



**Initial Study/Mitigated Negative Declaration
Lighthouse Project
1620-1644 Whittier Avenue
City of Costa Mesa, Orange County, California**

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Table of Contents

Section 1: Introduction	1
1.1 - Statutory Authority and Requirements	1
1.2 - Purpose.....	1
1.3 - Incorporation by Reference	2
Section 2: Project Description	5
2.1 - Project Location.....	5
2.2 - Environmental Setting	5
2.2.1 - General Plan and Zoning	6
2.3 - Background and History	14
2.4 - Project Features.....	15
2.4.1 - Lighthouse Project.....	15
2.5 - Project Phasing	33
2.6 - Project Approvals	33
Section 3: Initial Study Checklist.....	35
3.1 - Background.....	35
3.2 - Environmental Factors Potentially Affected	36
3.3 - Lead Agency Determination	36
Section 4: Environmental Analysis.....	37
4.1 Aesthetics	38
4.2 Agriculture and Forestry Resources.....	48
4.3 Air Quality.....	50
4.4 Biological Resources	65
4.5 Cultural Resources	68
4.6 Geology and Soils	71
4.7 Greenhouse Gas Emissions	77
4.8 Hazards and Hazardous Materials	83
4.9 Hydrology and Water Quality	96
4.10 Land Use and Planning	105
4.11 Mineral Resources	112
4.12 Noise.....	113
4.13 Population and Housing	126
4.14 Public Services	128
4.15 Recreation	134
4.16 Transportation/Traffic.....	136
4.17 Utilities and Service Systems	143
4.18 Mandatory Findings of Significance	150
Section 5: Inventory of Standard Conditions and Mitigation Measures.....	153
5.1 - Standard Conditions	153
5.1.1 - Aesthetics	153
5.1.2 - Air Quality.....	153
5.1.3 - Biological Resources	155
5.1.4 - Cultural Resources.....	155
5.1.5 - Geology and Soils	155
5.1.6 - Hazards and Hazardous Materials.....	156
5.1.7 - Hydrology and Water Quality	157

5.1.8 - Land Use and Planning.....	158
5.1.9 - Public Services	158
5.1.10 - Transportation/Traffic	159
5.1.11 - Utilities and Service Systems	159
5.2 - Mitigation Measures	159
5.2.1 - Air Quality	159
5.2.2 - Hazards and Hazardous Materials	159
5.2.3 - Hydrology and Water Quality	160
5.2.4 - Noise	160
Section 6: Consultant Recommendation.....	163
Section 7: References	165
Section 8: Report Preparation Personnel	169
Appendix A: Shade and Shadow Analysis	
Appendix B: Air Quality and GHG Modeling Data	
Appendix C: Geotechnical Data	
Appendix D: Hazards and Hazardous Materials	
Appendix E: Noise Data	
Appendix F: Transportation and Traffic Data	
Appendix G: Hydrology	

List of Tables

Table 1: Project Summary	17
Table 2: Land Use and Trip Generation Summary	20
Table 3: Localized Significance Analysis (Construction)	54
Table 4: Localized Significance Analysis with Mitigation (Construction).....	55
Table 5: Localized Significance Analysis (Operations)	55
Table 6: Construction Air Pollutant Emissions (with Standard Conditions Incorporated)	58
Table 7: Operational Emissions	60
Table 8: Estimated Greenhouse Gas Emissions.....	80
Table 9: Facilities Listed on the State CERCLIS Database.....	89
Table 10: Consistency with Live/Work Development Standards.....	110
Table 11: City of Costa Mesa Noise and Land Use Compatibility Matrix	115
Table 12: City Noise Ordinance Standards - Residential	115
Table 13: Typical Construction Equipment Maximum Noise Levels, Lmax	117

Table 14: Vibration Levels of Construction Equipment 123
Table 15: Land Use and Trip Generation Summary 137
Table 16: Existing Plus Project Peak Hour Intersection Capacity Analysis 139
Table 17: Year 2016 Cumulative Peak Hour Intersection Capacity Analysis 140

List of Exhibits

Exhibit 1: Regional Location Map 7
Exhibit 2: Local Vicinity Map, Topographic Base 9
Exhibit 3: Local Vicinity Map, Aerial Base..... 11
Exhibit 4: Site Plan 21
Exhibit 5a: Conceptual Elevations Residential Plan 1 23
Exhibit 5b: Conceptual Elevations Residential Plan 2 25
Exhibit 5c: Conceptual Elevations Live/Work Plan 3 27
Exhibit 5d: Conceptual Elevations Live/Work Plan 4 29
Exhibit 6: Tentative Tract Map 31
Exhibit 7: View from Sixteenth Street 43

SECTION 1: INTRODUCTION

The City of Costa Mesa has determined the proposed Lighthouse Project (i.e., 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 49-unit residential and a 40-unit, live/work development in place of the existing industrial land uses and a single residence at 1620-1644 Whittier Avenue. The project also includes approximately 0.6 acre of open space. The project-required entitlements include Urban Master Plan PA-14-06 and Tentative Tract No. 17747. 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 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.

City of Costa Mesa 2000 General Plan (Adopted January 22, 2002). 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. According to the current (2013-2021) Housing Element (City of Costa Mesa 2008), as of 2010, there were 39,946 households within 16 square miles in the City.

City of Costa Mesa 2000 General Plan Environmental Impact Report. 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 (sq ft) 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 Gisele Avenue, west of Harbor Boulevard);
- Noise (long-term mobile sources);
- Air Quality (short- and long-term emissions).

The General Plan and General Plan EIR were used in this Initial Study/Mitigated Negative Declaration 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.

Mesa West Bluffs Urban Plan (adopted April 2006). The Mesa West Bluffs 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 Mesa West Bluffs Urban Plan was identified as a live/work or residential overlay area. This approximately 277-acre area is north of W 16th Street and south of Victoria Street and between Whittier Avenue and Superior Avenue. The Mesa West Bluffs 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 live/work units or residential development within the plan area. The project site is located in the southwest portion of the Mesa West Bluffs Urban Plan; refer to Mesa West Bluffs Urban Plan Figure 2, Westside Urban Plan Areas.

SECTION 2: PROJECT DESCRIPTION

2.1 - Project Location

The project site is located in the southwestern portion of the City of Costa Mesa, in the County of Orange; refer to

Exhibit 1. Specifically, the site is located east of Whittier Avenue and north of 16th Street, at 1620-1644 Whittier Avenue; refer to Exhibit 2 and Exhibit 3. The site is located approximately 0.7 miles northwest of the Pacific Ocean.

Regional access to the site is provided via California State Route 55 (SR-55)/Newport Boulevard, which is located approximately one mile to the east. Pacific Coast Highway (CA-1), which is located approximately half a mile south of the site, also provides regional access. Local access to the site is provided via Whittier Avenue, West 16th Street and Monrovia Avenue.

2.2 - Environmental Setting

The project site (Assessor's Parcel Numbers 424-391-09, 424-391-10 and 424-391-12) consists of three parcels totaling approximately 5.7 acres. The site is relatively flat with onsite elevation of approximately 105 feet above mean sea level. The surface gradient on site drops approximate 10 feet over 630 feet from north to south across the site. The site was vacant land prior to 1901. By 1935, the site appeared generally as vacant or agricultural land with scattered structures. Three commercial buildings were developed on the northwest corner of the site by at least 1960 with numerous smaller structures along the western portion of the site. The current structures were constructed at the site by at least 1977. The site is currently developed with four industrial buildings totaling approximately 66,119 square feet and includes an associated parking lot. Additionally, an existing single-family residence is also located on site.

Primary site access is provided via Monrovia Avenue and West 16th Street. The site can also be accessed via Whittier Avenue south of 17th Street.

The site is currently separated from the residential properties to the north by a block wall or by chain link and private road. Onsite water and sewer are provided by Mesa Water District and Costa Mesa Sanitary District. All off-site drainage from Newhall Street will be collected and routed to the proposed underground public storm drain, which will be directed to the public storm drain system on 16th street.

The City contacted the Coast Commission to obtain a Coastal Zone boundary determination with respect to the project site. The Coastal Commission confirmed that the project is located outside the Coastal Zone (Coastal Commission 2014).

2.2.1 - General Plan and Zoning

General Plan

According to the City of Costa Mesa General Plan Land Use Map, the site is designated as 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 a 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). Additionally, with the adoption of the Mesa West Bluffs Urban Plan, the Mesa West Bluffs Urban Plan Mixed-Use Overlay District was applied to the property. The underlying zoning requirements of the base zoning districts are not applicable because the standards of the urban plans are applied. 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, PDRHD, 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)).

Mesa West Urban Plan

Mesa West Bluffs Urban Plan Area

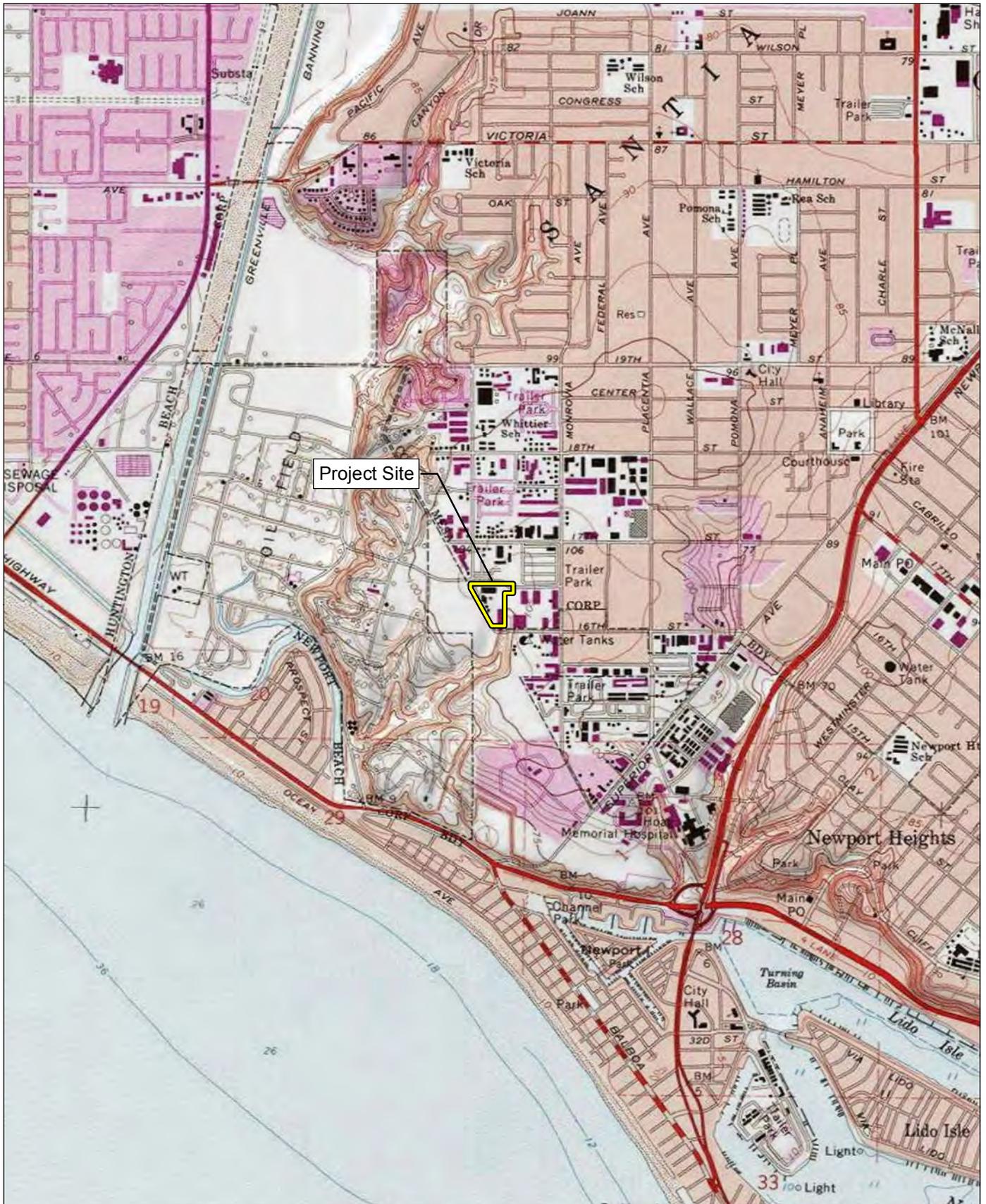
In March 2005, the Costa Mesa City Council unanimously approved several revitalization strategies aimed to improve the Westside. City Council identified the Mesa West Bluffs Urban Plan area as a live/work or residential overlay area. The Zoning Map reflects this overlay zone for the plan area. In April 2006, the City Council adopted the Mesa West Bluffs Urban Plan.



Source: Census 2000 Data, The CaSIL.



Exhibit 1 Regional Location Map

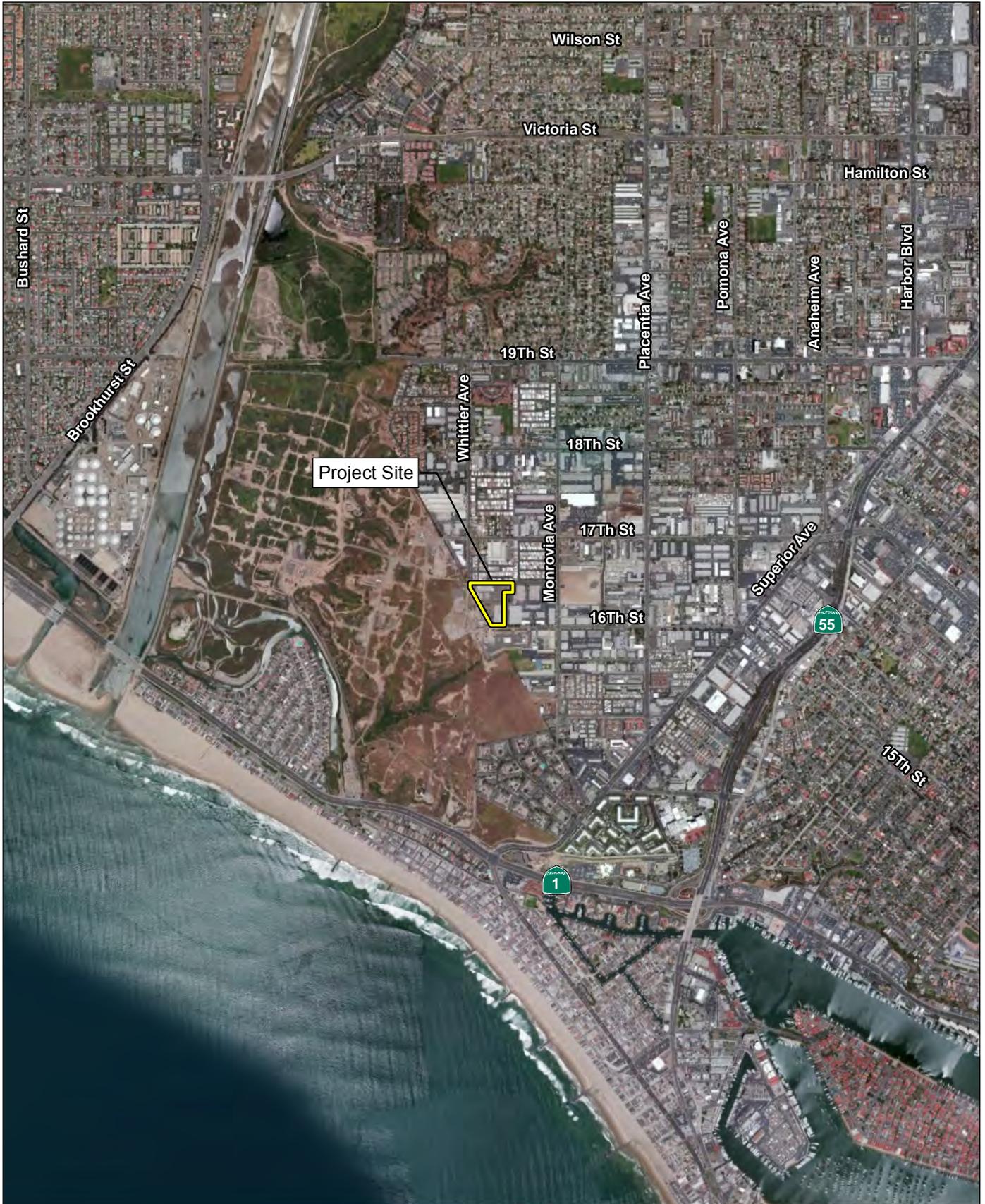


Source: TOPO! USGS Newport Beach, CA (1978) 7.5' DRG.

Exhibit 2

Local Vicinity Map Topographic Base





Source: ESRI Aerial Imagery.

Exhibit 3 Local Vicinity Map Aerial Base



The Mesa West Bluffs Urban Plan area is approximately 277 acres in size. Some 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 are identified in Figure 9 of the Mesa West Bluffs Urban Plan. 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 major 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 will be supported by the General Plan roadway network. In July 2009, the City amended the plan and added additional objectives to encourage a variety of quality mixed uses.

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 applicable 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.
- Encourage quality live/work development which promote business activity through workspaces and amenity areas and which are distinct from residential lofts/life-style lofts in design and function.

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 workspace accessible from the living area, reserved for, and regularly used by the resident(s).

Existing Surrounding Land Uses

Surrounding land uses generally consist of vacant, residential and light industrial uses. Land uses immediately adjacent to the project site consist of the following:

- **North:** Island View Mobile Home Park is located to the north. The mobile home park is zoned MG (General Industrial).
- **East:** RVCA and small businesses such as a gym, manufacturing companies, and retail are located to the east. These properties are zoned MG (General Industrial).
- **South:** 16th Street and the City of Newport Beach Utilities Yard are located to the south. These properties are zoned PF (Public Facilities).
- **West:** Vacant land is located to the west. This land is located in Newport Beach and is zoned PF (Public Facilities). A portion of this land is being considered for a new school site.

2.3 - Background and History

Urban Master Plan Screening Request

As part of the City's planning process, a screening review was held with the City Council on January 21, 2014 to present the conceptual project and receive initial City Council comment on the project. In particular, the purpose of the urban plan screening process is to address the following issues:

1. Does the project meet the City Council's expectations for projects in the Urban Plan areas?

The screening process is an opportunity to determine if the conceptual project meets Council's expectations for new projects in the urban plan areas. The City Council can provide initial feedback to the applicants.

2. Does the City Council have any comments on any requested deviations?

The screening process will highlight any requested deviations from the urban plans to the City Council's attention.

The screening process allows the Applicant to consider the City Council's initial comments and to refine the development concept based on their feedback.

Based on City Council feedback the Applicant has worked with City staff to make modifications to the project, including a reduction in deviations. The changes are reflected in the project description herein.

2.4 - Project Features

The proposal involves an 89-unit development of residential and live/work units at 1620-1644 Whittier Avenue (see Exhibit 4) The project requires City of Costa Mesa approval of the Urban Master Plan UMP-13-08, Tentative Tract Map 17747, Demolition Permit, Grading Permit, and Building Permit(s). These project components are further described below.

2.4.1 - Lighthouse Project

The City of Costa Mesa is processing a planning application from MW Bluffs Owner, LLC for an 89-unit residential and live/work project at 1620-1644 Whittier Avenue. The project involves the following:

1. Adoption of an Initial Study/Mitigated Negative Declaration.
2. Urban Master Plan - PA-14-06 for development of 89 units at the site of an industrial facility within the Mesa West Bluffs Urban Plan. The project consists of the development of 89 units with a total gross density of 13 units per acre (residential component) and a Floor Area Ratio (FAR) of 0.87 (live/work component); refer to Exhibit 4. Below is a breakdown of how the project would alter the site, based on the tentative tract map:
 - a) Tentative Tract Map 17747 - Subdivision of a 5.7-acre property as follows; refer to Exhibit 6:
 - 2.0 acres for 49 residential lots – single-family
 - 1.2 acres for 40 work/living lots – single-family
 - 1.9 acres for neighborhood streets
 - 0.6 acres for 18 open space lots (lots B through S)

Table 1, Project Summary, summarizes the proposed units and their sizes. The development includes 89 total units and offers these two different products:

- **49 Residential Units.** These units are within the northern portion of the project. These units are contained in individual buildings, with garage space and covered parking on the ground

floor; one floor plan also includes an office and powder room on the ground floor. Common living areas and one bedroom are on the second floor. The third floor features three bedrooms and a rooftop deck (fourth floor). Entry for all units is from the first floor.

- **40 Live/Work Units.** These units are within the southern portion of the project site. These units are contained in individual buildings, and features garage space, a minimum 250 square foot commercial office work space and a powder room on the ground floor. Common living areas are on the second floor, three bedrooms are on the third floor, and there is a rooftop deck (fourth floor). Entry for all units is from the first floor.

The project would provide 276 garage/covered parking spaces and 56 open parking spaces for a total of 332 spaces. (Four spaces per residential unit, and 3 spaces per live/work unit, for a total of 316 spaces are required by code.) Table 1, Project Summary, summarizes the proposed units and their sizes.

An eight-foot screening wall will be required to be constructed along the length of the northern and eastern project boundary. A 6-foot high wrought iron view fence is proposed to be constructed along the western boundary of the project site. No perimeter fencing is proposed along 16th Street.

The project would join to the existing 8-inch sanitary sewer for all effluent demands. The water system(s) would join to the existing 8-inch cast iron water line in two locations. One looped water line will serve both the domestic and fire demands. Water quality storm flow and hydrologic storm flow will connect through on site piping and in the existing 36-inch reinforced concrete pipe in 16th Street.

Table 1: Project Summary

Plan	Description	No of units	Total (sq ft)	First Floor (sq ft)	Second Floor (sq ft)	Third Floor (sq ft)	Garage (sq ft)	Balcony (sq ft)	Roof Deck (sq ft)	Work Space (sq ft)	Provided Parking ¹	Required Parking per Unit
Residential Units												
Plan 1	4 BR/2 BA Kitchen, living/dining room, balcony 2-car garage, 2 covered parking spaces	27	1,857	50	865	942	442	81	305	N/A	108	4
Plan 2	4 BR/2 BA Kitchen, living/dining room, balcony First floor office and powder room 2-car garage, 2 covered parking spaces	22	2,290	285	1,009	1,006	420	100	275	N/A	88	4
Live/Work Units												
Plan 3	2BR/2 BA First floor office and powder room Kitchen, living/dining room, balcony 2-car garage	15	1,750	356	690	704	420	94	260	250	30 ²	3
Plan 4	3BR/3 BA First floor office and powder room Kitchen, living/dining room, balcony 2-car garage	25	1,890	310	750	830	420	71	235	253	50 ²	3
	Surface Parking										56	—
	Total parking spaces										332	316
<p>Notes:</p> <p>¹ A total of 332 parking spaces are provided, including 56 in surface parking lot spaces.</p> <p>² Reflects the spaces provided within the lot for each unit. Additional parking for live-work units is provided in surface parking areas.</p>												

Architectural Features

The proposed architecture is a contemporary design of stucco with ribbed metal siding, brick veneer, and translucent garage doors. The proposed colors are light and charcoal grays, whites, and earthen tones conveying a commercial or light industrial village theme. Projections are included to maximize floor space on upper floors and provide building articulation, texture and color variation throughout the project's design. Private balconies are proposed with both the residential and live/work units. Elevations of the proposed buildings are provided in Exhibit 5a through Exhibit 5d.

