					
Residential (DU)	29			0.0032	34
Commercial (SF)	7,486	0.005		0.0200	7
Total Proposed Project					*41*
Net Change					***+23***

Notes:
1. Lbs = Pounds per day.
2. State of California CalRecycle Website, *Estimated Solid Waste Generation and Disposal Rates*, http://www.calrecycle.ca.gov/wastechar/wastegenrates/, Accessed September 6, 2013.

Standard Conditions:

SC 4.17-5 Unless an off-site trash hauler is being used, the Applicant shall contact the Costa Mesa Sanitary District to pay trash collection program fees and arrange for service for all new residences. Residences using bin or dumpster services are exempt from the requirement.

SC 4.17-6 The Applicant shall contact Costa Mesa Sanitary District for any additional district requirements.

Mitigation Measures: No mitigation is required.

4.17.g. Comply with federal, state, and local statutes and regulations related to solid waste?

Less Than Significant Impact. In 1989, the Legislature adopted the California Integrated Waste Management Act of 1989 (AB 939), in order to "reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible." AB 939 established a waste management hierarchy: Source Reduction; Recycling; Composting; Transformation; and Disposal. The law also required that each county prepare a new Integrated Waste Management Plan and each city prepare a Source Reduction and Recycling Element (SRRE) by July 1, 1991. The SRRE is required to identify how each jurisdiction will meet the mandatory state waste diversion goal of 50 percent by the year 2000. The Act mandated that California's 450 jurisdictions (i.e., cities, counties, and regional waste management compacts), implement waste management programs aimed at a 25 percent diversion rate by 1995 and a 50 percent diversion rate

by 2000. If the 50 percent goal was not met by the end of 2000, the jurisdiction was required to submit a petition for a goal extension to CalRecycle.

Senate Bill (SB) 2202 made a number of changes to the municipal solid waste diversion requirements under the Integrated Waste Management Act. These changes included a revision to the statutory requirement for 50 percent diversion of solid waste to clarify that local governments shall continue to divert 50 percent of all solid waste on and after January 1, 2000.

SB 1016, Wiggins, Chapter 343, Statutes of 2008 introduced a per capita disposal measurement system that measures the 50 percent diversion requirement using a disposal measurement equivalent. The bill repealed the board's two-year process, requiring instead that the board make a finding whether each jurisdiction was in compliance with the act's diversion requirements for calendar year 2006 and to determine compliance for the 2007 calendar year, and after, based on the jurisdiction's change in its per capita disposal rate. The board is required to review a jurisdiction's compliance with those diversion requirements in accordance with a specified schedule, which is conditioned upon the board finding that the jurisdiction is in compliance with those requirements or has implemented its source reduction and recycling element and household hazardous waste element. The bill requires the board to issue an order of compliance if the board finds that the jurisdiction has failed to make a good faith effort to implement its source reduction and recycling element or its household hazardous waste element, pursuant to a specified procedure.

The per capita disposal rate is a jurisdiction-specific index, which is used as one of several "factors" in determining a jurisdiction's compliance with the intent of AB 939, and allows CalRecycle and jurisdictions to set their primary focus on successful implementation of diversion programs. Meeting the disposal rate targets is not necessarily an indication of compliance. CalRecycle reports that Costa Mesa's Disposal Rate Targets for Reporting Year 2012 are 8.5 pounds per day (PPD) per Resident and 11.3 PPD per Employee.[9] For 2012, Costa Mesa's calculated Disposal Rates were 5.3 PPD per resident and 7.5 PPD per employee.[10]

Participation in the City's recycling programs during Project construction and operation would ensure that the Project would not conflict with federal, state, and local statutes and regulations related to solid waste. A less than significant impact would occur in this regard. Refer also to Response 4.17.f.

Mitigation Measures: No mitigation is required.

[9] State of California CalRecycle Website, Jurisdiction Diversion/Disposal Rate Summary (2007-Current), Accessed September 3, 2013.

[10] Ibid.

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4.18 MANDATORY FINDINGS OF SIGNIFICANCE

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?		✓		

4.18.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?

Less Than Significant Impact. As concluded in Section 4.4, *Biological Resources*, the Project proposes a live/work development. The Project site and its surroundings are fully developed, and there are no biological resources present in the area. Therefore, the Project does not 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.

As concluded in Response 4.5.a, the Project site is developed with commercial/industrial uses and does not contain a historically/culturally significant structure. Therefore, Project implementation would not eliminate important examples of the major periods of California history.