Development Standards

Site Coverage/Floor Area Ratio (FAR). The proposed 0.87 FAR for the live/work units is consistent with the Urban Plan requirements of a FAR of up to 1.0. The proposed 13 dwelling units (DU) per acre for the residential units are also consistent with the Urban Plan.

Open space and amenities. The minimum required open space for live/work units is 10 percent, and the minimum required open space for the residential units is 40%; the project provides 40.1 percent overall open space, and 29.6 percent common open space including the following amenities:

- Swimming pool and spa
- Activity/sport court
- Tot lot
- Community gathering space
- Restrooms
- Community gathering spaces (three)
- Monument art

Side and Rear Yard Setbacks

The Mesa West Bluffs Urban Plan identifies setbacks of 10 feet between multi-unit buildings. The project would deviate from the setback requirement in that some of the units would be less than 10 feet apart (6 feet at the narrowest point for some units). The project developer is requesting approval of a deviation from this requirement as part of Urban Master Plan PA-14-06.

Earth-Friendly Elements

1. Project features and design elements were reviewed by Verde, a sustainability consulting firm and identified sustainability features of the project including (Verde 2014):
 - The project is located on a previously developed infill project, within and near existing communities, public transit and other infrastructure. Improvements and redevelopment within existing developed areas reduce impacts on resources and public services. The area is currently considered "somewhat walkable" and is within 0.5 mile of a OCTA Route 47/47A bus stop (Placentia Avenue and 16th Avenue) providing the opportunity for transit and reduction in vehicle miles traveled.
 - Building compactly, or at a high density, can reduce costs of infrastructure for the builder and the public, and makes efficient use of existing infrastructure and can increase available areas for parks and open spaces. With a residential density of 13 units per acre,

and 65,700 square feet of open space, the project efficiently uses the available land area, and exceeds LEED-ND Neighborhood Pattern Design density (7 DU/acre) by two times.

- The project provides a variety of sizes and efficiency between standard residential and live/work options, which opens it up to a diverse group of homeowners. The size of the homes provide effective living and working space without exceeding, and in some cases lower than, the neutral home size as defined by U.S. Green Building Council. The incorporation of live/work residences provides opportunity for future commercial uses, and the opportunity to eliminate or dramatically reduce daily employment commute of occupants, reducing traffic congestion and vehicle dependence.
- The overall layout encourages social interaction and active recreation through the passive features that slow cars and the provided public spaces, with connected, walkable access. The detached homes with large window and integrated patio areas transform streetscapes into public amenities.

2. The project would also provide energy efficient elements such as:

- Energy efficient lighting
- Energy efficient HVAC systems
- Home designs that maximize natural light and air
- Tankless water heaters
- Water efficient toilets and fixtures
- Water efficient irrigation systems
- Drought tolerant landscaping

Site Access

The project would have two access locations: one from 16th Street that would be more open and commercially oriented consistent, with the live/work units in the southern portion of the project; and one from Whittier Avenue, facilitating more direct local access to nearby schools for residential units in the northern portion of the site. Internal streets provide access throughout the neighborhood and via either entry location.

Parking

The development meets the minimum parking requirement. Residential units have a parking requirement of 4 stalls total and live/work units have a parking requirement of 3 stalls total. Total required parking for the project is 316 stalls. The project will exceed parking requirements by providing 332 stalls. Parking would be provided via 56 surface parking stalls, the remaining parking would be provided via a mix of 2-car garages, and 2-car covered carport. The typical drive aisle is 26 feet for two-way traffic and 28 feet in a few locations to allow vehicular mobility throughout the site.

Construction Activities and Grading

The project includes demolition and removal of the existing buildings located on the project site, including approximately 61,000 square feet of existing buildings and approximately 6,000 square feet of temporary office trailers. Demolition will also include one single-family residence. Prior to demolition of the existing structures, removal and/or abatement of asbestos containing building

materials, lead based paints, and any hazardous materials associated with the existing building materials shall be conducted by a qualified environment professional in consultation with the Costa Mesa Fire Department. Once demolition and removals are completed, the project site would be graded and constructed in a single-phase. If contaminated soils are encountered during grading activities, excavation and removal of contaminated soils would be required to comply with Federal, State, and local regulations.

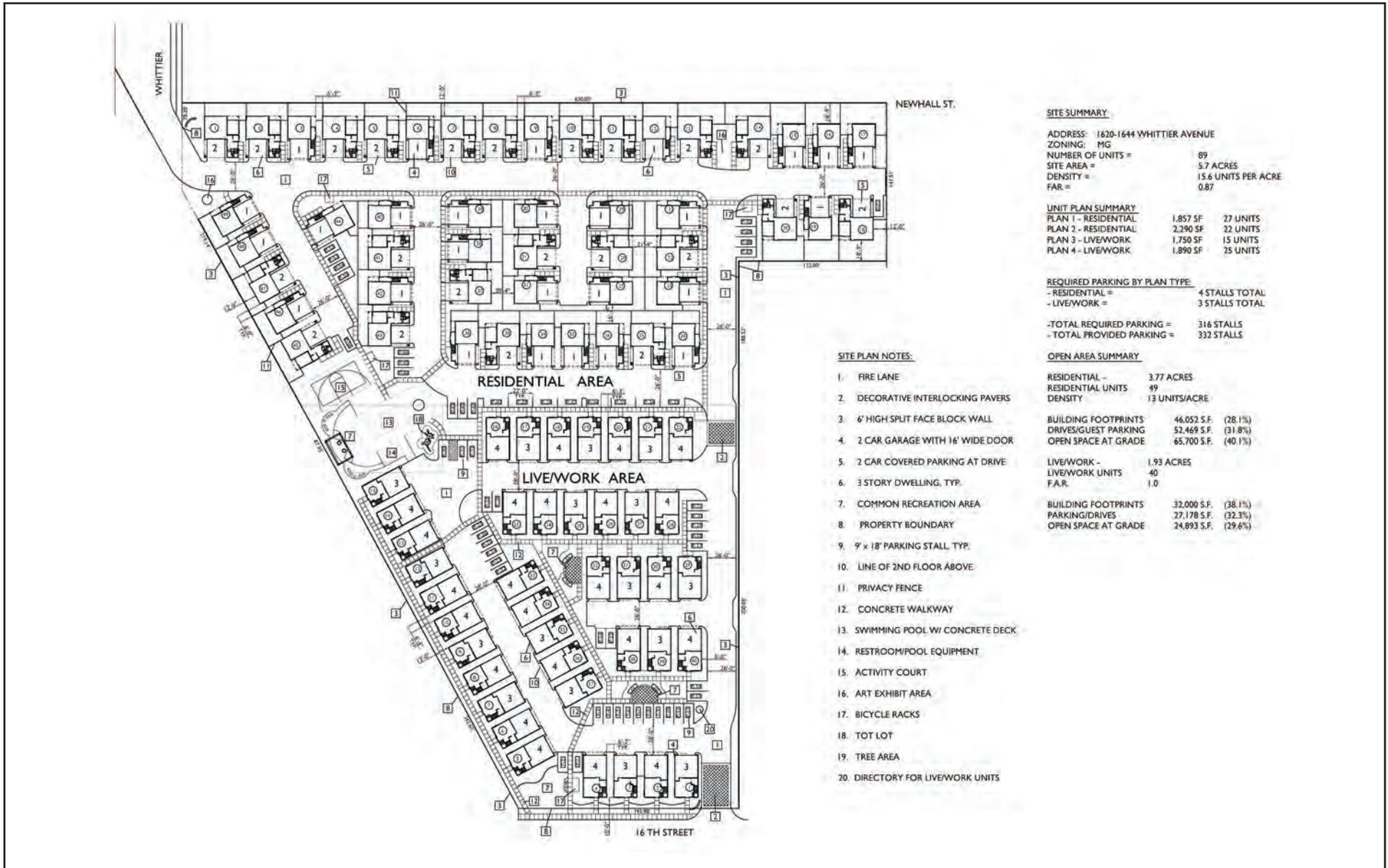
The project will require the export of approximately 9,500 cubic yards of material. A Construction Access and Circulation Plan will be submitted to ensure that construction traffic will not affect 16th Avenue, Whittier Avenue and other public roadways in the site vicinity.

Trip Generation Analysis

Linscott Law and Greenspan (LL&G) estimated project trip generation as part of the project-specific traffic impact analysis (LL&F 2014). The project is forecast to generate 981 daily trips, with 86 trips produced in the AM peak hour and 107 trips produced in the PM peak hour. The existing land use currently generates 424 daily trips, with 28 trips produced in the AM peak hour and 46 trips produced in the PM peak hour. When the project is compared to the existing “occupied floor area,” the project is forecast to result in 557 additional daily trips, 58 net AM peak-hour trips, and 61 net PM peak-hour trips. Refer to the Table 2 below.

Table 2: Land Use and Trip Generation Summary

Generation Rates Category	Daily 2-Way	AM Peak Hour	PM Peak Hour
		Total	Total
Single-Family Detached Housing (TE/DU)	9.52	0.75	1.00
General Office Building (TE/TSF)	11.03	1.56	1.49
Project			
Detached Residential Units (49 DU)	466	37	49
Detached Live/Work Units (40 DU)	381	30	40
Office Portion of Live/Work Units (13,501 square feet)	149	21	20
10% Mixed-Use Trip Reduction Applied to Office:	-15	-2	-2
Subtotal	981	86	107
Existing Occupied Floor Area			
Existing Site	-424	-28	-46
Total “Net Occupied” Project Trip Generation: Project Minus Existing Occupied Office Floor Area	557	58	61
Notes: TE/DU= trip end per dwelling unit, TE/TSF= trip end per 1,000 square feet Source: LL&G 2014.			



SITE SUMMARY:

ADDRESS: 1620-1644 WHITTIER AVENUE
 ZONING: MG
 NUMBER OF UNITS = 89
 SITE AREA = 5.7 ACRES
 DENSITY = 15.6 UNITS PER ACRE
 FAR = 0.87

UNIT PLAN SUMMARY

PLAN 1 - RESIDENTIAL	1,857 SF	27 UNITS
PLAN 2 - RESIDENTIAL	2,290 SF	22 UNITS
PLAN 3 - LIVE/WORK	1,750 SF	15 UNITS
PLAN 4 - LIVE/WORK	1,890 SF	25 UNITS

REQUIRED PARKING BY PLAN TYPE

- RESIDENTIAL =	4 STALLS TOTAL
- LIVE/WORK =	3 STALLS TOTAL
- TOTAL REQUIRED PARKING =	316 STALLS
- TOTAL PROVIDED PARKING =	332 STALLS

OPEN AREA SUMMARY

RESIDENTIAL -	3.77 ACRES
RESIDENTIAL UNITS	49
DENSITY	13 UNITS/ACRE
BUILDING FOOTPRINTS	46,052 S.F. (28.1%)
DRIVES/GUEST PARKING	52,469 S.F. (31.8%)
OPEN SPACE AT GRADE	65,700 S.F. (40.1%)
LIVE/WORK -	1.93 ACRES
LIVE/WORK UNITS	40
F.A.R.	1.0
BUILDING FOOTPRINTS	32,000 S.F. (38.1%)
PARKING/DRIVES	27,178 S.F. (32.3%)
OPEN SPACE AT GRADE	24,893 S.F. (29.6%)

SITE PLAN NOTES:

1. FIRE LANE
2. DECORATIVE INTERLOCKING PAVERS
3. 6' HIGH SPLIT FACE BLOCK WALL
4. 2 CAR GARAGE WITH 16' WIDE DOOR
5. 2 CAR COVERED PARKING AT DRIVE
6. 3 STORY DWELLING, TYP.
7. COMMON RECREATION AREA
8. PROPERTY BOUNDARY
9. 9' x 18' PARKING STALL, TYP.
10. LINE OF 2ND FLOOR ABOVE
11. PRIVACY FENCE
12. CONCRETE WALKWAY
13. SWIMMING POOL W/ CONCRETE DECK
14. RESTROOM/POOL EQUIPMENT
15. ACTIVITY COURT
16. ART EXHIBIT AREA
17. BICYCLE RACKS
18. TOT LOT
19. TREE AREA
20. DIRECTORY FOR LIVE/WORK UNITS

Source: Summa Architecture, June 2014.



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**Exhibit 4
Site Plan**

CITY OF COSTA MESA • LIGHTHOUSE PROJECT
 INITIAL STUDY/MITIGATED NEGATIVE DECLARATION



LEFT ELEVATION



FRONT ELEVATION



RIGHT ELEVATION



REAR ELEVATION

MATERIAL SCHEDULE

1	ASPHALT SHINGLE ROOFING
2	SAND FINISH STUCCO
3	RIBBED METAL SIDING
4	EXTERIOR LIGHT FIXTURE
5	STUCCO SCORE LINE
6	HARDIE PLANK LAP SIDING
7	HARDIE BOARD/BATTEN SIDING
8	HARDIE PLANK VERTICAL SIDING
9	BRICK VENEER
10	METAL RAILING
11	2x TRIM @ WINDOW TYP.
12	STUCCO EYEBROW OVERHANG
13	STUCCO REGLET
14	ROUND METAL CLAD COLUMN
15	TRANSLUCENT GARAGE DOOR

Source: Summa Architecture, June 2014.



Exhibit 5a Conceptual Elevations Residential Plan 1



Source: Summa Architecture, June 2014.



Exhibit 5b Conceptual Elevations Residential Plan 2



LEFT ELEVATION



FRONT ELEVATION



RIGHT ELEVATION



REAR ELEVATION

MATERIAL SCHEDULE

1	ASPHALT SHINGLE ROOFING
2	SAND FINISH STUCCO
3	RIBBED METAL SIDING
4	EXTERIOR LIGHT FIXTURE
5	STUCCO SCORE LINE
6	HARDIE PLANK LAP SIDING
7	HARDIE BOARD/BATTEN SIDING
8	HARDIE PLANK VERTICAL SIDING
9	BRICK VENEER
10	METAL RAILING
11	2x TRIM @ WINDOW TYP.
12	STUCCO EYEBROW OVERHANG
13	STUCCO REGLET
14	ROUND METAL CLAD COLUMN
15	TRANSLUCENT GARAGE DOOR

Source: Summa Architecture, June 2014.



Exhibit 5c Conceptual Elevations Live/Work Plan 3



LEFT ELEVATION



FRONT ELEVATION



RIGHT ELEVATION



REAR ELEVATION

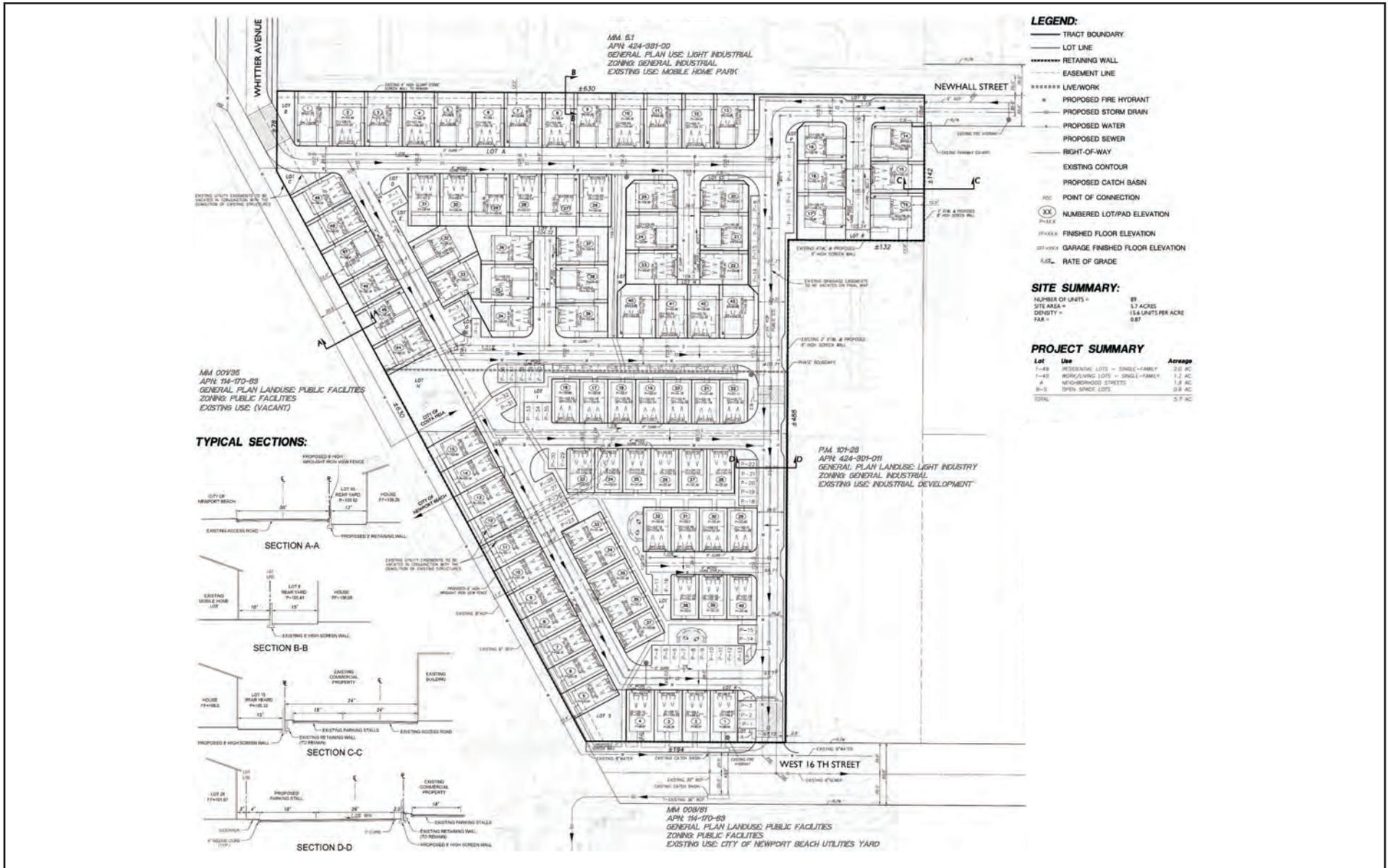
MATERIAL SCHEDULE

1	ASPHALT SHINGLE ROOFING
2	SAND FINISH STUCCO
3	RIBBED METAL SIDING
4	EXTERIOR LIGHT FIXTURE
5	STUCCO SCORE LINE
6	HARDIE PLANK LAP SIDING
7	HARDIE BOARD/BATTEN SIDING
8	HARDIE PLANK VERTICAL SIDING
9	BRICK VENEER
10	METAL RAILING
11	2x TRIM @ WINDOW TYP.
12	STUCCO EYEBROW OVERHANG
13	STUCCO REGLET
14	ROUND METAL CLAD COLUMN
15	TRANSLUCENT GARAGE DOOR

Source: Summa Architecture, June 2014.



Exhibit 5d Conceptual Elevations Live/Work Plan 4



Source: Hunsaker & Associates, February 2014.



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Exhibit 6 Tentative Tract Map

CITY OF COSTA MESA • LIGHTHOUSE PROJECT
 INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

2.5 - Project Phasing

Project construction is estimated to occur in one phase, over 24 months including demolition over two months (November 2014-December 2014), grading/site work over 4 months (January 2015-April 2015), and vertical construction over 18 months (March 2015-September 2016).

2.6 - Project Approvals

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

- Planning Commission approval of the Initial Study/Mitigated Negative Declaration;
- Approval of the Urban Master Plan PA-14-06, a mixed-use development allowing residential and live/work units;
- Approval of Tentative Tract Map 17747;
- Demolition Permits for onsite utilities and any other structures, as applicable;
- Grading and Building Permits to grade and construct the project;
- Site Plan approval from the Costa Mesa Fire Department and Sanitary District; and
- Onsite and offsite utility plans and any improvements within the public right-of-way.

SECTION 3: INITIAL STUDY CHECKLIST

3.1 - Background

1. Project Title
Lighthouse Project
2. Lead Agency Name and Address:
City of Costa Mesa Development Services Department 77 Fair Drive Costa Mesa, CA 92626
3. Contact Persons and Phone Number:
Melvin E. Lee, AICP Senior Planner 714-754-5611 email: mel.lee@costamesaca.gov
4. Project Location:
1620-1644 Whittier Avenue Costa Mesa Orange County, CA
5. Project Sponsor's Name and Address:
MW Bluffs Owner, LLC 4100 MacArthur Boulevard, Suite 330 Newport Beach, CA 92660
6. General Plan Designation:
Light Industry
7. Zoning:
MG- General Industrial Mesa West Bluffs Mixed-Use Zone Overlay District
8. Description of the Project:
See Section 2, Project Description
9. Surrounding Land Uses and Setting:
See Section 2, Project Description
10. Other public agencies whose approval is required (e.g., permits):
<ul style="list-style-type: none">• South Coast Air Basin• Santa Ana Regional Water Quality Control Board - Region 8

3.2 - Environmental Factors Potentially Affected

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.

- | | | |
|---|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards/Hazardous Materials | <input checked="" type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities/Services Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

3.3 - Lead Agency Determination

Lead Agency Determination

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described in Section 4, Environmental Analysis, have been added. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the 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.



Signed

City of Costa Mesa

Agency

MEL LEE, AICP, SENIOR

Signer's Name, Title
PLANNER

9/10/14

Date

SECTION 4: 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 Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards/Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities/Services Systems
- 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.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.1 Aesthetics <i>Would the project:</i>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

Would the project:

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, as there are no officially designated scenic vistas in the City of Costa Mesa. Therefore, project implementation would not have any effect on a designated scenic vista/view.

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

No Impact. The project site is not located along a designated State scenic highway, as there are no officially designated scenic highways in the City of Costa Mesa. Aside from ornamental landscaping located adjacent to the existing residential structure, and limited ornamental landscaping located on the western portion of the project site, there are no protected tree species on the property. No historic buildings or rock outcroppings are located at the project site. Therefore, project implementation would not damage scenic resources within a state scenic highway.

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 primarily defined by several light industrial buildings, associated parking lot, as well as a single-family residence currently onsite. The existing visual character of the surrounding area is defined by the light industrial uses scattered throughout the vicinity, vacant storage lots to the west, and the mobile-home park to the

north of the site. The area does not exhibit 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.

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 light industrial and residential area. The project involves construction of an 89-unit development of residential and live/work units, a three-story (plus fourth-story roof deck) detached development in place of existing industrial buildings, a parking lot, and one residential structure. Project implementation would introduce a mid-rise scale to the existing mature industrial and residential neighborhood. Therefore, the project 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 light industrial buildings, offices, and one residence. Projections are included, in order to provide building articulation, and texture and color changes are emphasized throughout the project's design. Exhibit 7 illustrates the buildings proposed at the southern portion of the property as viewed from Sixteenth Street. Additionally, an eight-foot high split face block wall and fencing would be provided along the northern boundary to provide a buffer between the existing residential mobile home park to the north of the project, enhance the future residents' privacy, and create a community identity. An eight-foot screen wall would also be provided along the eastern project boundary, in order to screen the project from the existing light industrial uses to the east. An eight-foot high wrought iron view fence would be installed along the western project boundary. No wall is provided along the 16th Street frontage in order to provide an urban sense of arrival consistent with the mixed-use aspect of the live/work units.

As stated, the project would establish an eight-foot high split face block wall and fencing along the northern border of the site, which would increase privacy for the residents of the mobile home park. Current views of the light industrial buildings from the mobile home to the project site would change as a result of the project by establishing residential buildings of 35 feet. While the current aesthetic of the project site would be altered, it would be enhanced through various architectural components including texture, color, and design. The new residential use would also be more compatible with the adjacent mobile homes than the existing industrial facility.

As previously noted, the project site is located within the Mesa West Bluffs Urban Plan. The Mesa West Bluffs Urban Plan's emphasis is on providing visual enhancement and encouraging the development of live/work units or residential development within the plan area. To this end, the Mesa West Bluffs Urban Plan's applicable objectives include to:

- 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.
- Encourage quality live/work development which promote business activity through workspaces and amenity areas and which are distinct from residential lofts/life-style lofts in design and function.

In furtherance of these objectives, the project would provide a mixed/use nontraditional development that includes urban housing in a light industrial area. The architecture is a contemporary design of sand finish stucco with ribbed metal siding, and brick veneer. The building material colors are light and charcoal grays, whites, and earthen tones conveying a commercial or light industrial village theme. Thus, project implementation would enhance and revitalize the character of the surrounding area.

The project site 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 onsite 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 however, are activated by a Master Plan. The development regulations specified in CMMC Article 11 would be superseded by those contained in the Mesa West Bluffs Urban Plan for live/work development, as applicable. Therefore, the project would be subject to compliance with the development standards and requirements specified in the Mesa West Bluffs Urban Plan. Namely, the project would be reviewed for consistency with the Mesa West Bluffs 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 project Master Plan would be reviewed through the City's discretionary review process, in order to verify compliance with the Mesa West Bluffs Urban Plan standards, as well as relevant CMMC Article 11 standards.

Shade and Shadow

The issue of shade and shadow pertains to the blockage of direct sunlight by project buildings, which may affect adjacent properties. Shading is an important environmental issue because the users or occupants of certain land uses, such as residential, recreational/parks, churches, schools, outdoor restaurants, and pedestrian areas have some reasonable expectations for direct sunlight and warmth from the sun. These land uses are termed "shadow-sensitive." The mobile home park adjacent to and north of the project site is the only "shadow-sensitive" land use with the potential to be impacted by the project.

The Mesa West Bluffs Urban Plan includes the following Standard Condition of Approval pertaining to shade and shadow effects on surrounding uses:

For proposed development adjacent to residentially zoned properties that exceeds two stories, developer shall submit a shade/shadow analysis prepared by a professional aesthetic consultant. The conclusions of the aesthetic analysis shall specifically demonstrate that adequate daylight plane requirements for the abutting residential uses are provided.

The City of Costa Mesa does not define any specific shade/shadow thresholds for development. However, thresholds utilized by local municipalities such as the City of Los Angeles can be useful in determining the degree of impact. The City of Los Angeles contains the following guidance in the L.A. CEQA Thresholds Guide (City of Los Angeles 2006) to aid in determining the significance:

. . . shadow-sensitive uses would be shaded by project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October).

Pursuant to local policy, a project-specific Shade/Shadow Analysis (Summa Architecture 2014) was conducted and is contained in Appendix A. The analysis includes exhibits illustrating the potential effects of shade/shadows on adjacent residential properties. While the mobile-home park is not zoned for residential use, the current land use on site is reflective of residential zoning and shall be analyzed as such, thereby providing a conservative analysis of the project.

The majority of the applicable properties are separated from the project by an internal access road, and a few of these mobile home units have outdoor areas along the south side, with some of these areas shaded by awnings or other structures. With the potential exceptions of mobile home units 24 and 25, all of the bordering units currently experience some level of shadowing from various structures and trees during the winter months, including buildings associated with the existing project site.

The residential and live/work structures would be constructed at a greater height (35 feet) than the current building, but would also be setback farther from the adjacent property line. The project would also provide spacing between buildings that may produce sun, unlike the current monolithic building on site. During the winter months, the mobile-home units would receive slightly longer shadow projections from the homes, but alternatively, they would also receive mid-day solar access.

According to the project-specific Shade/Shadow Analysis, units 24 and 25 would experience greater than 3 hours of shade during January, November, and December (between 9:00 a.m. and 3:00 p.m.). However, as depicted in the Shade/Shadow Exhibits, the project would create shade in the front yard of two residences, a section of which is sidewalk. However, while general residential uses are relatively shadow sensitive, the project would impact a minimal amount of relevant property currently utilized for outdoor use.

Additionally, the remaining mobile home units would not experience more than 3 hours of project induced shade in outdoor areas during the winter, nor 4 hours of shade during the other months. As previously discussed, many of the outdoor areas near the project site already experience similar levels of shade from the current building and from other structures such as awnings. Therefore, project impacts to shade/shadows would be less than significant.

Although the project would substantially alter the visual character of the project site and is dissimilar to the surrounding industrial/commercial/residential land uses, the development meets the objectives of the Urban Plan by enhancing and revitalizing the site through a residential and 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.

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

Light Impacts

Less than significant impact. 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.



Source: Summa Architecture, June 2014.



Exhibit 7 View from Sixteenth Street

The project site is located within a light industrial and residential area. Existing lighting conditions in the project area include light emanating from building interiors, security lights and the surrounding light industrial and residential land uses, as well as nearby street lighting. There are residential uses located north of the project site and Carden Hall School is located approximately 0.1 mile south of the project site. There are no additional sensitive land uses in the project's immediate vicinity.

The residential units would involve a carport, garage on the ground floor and living areas on the second and third floors. The live/work units of the development would involve garage and commercial uses on the ground floor and residential uses on the second and third floors. The project 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 residential uses immediately north of the project site and the Carden Hall school approximately 0.1 mile to the south. The existing and proposed residential uses are considered light sensitive and could be exposed to lighting from the existing surrounding industrial uses and/or the project's future commercial uses. Both sides of each garage door would have an exterior light fixture. An eight-foot high block wall would be installed between along the northern project boundary to enhance privacy and separate the project from existing residential land uses. Given the height and proximity of the residential units, the City considers building mounted lighting to be adequate for site lighting. No significant lighting is proposed adjacent to the existing residential uses to the west. Low voltage landscape, pole, and fountain lighting will be placed within the open space area in the center to the project site. Standard Condition SC 4.1-1 requires preparation of a Lighting Plan and Photometric Study, in order to demonstrate that the project lighting meets minimum-security lighting requirements and minimizes light/glare to residents.

Additionally, the project would be subject to lighting regulations specified in the Mesa West Urban Plan, as well as those specified CMMC Article 11 (Mixed-Use Overlay District). "Carpinteria" style ornamental street lighting is recommended for the Mesa West Urban Plan area; refer to Mesa West Urban Plan page 27. CMMC Article 11 specifies the following regarding lighting:

- **CMMC Section 13-83.52(c)3:** *Master plan findings for mixed-use overlay district.* A project must be consistent with the compatibility standards for residential development in that it provides adequate protection for residents from excessive noise, odors, vibration, light and glare, and toxic emanations. This includes the new residents of this development.
- **CMMC Section 13-83.53(d)2:** *Project design features.* The nonresidential component of the mixed-use development shall incorporate parking areas, service areas, buffers, entrances, exits, yards, courts, landscaping, and graphics and lighting as integrated portions of the overall mixed-use development.
- **CMMC Section 13-83.54(c):** *Lighting.* Outdoor lighting associated with 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.

Live-work units are located in the southern portion of the site, and not adjacent to existing residential uses (i.e., the mobile home park). In addition, compliance with the Urban Plan and

CMMC standards and Standard Condition SC 4.1-1 would reduce the project's commercial uses' potential spillover light impacts on residential uses to less than significant.

As previously noted, the existing and proposed residential uses could be exposed to lighting from the existing surrounding commercial/industrial uses. Most of the lighting from the existing uses to the east of the project site would be shielded by an existing two-foot RTWL and eight-foot high screen wall to be located along the eastern property line of the project site. 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 spillover 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 architecture is a contemporary design of sand finish stucco with ribbed metal siding, and brick veneer. The project would involve primarily non-reflective façade treatments and the minimization of unrelieved glass surfaces. Additionally, the project would be subject to compliance with CMMC Section 13-83.54(c)3, 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-foot candle 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.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>4.2 Agriculture and Forestry Resources <i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. 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.</i> Would the project:</p>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Evaluation

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. 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:

- 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 existing industrial buildings, a parking lot, and one residential structure. Thus, project implementation would not result in the conversion of farmland to non-agricultural use.

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

No impact. The project site is zoned MG 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.

- 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 MG General Industrial. Project implementation would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

- 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 existing industrial buildings, a parking lot, and one residential structure. Thus, project implementation would not 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?**

No impact. The project site is developed with existing industrial buildings, a parking lot, and one residential structure, and the surrounding area is designated for industrial uses. 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.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.3 Air Quality <i>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:</i>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

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. The City of Costa Mesa requires projects meet certain Standard Conditions. They are requirements and, therefore, incorporated into the analysis. Standard Conditions relevant to the project are provided in the section for reference.

Would the project:

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

Less than significant impact with mitigation incorporated. The project consists of an 89-unit detached residential and live/work development, replacing 66,119 square feet of industrial buildings and a single-family residence. The project site is located in Orange County, which is located in the South Coast Air Basin (Air Basin). The regional agency responsible for air quality within the Air Basin is the South Coast Air Quality Management District (SCAQMD). The area is designated nonattainment for the state 1-hour and 8-hour ozone, 24-hour and annual respirable particulate matter (PM₁₀), and annual fine particulate matter (PM_{2.5}) standards. The area is also designated

nonattainment for federal standards for 8-hour ozone, and 24-hour PM_{2.5}. The area is designated as maintenance for the federal PM₁₀ standard.

The applicable Air Quality Plan (AQP) is the 2012 Air Quality Management Plan for the South Coast Air Basin (AQMP 2012). According to the SCAQMD CEQA Air Quality Handbook, the project is consistent with the AQP if the project addresses two main criteria (and associated questions):

Criterion 1:

Questions 1 and 2. Would the project result in an increase in the frequency or severity of existing air quality violations? Would the project cause or contribute to new air quality violations?

Answers 1 and 2: As shown in Impact AIR b) below, the project would result in a less than significant carbon monoxide (CO) impact during operation. In addition, project construction emissions would not exceed SCAQMD's LST criteria with mitigation incorporated. Therefore, the project would not increase the frequency or severity of existing air quality violations in the project's vicinity. The project would be consistent with the first and second questions of Criterion 1.

Question 3. Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQP?

Answer 3. As shown in Impacts AIR b) and AIR c) below, the project would result in less than significant impacts with regard to localized pollutant concentrations and regional pollutant contributions, respectively, with mitigation incorporated. The project would not delay the timely attainment of air quality standards or 2012 AQMP emissions reductions. The project is consistent with the third question of Criterion 1.

Criterion 2:

Question 1. Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?

Answer 1: In order to be consistent with the growth assumptions in the AQMP, the project must be consistent with the City of Costa Mesa 2000 General Plan (General Plan), the SCAG's Growth Management Chapter of the Regional Comprehensive Plan and Guide (RCPG), and SCAG's 2012 Regional Transportation Plan (RTP).

The General Plan map indicates that the project is located within the City's Mesa West Bluffs Urban Plan. The Mesa West Bluffs Urban Plan identifies the project site zoned as "General Industrial" with a "Mixed Use Overlay District" Boundary. The designation allows for mixed uses, including live/work units, which the project consists of. Therefore, the project is consistent with the City-wide plan for population growth at the project site. The project is also consistent with the RCPG's types, intensity, and patterns of land use designated for the area in and around the project site. 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. Therefore, the project is consistent with the first question of Criterion 2.

Question 2. Would the project implement all feasible air quality mitigation measures?

Answer 3: As demonstrated in Impact AIR b) below, the project would result in less than significant impact with all feasible air quality mitigation measures incorporated and would therefore be consistent with the second question of Criterion 2.

Question 3. Would the project be consistent with the land use planning strategies set forth in the AQMP?

Answer 3: The project is located within a developed portion of the City with proximity to transit and a mix of other uses, therefore the project would not conflict with the City's or SCAG's policies. The project is consistent with the third question of Criterion 2.

In summary, the project would not result in a significant localized or regional impact on the region's ability to meet State and Federal air quality standards. In addition, the project would be consistent with the growth forecasts in the AQMP, and is consistent with the land use strategies set forth in the AQMP. Therefore, this impact is less than significant.

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

Less than significant impact with mitigation incorporated. This impact relates to localized criteria pollutant impacts. Particulate matter emissions (PM_{10}) are of concern during construction because of the potential to emit fugitive dust during earth-disturbing activities. In addition, SCAQMD has set localized significance thresholds (LST) for project construction emissions. Because SCAQMD's LSTs for construction include a threshold for PM_{10} , fugitive dust emissions impacts are assessed through the LST analysis. CO emissions are of concern during project operation because operational CO hotspots are related to increases in on-road vehicle congestion. Each is discussed separately below.

Localized Significance Thresholds

The SCAQMD Governing Board adopted a methodology for calculating localized air quality impacts through localized significance thresholds (LSTs). LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable state or federal ambient air quality standard. LSTs were developed in recognition of the fact that criteria pollutants such as NO_x , CO, and PM_{10} and $PM_{2.5}$ in particular, can have local impacts at nearby sensitive receptors as well as regional impacts. To facilitate the localized assessment process, the SCAQMD provides a series of look-up tables that contain LSTs for each Source Receptor Area within the basin (SCAQMD 2009). The project is located within Source Receptor Area (SRA) 18, North Coastal Orange County (SCAQMD 2011b).

In addition to the dependence on geographic location within the SCAQMD (e.g., the Source Receptor Area), the localized thresholds also depend on the distance to the impacted receptor from the source of emissions. The distance to the nearest sensitive receptor is within 25 meters from the boundary of the project. Specifically, the nearest sensitive uses are existing residences approximately 3 meters north of the project site.

CalEEMod version 2013.2.2 was used to estimate construction emissions. The emissions analysis incorporates required regulatory compliance, such as SCAQMD Rule 403. Note that due to the way CalEEMod is constructed, compliance with SCAQMD Rule 403 is reflected as 'mitigation' in the output, although compliance with Rule 403 is mandatory and not considered mitigation under CEQA. In addition, the emissions analysis utilizes CalEEMod default activities based on the land use to be constructed, the facilities to be demolished and project-specific soils import and export volumes.

The SCAQMD has published a "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (SCAQMD 2011c). CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. In order to compare CalEEMod reported emissions against the LST lookup tables, the CEQA document should contain in its project design features or its mitigation measures the following parameters:

- 1) The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
- 2) The maximum number of acres disturbed on the peak day.
- 3) Any emission control devices added onto off-road equipment.
- 4) Specific dust suppression techniques used on the day of construction activity with maximum emissions.

Items 1, 3 and 4 are contained within the emissions modeling output provided as Appendix B to this document. During grading activities, fugitive dust can be generated from the movement of dirt on the project site. CalEEMod estimates dust from dozers moving dirt around, dust from graders or scrapers leveling the land, and loading or unloading dirt into haul trucks. Each of those activities is calculated differently in CalEEMod based on the number of acres traversed by the grading equipment.

Only some pieces of equipment generate fugitive dust in CalEEMod. The CalEEMod manual identifies various types of equipment and the acreage disturbed in an 8-hour day:

- Crawler tractors, graders, and rubber tired dozers: 0.5 acres per 8-hour day
- Scrapers: 1 acre per 8-hour day

Therefore, the following acres are the quantity disturbed per day, per phase, according to the acreage disturbed quantities listed above:

- Building Demolition = 1 acre/day
- Pavement Demolition = 1 acre/day
- Grading = 1 acre/day

Therefore, based on the SCAQMD guidance on applying CalEEMod to LSTs, the LST thresholds for 1 acre was utilized for the construction LST analysis.

The localized assessment methodology limits the emissions in the analysis to those generated from onsite activities. The onsite emissions during construction are compared with the LSTs and summarized in Table 3.

Table 3: Localized Significance Analysis (Construction)

Activity	Onsite Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Demolition - Building	49.54	36.29	3.73	2.54
Demolition - Paving	49.54	36.29	3.95	2.57
Grading (2014)	41.10	26.75	4.93	3.50
Grading (2015)	40.42	26.67	4.89	3.46
Building Construction (2015)	30.03	18.75	2.12	1.99
Building Construction (2016)	28.51	18.51	1.97	1.85
Paving	22.39	14.82	1.26	1.16
Architectural Coating	2.37	1.88	0.20	0.20
Maximum Onsite Emissions¹	49.54	36.29	4.93	3.50
Localized Significance Threshold	92	647	4	3
Threshold Exceeded?	No	No	Yes	Yes

Notes:
¹ Each of the above activities does not occur at the same time; therefore, the maximum daily emissions represent the maximum emissions that would occur in one day.
 Source of emissions: Appendix B, CalEEMod 2013.
 Source of thresholds: South Coast Air Quality Management District 2009, for Source Receptor Area 18, 1-acre site, with a receptor within 25 meters.

As shown above, the LSTs for PM₁₀ and PM_{2.5} will be exceeded during the grading phase in 2014 and in 2015. Mitigation Measure AQ-1 (MM AQ-1) would reduce PM₁₀ and PM onsite emissions to less than significant. MM AQ-1 requires the developer to use Tier 3 mitigation for rubber-tired dozers and graders during the grading phase. Results from the implementation of MM AQ-1 are shown in Table 4 below.

Table 4: Localized Significance Analysis with Mitigation (Construction)

Activity	Onsite Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Demolition – Building	49.54	36.29	3.73	2.54
Demolition – Paving	49.54	36.29	3.95	2.57
Grading (2014)	22.75	20.03	3.94	2.61
Grading (2015)	22.25	20.05	3.91	2.58
Building Construction (2015)	30.03	18.75	2.12	1.99
Building Construction (2016)	28.51	18.51	1.97	1.85
Paving	22.39	14.82	1.26	1.16
Architectural Coating	2.37	1.88	0.20	0.20
Maximum Onsite Emissions¹	49.54	36.29	3.95	2.61
Localized Significance Threshold	92	647	4	3
Threshold Exceeded?	No	No	No	No

Notes:
¹ Each of the above activities does not occur at the same time; therefore, the maximum daily emissions represent the maximum emissions that would occur in one day.
 Source of emissions: Appendix B, CalEEMod 2013.
 Source of thresholds: South Coast Air Quality Management District 2009, for Source Receptor Area 18, 1-acre site, with a receptor within 25 meters.

The onsite emissions during operation are compared with the LSTs and summarized in Table 5 below. As shown in Table 5, emissions during operation do not exceed the LSTs.

Table 5: Localized Significance Analysis (Operations)

Activity	Onsite Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Operation				
Area and Energy Sources	0.43	7.56	0.28	0.27
Localized Significance Threshold	197	1,711	4	2
Threshold Exceeded?	No	No	No	No

Notes:
 Each of the above activities does not occur at the same time; therefore, the maximum daily emissions represent the maximum emissions that would occur in one day.
 Source of emissions: Appendix B, CalEEMod 2013
 Source of thresholds: South Coast Air Quality Management District 2009, for Source Receptor Area 18, project size of 5 acres, with a receptor at a distance of 25 meters.

The localized construction analysis uses thresholds that represent the maximum project emissions that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard (SCAQMD 2008a). If the project results in emissions that do not exceed the LSTs, it follows that those emissions would not cause or contribute to a local exceedance of the appropriate ambient air quality standard. The localized construction analysis demonstrates that the project would not exceed the LSTs for nitrogen dioxide, CO, PM₁₀, or PM_{2.5}. Therefore, the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation during construction.

Carbon Monoxide Hot Spot Analysis

Carbon monoxide (CO) “hot spot” thresholds ensure that emissions of CO associated with traffic impacts from a project in combination with CO emissions from existing and forecasted regional traffic do not exceed state or federal standards for CO at any traffic intersection impacted by the project. Project concentrations may be considered significant if a CO hot spot intersection analysis determines that project generated CO concentrations cause a localized violation of the state CO 1-hour standard of 20 ppm, state CO 8-hour standard of 9 ppm, federal CO 1-hour standard of 35 ppm, or federal CO 8-hour standard of 9 ppm. The SCAQMD recommends that a local CO hot spot analysis be conducted if the intersection meets one of the following criteria: 1) the intersection is at LOS D or worse and where the project increases the volume to capacity ratio by 2 percent, or 2) the project decreases LOS at an intersection from C to D.

As previously stated, the project proposes 89-unit detached residential and live/work development in place of 66,119 square feet of industrial buildings and a single-family residence. The Traffic Impact Analysis Report (TIA) prepared by Linscott Law & Greenspan on July 3, 2014, states that the project would generate an additional 324 daily trips. Due to the negligible traffic generation associated with the project, no traffic impacts to intersection level of service were identified in the TIA. Therefore, the project would not require a CO hotspot analysis since the project would not worsen the LOS at nearby intersections. Impacts are less than significant.

Conclusion

In summary, the project would not generate a localized exceedance of the ambient air quality standards; therefore, the project would not contribute substantially to an existing or projected localized air quality violation. Impacts would be less than significant.

Standard Conditions

- 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 tires 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.

Mitigation Measures

MM AQ-1 All rubber tired dozers and graders used during the grading phase of construction shall be powered by Tier 3 engines.