As concluded in Response 4.5.b, the Project site is developed with commercial/industrial uses, has already been subject to extensive disruption, and contains artificial fill materials. Given the highly disturbed condition of the site, the potential for Project implementation to impact an as yet unidentified archeological resource is considered remote. Therefore, Project implementation would not eliminate important examples of the major periods of California prehistory.

Mitigation Measures: No mitigation is required.

4.18.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)?

Less Than Significant Impact. For the environmental issue areas analyzed in this Initial Study/Mitigated Negative Declaration, there would be no impact that would be individually limited, but cumulatively considerable.

In accordance with CEQA Guidelines Section 15183, this environmental analysis was conducted to determine if there were any Project-specific effects that are peculiar to the Project or its site. No Project-specific significant effects peculiar to the Project or its site were identified that could not be mitigated to a less than significant level. The Project would not induce substantial population growth or significant traffic volumes. The Project would contribute to environmental effects in the areas of air quality, geology/soils, hazards/hazardous materials, hydrology/water quality, and noise. However, these would not be cumulatively considerable, since they are site-specific. Further, mitigation measures incorporated herein mitigate any potential impacts associated with these environmental issues. Cumulative projects would be required to prepare the appropriate CEQA environmental documentation on a project-by-project basis. Therefore, the Project does not have impacts that are individually limited, but cumulatively considerable.

Mitigation Measures: No mitigation is required.

4.18.c. Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant With Mitigation Incorporated. Previous sections of this Initial Study/Mitigated Negative Declaration reviewed the Project's potential impacts related to air quality, geology/soils, hazards/hazardous materials, and noise, among other environmental issue areas. As concluded in these previous discussions, the Project would result in less than significant environmental impacts with implementation of the standard conditions and recommended mitigation measures. Therefore, with implementation of the specified mitigation, the Project would cause less than significant adverse effects on human beings.

Standard Conditions: Refer to Sections 4.1 through 4.17 above.

Mitigation Measures: Refer to Sections 4.1 through 4.17 above.

5.0 INVENTORY OF STANDARD CONDITIONS AND MITIGATION MEASURES

5.1 STANDARD CONDITIONS

AESTHETICS

SC 4.1-1 Prior to the issuance of Building Permits, the Applicant shall submit a Lighting Plan and Photometric Study for the approval of the City's Development Services Department. The Lighting Plan shall demonstrate compliance with the following:

- The mounting height of lights on light standards shall not exceed 18 feet in any location on the Project site unless approved by the Development Services Director.
- The intensity and location of lights on buildings shall be subject to the Development Services Director's approval.
- All site lighting fixtures shall be provided with a flat glass lens. Photometric calculations shall indicate the effect of the flat glass lens fixture efficiency.
- Lighting design and layout shall limit spill light to no more than 0.5 footcandle at the property line of the surrounding neighbors, consistent with the level of lighting that is deemed necessary for safety and security purposes on site.
- Glare shields may be required for select light standards.

SC 4.1-2 A "Notice to Buyers" shall disclose that the Project is located within an area designated as Light Industry in the City of Costa Mesa General Plan and is subject to existing and potential annoyances or inconveniences associated with industrial land uses. The Notice shall disclose the existing surrounding industrial land uses, including but not limited to, operational characteristics such as hours of operation, delivery schedules, outdoor activities, and noise and odor generation. In addition, the Notice shall state that the existing land use characteristics are subject to change in the event that new businesses move or existing businesses change ownership. The Buyer's Notice shall be reviewed/approved by the City Attorney's office and Development Services Director prior to recordation. The Buyer's Notice shall serve as written notice of the then existing noise environment and any odor generating uses within the mixed-use development and within a 500-foot radius of the mixed use development, as measured from the legal property lines of the development lot. The Buyer's Notice shall be remitted to any prospective purchaser or tenant at least 15 days prior to close of escrow, or within three days of the execution of a real estate sales contract or rental/lease agreement, whichever is longer.