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. This impact is related to regional criteria pollutant impacts. The non-attainment regional pollutants of concern are ozone, PM₁₀, and PM_{2.5}. Ozone is not emitted directly into the air, but is a regional pollutant formed by a photochemical reaction in the atmosphere. Ozone precursors, volatile organic compounds (VOC) and oxides of nitrogen (NO_x) react in the atmosphere in the presence of sunlight to form ozone. Therefore, the Air District does not have a recommended ozone threshold, but has regional thresholds of significance for VOC and NO_x.

Emissions from projects in the Air Basin can potentially contribute to the existing emission burden and possibly affect the attainment and maintenance of ambient air quality standards. Therefore, the SCAQMD has established regional significance thresholds applicable to project construction and operational emissions. Projects within the Air Basin with regional emissions in excess of any of the applicable regional thresholds are considered to have a significant regional air quality impact.

Project-generated construction and operational emissions were estimated using the CalEEMod version 2013.2.2 computer program. Emissions model output is provided as Appendix B.

Construction Emissions

The construction activities associated with the project include: demolition, site preparation, grading, building construction, paving, and architectural coating. The project would be constructed over approximately 22 months, beginning November 2014. The CalEEMod phase length for grading was extended from the default 20 working days to 88 working days (4 months) based on the project’s schedule and to accommodate the anticipated soils movement. However, construction phase defaults were used for all other construction phases for the purposes of a conservative analysis. Specifically, the building phase default in CalEEMod is more conservative (more intense daily activity) than what would occur under the project’s proposed schedule.

Table 6 summarizes construction-generated emissions. For the assumptions used in generating the emissions, please refer to Appendix B. The project would be required to adhere to standard SCAQMD regulations, such as implementing SCAQMD Rule 403 (see Standard Conditions in Air b)), which would reduce fugitive dust emissions.

The information shown in Table 6 indicates that the SCAQMD regional emission thresholds would not be exceeded for construction emissions. Therefore, the short-term construction emissions are considered to have a less than significant regional impact.

Table 6: Construction Air Pollutant Emissions (with Standard Conditions Incorporated)

Source	Emissions (pounds per day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Demolition - Building	5.01	54.90	40.95	0.05	4.25	2.74
Demolition - Paving	5.07	55.82	41.60	0.05	4.52	2.77
Grading (2014)	4.44	48.88	33.13	0.05	12.11	5.37
Grading (2015)	4.34	47.24	32.59	0.05	5.473	3.69
Building Construction (2015)	3.99	31.34	23.24	0.03	2.83	2.19
Building Construction (2016)	3.71	29.64	23.24	0.036	2.67	2.05
Paving	2.20	22.46	15.60	0.02	1.43	1.21
Architectural Coating	68.46	2.43	2.45	0.00	0.32	0.23
Maximum Daily Emissions¹	68.46	55.82	44.10	0.05	12.11	5.37
Significance Threshold	75	100	550	150	150	55
Significant Impact?	No	No	No	No	No	No

Table 6 (cont.): Construction Air Pollutant Emissions (with Standard Conditions Incorporated)

Source	Emissions (pounds per day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Notes:						
¹ The maximum daily emissions refer to the maximum emissions that would occur in one day; it was assumed that the grading activities do not occur at the same time as the other construction activities; therefore, their emissions are not summed.						
VOC = volatile organic compounds NO _x = nitrogen oxides CO = carbon monoxide						
SO _x = sulfur oxides PM ₁₀ and PM _{2.5} = particulate matter						
Source of emissions: Appendix B, CalEEMod Output.						
Source of thresholds: South Coast Air Quality Management District 2011a.						

Operational Regional Emissions

Existing Use

The existing site currently contains 66,119 square feet of industrial buildings and a single-family residence. CalEEMod was used to estimate the operational emissions that would occur with continuance of the existing land uses. Emissions modeling utilized the trip generation rates provided in the TIA. Emissions from existing land uses are provided in Table 7.

Proposed Use

CalEEMod was used to estimate operational emissions that would occur with the proposed land uses. Emissions would be from motor sources and area sources (natural gas, hearth, landscape, consumer products, and architectural coating). Motor sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Area sources would be generated due to an increased demand for electrical energy and natural gas with development of the project.

The project would be required to adhere to SCAQMD regulations, such as implementing SCAQMD Rule 445 (see Standard Conditions below), which would prohibit permanently installed wood burning devices into any new development. SC-3 requires compliance with Title 24 of the California Code of Regulations.

The emissions analysis utilized the trip generation rates from the project’s TIA provided trip generation for the project. The condominium and live/work units were combined in the analysis, with a trip generation average of 10.81 daily trips per dwelling unit.

Operational emissions were estimated for the summer and winter seasons. Winter season emissions were greater than summer emissions. Therefore, operational emissions as derived from CalEEMod are shown in Table 7 for the winter season. Outputs for both seasons are found in Appendix B.

The information shown in Table 7 indicates that the SCAQMD regional emission thresholds would not be exceeded for operational emissions. Therefore, the long-term operational emissions are considered to have a less than significant regional impact.

Table 7: Operational Emissions

Source	Winter Emissions (pounds per day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Project Emissions						
Area Sources	4.36	0.09	7.41	0.00	0.25	0.25
Energy Sources	0.04	0.34	0.15	0.00	0.03	0.03
Mobile Sources	3.19	7.33	33.56	0.08	6.12	1.70
<i>Project Emissions</i>	<i>7.58</i>	<i>7.76</i>	<i>41.12</i>	<i>0.08</i>	<i>6.40</i>	<i>1.97</i>
Existing Emissions						
<i>Existing Emissions</i>	<i>3.87</i>	<i>5.47</i>	<i>23.25</i>	<i>0.06</i>	<i>4.56</i>	<i>1.34</i>
Project Impact						
Net Increase In Emissions	3.40	1.30	13.76	0.02	1.82	0.61
Significance Threshold	55	55	550	150	150	55
Significant Impact?	No	No	No	No	No	No
Notes: VOC = volatile organic compounds NO _x = nitrogen oxides CO = carbon monoxide SO _x = sulfur oxides PM ₁₀ and PM _{2.5} = particulate matter Source of emissions: Appendix B, CalEEMod Output. Source of thresholds: South Coast Air Quality Management District 2011a.						

Standard Conditions

SC-4.3-1 Prohibits permanently installed wood burning devices into any new development. A wood burning device means any fireplace, wood burning heater, or pellet-fueled wood heater, or any similarly enclosed, permanently installed, indoor or outdoor device burning any solid fuel for aesthetic or space-heating purposes, which has a heat input of less than one million British thermal units per hour.

SC-4.3-2 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:

- Double paned glass or window treatment for energy conservation shall be used in all exterior windows;
- Buildings shall be oriented north/south where feasible.

SC 4.3-3 The Applicant shall contact the Air Quality Management District (AQMD) at (800) 288-7664 for potential additional conditions of development or for additional permits required by the AQMD.

Conclusion

The SCAQMD does not recommend 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 Air Basin is in non-attainment.

As indicated in both Table 4 and Table 5 above, the project would not exceed SCAQMD thresholds during construction or operation. Therefore, the project's impacts would be considered less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant impact with mitigation incorporated. This discussion addresses whether the project would expose sensitive receptors to naturally occurring asbestos, asbestos from building demolition, construction-generated localized criteria pollutant impacts, construction-generated diesel particulate matter (DPM), construction or operational related toxic air contaminants (TACs), or operational CO hotspots.

Sensitive Receptors

Those who are sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or cardiovascular illness. For purposes of CEQA, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours, such as residences, hospitals, or convalescent facilities (SCAQMD 2008a). Commercial and industrial facilities are not included in the definition because employees do not typically remain onsite for 24 hours. However, when assessing the impact of pollutants with 1-hour or 8-hour standards (such as nitrogen dioxide and carbon monoxide), commercial and/or industrial facilities would be considered sensitive receptors for those purposes.

The closest sensitive receptor is a residential development directly adjacent north to the project. The existing residence is located within 25 meters of the project boundary.

Naturally Occurring Asbestos (NOA)

Asbestos is a fibrous mineral which is both naturally occurring in ultramafic rock (a rock type commonly found in California), and used as a processed component of building materials. Because asbestos has been proven to cause a number of disabling and fatal diseases, such as asbestosis and lung cancer, it is strictly regulated either based on its natural widespread occurrence, or in its use as a building material. In addition, the ARB approved an Air Toxic Control Measure for construction, grading, quarrying and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of best management practices to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities.

The California Department of Conservation, Division of Mines and Geology (DMG) has published a guide for generally identifying areas that are likely to contain NOA (DMG 2011). The DMG map indicates NOA are not known to occur within the project area. Therefore, disturbance of NOA during project construction is not a concern for the project. The project would result in no impact from exposure of sensitive receptors to naturally occurring asbestos.

Asbestos Containing Materials (ACM)

In the initial Asbestos National Emission Standards for Hazardous Air Pollutants rule promulgated in 1973, a distinction was made between building materials that would readily release asbestos fibers when damaged or disturbed (friable) and those materials that were unlikely to result in significant fiber release (non-friable). The United States Environmental Protection Agency (EPA) has since determined that, severely damaged, otherwise non-friable materials can release significant amounts of asbestos fibers. Asbestos has been banned from many building materials under the Toxic Substances Control Act, the Clean Air Act, and the Consumer Product Safety Act. However, most uses of asbestos for building material are not banned. Therefore, the potential source of asbestos exposure for the project is the demolition activity of the existing structures.

SCAQMD's Rule 1403 specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, includes the removal and associated disturbance of asbestos-containing materials (ACM). The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and land filling requirements for asbestos-containing waste materials (ACWM). The rule further states that the District shall be notified of the intent to conduct any demolition or renovation activity (SCAQMD 2012)

Compliance with SCAQMD, federal, and state regulations reduces the potential of asbestos-containing material exposure to a less than significant impact.

Construction: Localized Construction Impacts

As shown in Impact AIR b) above, the project would not exceed the localized significance thresholds for construction-generated criteria pollutants with implementation of MM AQ-1. Therefore, the project would not expose receptors to substantial criteria pollutant concentrations from construction activities. Impacts would be less than significant.

Construction: Diesel Particulate Matter

The project would generate diesel exhaust, a source of diesel particulate matter, during project construction. Diesel particulates are typically 2.5 microns (PM_{2.5}). Onsite emissions of both diesel particulate matter occur during construction from the operation of heavy-duty construction equipment and from vendor trucks that operate on project sites.

Project activities that would generate diesel particulate matter emissions are short-term in nature. Moreover, the current methodological protocols required by SCAQMD and ARB when studying the health risk posed by diesel particulate matter assume the following: (1) 24-hour constant exposure; (2) 350 days a year; (3) for a continuous period lasting 70 years. Therefore, considering the

dispersion of the emissions and the short time frame, exposure to diesel particulate matter is anticipated to be less than significant.

Construction: Toxic Air Pollutants - Onsite Workers

There are a variety of state and national programs that protect workers from safety hazards, including high air pollutant concentrations (California OSHA and CDC 2012).

Onsite workers are not required to be addressed through this health risk assessment process. A document published by the California Air Pollution Control Officers Association (CAPCOA, 2009), Health Risk Assessments for Proposed Land Use Projects, indicates that onsite receptors are included in risk assessments if they are persons not employed by the project. Persons not employed by the project would not remain onsite for any significant period. Therefore, a health risk assessment for onsite workers is not required or recommended. Impacts are less than significant.

Operation: Toxic Air Pollutants

The ARB Air Quality and Land Use Handbook contains recommendations that will “help keep California’s children and other vulnerable populations out of harm’s way with respect to nearby sources of air pollution” (ARB 2005), including recommendations for distances between sensitive receptors and certain land uses. These recommendations are assessed as follows.

- Heavily traveled roads. ARB recommends avoiding new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. Epidemiological studies indicate that the distance from the roadway and truck traffic densities were key factors in the correlation of health effects, particularly in children. The project is approximately 630 feet west of Placentia Ave, which is currently estimated to have 15,606 vehicles per day (California Environmental Health Tracking Program 2011). Therefore, the project would not expose onsite sensitive receptors to significant health risk from heavily traveled roads.
- Distribution centers. ARB also recommends avoiding siting new sensitive land uses within 1,000 feet of a distribution center. The closest existing or proposed distribution center to the project is located more than 1,000 feet from the project. Therefore, the project would not expose onsite sensitive receptors to significant health risk from distribution centers.
- Fueling stations. ARB recommends avoiding new sensitive land uses within 300 feet of a large fueling station (a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities. The nearest fueling station is 0.50 miles from the project site. Therefore, the project would not expose onsite sensitive receptors to significant health risk from fueling stations.
- Dry cleaning operations. ARB recommends avoiding siting new sensitive land uses within 300 feet of any dry cleaning operation that uses perchloroethylene. For operations with two or more machines, ARB recommends a buffer of 500 feet. For operations with three or more machines, ARB recommends consultation with the local air district. The nearest dry cleaning operations from the project site are 0.54 miles to the southeast of the project site. Therefore,

the project would not expose onsite sensitive receptors to significant health risk from dry cleaning operations.

Operation: CO Hotspot

As shown in Impact AIR b) above, the project would not create a localized CO hotspot. Therefore, the project would not expose receptors to substantial CO concentrations from operational activities.

Conclusion

The project would not expose receptors to substantial quantities or significant concentrations of asbestos from demolition or soils disturbance, construction-generated localized criteria pollutant concentrations, construction-generated diesel particulate matter, operational toxic air contaminants, or CO hotspots. Therefore, the project would result in a less than significant impact.

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

Less than significant impact. The SCAQMD recommends that odor impacts be addressed in a qualitative manner. Such an analysis shall determine whether the project would result in excessive nuisance odors, as defined under the California Code of Regulations and Section 41700 of the California Health and Safety Code, and thus would constitute a public nuisance related to air quality.

Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. The project does not contain land uses typically associated with emitting objectionable odors. Additionally, these types of land uses are not located in the project's vicinity. Notwithstanding, the project site is located within a mature commercial/industrial area. 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. Therefore, impacts from project operations are less than significant.

Diesel exhaust and VOCs would be emitted during construction of the project, which are objectionable to some; however, emissions would disperse rapidly from the project site and therefore should not reach an objectionable level at the nearest sensitive receptors. Impacts from construction odor 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.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.4 Biological Resources <i>Would the project:</i>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The project site is developed with existing commercial/industrial buildings, associated parking and one single-family residence. The project site is surrounded by urban development consisting of light industrial and residential uses. Average temperatures range from January low of 46.9°F to August highs of 73.4°F. Average annual precipitation is approximately 11 inches; precipitation falls primarily

as rain with most precipitation occurring between the months of November and April. The project site is generally flat. The following information sources were reviewed:

- The Newport Beach, California USGS 7.5-minute topographic quadrangle;
- Aerial photography of the project site (Google Earth);
- California Department of Fish and Game (CDFG) California Natural Diversity Data Base (CNDDB) records for the Newport Beach, California 7.5-minute topographic quadrangle and the surrounding eight quadrangles;
- CDFW California Wildlife Habitat Relationship System (CWHR);
- U.S. Fish and Wildlife Service (USFWS) list of endangered and threatened species that may occur, or be affected by the project, in the Newport Beach, California quadrangle.

Environmental Evaluation

Would the project:

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

No impact. The project site contains limited ornamental landscaping at the following locations: along the northern, western, and southern perimeters; associated with the existing single-family residence in the western portion of the site at the end of Whittier Avenue; and associated with an employee picnic/break area in the western portion of the site. The project site is fully developed/disturbed. No suitable habitat for any special-status plant or wildlife species occurs within the project site. Red imported fire ants are both a nuisance and threat to area agriculture and wildlife. In the event they are present on the site, they could spread to other areas and become a concern. Any potential threat from these species would be addressed through Standard Condition 4.5-1. 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.

Standard Condition

- SC 4.5-1** The Applicant shall comply with the requirements of the California Department of Food and Agriculture (CDFA) to determine if red imported fire ants exist on the property prior to any soil movement or excavation. Call CDFA at (714) 708-1910 for information.

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

No impact. There are no riparian habitats or other sensitive natural communities located within the project area identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Therefore, there would be no impacts to any of these habitat types.

- 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. The project is devoid of wetlands, marshes, and vernal pools. Therefore, there would be no impact to any federally protected wetlands under the Clean Water Act.

- 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 wildlife nursery sites?**

No impact. The project site is fully developed with light industrial uses in an urban setting. The site and surrounding areas do not provide habitat for the movement of any native resident or migratory fish or wildlife species. Therefore, there is no potential for the site to serve as a migration corridor for wildlife and no impact would occur.

- 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.

- 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.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.5 Cultural Resources <i>Would the project:</i>				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

Would the project:

- a) **Cause a substantial adverse change in the significance of a historical resource as defined in §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. Title company records indicate that both the house and buildings were constructed in 1961.

The existing structures were assessed for historic significance and do not appear to meet any of the four criteria (A-D) for listing on the California Register of Historic Resources (CR) nor do they appear to meet any criteria for local listing. The structures were built as functional buildings for local businesses and therefore, are not associated with events (A) that have made a significant contribution to the broad patterns of history. The businesses are not recognized locally, and would not be considered historically significant and therefore, the structures are not associated with a person(s) (B) significant in the past. The structure is not unusual or exceptional in any respect and therefore, it does not embody a distinctive characteristic of a type, period, or method of construction (C). Finally, the structure is not capable of providing information important in prehistory or history (D). The structures located onsite do not appear to meet any of the criteria for listing on the CR or local listings and further study is not deemed necessary.

Therefore, project implementation would not cause a substantial adverse change in the significance of a historic resource.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §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, developed land that has been permanently altered due to the construction of below and aboveground improvements (i.e., buildings, driveways, streets, hardscapes, and utilities). Additionally, the project site has already been subject to extensive disruption and contains artificial fill materials; refer to Response 4.6.b. Given the highly disturbed condition of the site, the potential for project implementation to impact an unidentified archeological resource is considered low. 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 archaeological resources 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.

c) Directly or indirectly, destroy a unique paleontological resource or site or unique geologic feature?

Less than significant impact. As noted above, the project site has already been subject to extensive disruption. Additionally, there is no evidence of unique geologic features on the project site. Given the highly disturbed condition of the site, the potential for the project to impact unidentified paleontological resource is considered remote. 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 paleontological resources impact mitigation plan (PRIMP) for the review and approval by the City prior to resuming excavation activities.

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 low, given the degree of past disturbance of the site, as it is developed with existing industrial land 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.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.6 Geology and Soils <i>Would the project:</i>				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A Due Diligence Preliminary Geotechnical Review, prepared by Associated Soils Engineering (ASE), briefly summarizes the geotechnical constraints for the project (ASE 2013). In addition, an Initial Study was prepared for the Newport Beach Learning Center located approximately 1,800 feet from the project (MBA 2009). Collectively, these documents provide information to support the below analysis.

Environmental Evaluation

Would the project:

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

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 nearest potentially active fault is the Newport-Inglewood Fault located near the coast, which is less than 0.5 miles southwest of the project site (ASE 2013). No faults are known to occur on or within the immediate vicinity of the project site. Therefore, there would be no impact.

- ii) **Strong seismic ground shaking?**

Less than significant impact. As with all areas of Southern California, the project would be subject to strong ground shaking associated with seismic activity, especially given that the project site is located near faults that have the potential to cause moderate to large earthquakes. The area is considered to have a ten percent chance of experiencing ground acceleration greater than 43 to 52 percent of the force of gravity in 50 years (MBA 2009). These levels of shaking can be expected to cause damage particularly to older and poorly constructed buildings. The project would involve all new structures and would be required to conform to the seismic design parameters of the California Building Code (CBC). Compliance with the seismic design parameters as outlined in the most recent CBC would ensure that impacts are less than significant.

Standard Condition

- SC 4.6-1** The Applicant shall comply with the requirements of the 2013 California Building Code, 2013 California Residential code, 2013 California Electrical code, 2013 California Mechanical code, 2013 California Plumbing code, 2013 California Green Building Standards Code, and the 2013 California Energy Code (or the applicable

adopted California Building code, California Residential code, California Electrical code, California Mechanical code, California Plumbing Code, California Green Building Standards, California Energy Code at the time of plan submittal or permit issuance), and California Code of Regulations also known as the California Building Standards Code, as amended by the City of Costa Mesa. Areas of alteration and additions shall comply with 2013 California Green Building Standards Code section 5.303.2 and 5.303.2

iii) Seismic-related ground failure, including liquefaction?

Less than significant impact. Liquefaction describes the behavior of soils that, when loaded, suddenly suffer a transition from a solid state to a liquefied state, or having the consistency of a heavy liquid. Liquefaction can occur during vibratory conditions such as those induced by seismic event, under saturated conditions in soils, such as sand, in which the strength is purely frictional. A low relative density and loose consistency of the granular materials, shallow groundwater table, long duration and high acceleration of seismic shaking are some of the factors that can cause liquefaction. Presence of predominately cohesive or fine-grained materials and/or absence of saturated conditions can preclude liquefaction. Liquefaction hazards are usually manifested in the form of buoyancy forces expected on structures during liquefaction, increase in lateral earth pressures due to liquefaction, horizontal and vertical movements of structures resulting from lateral spreading, and post-earthquake settlement of the liquefied materials.

As indicated in the City's General Plan Update EIR, Geology, Soils, and Mineral Resources section, the project site is located in an area with low to no potential for liquefaction due to the lack of liquefiable soils (MBA 2009). The project must comply with Standard Condition SC 4.6-1, which requires compliance with the California Building Code. Standard Condition SC 4.6-2 must also be followed, which requires that prior to the implementation of the project, the project Applicant would prepare a geotechnical report for the proposed buildings, which would fully identify any site-specific risk for liquefaction, and would identify any specific construction design recommendations in accordance with the CBC. The Preliminary Geotechnical Review included borings up to 35.5 feet, and associated soil testing (moisture, shear strength, consolidation, corrosivity, etc.) to determine any geotechnical constraints to development (ASE 2013). Excavation for the site would generally be limited to 10 feet below ground surface, and groundwater depth is estimated between 30 and 50 feet below ground surface. The Review did not identify any barriers to development, and provided specific grading and foundation design recommendations. Accordingly, impacts associated with this issue would be less than significant.

Standard Condition

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 onsite 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.

iv) 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.

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

Less than significant impact. The project site is currently a mostly developed 5.7-acre site comprised of three separate parcels of land with several commercial structures. While the project would have a greater amount of pervious areas, these areas would take the form of trees and shrubs in private yards, as well as community gathering spaces, and vegetative groundcover. Thus, the increase of pervious areas does not pose a risk for erosion because they would be either vegetated and/or contained. As all storm water flows would be directed to the existing municipal storm drain system or into vegetated pervious areas, the project would not result in substantial soil erosion or the loss of topsoil.

In addition, 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 4.6-4. Following development of increased pervious landscaping and compliance with NPDES regulatory requirements, project implementation would result in a less than significant impact involving soil erosion or the loss of topsoil. Furthermore, the project site is currently developed with industrial buildings that previously required grading and the removal of topsoil during construction. The project would require minimal grading because of the site's current use as an industrial site. Therefore, impacts related to erosion would be less than significant.

Standard Conditions

SC 4.6-3 The Applicant shall submit a soils report for this project. Soil's Report recommendations shall be blueprinted on both the architectural and grading plans. For existing slopes or when new slopes are proposed, the Soils Report shall address how existing slopes or the new slopes will be maintained to avoid erosion or future failure.

SC 4.6-4 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 the SWPPP implementation and the BMP maintenance during and after grading. The project Applicant shall implement the SWPPP and modify the SWPPP as directed by the Construction General Permit.

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?

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.

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

Less than significant impact. Expansive soils expand or contract with changes in the moisture content. Some of the geologic units in the City, including both surficial soils and bedrock, have fine grained components that are moderate to highly expansive. As required for all new residential buildings, an evaluation of onsite soils will be required as part of building permit review in order to

determine compliance with the CBC, and measures to reduce the potential impact of expansive soil impacts to less than significant.

As discussed above, prior to the implementation of the project, the Applicant will be required to prepare a geotechnical report. The project-specific geotechnical report will identify onsite soils and evaluate such soils for expansiveness. The final design of the project building would be based on the results of the geotechnical report, thereby ensuring any impacts associated with this issue would be less than significant.

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

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. Therefore, no impacts to soils due to the use of septic systems are anticipated.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.7 Greenhouse Gas Emissions <i>Would the project:</i>				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

Would the project:

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

Less than significant impact. A variety of agencies have developed greenhouse gas emission thresholds and/or have made recommendations for how to identify a threshold. However, the thresholds for projects in the jurisdiction of the SCAQMD remain in flux. The California Air Pollution Control Officers Association explored a variety of threshold approaches, but did not recommend one approach (2008). The ARB recommended approaches for setting interim significance thresholds (ARB 2008b), in which a draft industrial project threshold suggests that non-transportation related emissions under 7,000 MTCO₂e per year would be less than significant; however, the ARB has not approved those thresholds and has not published anything since then. The Bay Area Air Quality Management District and the San Joaquin Valley Air Pollution Control District have both adopted greenhouse gas thresholds. However, those thresholds are not applicable to the project since the project is under the jurisdiction of the SCAQMD. The SCAQMD is in the process of developing thresholds, as discussed below.

On December 5, 2008, the SCAQMD Governing Board adopted an interim greenhouse gas significance threshold for stationary sources, rules, and plans where the SCAQMD is lead agency (SCAQMD permit threshold). However, this project is not considered a stationary source.

The SCAQMD is in the process of preparing recommended significance thresholds for greenhouse gases for local lead agency consideration (“SCAQMD draft local agency threshold”); Staff indicated that they hoped to bring the proposed greenhouse gas significance thresholds to the board for their December 2010 meeting; however, this did not occur. The current draft thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to a project's operational emissions. If a project's emissions are under one of the following screening thresholds, then the project is less than significant:
 - All land use types: 3,000 MTCO₂e per year
 - Based on land use type: residential: 3,500 MTCO₂e per year; commercial: 1,400 MTCO₂e per year; or mixed use: 3,000 MTCO₂e per year
- Tier 4 has the following options:
 - Option 1: Reduce emissions from business as usual by a certain percentage; this percentage is currently undefined
 - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
 - Option 3, 2020 target for service populations (SP), which includes residents and employees: 4.8 MTCO₂e/SP/year for projects and 6.6 MTCO₂e/SP/year for plans;
 - Option 3, 2035 target: 3.0 MTCO₂e/SP/year for projects and 4.1 MTCO₂e/SP/year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD discusses its draft thresholds in the following excerpt (SCAQMD 2008b):

The overarching policy objective with regard to establishing a GHG [greenhouse gas] significance threshold for the purposes of analyzing GHG impacts pursuant to CEQA is to establish a performance standard or target GHG reduction objective that will ultimately contribute to reducing GHG emissions to stabilize climate change. Full implementation of the Governor's Executive Order S-3-05 would reduce GHG emissions 80 percent below 1990 levels or 90 percent below current levels by 2050. It is anticipated that achieving the Executive Order's objective would contribute to worldwide efforts to cap GHG concentrations at 450 ppm, thus, stabilizing global climate.

As described below, staff's recommended interim GHG significance threshold proposal uses a tiered approach to determining significance. Tier 3, which is expected to be the primary tier by which the AQMD will determine significance for projects where it is the lead agency, uses the Executive Order S-3-05 goal as the basis for deriving the screening level. Specifically, the Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90 percent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to

some type of CEQA analysis, including a negative declaration, a mitigated negative declaration, or an environmental impact.

Therefore, the policy objective of staff's recommended interim GHG significance threshold proposal is to achieve an emission capture rate of 90 percent of all new or modified stationary source projects. A GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that staff estimates that these GHG emissions would account for less than one percent of future 2050 statewide GHG emissions target (85 MMTCO₂e/yr). In addition, these small projects would be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory.

In summary, the SCAQMD's draft threshold uses the Executive Order S-3-05 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap carbon dioxide concentrations at 450 ppm, thus, stabilizing global climate.

For this project, the 3,000 MTCO₂e per year threshold for mixed use development is used as the appropriate threshold of significance.

Project Impact

Project-related GHG emissions would include emissions from direct and indirect sources. The project would result in direct and indirect emissions of CO₂, N₂O, and CH₄. 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 emissions are based on energy emissions from natural gas usage and automobile emissions. The CalEEMod computer program was used to estimate GHG emissions from the existing land uses, project construction, and project operation. The operational emissions analysis utilizes trip rates from the project's Traffic Study.

Table 8 contains the estimated greenhouse gas emissions for the project. As provided in Table 8, the project's estimated GHG emissions fall below the SCAQMD threshold of 3,000 MTCO₂e per year. Therefore, this impact would be less than significant.

Table 8: Estimated Greenhouse Gas Emissions

Source	Emissions (Metric Tons per year)			Total MTCO ₂ e
	CO ₂	CH ₄	N ₂ O	
Project Emissions				
Area	38.95	0.00	0.00	39.21
Energy	173.43	0.01	0.00	174.27
Mobile	930.54	0.03	0.00	931.25
Waste	11.50	0.68	0.00	25.77
Water	28.54	0.19	0.01	33.99
Construction (total of 669.64 MT/year which would be amortized over 30 years)	22.96	0.00	0.00	23.08
<i>Project Emissions</i>	<i>1,205.92</i>	<i>0.91</i>	<i>0.01</i>	<i>1,227.57</i>
Existing Emissions				
<i>Existing Emissions</i>	<i>852.41</i>	<i>1.53</i>	<i>0.02</i>	<i>889.21</i>
Net Increase In Emissions	353.51	-0.62	-0.01	338.36
GHG Threshold (MTCO₂e)	—	—	—	3,000
Significant Impact?	—	—	—	No
Source of Emissions: Appendix B, CalEEMod 2013. Source of Threshold: SCAQMD 2008.				

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

Less than significant impact. There are currently no adopted local or regional greenhouse gas reduction plans applicable to the project. Therefore, the AB 32 emission reduction goal and the ARB-adopted AB 32 Scoping Plan will be used to determine consistency with an adopted plan, policy, or regulation for reducing greenhouse gases.

The Scoping Plan states, “The 2020 goal was established to be an aggressive, but achievable, mid-term target, and the 2050 GHG emissions reduction goal represents the level scientists believe is necessary to reach levels that would stabilize climate” (ARB 2008). The year 2020 GHG emission reduction goal of AB 32 corresponds with the mid-term target established by Executive Order S-3-05, which aims to reduce California’s fair-share contribution of GHGs in 2050 to levels that would stabilize the climate.

As discussed in Section 4.7a) above, the SCAQMD is in the process of preparing recommended significance thresholds for greenhouse gases for local lead agency consideration, which the project

does not exceed. As shown in the discussion in Section 4.7a) above, the project would not exceed the SCAQMD's draft threshold of significance for greenhouse gases.

Project Construction

Construction of the project is estimated to generate GHGs. However, AB 32 requires that GHG emissions generated in California in year 2020 be equal to or less than California's statewide inventory from 1990. Construction emissions would occur before the year 2020, so the project's construction would not contribute to year 2020 emissions. Therefore, construction emissions would not conflict with the AB 32 emission reduction goals or the Scoping Plan.

Project Operation

The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors and are implemented through regulatory action by state agencies. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards.
- Achieving a statewide renewable energy mix of 33 percent.
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system.
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets.
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard.
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

Because the project is limited to the redevelopment of a site for a live/work, single-family residence, and condominium development, it is not a project subject to the Scoping Plan's recommended measures. As such, the Scoping Plan's recommended measures do not directly apply to the project. In other words, there are no specific actions or measures to incorporate into the project in order to comply with the Scoping Plan. Therefore, the project would not conflict with the Scoping Plan's recommended measures and, as such, would not impede implementation of the Scoping Plan.

In conclusion, the project would not conflict with any applicable plan, policy, or regulation of an agency adopted for reducing the emissions of GHGs because the project would generate low levels of GHGs (less than the SCAQMD's threshold (see Section 4.7a), above), and would not impede implementation of the Scoping Plan, or conflict with the policies of the Scoping Plan. Therefore, the impact would be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.8 Hazards and Hazardous Materials <i>Would the project:</i>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A Phase I Environmental Site Assessments (Phase I) was prepared for the project site by Ninyo & Moore (2013a), and included in Appendix C. Phase I ESAs are intended to identify potential environmental liabilities associated with the presence of hazardous materials, their use, storage, and

disposal on and in the vicinity of a property, as well as any previous regulatory noncompliance that may have occurred on a property. The goal of a Phase I ESA is to identify the presence or likely presence of any hazardous substances or petroleum products on a property that may indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum product into the soil, groundwater, or surface water of the property. The ESA was prepared to conform to the ASTM 1527-05 standard. The Phase I ESA identified Recognized Environmental Conditions and additional investigations were conducted, including oil and soil gas sampling (Ninyo & Moore 2013b). The Phase I also considered these conditions in evaluation of the project site.

Environmental Evaluation

Would the project:

- 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 accidents; environmentally unsound disposal methods; and/or fires, explosions, or other emergencies. The severity of these 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 would construct an 89-unit, residential and live/work development. The secondary activities that would occur at these 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 onsite. Thus, the project would result in an increase in the use of household cleaning products and other materials routinely used in building maintenance.

The project would include business areas on the ground floors of the units. The Mesa West Bluffs Urban Plan 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 the size of proposed work spaces, that the future businesses would be associated with industrial types of uses or the disposal of hazardous materials in reportable quantities. Nor would the operation of future businesses require the handling of hazardous or other materials that would result in the production of large amounts of hazardous waste. However, the project site is located within a mature commercial/industrial area. The light industrial uses to the east of the project site 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 could be subject to existing and potential issues associated with

these adjacent industrial land uses. These existing light industrial uses and future commercial uses would be required to comply with existing hazardous materials regulations, and verification of compliance would be monitored by state (e.g., Occupational Safety and Health Administration in the workplace or Department of Toxic Substances Control for hazardous waste) and local agencies (e.g., the Costa Mesa Fire Department). According to CMMC Title 7 Chapter II, the City adopted the California Fire Code, 2013 Edition, for the purpose of prescribing regulations governing conditions hazardous to life and property from hazardous materials or explosions (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.

Future businesses would also 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 Mesa West Bluffs Urban Plan standards pertaining to land use compatibility. The listing of allowable uses provided in Mesa West Bluffs 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, as well as the Mesa West Bluffs Urban Plan. Therefore, project implementation would result in less than significant impacts.

Standard Condition

Refer to Standard Condition 4.1-2.

- 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 Environmental Site Assessment (ESA)

The following summarizes the findings of the Phase I ESA:

Site Improvements. The project site is currently developed, with four industrial buildings totaling approximately 66,117 square feet, and includes an associated parking lot. Three buildings are located in the northwest portion of the project site, and one larger building is located on the southern portion of the site (Ninyo and Moore, 2013a). Additionally, a single-family detached residence is located on the eastern portion of the project site, just south of the three buildings.

Site Vicinity. The project site is located within a mixed-use residential and light industrial area of Costa Mesa.

Property Observations. The project site is occupied by Ametek, Inc., an aerospace manufacturing and servicing company, and one single-family home. The industrial uses are contained within the four industrial buildings onsite. The findings of the Phase I ESA are summarized below.

1644 Whittier Avenue (Buildings 1-3)

Building Records

Records were available for 1644 Whittier Avenue from 1960 to 2007. In 1960, a new 23,500 square-foot building was erected containing offices and a factory for Servonics. Certificates of occupancy from 1960 and 1963 indicated that the owner of the building was Servonics Instruments, Inc. Between 1961 and 1979, various building permits for interior modifications, a laboratory addition, maintenance and storage room additions, plastering, a new 10,000 square-foot building (in 1962), and equipment pad installation. Between 1980 and 2000, Gulton Industries filed additional building permits for re-roofing, wall construction, ventilation installation, spray booths, concrete pads, a 3,000-gallon liquid nitrogen AST (in 1987), and building additions. Various plumbing, electrical, mechanical, and fire suppression permits were also filed between 1979 and 2007.

Hazardous Waste Storage

Two 55-gallon drums of new hydraulic oil were observed onsite in the hazardous waste storage area outside Building 1. Two exterior hazardous waste enclosures designated for hazardous waste storage were observed onsite within the southeast portion of Building 1. The hazardous waste storage area for Building 1 included used car batteries, light bulbs, and one 55-gallon drum of used hydraulic oil within secondary containment.

Aboveground and Underground Storage Tanks

One 400-gallon liquid nitrogen Aboveground Storage Tank (AST) was observed onsite, outside the eastern portion of Building 1.

Polychlorinated Biphenyls (PCBs)

Electrical transformers can be a source of PCBs. Two pad-mounted transformers were observed onsite, east of Building 2. Staining or evidence of release was not observed.

Hazardous Waste Storage

Several mobile liquid nitrogen ASTs were observed onsite, outside the eastern portion of Building 4. A hazardous chemical storage closet with secondary containment was observed outside the northwest portion of Building 4, containing one 55-gallon drum of isopropyl alcohol and one 55-gallon drum of acetone. Several 80 cubic-foot cylindrical argon tanks were observed onsite, outside the northeastern portion of Building 4. Two exterior hazardous waste enclosures designated for hazardous waste storage were observed onsite, within the northeast portion of Building 4. The hazardous waste storage area for Building 4 included four 55-gallon drums of isopropyl alcohol and acetone, 5-gallon buckets of acetone, and small quantities (less than 5 gallons) of lead from solder. Secondary containment was observed for some of the 55-gallon drums and 5-gallon buckets. Staining, cracked pavement, or other evidence of releases was not observed.

Aboveground and Underground Storage Tanks

One 3,000-gallon liquid nitrogen AST was observed onsite, outside the northern portion of Building 4. One 792-gallon liquid nitrogen AST and one 13-ton carbon dioxide AST were observed onsite, outside the central eastern portion of Building 4. Other evidence of ASTs or Underground Storage Tanks was not observed.

Polychlorinated Biphenyls

Electrical transformers can be a source of PCBs. Two pad-mounted transformers were observed onsite, east of Building 2 and west of Building 4. Staining or evidence of release was not observed.

Recognized Environmental Conditions (RECs)

The entire project site was used for industrial purposes (electronics-related manufacturing) from at least 1966 through 2012, which represents a Recognized Environmental Condition (REC). Limited soil, soil gas, and groundwater sampling was conducted within the project site in May 2013, augmenting the soil gas data collected by ERM in March 2013, and gaining information, including groundwater data, from three deeper borings (to 50 feet below ground surface). These investigations found volatile organic compound (VOC) concentrations in soil gas and groundwater samples, and these are considered RECs for the project site (Ninyo and Moore 2013a).

Suspect Asbestos-Containing Materials

Based on the age of the structures (1960s), Asbestos-Containing Materials are likely to be present at the site.

Lead-Based Paint

Based on the age of the structures (1960s), Lead-Based Paint is likely to be present at the site.

Environmental Database Search

A computerized, environmental information database search was performed by EDR on May 14, 2013. Below is a description of the search results that noted properties of environmental concern and a discussion of the regulatory status of the facilities, and implications for the project site.

1. CERCLIS/No Further Remedial Action Planned (NFRAP) List. The project site was not listed on this database. Two facilities within the search radius were listed on this database: the Mobil Oil Corp Banning Lease at 1080 West 17th Street, which is located approximately 0.14 mile north-northwest of the project site; and the Hixson Metal Finishing Fire at 829 Production Place, which is located approximately 0.34 mile east-southeast of the project site. Based on their distance and/or direction from the project site, and/or their current status, these facilities are not considered RECs for the project site.
2. Corrective Action Report (CORRACTS). The EPA maintains this database of Resource Conservation and Recovery Act (RCRA) facilities that are undergoing corrective action. A corrective action order is issued when a release of hazardous waste or constituents into the environment from a RCRA facility has occurred.

The project site was not listed on this database. One facility, the Newport Health Center LLC at 500 Superior Avenue, which is located approximately 0.57 mile east-southeast and cross-to up-gradient of the project site, was listed on this database. Based on the distance and/or direction from the project site, relative groundwater flow, and the information provided, this facility is not considered a REC for the project site.

3. Resource Conservation and Recovery Act (RCRA) Generators List. This list identifies sites that generate hazardous waste as defined by RCRA. Inclusion on this list is for permitting purposes and is not indicative of a release.

The project site was listed on this database as Gulton-Statham Transducers, Inc. at 1644 Whittier Avenue, a small quantity generator with one written informal violation on June 21, 2004 for "Generators-General," which achieved compliance on June 23, 2005. Two adjacent properties with no violations were also listed on this database: Jorgensen Furniture, Inc., at 951 Newhall Street, which is located east of, adjacent to, and up- to cross-gradient of the project site, and Omohundro Co. at 960 West 16th Street, which is located adjacent to, southeast of, and cross-gradient of the site. Although not adjacent to the project site, 14 additional facilities within a 0.25-mile-radius were listed as either small or large quantity generators. No violations were reported for any of these facilities. These listings are not indicative of a release and are not considered a REC for the project site.

4. State Sites. The State Sites database consists of potential or confirmed hazardous substance releases. The project site was not listed on this database. Four facilities located within the search radius were listed on this database:
 - a) Southern California Edison Lafayette Substation, at 1680 Monrovia Avenue, which is located approximately 0.15 mile east-northeast and up-gradient of the project site, was listed as an active facility undergoing corrective action under a consent agreement with the DTSC as of 2012.
 - b) Maurer Marine Inc., at 873 West 17th Street, which is located approximately 0.23 mile east-northeast and up-gradient of the project site, was listed as an active facility undergoing corrective action under a consent agreement with the DTSC as of 2011.
 - c) Precision Optical, at 869 West 17th Street, which is located approximately 0.24 mile east-northeast and up-gradient of the project site, was listed as an active facility undergoing corrective action under a consent agreement with the DTSC as of 2011. Past uses for the facility included hazardous waste storage in tanks/containers.
 - d) Griswold Industries, at 1701 Placentia Avenue, which is located approximately 0.41 mile east-northeast and up-gradient of the project site, was listed as an active facility undergoing corrective action under a consent agreement with the DTSC, as of 2011. Past uses for the facility included a foundry with USTs.

According to the EnviroStor database, the Costa Mesa Site Discovery Project (CMSDP) regional groundwater plume, which has been impacted with VOCs, is located approximately

0.25 mile northeast and up-gradient of the project site. CMSDP records indicate that groundwater flows southwest, toward the project site. It is conceivable that releases from the CMSDP facilities have contributed to impacts of groundwater and soil gas beneath the project site. The four facilities listed above lie within the CMSDP. Based on their proximity to the project site, it is conceivable that these facilities have contributed to the groundwater quality impacts occurring beneath the project site.

5. State CERCLIS. The DTSC’s Site Mitigation and Brownfields Reuse Program’s EnviroStor database identifies facilities with known contamination and for which there may be reasons to investigate further.

The project site was listed on this database as Gulton-Statham Transducers Inc., at 1644 Whittier Avenue. According to EnviroStor, the project site had a status of “Inactive – Needs Evaluation,” with an unreported date. Ninyo & Moore reviewed the DTSC EnviroStor database for additional information. According to EnviroStor, a regional groundwater plume called the CMSDP, which has been impacted with VOCs, is located approximately 0.25 mile northeast of the project site. The CMSDP consists of several facilities that are listed in Table 9. CMSDP records indicate that groundwater flows southwest toward the project site.

The EnviroStor database lists the project site on a tiered permit under the name of Gulton-Statham Transducers, Inc. with an “inactive, needs evaluation” status. Ninyo & Moore conducted limited soil, soil gas, and groundwater sampling onsite in May 2013, augmenting the soil gas data collected by ERM in March 2013 and gaining information on groundwater from three deeper borings (to 50 feet bgs). These investigations found VOC concentrations in soil gas and groundwater, and these are considered RECs for the project site.

Table 9 lists the 16 facilities that were located with the EnviroStor search radius for the CERCLIS Databases.

Table 9: Facilities Listed on the State CERCLIS Database

Facility	Relationship to Project Site	Regulatory Status	Date of Last Action	Concern (Y/N)
Former Eaton Corporation* 1640 Monrovia Avenue	0.13 mile east Up- to cross-gradient	Active	06/28/2012	N
Southern California Edison Lafayette Substation* 1680 Monrovia Avenue	0.15 mile east-northeast Up-gradient	Active	01/05/2012	N
Maurer Marine Inc.* 873 West 17th Street	0.23 mile east-northeast Up-gradient	Active	02/25/2013	N
Precision Optical* 869 West 17th Street	0.24 mile east-northeast Up-gradient	Active	09/07/2012	N
Hixson Metal Finishing 829 Production Place	0.34 mile east-southeast Up- to cross-gradient	Active	11/29/2012	—

Table 9 (cont.): Facilities Listed on the State CERCLIS Database

Facility	Relationship to Project Site	Regulatory Status	Date of Last Action	Concern (Y/N)
California Exploration Company 18 th and Whittier Avenue	0.38 mile north Down- to cross-gradient	Refer: RWQCB	11/07/1994	N
Griswold Industries* 1701 Placentia Avenue	0.41 mile east-northeast Up-gradient	Active	10/30/2012	N
Railmakers, Inc. 864 West 18th Street	0.43 mile northeast Up-gradient	Inactive – Needs Evaluation	Not Reported	N
Hartman Enterprises 741 Ohms Way	0.55 mile east Up- to cross-gradient	Inactive – Needs Evaluation	11/09/2010	N
Hughes Aircraft Company 500 Superior Avenue	0.57 mile east-southeast Up- to cross-gradient	Refer: RWQCB	01/01/2008	N
Newport Beach City Yard 592 Superior Avenue	0.59 mile east-southeast Up- to cross-gradient	Refer: RWQCB	05/24/1995	N
Leadership Housing Systems 19th and Whittier Avenue	0.62 mile north Up- to cross-gradient	Refer: RWQCB	10/28/1994	N
Hoag Memorial Hospital Presbyterian 1 Hoag Drive	0.63 mile southeast Down-gradient	Inactive – Needs Evaluation	Not Reported	N
South Basin Oil Company 204/206 43rd Street	0.85 mile south Down- to cross-gradient	Refer: Other Agency	10/28/1994	N
Orange County Refining Co. Well #3 213 42nd Street	0.88 mile south Down- to cross-gradient	Refer: Local Agency	01/11/2011	N
Dry Clean 4 Less 1704 Newport Boulevard	1.0 mile east-northeast Up- to cross-gradient	Refer: 1248 Local Agency	06/01/2000	N
Notes: N = No RWQCB = Regional Water Quality Control Board Y = Yes * = Within the CMSDP regional groundwater plume — = No information provided Source: Ninyo and Moore, 2013a.				