AIR QUALITY

SC 4.3-1 All construction contractors shall comply with South Coast Air Quality Management District (SCAQMD) regulations, including Rule 403, Fugitive Dust. All grading (regardless of acreage) shall apply best available control measures for fugitive dust in accordance with Rule 403. To ensure that the project is in full compliance with applicable SCAQMD dust regulations and that there is no nuisance impact off the site, the contractor would implement each of the following:

- Moisten soil not more than 15 minutes prior to moving soil or conduct whatever watering is necessary to prevent visible dust emissions from exceeding 100 feet in any direction.
- Apply chemical stabilizers to disturbed surface areas (completed grading areas) within five days of completing grading or apply dust suppressants or vegetation sufficient to maintain a stabilized surface.
- Water excavated soil piles hourly or covered with temporary coverings.
- Water exposed surfaces at least twice a day under calm conditions. Water as often as needed on windy days when winds are less than 25 miles per day or during very dry weather in order to maintain a surface crust and prevent the release of visible emissions from the construction site.
- Wash mud-covered tired and under-carriages of trucks leaving construction sites.
- Provide for street sweeping, as needed, on adjacent roadways to remove dirt dropped by construction vehicles or mud which would otherwise be carried off by trucks departing project sites.
- Securely cover loads with a tight fitting tarp on any truck leaving the construction sites to dispose of debris.
- Cease grading during period when winds exceed 25 miles per hour.

SC 4.3-2 Prior to issuance of grading permits, developer shall submit for review and approval a Construction Management Plan. This plan features methods to minimize disruption to the neighboring residential uses to the fullest extent that is reasonable and practicable. The plan shall include construction parking and vehicle access and specifying staging areas and delivery and hauling truck routes. The plan should mitigate disruption to residents and also businesses during construction.

The truck route plan shall preclude truck routes through residential areas and major truck traffic during peak hours. The total truck trips to the site shall not exceed 200 trucks per day (i.e., 100 truck trips to the site plus 100 truck trips from the site) unless approved by the Development Services Director or Transportation Services Manager.

SC 4.3-3 The Project shall comply with Title 24 of the California Code of Regulations established by the energy conservation standards. The Project Applicant shall incorporate the following in building plans:

- Solar or low emission water heaters shall be used with combined space/water heater units;
- Double paned glass or window treatment for energy conservation shall be sued in all exterior windows; and
- Building shall be oriented north/south where feasible.

CULTURAL RESOURCES

SC 4.5-1 In the event that archeological resources are archaeological materials are encountered during grading and construction, all construction activities shall be temporarily halted or redirected to permit the sampling, identification, and evaluation of archaeological materials as determined by the City, who shall establish, in cooperation with the project applicant and a certified archaeologist, the appropriate procedures for exploration and/or salvage of the artifacts.

SC 4.5-2 In the event that paleontological resources are encountered during grading and construction operations, all construction activities shall be temporarily halted or redirected to permit a qualified paleontologist to assess the find for significance and, if necessary, develop a PRIMP for the review and approval by the City prior to resuming excavation activities.

SC 4.5-3 If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

GEOLOGY AND SOILS

SC 4.6-1 The proposed development shall be designed to comply with all applicable geological and seismic safety requirements of the California Building Code and mitigation as defined in the Public Resources Code Section 2693(c). Verification of such compliance will be confirmed during the City's plan review and building permit issuance processes.

SC 4.6-2 Prior to the issuance of Grading Permits, the Project Applicant shall provide the City of Costa Mesa Department of Building Safety with a geotechnical investigation of the project site detailing recommendations for remedial grading in order to reduce the potential of on-site soils to cause unstable conditions. Design, grading, and construction shall be performed in accordance with the requirements of the California Building Code applicable at the time of grading, appropriate local grading regulations, and the recommendations of the geotechnical consultant as summarized in a final written report, subject to review by the City of Costa Mesa Department of Building Safety.

SC 4.6-3 The Project shall comply with the NPDES requirements, as follows:

- Construction General Permit Notice of Intent (NOI) Design: Prior to the issuance of preliminary or precise grading permits, the project applicant shall provide the City Engineer with evidence that an NOI has been filed with the Storm Water Resources Control Board (SWRCB). Such evidence shall consist of a copy of the NOI stamped by the SWRCB or

Regional Water Quality Control Board (RWQCB), or a letter from either agency stating that the NOI has been filed.

- Construction Phase Storm Water Pollution Prevention Plan (SWPPP): Prior to the issuance of grading permits, the applicant shall prepare a SWPPP that complies with the Construction General Permit and will include at a minimum the following:

  - Discuss in detail the BMPs planned for the project related to control of sediment and erosion, nonsediment pollutants, and potential pollutants in non-storm water discharges;

  - Describe post-construction BMPs for the project;

- Explain the maintenance program for the project's BMPs;

- List the parties responsible for SWPPP implementation and BMP maintenance during and after grading. The Project Applicant shall implement the SWPPP and modify the SWPPP as directed by the Construction General Permit.