With the possible exception of the facilities within the CMSDP, based on the location of these facilities, the distance and directions from the project site, and their currently regulatory status, it is unlikely that activities at these facilities have impacted the environmental integrity of the project site.

6. State Leaking Underground Storage Tank (LUST) Lists: Distance Searched – ½ mile

LUST Information System Databases are maintained by the California State Regional Water Quality Control Boards (RWQCBs).

The project site was not listed on this database. Thirteen listings representing 11 facilities within the 0.5-mile search radius were listed on the LUST database (see the table in section 7.14 of the Phase I ESA). Based on the current regulatory status of these facilities, the media affected, or their distance/direction from the project site, it is unlikely that these LUST incidents have impacted the environmental integrity of the project site.

7. Additional Non-ASTM Databases.

Ametek Aerospace and Gulton-Statham Transducers, Inc., at 1644 Whittier Avenue and 970 West 16th Street, were listed on the Facility Information Detail, National Pollutant Discharge Elimination System, Exposure Model for Individuals, Waste Data System, and Hazardous Waste Information System databases. Information recovered from these databases included facility identification numbers, chemicals stored onsite, and waste generated onsite. According to the HAZNET database, several types of waste, including waste oil, mixed oil, oxygenated solvents, hydrocarbon solvents, and laboratory waste chemicals, were generated and removed from the project site between 1993 and 2010. This information is not indicative of a release; however, historic storage and uses of these chemicals are considered RECs for the project site.

Ninyo & Moore conducted limited soil, soil gas, and groundwater sampling onsite in May 2013, augmenting the soil gas data collected by ERM in March 2013 and gaining information on groundwater from three deeper borings (to 50 feet bgs). These investigations found VOC concentrations in soil gas and groundwater samples, which are considered RECs for the project site.

Summary

Records indicate the former storage and use of chemicals, including solvents, and generation of related hazardous wastes at the project site. Historic operations, and the former use, storage, and generation of hazardous wastes are considered RECs for the project site.

ERM installed 27 soil vapor probes in 1999, 19 soil vapor probes in March 2013, and 7 soil vapor probes and 4 groundwater monitoring wells in June 2013. Ninyo & Moore installed 16 soil vapor probes, collected three groundwater samples, and collected shallow soil samples in May 2013. VOCs were detected in soil gas and groundwater samples taken during these site investigations, and these are considered RECs for the project site.

Several liquid nitrogen ASTs and one 13-ton carbon dioxide AST were observed on the project site. Two exterior hazardous waste enclosures were observed onsite, containing used car batteries, light bulbs, used hydraulic oil, isopropyl alcohol, and lead from solder. Staining or evidence of releases was not observed.

According to EnviroStor, the CMSDP regional groundwater plume, which has been impacted with VOCs, is located approximately 0.25 mile northeast and up-gradient of the project site. CMSDP records indicate that groundwater flows southwest toward the project site. It is conceivable that

releases from the CMSDP facilities have contributed to impacts of groundwater and soil gas beneath the project site.

Conclusion

The Phase I ESA revealed the following RECs in connection with the project site:

- The use of the site for industrial, electronic-related purposes, from at least 1960 through 2012, represents a REC for the project site. Historic uses included the storage, use, and generation of hazardous wastes, including solvents.
- Ninyo & Moore conducted limited soil, soil gas, and groundwater sampling onsite in May 2013, augmenting the soil gas data collected by ERM in March 2013 and gaining information on groundwater from three deeper borings (to 50 feet bgs). These investigations found VOC concentrations in soil gas and groundwater samples, which are considered RECs for the project site.

It is conceivable that releases from the CMSDP facilities have contributed to impacts of groundwater and soil gas beneath the project site. Correspondence from the project Applicant regarding cleanup activities for the project site indicates that project site remediation was referred to the Department of Toxic Substances Control by the County of Orange Health Care Agency's Environmental Health Division in October 2013, due to potentially impacted soil and groundwater at 1644 Whittier Avenue.

As discussed, the Applicant has been coordinating with the DTSC, which is providing the necessary oversight for the site remediation and workplan. The DTSC has provided several sets of comments on the proposed Site Investigation Workplan (ERM 2014). The Applicant—in conjunction with its hazardous materials consultant, Environmental Resources Management (ERM)—proposes to address VOC concerns as follows:

- In late 2014, the buildings onsite would be demolished.
- To address the potential vapor intrusion risks for future structures and receptors at the redevelopment site, ERM plans to use all available site-wide soil vapor data as well as any pertinent site information (soil data, physical characteristics, etc.) in a human health risk assessment once investigation activities are completed, consistent with DTSC and USEPA guidance.
- Vapor barriers would be integrated into the design of future site structures, if necessary, based on the findings of the risk assessment.

Thus, the project Applicant is currently working with the DTSC to finalize a corrective measure plan for the property that addresses sampling/investigation, and corrective action before, during, and following project construction.

Compliance with established regulations, Standard Conditions SC 4.1-2, 4.8-1 and 4.8-2, and Mitigation Measures (MMs) HAZ-1 and HAZ-2 would ensure that the project would not 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. Therefore, the project would have a less than significant impact in this regard.

Standard Condition

- 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.

Mitigation Measure

- MM HAZ-1** Prior to demolition activities, removal and/or abatement of asbestos containing building materials, lead based paints, and hazardous materials associated with the existing building materials, an investigation shall be conducted by a qualified environmental professional in consultation with the Costa Mesa Fire Department. An asbestos and hazardous materials abatement plan shall be developed by the qualified environmental professional, in order to clearly define the scope and objective of the abatement activities. The Applicant shall conduct demolition consistent with the abatement plan, applicable state requirements and City standard conditions.
- MM HAZ-2** Prior to the issuance of a grading permit, the project Applicant shall provide documentation to the City of Costa Mesa Planning Division indicating DTSC approval of a plan containing all corrective measures required for the project.
- Prior to the issuance of an occupancy permit, the Applicant shall implement all feasible corrective measures and establish any ongoing measures required (i.e. monitoring).
- 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. Carden Hall School is located approximately 375 feet southeast 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 within 0.25-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?**

Less than significant impact with mitigation incorporated. Based on the Phase I ESA prepared for the project site, the site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. However, the EnviroStor database reports that there is a tiered permit for the site due to the following potential contaminants of concern: tetrachloroethylene (PCE), trichloroethylene (TCE), and 1, 2-dichloroethane (Ninyo & Moore 2013a).

A site remediation, with DTSC oversight is in progress, and the site would be remediated consistent with regulatory requirements prior to project development.

Compliance with established regulations, Standard Conditions SC 4.1-2, 4.8-1 and 4.8-2, and MM HAZ-1 through MM HAZ-2 would ensure that the project would not create a significant hazard to the public or the environment. With implementation of these measures, the project would have a less than significant impact.

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

No impact. The project site is approximately 4.1 miles southwest of John Wayne Airport and outside of the Airport Safety Zone, the AELUP Height Restriction Zone, and the Runway Protection Zones (Clear Zones). The project site is not within the FAR Part 77 Notification Area for John Wayne Airport. Therefore, project implementation would not result in an airport-related safety hazard for people residing or working at the proposed residential and live/work development.

- 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 residential and live/work development.

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

No 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 indicates that 19th Street, located approximately 0.60 north of the project site, is a designated emergency evacuation route. Newport Boulevard, located approximately 0.7 mile southeast of the project site, is also a designated emergency evacuation route. The project does not include any characteristics that would physically impair or otherwise interfere with emergency response or evacuation in the project vicinity. These conditions preclude the possibility of the project conflicting with an emergency response or evacuation plan. No impact would occur.

h) Expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands?

No impact. The project site is located within an urban area and not adjacent to wild lands. Therefore, project implementation would not expose people or structures to a significant risk involving wild land fires.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.9 Hydrology and Water Quality <i>Would the project:</i>				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Evaluation

Would the project:

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

Less than significant impact. Project-related impacts related to water quality could occur 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
- After 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 benefit to water quality, 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 site currently consists of three parcels totaling 5.7 acres. The project site currently includes industrial buildings in the northwest and southeast sections, a single-family residence within the western section, and paved walkways and parking lots. Currently, 99.5 percent of the project site is covered with impervious surfaces; there is only 0.5 acre of pervious surfaces currently onsite. The front lawn, grasses, shrubs, and trees that surround the single-family residence currently provide some permeability. Existing landscaping along Whittier Avenue also allows some permeability.

According to the Conceptual Water Quality Management Plan (CWQMP) prepared by Hunsaker and Associates(2014; Appendix G), the project would construct 89 residential and live/work units that would include approximately 1.4 acres of open space, including pervious coverage such as turf or landscaping in private yards, parkway landscaping, open lawn play areas, and community gathering spaces. Upon completion, approximately 75 percent of the site would be covered with impervious surfaces. This represents an almost 25% improvement over existing conditions. By removing the site's previous land use, which consisted of industrial buildings and paved parking lots, and incorporating landscaping within open space lots, open play areas, and private residential yards, project implementation would increase site permeability by decreasing the total surface area covered by impervious surfaces (by as much as 25%).

National Pollutant Discharge Elimination System

Under 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 from 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.

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 4.6-4. 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)¹ 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.

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), including but 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

¹ BMP means any program, technology, process, siting criteria, operational methods or measures, or engineered systems, which when implemented prevent, control, remove, or reduce pollution.

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 ensure that the project's construction-related impacts to water quality are less than significant.

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 MS4s and are discharged to surface water bodies of the 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 Area wide Urban Storm Water Runoff Orange County, which was approved on May 19, 2011. 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 stormwater 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 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 employed for a designated project. 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 must approve the project plan as part of their 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 North Orange County (NOC) Permit Area. A project is considered a Priority Project in the North Orange County (NOC) 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 subdivision, mixed-use, and public projects on private or public property that falls under the planning and building authority of the Permittees. Because the project would create approximately 187,308 square feet of impervious surface, it would meet the criteria of a Priority Project. As such, in order to mitigate storm water pollution from the project, the project must prepare a WQMP that specifies the proposed BMPs.

As noted above, the project would 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.

Based on project-specific CWQMP, the pollutants of concern associated with residential and commercial development are as follows: suspended solid/sediments, nutrients, pathogens, pesticides, oil & grease, toxic organic compounds, and trash & debris (Hunsaker 2014). Site design BMPs and Low Impact Development (LID) BMPs are implemented in order to reduce development impacts on water quality and protect downstream hydraulic conditions, and reduce project -related storm water pollutants, respectively. The project site is not potentially susceptible to hydromodification impacts. The incorporation of LID BMPs into the project design requires evaluation of LID measures in the following order: infiltration, evapotranspiration, harvest/reuse and biotreatment.

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 ensure that the long-term project-related impacts to water quality would be less than significant.

Standard Condition

Refer to Standard Condition 4.6-4 above.

SC 4.9-1 In order 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 and 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.

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. 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. The project would construct 49 residential units (137 people) and 40 commercial live/work units (111 people), the water demand of which would be approximately 24, 534 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 2035. Further, Mesa Water's groundwater supply is anticipated to significantly increase with completion of the Colored Water Treatment Facility expansion. 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 project implementation would increase (not decrease) the permeable surface area of the site. Project implementation would therefore result in a less than significant impact to groundwater supplies.

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

Less than significant with mitigation incorporated. The City's storm water collection system includes catch basins, drainage basins, pumping stations, and force mains. As part of project, construction activities including demolition, grading, paving and site improvements may result in loose sediment, which can be picked up by surface water or wind into nearby storm drains and into waterways.

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. With implementation of MM HYD-1, the project would result in less than significant impacts to on- or offsite erosion and/or siltation.

Standard Condition

Refer to Standard Condition 4.6-3 above.

Mitigation Measure

- MM HYD-1** Prior to the issuance of any Grading Permit, the Applicant shall:
- Prepared 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 by City of Costa Mesa requirements and in accordance with the Orange County Local Drainage Manual including a minimum spacing between manholes of 300 feet.

- 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. Upon project implementation, drainage patterns would be similar to existing conditions. No stream or river traverses the project site or is located in the project vicinity. Project implementation would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.

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 drainage facilities would be subject to compliance with the Master Drainage Plan (pursuant to Standard Condition 4.9-2) and must be reviewed/approved 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 increase in impervious surface areas on the site (rather, the project would increase impervious surface cover by as much as 25 percent). The project would also be subject to compliance with the CMMC provisions, and thus, would result in less than significant impacts on drainage patterns and flooding.

Standard Conditions

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

SC 4.9-3 The project Applicant shall submit grading plans, an erosion control plan, and a hydrology study.

e) Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less than significant impact. The project would be served by the City’s stormwater drainage system. Construction activities such as demolition, grading, and paving could introduce additional pollutants and sediment into water runoff and flow into nearby storm drains. As part of project, a SWPPP in compliance with the NPDES requirements of the Clean Water Act would be prepared. Projects that comply with NPDES requirements would not result in a significant impact related to changes in the quantity, rate, or quality of stormwater runoff from the site. Finally, continuous use and operation of the site would not create or contribute runoff water that would exceed the capacity of existing stormwater drains on the project site. Therefore, impacts would be less than significant.

f) Otherwise substantially degrade water quality?

Less than significant impact. Refer to Response 4.9.a. above.

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 is in Zone X, pursuant to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel 0264J, Map No. 06059C0264J.6 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.

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.

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 within the City's coastal areas that are subject to coastal storm surges, according to General Plan SAF 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.

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 in the project vicinity.

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 SAF 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, 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 would occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.10 Land Use and Planning <i>Would the project:</i>				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Evaluation

Would the project:

a) Physically divide an established community?

No impact. The physical division of an established community typically refers to the construction of a linear feature, such as an interstate highway or railroad tracks, or removal of a means of access, such as a local road or bridge that would impact mobility within an existing community or between a community and outlying area. The project site is located in the southwestern portion of Costa Mesa and is surrounded by residential and light industrial uses. The project site is currently developed, with four industrial buildings totaling approximately 66,119 square feet, an associated parking lot, and an existing single-family residence occurring onsite. The project would remove the existing structures and impermeable surfaces and construct an 89-unit development of residential and live/work units. None of the activities associated with project implementation would physically divide an established community.

Standard Condition

Refer to Standard Condition 4.1-2 above.

- 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?**

City of Costa Mesa 2000 General Plan

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

According to the City of Costa Mesa General Plan Land Use Map, the land use designation of the project site is Light Industry. The Light Industry designation allows a variety of light and general industrial uses, including those associated with this mixed-use development project. The Land Use Element 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 Mesa West Bluffs 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 within 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 project site is consistent with the General Plan in this regard.

The project would be consistent with the Costa Mesa General Plan, as follows:

Mix of Uses/Four Story Maximum. The proposed live/work development has been designed to be consistent with a mix of uses and a four-story maximum.

Product Types. The proposed live/work development has been designed to be consistent with product type specifications in the General Plan.

Types of Nonresidential Uses. Businesses that would occupy the proposed live/work development would be required to comply with the list of allowable land uses that are permitted and conditionally permitted within the overlay zone's mixed-use developments. The list of allowable land uses (i.e., land use matrix) would be approved during the entitlement process. Project consistency with the

specific goals and objectives of the General Plan Land Use Element is evaluated below. Because of the expansive nature of a General Plan, it is not expected that every goal and objective will apply to every project, so this consistency evaluation focuses on the issues that are salient and relevant.

- **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 project would construct a mixed-use, live/work development on a site designated for industrial and commercial uses. The project would retain the residential character of the City, provide additional housing opportunities, and ensure the long-term viability of the community's man-made environments. The project includes a variety of "earth-friendly elements" and sustainable features to protect the viability of the natural environment. The project is therefore 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 would not exceed the capacity of existing infrastructure. 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 enhance the visual appearance of the project site by implementing a Landscape Plan and by introducing a high-quality architectural design to the project area. Therefore, the project is consistent with this General Plan goal.

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

Consistency: The project has been designed to improve and help maintain the quality of the environment. The project is therefore consistent with this General Plan objective.

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

According to the Official Zoning Map, the project site is zoned MG General Industrial. However, when activated by an approved Master Plan, the underlying zoning district is superseded by the Urban Plan's zoning regulations (unless otherwise indicated). According to the Westside Urban Plan

Areas Map, the project site is specifically located within the Mesa West Bluffs Urban Plan. The Mixed-Use Overlay District was applied to the property at the time of the Mesa West Bluffs Urban Plan adoption. Therefore, the development standards that apply to the project are specified in the Mesa West Bluffs Urban Plan.

The Costa Mesa Municipal Code (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.

The project entitlements include the Urban Master Plan UMP-13-08, among others (refer to Section 2.4, Project Features). As a live/work development in the Mesa West Bluffs Urban Plan area, the project requires approval of the proposed Urban Master Plan UMP-13-08, pursuant to CMMC Title 13, Chapter II, Planning Applications. Adoption of the Urban Master Plan would activate the provisions of the mixed-use overlay, as specified in the Mesa West Bluffs Urban Plan. Therefore, the project is analyzed below for consistency with the Mesa West Bluffs Urban Plan.

Mesa West Bluffs Urban Plan

The project site is located within the Mesa West Bluffs Urban Plan, which emphasizes improving the area by providing visual enhancement and encouraging the development of mixed-use urban villages along specified areas. To this end, the Mesa West Bluffs Urban Plan's objectives include the following:

- Encourage the construction of live/work units that combine residential uses in the same unit without exceeding the development capacity of the General Plan transportation system;
- Encourage adaptive reuse of existing industrial or commercial structures, which would result in rehabilitated buildings with unique architecture and a wider array of complementary uses;
- 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;
- Meet demand for a new housing type to satisfy a diverse residential population comprised of artists, designers, craftspeople, professionals and small-business entrepreneurs;
- Promote new type of urban housing that would be target-marketed to people seeking alternative housing choices in an industrial area. An urban loft would be an alternative to a traditional single-family residence, tract home, or small-lot subdivision.

The project would further these objectives by providing a mixed/use, nontraditional development that includes urban housing and live/work units in a light industrial area. The project has been designed to be a desirable live/work environment for future residents, and project implementation would enhance and revitalize the character of the project site, as well as the surrounding area.

Development Standards. Mixed-use development standards are provided in the Mesa West Bluffs Urban Plan, Tables A, A2, and A3. Project consistency with these standards is evaluated below and summarized in Table 10, Consistency with Live/Work Development Standards.

Live/Work Standards. Urban Plan live/work development standards allow development of up to 1.0 FAR. The proposed 0.87 FAR for the live/work units is consistent with these development standards.

Minimum Size of Workspace. The Urban Plan requires a minimum 250-square-foot workspace in a live/work unit. The live/work units would provide between 250 and 253 square feet of workspace, which is consistent with these development standards.

Open Space. The minimum required open space for live/work units is 10 percent, and the minimum required open space for the residential units is 40%; the project provides 40.1 percent overall open space, and 29.6 percent common open space.

Setback Requirements. The Urban Plan requires a minimum 20-foot rear setback from residential properties. This was intended to allow a larger setback for the three and four-story structures permitted by the Urban Plan Overlay districts. The project has been designed to be consistent with these requirements.

The Urban Plan also requires a minimum front setback of 10 feet. The project has been designed to be consistent with these requirements.

The Urban Plan requires a minimum 10-foot-setback between buildings. The Urban Plan identifies setbacks of 10 feet between multi-unit buildings. The project would not have any attached units, and would deviate from the setback requirement in that some of the units would be less than 10 feet apart (6 feet in some areas proposed). This minor deviation is not considered significant for the purposes of CEQA.

Permitted Land Uses. The land use matrix from the Mesa West Bluffs Urban Plan, Table C, lists the land uses that are 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 in mixed used developments, with limited larger offices and commercial uses permitted in ground-level units.

The project would allow business areas to operate on the ground floors of the live/work units. However, future businesses would be evaluated under the City's discretionary review process, upon their request for a permit to operate. The City's review would verify whether a future business is permitted or prohibited. Issuance of a Permit (i.e., Minor Conditional Use Permit or Conditional Use Permit) would ensure consistency with the City's development standards.

Table 10: Consistency with Live/Work Development Standards

Development Standard (Required/Allowed)	Project	Consistent?
Lot Area: 1.0 acre	5.7 gross acres	Yes
Floor Area Ratio: up to 1.0 (live/work units)	0.87	Yes
Density: 13 DU per acre (residential units)	13 DU per acre	Yes
Minimum Size of Live/Work Space: 250 Sq ft (excluding bathroom, kitchen, hallway)	200 - 253 sq ft (Live/Work Units)	Yes
Building Coverage <ul style="list-style-type: none"> • Buildings: varies • Open Space: 10 percent (live/work units) • Open Space: 40 percent (residential units) 	<i>RESIDENTIAL</i> Building Footprints: 46,052 S.F. (28.1%) Drives/Parking: 52,469 S.F. (31.8%) Open Space: 65,700 S.F. (40.1%) <i>LIVE/WORK</i> Building Footprints: 32,000 S.F. (38.1%) Drives/Parking: 27,178 S.F. (32.3%) Open Space: 24,893 S,F, (29.6%)	Yes
Building Height <ul style="list-style-type: none"> • 4 stories/60 feet (Roof gardens/terraces are considered a story)	4 stories/35 feet	Yes
Setbacks <ul style="list-style-type: none"> • Distance between buildings: 10 feet • Front: 10 feet • Side (left/right): 0 feet live/work units; 10 feet residential units (not abutting residential/public street) • Rear: 20 feet abutting residential 	6–10 feet 10–15 feet 12 feet 20 feet	No Yes Yes Yes
Development Standard (Required/Allowed)	Project	Consistent?
Parking Garage size: 20 feet x 20 feet (inside dimension)	Residential: 39' 0" x 20'8" (Plan 1, 2-car garage, 2 covered spaces) 37'0" x 20'7" (Plan 2, 2-car garage, 2 covered spaces) Live/Work Units: 20'10" x 21' (Plan 3, 2-car garage) 20'4" x 21' (Plan 4, 2-car garage)	Yes Yes
Parking, Tenant: 4 spaces per residential unit 3 spaces per live/work unit =316 spaces total	276 garage/covered spaces 56 open spaces =332 spaces total	Yes
Open Parking	56 open spaces	Yes

Compatibility with the Surrounding Land Uses. As discussed above, in Section 2.1, the project would construct a mixed use, live/work development in a highly industrialized area consisting of industrial operations intermixed with existing residential uses. Land use compatibility between sensitive land uses (i.e., residential) can occur when sensitive land uses are first introduced into industrial areas; however there are other residential areas located adjacent to the project site, and the project would comply with all regulations and Standard Conditions pertaining to landowner notification and land use compatibility. In particular, compliance with Standard Condition SC 4.1-2, which requires notification to future buyers that the project is located within an area designated as Light Industry and could be subject to existing and potential annoyances/inconveniences associated with industrial land uses, would ensure that the project would have a less than significant impact on land use compatibility. Therefore, the project would not be incompatible with surrounding land uses.

Additionally, the project is not located within a designated Coastal Zone, as confirmed by the Coastal Commission (2014). Impacts are less than significant.

Standard Condition

Refer to Standard Condition SC 4.1-2 above.

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

No impact. Refer to response 4.4.f.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.11 Mineral Resources <i>Would the project:</i>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Evaluation

Would the project:

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

No impact. The project site is not located within a State-designated Mineral Resource Zone. In addition, the project site is developed with light industrial uses and does not support mineral extraction operations. This condition precludes the possibility of related impacts. No impact would occur.

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

No impact. The Costa Mesa 2000 General Plan does not identify the project site as a mineral resource zone. In addition, the project site is developed with light industrial uses and does not support mineral extraction operations. This condition precludes the possibility of related impacts. No impacts would occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.12 Noise <i>Would the project result in:</i>				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Evaluation

This analysis is based on the *Exterior Noise Analysis* report prepared for this project by Bridgenet International, dated February 21, 2014. This report is provided, in its entirety, in Appendix E of this Initial Study.

Fundamentals of Noise

Noise is defined as unwanted sound. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing. Most of the sounds that we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound. Noise is typically generated by transportation, specific land uses, and ongoing human activity.

The standard unit of measurement of the loudness of sound is the decibel (dB). The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or less are only perceptible in laboratory environments. A change of 3 dB is the lowest change that can be perceptible to the human ear in outdoor environments, while a change of 5 dBA is considered to be the minimum readily perceptible change to the human ear in outdoor environments.

Since the human ear is not equally sensitive to sound at all frequencies, the A-weighted decibel scale (dBA) was derived to relate noise to the sensitivity of humans. The scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Furthermore, the A-weighted sound level is the basis for a number of various sound level metrics, including the day/night sound level (L_{dn}) and the Community Noise Equivalent Level (CNEL), both of which represent how humans are more sensitive to sound at night.² In addition, the equivalent continuous sound level (L_{eq}) is the average sound energy of time-varying noise over a sample period and the L_{max} is the maximum instantaneous noise level occurring over a sample period.

Regulatory Framework

The City of Costa Mesa's Noise Element of their General Plan (Adopted January 2002) specifies an exterior noise standard of 65 dBA CNEL and an interior noise standard of 45 dBA CNEL with closed windows for single and multi-family residential land use. The exterior noise standard for single residential land use is limited to private yards and the exterior noise standard for multi-family residential land use is limited to private patios or balconies which are served by a means of exist from inside the dwelling, balconies 6 feet deep or less are exempt. The interior environment excludes bathrooms, closets and corridors.

The General Plan provides criteria to be used to assess the compatibility of proposed land uses with their noise environment. Since the table does not provide for live/work uses, as the project proposes, the multi-family residential use was used due to its relative stringency. These standards are provided in Table 11.

² L_{dn} is the 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m. CNEL is the 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m. Source: Harris, Cyril M. 1998. *Handbook of Acoustical Measurement and Noise Control*.

Table 11: City of Costa Mesa Noise and Land Use Compatibility Matrix

Land Use Category	Community Noise Exposure (L _{dn} or CNEL, dBA)			
	Normally Acceptable ¹	Conditionally Acceptable ²	Normally Unacceptable ³	Clearly Unacceptable ⁴
Residential-Multiple Family	50 to 65	65 to 70	70 to 75	75 to 85
<p>Notes:</p> <p>¹ Normally acceptable is defined as, "Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements."</p> <p>² Conditionally acceptable is defined as, "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."</p> <p>³ Normally unacceptable is defined as, "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 included in the design."</p> <p>⁴ Clearly unacceptable is defined as, "New construction or development should generally not be undertaken."</p> <p>Source: General Plan, Table N-3 (Noise and Land Use Compatibility Matrix, on page N-6)</p>				

The General Plan provides interior and exterior noise standards for various land use categories (Table N-4, on page N-7). The interior noise standard for the Multiple-Family use category is 45 dBA CNEL, while the exterior standard is 65 dBA CNEL. According to the Mesa West Bluffs Urban Plan, exterior noise standards for live/work and multi-family units do not apply to any balconies, roof decks, or terraces, regardless of size. The interior noise standard for the Commercial Office Building use (the listed use that best matched likely future uses of ground-level units with work-at-home accommodations) is 50 dBA CNEL, while there are no exterior noise standards that apply.

The City of Costa Mesa's Noise Ordinance was 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. These standards are summarized in Table 12.

Table 12: City Noise Ordinance Standards - Residential

Location	Community Noise Exposure (L _{dn} or CNEL, dBA)	
	Daytime ¹	Nighttime ²
Interior	55	45
Exterior	55	50
<p>Notes:</p> <p>¹ Defined in the Noise Ordinance as, 7:00 a.m. to 11:00 p.m.</p> <p>² Defined in the Noise Ordinance as, 11:00 p.m. to 7:00 a.m.</p> <p>Source: Costa Mesa. <i>Code of Ordinances</i>. Title 13. Chapter XIII. Noise Control.</p>		

The noise ordinance exempts several categories of noise sources, including construction activities, which take place between the hours of 7 a.m. and 7 p.m. Monday through Friday and 9 a.m. to 6 p.m. on Saturday. Construction activities are prohibited for all hours on Sundays and federal holidays.

Would the project:

- 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 with Mitigation Incorporated. Noise levels in the project area would be influenced by construction activities and from the ongoing operation of the project.

Construction Noise Impacts.

The following two types of short-term noise impacts could occur during the construction of the project. First, construction crew commutes and the transport of construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the project site. Although there would be a relatively high single event noise exposure potential causing intermittent noise nuisance, the effect on longer term (hourly or daily) ambient noise levels would be small. Therefore, short-term construction-related impacts associated with worker commute and equipment transport to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during construction on the project site. Construction is completed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase. Table 13 lists typical construction equipment noise levels, based on a distance of 50 feet between the equipment and a noise receptor. Because the noisiest construction equipment is earthmoving equipment, the site preparation phase is expected to be the loudest phase of construction. The site preparation construction phase is expected to require the use of front-end loaders, compactors, hydraulic backhoes, and haul trucks. Typical 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. Impact equipment such as pile drivers are not expected to be used during construction of this project.

As shown in Table 13, the typical maximum noise level generated by backhoes and front-end loaders is assumed to be 80 dBA L_{max} at 50 feet from the operating equipment. The maximum noise level generated by compactors or rollers is approximately 85 dBA L_{max} at 50 feet. The maximum noise level generated by haul trucks is approximately 84 dBA L_{max} at 50 feet from these vehicles. Each doubling of the sound sources with equal strength would increase the noise level by 3 dBA. Assuming each piece of construction equipment operates at some distance apart from the other equipment, the worst-case combined noise level during this phase of construction would be 91 dBA

L_{max} at a distance of 50 feet from multiple pieces of heavy construction equipment operating at full power simultaneously.

Table 13: Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Impact Device? (Yes/No)	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Impact Pile Driver	Yes	95
Auger Drill Rig	No	85
Vibratory Pile Driver	No	95
Jackhammers	Yes	85
Pneumatic Tools	No	85
Pumps	No	77
Scrapers	No	85
Cranes	No	85
Portable Generators	No	82
Rollers	No	85
Dozers	No	85
Tractors	No	84
Front-End Loaders	No	80
Backhoe	No	80
Excavators	No	85
Graders	No	85
Air Compressors	No	80
Dump Truck	No	84
Concrete Mixer Truck	No	85
Pickup Truck	No	55

Source: FHWA 2006. *Highway Construction Noise Handbook*, August.

Residential (mobile home) land uses border the project site to the north. The closest of these residential structures are located approximately 12 feet from the project property line, and approximately 25 feet from the construction areas of the nearest proposed residential units. When a single piece of the heaviest construction equipment operates at the project property line during the site preparation phase of construction, the closest off-site residential units would be exposed to construction noise levels of up to 97 dBA L_{max} . During construction of the proposed residential structures, simultaneous operation of multiple pieces of heavy construction equipment would result in construction noise levels ranging up to 97 dBA L_{max} at the closest off-site residential units.

As noted previously, temporary construction noise is exempted from the City's daytime noise performance standards provided that such construction has been properly permitted through the appropriate City departments, and provided that such noise producing construction activities only occur between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday, and between 9:00 a.m. and 6:00 p.m. on Saturdays, excluding federal holidays. However, such noise levels would still be considered excessive and a substantial temporary increase in ambient noise levels. Therefore, in addition to complying with the City's permissible hours of noise producing construction activities, best management noise reducing methods and practices should be incorporated to reduce construction noise impacts to less than significant. Because construction noise is temporary and Applicants would be required to implement the noise abatement measures listed below, construction noise impacts would be reduced to less than significant.

On-Site Stationary Noise Impacts.

A project would result in a significant impact if it would expose persons to noise levels in excess of the City's land use compatibility standards for community noise environments or with the City's exterior noise standards for the proposed land use type.

A noise measurement survey was conducted on Friday February 7, 2014 from the hours of 8:00 a.m. to 5:00 p.m. and on Tuesday, February 11, 2014 from the hours of 8:00 a.m. to 5:00 p.m. The goal of the noise measurement survey was to determine the existing ambient noise environment.

Noise measurement Location 1 was selected for its close proximity to the commercial building on the eastern portion of the project site. The sound level meter at this location was placed at a distance of 10 feet from the nearest property line. The commercial property sits approximately 4 feet higher and there is an existing 6-foot high chain link fence around the property at this location. The noise at this location was dominated by noise emanating from the tenants of the commercial building to the east. The noise measurement results do not exceed the daytime exterior noise standards, but do exceed the nighttime exterior noise standards. Therefore, additional exterior mitigation will be required.

Noise measurement Location 2 was selected for its proximity to RVCA on the eastern portion on the project site. The sound level meter at this site was placed 5 feet from the nearest property line. There is an existing 6-foot high chain link fence around the property at this location. The noise at this location was dominated by noise emanating from Ametek Aerospace & Defense, which is currently located and operating on the project site, but will be demolished once this project is built. The main noise sources from Ametek Aerospace & Defense were from pumps that have an air filtration system, which ran for the entire duration of the noise measurement survey. There were also truck and vehicle deliveries to Ametek Aerospace & Defense that contributed to the higher noise values. The noise measurement results do exceed the daytime exterior noise standards, but since the noise at this location was dominated by noise emanating from Ametek Aerospace & Defense, which will no longer exist once this project is built, additional exterior mitigation measures would not be required.

Noise measurement Location 3 was selected for its close proximity to the City of Newport Beach Utility Yard on the southern portion of the project site adjacent to 16th Street. The sound level meter at this location was placed at a distance of 10 feet from the nearest property line. City of Newport Beach Utility Yard is largely shielded from the project site by its own building. Similar to Location 2, the noise at this location was dominated by noise emanating from Ametek Aerospace & Defense. The noise measurement results do exceed the daytime exterior noise standards, but since the noise at this location was dominated by noise emanating from Ametek Aerospace & Defense, which will no longer exist once this project is built, additional exterior mitigation measures would not be required.

Noise measurement Location 4 was selected for its close proximity to the commercial property to the west of the project. The sound level meter at this location was placed 5 feet from the nearest property line. There is an existing 6-foot chain link fence around the property at this location. Similar to Locations 2 and 3, the noise at this location was dominated by noise emanating from Ametek Aerospace & Defense. Some of the hourly noise measurements that do exceed the daytime exterior noise standards were from landscaping/gardening services for Ametek Aerospace & Defense on Friday, February 7th from 12 p.m. to 1 p.m. Noise from the adjacent commercial property to the west was not audible and therefore should have a less than significant impact to the project site. Since the noise at this location was dominated by noise emanating from Ametek Aerospace & Defense, which will no longer exist once this project is built, additional exterior mitigation measures would not be required.

To reduce the noise emanating from the commercial building to the east of measurement Location 1 to levels that comply the City of Costa Mesa's nighttime exterior noise standards at the backyards of Lots 14-16, it was calculated that a 6-foot perimeter wall would be required along the property line between the commercial building and the project site. The 6-foot perimeter wall should reduce the levels in Table 12 above to within the City of Costa Mesa's nighttime exterior noise standards. There is already an 8-foot perimeter wall planned around the project in this location that will satisfy this requirement. The perimeter wall is required to have a surface density of at least 3.5 pounds per square foot, and have no openings or gaps. It may be constructed of wood studs with stucco exterior, 3/8-inch plate glass, 5/8-inch Plexiglas, any masonry material, or a combination of these materials.

Based upon the preliminary architectural plans, the 2nd floor balcony of Lot 15, which is greater than 6 feet in depth, will have line of sight to the commercial building to the east. It was calculated that the exterior noise level at the 2nd floor balcony of Lot 15 will comply with the nighttime exterior noise standards due to distance reduction. As previously discussed, according to the Mesa West Bluffs Urban Plan, exterior noise standards for live/work and multi-family units do not apply to any balconies, roof decks, or terraces, regardless of size. However, implementation of MM NOISE-2 would reduce potential exterior stationary noise impacts to less than significant.

The existing environment and stationary noise sources in the project vicinity would also result in interior noise level impacts in the proposed residential units. The worst-case, measured exterior noise levels were documented to range up to 60.8 dBA L_8 , 66.5 dBA L_2 and 74.8 dBA L_{max} . With a combination of walls, doors, and windows, standard construction for southern California residences

would provide 12 dBA in exterior-to-interior noise reduction with windows open, and 24 dBA in exterior-to-interior noise reduction with windows closed. With windows open, interior noise levels of the proposed work/live units would not meet the interior noise standard of 45 dBA CNEL (i.e., $74.8 \text{ dBA} - 12 \text{ dBA} = 62.8 \text{ dBA}$). Therefore, an alternative form of ventilation, such as air conditioning, that would allow windows to remain closed for prolonged periods of time must be incorporated into the project to meet the interior noise level standard of 45 dBA CNEL. However, even with windows closed, interior noise levels of the proposed work/live units would not meet the interior noise standard of 45 dBA CNEL (i.e., $74.8 \text{ dBA} - 24 \text{ dBA} = 50.8 \text{ dBA}$). Therefore, to reduce this potential impact, all project residential unit wall assemblies (windows, doors, and wall combinations) should be upgraded to have a combined minimum Standard Transmission Class (STC) rating of STC-34 exterior to interior noise reduction in order to meet the City's interior noise level standards for new residential development. Implementation of this measure, as outlined in MM NOI-3, would reduce these stationary sources interior noise impacts to less than significant.

On-Site Traffic Noise Impacts.

The roadway noise exposure in this report was computed using an acoustical planning and modeling program called SoundPLAN (Version 7.2). The project will be subject to noise from traffic on the three arterial roadways closest to the site: 16th Street, Whittier Avenue and Newhall Street. The noise modeling result tables and figures are provided in the *Exterior Noise Analysis* report in Appendix E.

For the residential only units of the project, the worst-case exterior noise levels at the backyards and 2nd-3rd floors of the units were calculated, and take into account the planned 8-foot and 6-foot perimeter walls around the project. The worst-case exterior noise levels at the backyards were calculated to be as high as 53.6 dBA CNEL. Since this level does not exceed the City of Costa Mesa's exterior noise standard of 65 dBA CNEL, additional exterior mitigation measures will not be required. The worst-case exterior noise levels at the 2nd-3rd floors of the homes were calculated to be as high as 54.5 and 54.7 dBA CNEL, respectively. Since these levels do not exceed the City of Costa Mesa's exterior noise standard of 65 dBA CNEL, additional exterior mitigation measures will not be required.

For the live/work units of the project, the worst-case exterior noise levels at the 1st-3rd floors of the homes were calculated and take into account the planned 8-foot walls around the project. The worst-case exterior noise levels at the 1st-3rd floors of the homes were calculated to be as high as 62.3, 62.0 and 61.4 dBA CNEL, respectively. Since these levels do not exceed the City of Costa Mesa's exterior noise standard of 65 dBA CNEL, additional exterior mitigation measures will not be required.

The project must also comply with the City of Costa Mesa's interior noise standard of 45 dBA CNEL for single and multi-family residential land use. To comply with the interior noise standard the homes must provide sufficient exterior to interior noise attenuation to reduce the interior noise exposure to acceptable levels.

The worst-case exterior noise levels at the 1st-3rd floors of the homes of the residential area of the project were calculated to be as high 53.6, 54.5 and 54.7 dBA CNEL, respectively. This means the

rooms within the 1st-3rd floors of the homes must provide at least 8.6, 9.5 and 9.7 dBA, respectively of exterior to interior noise reduction in order to meet the interior noise standard.

The worst-case exterior noise levels at the 1st-3rd floors of the homes of the live/work area of the project were calculated to be as high 62.3, 62.0 and 61.4 dBA CNEL, respectively. This means the rooms within the 1st-3rd floors of the homes must provide at least 17.3, 17.0 and 16.4 dBA, respectively of exterior to interior noise reduction in order to meet the interior noise standard.

Based on the U.S. EPA's Protective Noise Levels,³ with a combination of walls, doors, and windows, standard construction for southern California residences would provide 24 dBA in exterior-to-interior noise reduction with windows closed and 12 dBA or more with windows open. With windows open, interior noise levels of the proposed work/live units would not meet the interior noise standard of 45 dBA CNEL (i.e., 62.3 dBA - 12 dBA = 50.3 dBA). Therefore, an alternative form of ventilation, such as air conditioning, that would allow windows to remain closed for prolonged periods of time must be incorporated into the project to meet the interior noise level standard of 45 dBA CNEL (i.e., 62.3 dBA - 24 dBA = 38.3 dBA). Therefore, mitigation requiring such design features would be required in order to reduce potential impacts from combined traffic and railroad noise sources to a less than significant level. Implementation of MM NOI-3 would reduce interior noise impacts to less than significant.

Mitigation Measures

MM NOI-1 Implementation of the following multi-part mitigation measure is required to reduce the potential construction period noise impacts:

- The construction contractor shall ensure that all noise producing construction activities, including warming-up or servicing equipment and any preparation for construction, shall be limited to the hours between 7:00 a.m. and 7:00 p.m., Monday through Friday, and between 9:00 a.m. and 6:00 p.m. on Saturdays, with no noise-generating construction on Sundays or federal holidays.
- The Applicant shall construct the proposed northern and eastern sound walls prior to issuance of the project building permit.
- The construction contractor shall ensure that all internal combustion engine-driven equipment is equipped with mufflers, which are in good condition and appropriate for the equipment.
- The construction contractor shall utilize quiet models of air compressors and other stationary noise sources where such technology exists.
- The construction contractor shall locate onsite equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during construction.
- Where feasible, the project contractor shall place all stationary construction equipment so that emitted noise is directed away from the closest off-site sensitive receptors.

³ EPA 550/9-79-100, November 1978

- The construction contractor shall prohibit unnecessary idling of internal combustion engines.

MM NOI-2 A minimum 8-foot high perimeter wall shall be constructed along the project site's eastern property line between the commercial building and the project site. The perimeter wall shall have a surface density of at least 3.5 pounds per square foot, and have no openings or gaps. It may be constructed of wood studs with stucco exterior, 3/8-inch plate glass, 5/8-inch Plexiglas, any masonry material, or a combination of these materials.

MM NOI-3 Prior to issuance of building permits, the developer shall show evidence, and the Development Services Director shall approve, an alternative form of ventilation, such as air conditioning systems or noise-attenuated passive ventilation, shall be included in the building design to ensure that windows can remain closed for prolonged periods of time in order to meet the interior noise standard of 45 dBA CNEL established by the City and the Uniform Building Code Requirements. In addition, prior to issuance of building permits, the developer shall show evidence, and the Development Services Director shall approve, that all project residential unit wall assemblies (windows, doors, and wall combinations) have been designed and will be constructed to have a minimum STC-34 exterior to interior noise reduction.

b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

Less than Significant with Mitigation Incorporated. No permanent noise sources that would expose persons to excessive ground borne vibration or noise levels would be located within the project site.

The closest off-site structures to the proposed residential units are the mobile home structures bordering the projects northern property line. During development of the project, heavy construction equipment such as graders, loaders, backhoes, and bulldozers may be used as close as 25 feet from these closest off-site sensitive receptors. As shown in Table 14, the construction equipment that would be used during construction would generate vibration levels between 0.001 and 0.101 PPV as measured at a distance of 25 feet from the operating machinery. When the heaviest construction equipment operates at the proposed building construction limits, the nearest off-site residential structures may be exposed to ground-borne vibration levels ranging up to 0.101 PPV. These ground borne vibration levels are well below the FTA construction vibration damage impact criteria of 0.2 PPV for buildings of non-engineered timber or masonry construction; and are even below the FTA construction vibration damage impact criteria of 0.12 PPV for buildings considered extremely susceptible to vibration damage. Furthermore, implementation of Mitigation Measure NOISE-1, which includes required compliance with the City's Municipal Code ordinances establishing permissible hours of noise-producing construction activity, would ensure that ground borne vibration levels from the operation of construction equipment would also not result in nighttime sleep disturbance of adjacent noise sensitive receptors. Therefore, implementation of the

project would not expose persons within or around the project site to excessive ground borne vibration or noise.