HAZARDS AND HAZARDOUS MATERIALS

SC 4.8-1 During demolition, grading, and excavation, workers shall comply with the requirements of Title 8 of the California Code of Regulations, Section 1529, which provides for exposure limits, exposure monitoring, respiratory protection, and good working practices by workers exposed to asbestos. Asbestos-contaminated debris and other wastes shall be managed and disposed of in accordance with the applicable provision of the California Health and Safety Code.

SC 4.8-2 During demolition, grading, and excavation, workers shall comply with the requirements of Title 8 of the California Code of Regulations, Section 1532.1, which provides for exposure limits, exposure monitoring, respiratory protection, and good working practice by workers exposed to lead. Lead-contaminated debris and other wastes shall be managed and disposed of in accordance with the applicable provision of the California Health and Safety Code.

NOISE

SC 4.12-1 During construction, the contractor shall ensure that construction activity complies with the City's Noise Ordinance. Exceptions may be made for activities that will not generate noise audible from off-site, such as painting and other quiet indoor

5.2 MITIGATION MEASURES

AIR QUALITY

AQ-1 Prior to issuance of Building Permits, the Building Plans shall demonstrate that all residences are equipped with a mechanical ventilation system that will properly filter the indoor air. The ventilation system can be a component of the air conditioning system, with the distinction being that clean, ventilated air flow does not necessarily need coolant. The ventilation system shall be effective with all doors and windows closed. Additionally, the ventilation system shall have a filtration efficiency of at least 90 percent and the ability to remove particulate matter with diameters equal to or greater than 0.5 micron.

HAZARDS AND HAZARDOUS MATERIALS

HAZ-1 Site mitigation engineering controls, such as a Liquid Boot® barrier, shall be installed at the Project site in order to prevent vapor intrusion into proposed structures.

HAZ-2 Prior to demolition and/or rehabilitation activities, an asbestos survey shall be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and Cal OSHA certified building inspector to determine the presence or absence of asbestos containing-materials (ACMs). If ACMs are located, abatement of asbestos shall be completed prior to any activities that would disturb ACMs or create an airborne asbestos hazard. Asbestos removal shall be performed by a State certified asbestos containment contractor in consultation with the Costa Mesa Fire Department and in accordance with the South Coast Air Quality Management District (SCAQMD) Rule 1403.

HAZ-3 If paint is separated from building materials (chemically or physically) during demolition of the structures, the paint waste shall be evaluated independently from the building material by a qualified Environmental Professional. If lead-based paint is found, abatement shall be completed by a qualified Lead Specialist prior to any activities that would create lead dust or fume hazard. Lead-based paint removal and disposal shall be performed in accordance with California Code of Regulation Title 8, Section 1532.1, which specifies exposure limits, exposure monitoring and respiratory protection, and mandates good worker practices by workers exposed to lead. Contractors performing lead-based paint removal shall provide evidence of abatement activities to the City Project Engineer.

HAZ-4 A Phase II/site characterization specialist shall review available documentation for the Texaco Service Station site and coordinate with the RWQCB to confirm that the regulatory closure in 2005 meets current residential use standards. If deemed necessary by the RWQCB, sampling would need to take place at the corner parcel to determine the level of remediation and/or mitigation measures that would be required.

HAZ-5 If unknown or suspect materials are discovered during construction by the contractor that are believed to involve hazardous wastes or materials, the contractor shall:

- Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area;
- Notify the City Engineer and Costa Mesa Fire Department;
- Secure the area(s) in question; and
- Implement required corrective actions, including remediation if applicable.

NOISE

NOI-1 For Project residential areas immediately adjacent to West 17th Street and Superior Avenue (i.e., along the roadway or with a direct line of sight), all exterior walls and floor ceiling assemblies (unless within a unit) shall be constructed with double paned glass or an equivalent windows in a manner to provide an airborne sound insulation system achieving a minimum Sound Transmission Class of 33. The Applicant, as an alternative, may retain a qualified acoustical consultant whom shall submit a report for an alternative means of sound insulation satisfactory to the City of Costa Mesa which achieves a maximum interior noise level of 45 CNEL.

6.0 CONSULTANT RECOMMENDATION

Based on the information and environmental analysis contained in this Initial Study, we recommend that the City of Costa Mesa prepare a Mitigated Negative Declaration for the West 17 Street & Superior Avenue Live/Work Project. We find that the Project could have a significant effect on a number of environmental issues, but that the specified mitigation measures would reduce such impacts to a less than significant level. We recommend that the second category, which specifies preparation of a Mitigated Negative Declaration, be selected for the City's determination; refer to Section 3.3, *Lead Agency Determination*.

September 30, 2013
Date

Glenn Lajoie, AICP
Vice President
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