Table 14: Vibration Levels of Construction Equipment

Construction Equipment	PPV at 25 Feet (inches/second)	RMS Velocity in Decibels (VdB) at 25 Feet
Water Trucks	0.001	57
Scraper	0.002	58
Bulldozer-small	0.003	58
Jackhammer	0.035	79
Concrete Mixer	0.046	81
Concrete Pump	0.046	81
Paver	0.046	81
Pickup Truck	0.046	81
Auger Drill Rig	0.051	82
Backhoe	0.051	82
Crane (Mobile)	0.051	82
Excavator	0.051	82
Grader	0.051	82
Loader	0.051	82
Loaded Trucks	0.076	86
Bulldozer-Large	0.089	87
Caisson drilling	0.089	87
Vibratory Roller (small)	0.101	88
Compactor	0.138	90
Clam shovel drop	0.202	94
Vibratory Roller (large)	0.210	94
Pile Driver (impact-typical)	0.644	104
Pile Driver (impact-upper range)	1.518	112

Note: Equipment in **bold** are expected to be operated onsite during project construction.
Source: Compilation of scientific and academic literature, generated by FTA and FHWA.

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

Less Than Significant Impact. The project’s potential to substantially increase ambient noise levels on area roadways is determined by the definition of the term “substantial.” “Substantial” is not

defined in the CEQA Guidelines; however, research into the human perception of sound level increases indicates the following:

- A 1-dBA, or less, increase is difficult to perceive,
- A 3-dBA increase is just perceptible,
- A 5-dBA increase is clearly perceptible, and
- A 10-dBA increase is perceived as being twice as loud.

A characteristic of noise is that a doubling of sound sources with equal strength is required to result in a perceptible increase (defined to be a 3-dBA increase) in noise level. Implementation of the project would not result in a doubling of traffic volumes along any roadway segment in the project vicinity. Therefore, project-related traffic would not result in a perceptible permanent increase in existing ambient noise levels along any roadway segment in the project vicinity and project-related traffic noise impacts on off-site sensitive land uses would be less-than-significant.

Additionally, the project would not include any stationary noise sources that would result in permanent increases in ambient noise levels in the project vicinity above levels existing without the project. Periodic noise increases associated with construction of the project are discussed in Section 12.a. and 12.d.

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

Less than Significant with Mitigation Incorporated. As discussed in Section 12.a, project-related construction activities could result in high intermittent noise levels of up to 97 dBA L_{max} at the closest noise sensitive land uses. This noise would result from the temporary use of heavy construction equipment. Temporary construction noise is exempted from the City's daytime noise performance standards provided that such construction has been properly permitted through the appropriate City departments, and provided that such noise producing construction activities only occur between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday, and between 9:00 a.m. and 6:00 p.m. on Saturdays, excluding federal holidays. In addition, implementation of Mitigation Measure Noise-1, including best management practice noise reducing measures, as well as prioritizing construction of the proposed sound walls, would ensure that construction noise impacts are reduced to less than significant.

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 4.1 miles southwest of John Wayne Airport (the nearest airport). While aircraft noise is occasionally audible on the project site, due to the distance from area airports and the orientation of runways and flight patterns the project site does not lay within the 55-dBA CNEL noise contours of any airport. Therefore, the impact of noise levels from aviation sources would be less than significant.

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

No Impact. The project site is not located in the vicinity of a private airstrip. Therefore, implementation of the project would not expose people to excessive noise levels, and no impact would occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.13 Population and Housing <i>Would the project:</i>				
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

Would the project:

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

Less than significant impact. A project could induce population growth in an area, either directly (for example, by proposing new homes and/or business) or indirectly (for example, through extension of roads and/or other infrastructure). The project involves construction of an 89-unit, residential and live/work development in place of the existing industrial buildings and single-family residence on site.

As of May 2013, the City’s average household size was 2.7 according to the Costa Mesa General Plan. 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 residential and live/work development. Therefore, it is likely that the proposed live/work units would have a smaller household size than traditional units.

Notwithstanding, in order to provide a conservative analysis, based on average household size of 2.79, project implementation could result in a population increase of approximately 248 persons. The potential population growth would be nominal, representing less than one-tenth of one percent (less than 0.1%) increase over the City’s existing 2013 population of 111,358 persons. Therefore, project implementation would not induce substantial population growth within the City.

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

Less than significant impact. The project site currently contains several industrial buildings and one single-family residence. The project is an 89-unit residential and live/work development and has a General Plan designation of Light Industry. Displacement of the one single-family residence located within the project boundaries would not affect the housing needs of Costa Mesa. Therefore, the project would not displace substantial numbers of existing housing. Impacts would be less than significant.

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

Less than significant impact. As discussed, the project implementation would include the demolition of two light industrial buildings and one single-family residence, as well as the construction of a new residential and live/work development. Displacing one single-family residence would not result in the displacement of a substantial number of people. Impacts would be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.14 Public Services <i>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:</i>				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

Would the project:

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:

a) 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. The closest station to the project is the Park Station, located at 1865 Park Avenue, approximately 1.7 miles from the project site. 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 an 89-unit, residential and live/work development in place of industrial buildings and

a single-family residence that exist on the property. Therefore, project implementation would result in a net increase of 88 dwelling units, of which, 40 units would include commercial space, with a resulting increase in the demand for fire protection services. However, 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 the requirements set forth in the 2013 California Fire Code (and all amendments), including the provision of fire sprinkler systems throughout buildings, as noted in CMMC Title 7, Fire Protection and Prevention. The development would also be subject to compliance with the fire provisions specified in the 2013 California Building Code and all incorporated amendments, and the 2013 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.

The project would also be subject to compliance with CMMC Title 13 Chapter XII Article 2, *Fire Protection Systems*, which sets forth the parameters for assessing the Fire Protection System Development Impact Fee. The purpose of these fees is to minimize, to the greatest extent practicable, the impact that new development has on the City's public services and public facilities. The project Applicant would be required to pay their fair share of the costs of providing fire protection services and facilities.

Compliance with the City's discretionary review process and CMMC requirements, which include payment of the Fire Protection System Development Impact Fee, would ensure that project implementation would result in a less than significant impact to fire protection services.

Standard Conditions

SC 4.14-1 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. The Applicant shall then pay the appropriate fee in effect to mitigate the project's proportionate impact to additional demands on fire protection services, if any.

SC 4.14-2 Projections, including eaves, shall be one-hour fire resistive construction, heavy timber or of noncombustible material if they project into the 5 ft (setback area from the property line). They may project a maximum of 12 inches beyond the 3 ft setback. CRC Tables R302.1(1) and R302.1(2).

b) 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 four divisions: Administration; Technical Services; Field Operations; and Support Services. 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. The City's existing police protection service ratio is 1.17 officers for every 1,000 people, based on the City's existing 2013 population of 111,358 persons.

The project does not propose new or physically altered police protection facilities. The project involves construction of an 89-unit, attached residential and live/work development in place of industrial buildings and a single-family residence that exist on the property. As discussed in Response 4.13.a, project implementation would result in a net increase of 88 dwelling units that include approximately 248,292 net sq ft of commercial space, with a resultant increase in the demand for police protection services. However, 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. In addition, 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 fire protection services.

Standard Condition

SC 4.14-3 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 (e.g. minimize use of hedges, use of low height shrubs for greater visibility).
- Emergency vehicle parking areas shall be designated within proximity to buildings.
- Prior to the issuance of a Building Permit, the City of Costa Mesa Police Department shall review and approve the developer's project design features to satisfy local requirements. The applicant shall then pay the appropriate fee in effect to mitigate the project's proportionate impact to additional demands on police protection services, if any.

c) 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 located in the Newport Heights Elementary

School, Ensign Middle School, and Newport Harbor High School service areas, with school enrollments of approximately 650 students, 1,230 students, and 2,450 students, respectively. In addition to the schools currently serving the project area, a new school is proposed in the vacant/storage lot adjacent to the project site. The proposed school is currently under environmental review.

The student generation rates provided by the Newport-Mesa Unified School District do not take into account the target market of the new residents of the proposed residential and live/work development. 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 project 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 analysis is provided for environmental purposes.

The project does not propose new or physically altered school facilities. The project involves construction of an 89-unit, attached residential and live/work development in place of the industrial buildings and a single-family residence that exist on the property. Project implementation would result in a net increase of 88 dwelling units, with a corresponding increase in the demand for school facilities. Based on a student generation factor of 0.26 students per dwelling unit, project implementation could generate a total of 23.14 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. Thus, less than significant impacts to school facilities would occur.

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. The project Applicant would be subject to payment of this development fee pursuant to Standard Condition SC 4.14-4, 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 4.14-4 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.

d) 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. The City's standard for permanent public open space is 5.76 acres per 1,000 residents.

The project does not propose new or physically altered park facilities. The project involves construction of an 89-unit, attached residential and live/work development in place of light industrial uses and a single-family residence that exist on the property. Project implementation would result in a net increase of 88 dwelling units, with a resultant population increase of approximately 240 persons. Based on a parkland demand factor of 5.76 acres per 1,000 residents, project implementation would generate a demand for approximately 1.42 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, on a dwelling unit basis. 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 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 single-family dwelling unit is \$13,572. As permitted by CMMC Section 13-256 and in compliance with Standard Condition 4.14-5, the Applicant would pay this Parkland Impact Fee in lieu of dedication of 1.42 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. The project would provide approximately 27,904 sq ft of open space/landscaping. The provision of onsite open space would further minimize potential impact to recreational facilities.

Standard Condition

SC 4.14-5 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 \$13,572 per new single-family dwelling unit.

e) Other public facilities?

Less than significant impact. There are 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 1.7 miles northeast, at 1855 Park Avenue, Costa Mesa.

The project does not propose new or physically altered library facilities. Project implementation would result in a net increase of 88 dwelling units, with a resultant population increase of approximately 240 persons. Given the project's nominal growth in population (less than one tenth of one percent over existing conditions), construction of new or physically altered library facilities would not be required.

The project site is located within the boundaries of the Orange County Public Library, Costa Mesa Branch. The branch maintains generation rates of 0.2 sq ft of facility space and 1.3 volumes per capita. Based on a project population of 240, this equates to 48 sq ft of facility space and 312 volumes. According to the Orange County Public Library, within the City of Costa Mesa there is a current facility space deficit of 6,294 sq ft.

The Costa Mesa General Plan anticipates growth in the City from 113,134 residents to 128,483 residents by the Year 2025, an increase of over 15,000 residents. The project would generate approximately 240 new residents and would contribute less than two percent of the anticipated growth. The City of Costa Mesa is currently served by two public libraries and a technology library.

The 2000 General Plan EIR identified the current standard set by the Orange County Public Library system for 0.2 sq ft per capita of library space. While the library facilities in the City currently do not meet this standard under the existing condition, there are also no current plans to expand the existing facilities. According to the 2000 General Plan EIR, the establishment of a new branch within the City has been approved; the new library branch would be located in approximately 1,500 sq ft of rented space (City of Costa Mesa 2002). Since the writing of the 2000 General Plan EIR, 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. According to the April 2005 City Council approval, 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 significantly reduced. Furthermore, the 2000 General Plan EIR analyzed impacts assuming the future establishment of only 1,500 square feet of library space and determined that impacts to library services would be less than significant. For these reasons, project impacts on library services are considered less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.15 Recreation				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

- 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.

The project does not propose new or physically altered park facilities. The project involves construction of an 89-unit, attached residential and live/work development in place of the industrial buildings and single-family residence that exists on the property. Project implementation would result in a net increase of 88 dwelling units, with a resultant population increase of approximately 240 persons. Based on a parkland demand factor of 5.76 acres per 1,000 residents, project implementation would generate a demand for approximately 1.42 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, on a dwelling unit basis. 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 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 single-family dwelling unit is \$13,572. As permitted by CMMC Section 13-256 and in compliance with Standard Condition 4.14-5, 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 would provide approximately 27,904 sq ft of open space/landscaping. The provision of onsite open space would further minimize potential impacts to recreational facilities.

Standard Condition

Refer to Standard Condition 4.14-5 above.

Mitigation Measure

No mitigation is required.

- 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.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.16 Transportation/Traffic <i>Would the project:</i>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This section is based on the Traffic Impact Analysis Report prepared by Linscott Law and Greenspan (LL&G, 2014), which is included as Appendix F, Transportation and Traffic Data. The Traffic Impact Analysis Report evaluates the trip generation for the project and determines the effect of the project trips on the level of service (LOS) for 11 study area intersections.

Existing Conditions

The project site is currently developed, with four industrial buildings totaling approximately 66,119 square feet, and includes an associated parking lot. One existing single-family residence is also

located onsite. Existing AM peak-hour and PM peak-hour traffic volumes for six (6) of the eleven (11) key study intersections located in the City of Costa Mesa were obtained from the manual turning movement counts conducted by National Data and Surveying Services in June 2014. Existing AM peak-hour and PM peak-hour traffic volumes for the remaining five (5) key study intersections located in the City of Newport Beach were obtained directly from City Staff. Existing traffic counts are included in the traffic report.

Environmental Evaluation

Would the project:

- 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. Table 15, Land Use and Trip Generation Summary, summarizes the trip generation for the existing site and the project. The trip generation potential of the project was estimated using the average rates for ITE Land Use 210: Single-Family Detached Housing and ITE Land Use 710: General Office Building published in the Trip Generation, 9th Edition, Institute of Transportation Engineers. For the existing site, daily counts were conducted at the existing driveways on June 17, 2014, to derive existing daily, AM, and PM peak-hour trip estimates.

Table 15, below, depicts the trip generation rates used to forecast existing and proposed trips, summarizes the project’s daily, AM peak hour, and PM peak-hour trip generation potential, and compares these estimates to the existing trip generation “budget.”

The project would generate up to 981 daily trips, including up to 86 trips in the AM peak hour and up to 107 trips in the PM peak hour. Under existing conditions, the project site generates approximately 424 daily trips, including 28 trips in the AM peak hour and 46 trips in the PM peak hour. Overall, the project would generate up to 557 additional daily trips, including an additional 58 AM peak-hour trips and an additional 61 PM peak-hour trips, than currently occur under existing conditions.

Table 15: Land Use and Trip Generation Summary

Generation Rates Category	Daily 2-Way	AM Peak Hour	PM Peak Hour
		Total	Total
Single-Family Detached Housing (TE/DU)	9.52	0.75	1.00
General Office Building (TE/TSF)	11.03	1.56	1.49
Project			
Detached Residential Units (49 DU)	466	37	49

Table 15 (cont.): Land Use and Trip Generation Summary

Generation Rates Category	Daily 2-Way	AM Peak Hour	PM Peak Hour
		Total	Total
Detached Live/Work Units (40 DU)	381	30	40
Office Portion of Live/Work Units (13,501 square feet)	149	21	20
10% Mixed-Use Trip Reduction Applied to Office:	-15	-2	-2
Subtotal	981	86	107
Existing Occupied Floor Area			
Existing Site	-424	-28	-46
Total "Net Occupied" Project Trip Generation: Project Minus Existing Occupied Office Floor Area	557	58	61
Notes: TE/DU= trip end per dwelling unit, TE/TSF= trip end per 1,000 square feet Source: LL&G 2014.			

Based on the City of Costa Mesa and Newport Beach guidelines, level of service (LOS) D is the minimum acceptable level of service that should be maintained during the weekday AM peak hour and weekday PM peak hour. Under these criteria, a project is considered to have a significant impact if the following conditions at signalized intersection are met:

The intersection capacity utilization (ICU) value under with projects conditions is 0.91 or greater (LOS E or F), and

The ICU increase attributable to the project is 0.01 or greater.

Volume/capacity calculations were performed at eleven (11) key intersections for existing plus project and near-term (Year 2016) traffic conditions. Existing AM peak-hour and PM peak-hour traffic volumes for the six (6) key study intersections located in the City of Costa Mesa were obtained from manual turning movement counts conducted by National Data and Surveying Services in June 2014. Existing AM peak-hour and PM peak-hour traffic volumes for the five (5) key study intersections located in the City of Newport Beach were obtained directly from City Staff.

Existing Plus Project Traffic Conditions

As shown in Table 16, below, project-related traffic will not significantly impact any of the 11 key study intersections. Although the intersection of Placentia Avenue/Superior Avenue would operate at LOS E during the PM peak hour with the addition of project traffic, the project would add less than 0.010 to the ICU value. The remaining 10 key study intersections would continue to operate at an acceptable LOS during the AM and PM peak hours with project implementation.

Table 16: Existing Plus Project Peak Hour Intersection Capacity Analysis

Key Intersection	Time Period	Existing Traffic Conditions		Existing Plus Project Traffic Conditions		Significant Impact	
		ICU/ HCM (s/v)	LOS	ICU/ HCM (s/v)	LOS	Increase (s/v)	Yes/No
1. Whittier Avenue at 17th Street	AM	7.5	A	7.5	A	0.0	No
	PM	7.5	A	7.6	A	0.1	No
2. Monrovia Avenue at 17th Street	AM	8.9	A	9.0	A	0.1	No
	PM	9.1	A	9.2	A	0.1	No
3. Placentia Avenue at 17th Street	AM	0.389	A	0.395	A	0.006	No
	PM	0.534	A	0.543	A	0.009	No
4. Monrovia Avenue at Newhall Street	AM	9.7	A	9.7	A	0.0	No
	PM	10.6	B	10.6	B	0.0	No
5. Monrovia Avenue at 16th Street	AM	8.0	A	8.1	A	0.1	No
	PM	8.0	A	8.2	A	0.2	No
6. Placentia Ave at 16th Street	AM	0.289	A	0.305	A	0.016	No
	PM	0.335	A	0.350	A	0.015	No
7. Placentia Ave at Superior Avenue	AM	0.861	D	0.861	D	0.000	No
	PM	0.909	E	0.909	E	0.000	No
8. Superior Avenue/Balboa Boulevard Coast Highway	AM	0.573	A	0.574	A	0.001	No
	PM	0.675	B	0.675	B	0.000	No
9. Newport Boulevard at Hospital Road	AM	0.650	B	0.650	B	0.000	No
	PM	0.686	B	0.689	B	0.003	No
10. Newport Boulevard SB Ramp at Coast Highway	AM	0.864	D	0.865	D	0.001	No
	PM	0.652	B	0.653	B	0.001	No
11. Riverside Avenue at Coast Highway	AM	0.763	C	0.766	C	0.003	No
	PM	0.784	C	0.786	C	0.002	No

Notes:
 Bold ICU/LOS or HCM/LOS values indicate adverse service levels based on the City's LOS standards.
 s/v = seconds per vehicle
 Source: LL&G 2014.

Year 2016 Cumulative Plus Project Traffic Conditions

As shown in Table 17, below, project-related traffic will not significantly impact any of the 11 key study intersections. Although the intersection of Placentia Avenue/Superior Avenue and Newport Boulevard SB Ramps/Coast Highway would operate at LOS E during the AM and/or PM peak hours with the addition of project traffic, the project would add less than 0.010 to the ICU value. The remaining nine key study intersections would continue to operate at an acceptable LOS during the AM and PM peak hours in the Year 2016, with project implementation.

Table 17: Year 2016 Cumulative Peak Hour Intersection Capacity Analysis

Key Intersection	Existing Traffic Conditions				Year 2016 Cumulative Traffic Conditions				Year 2016 Cumulative Plus Project Traffic Conditions				Significant Impact		
	AM		PM		AM		PM		AM		PM		Increase (s/v) AM	Increase (s/v) PM	Yes/No
	ICU/ HCM (s/v)	LOS	ICU/ HCM (s/v)	LOS	ICU/ HCM (s/v)	LOS	ICU/ HCM (s/v)	LOS	ICU/ HCM (s/v)	LOS	ICU/ HCM (s/v)	LOS			
1. Whittier Avenue at 17th Street	7.5	A	7.5	A	7.5	A	7.5	A	7.5	A	7.6	A	0.0	0.1	No
2. Monrovia Avenue at 17th Street	8.9	A	9.1	A	9.0	A	9.2	A	9.1	A	9.4	A	0.1	0.2	No
3. Placentia Avenue at 17th Street	0.389	A	0.534	A	0.405	A	0.567	A	0.411	A	0.576	A	0.006	0.009	No
4. Monrovia Avenue at Newhall Street	9.7	A	10.6	B	9.8	A	10.6	B	9.8	A	10.7	B	0.0	0.1	No
5. Monrovia Avenue at 16th Street	8.0	A	8.0	A	8.0	A	8.1	A	8.1	A	8.2	A	0.1	.01	No
6. Placentia Ave at 16th Street	0.289	A	0.335	A	0.310	A	0.363	A	0.327	A	0.378	A	0.017	0.015	No
7. Placentia Ave at Superior Avenue	0.861	D	0.909	E	0.934	E	0.971	E	0.934	E	0.971	E	0.0	0.0	No
8. Superior Avenue/Balboa Boulevard Coast Highway	0.573	A	0.675	B	0.629	B	0.757	C	0.630	B	0.757	C	0.001	0.0	No
9. Newport Boulevard at Hospital Road	0.650	B	0.686	B	0.703	C	0.755	C	0.705	C	0.757	C	0.002	0.002	No
10. Newport Boulevard SB Ramp at Coast Highway	0.864	D	0.652	B	0.956	E	0.740	C	0.956	E	0.740	C	0.0	0.0	No
11. Riverside Avenue at Coast Highway	0.763	C	0.784	C	0.841	D	0.848	D	0.843	D	0.850	D	0.002	0.002	No

Notes:
 Bold ICU/LOS or HCM/LOS values indicate adverse service levels based on the City's LOS standards.
 s/v = seconds per vehicle
 Source: LL&G 2014.

The project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. The project would result in less than significant impacts on traffic/circulation and the surrounding roadway network. The project would be subject to compliance with Standard Condition SC 4.16-1, which requires payment of traffic impact fees. No mitigation is required. Please refer to Response 4.16.f for a discussion of pedestrian and bicycle paths and mass transit.

Standard Condition

SC 4.16-1 The project Applicant shall be responsible for the payment of fees in accordance with Costa Mesa's traffic impact fee program to mitigate project-generated traffic impacts (including regional traffic).

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, consistent with that of the Southern California Association of Governments (SCAG). The CMP requires review of substantial individual projects, which might on their own impact the CMP transportation system. Specifically, the Congestion Management Program (CMP) Traffic Impact Analysis (TIA) measures impacts of a 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 will directly access or be in close proximity to a CMP Highway System link, a reduced threshold of 1,600 trips per day is used.

As discussed above, under Response 4.16.a, the project would generate up to 557 additional daily trips, including an additional 58 AM peak-hour trips and an additional 61 PM peak-hour trips, than currently occur under existing conditions. The project would generate a total of 981 daily trips, and thus would not meet the criteria for a CMP TIA. Project-related impacts on applicable CMPs and other established standards are considered less than significant.

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 an 89-unit residential and live/work development. Due to the nature and scope of the proposed developed, project implementation would not result in a change in air traffic patterns.

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 will be provided via one full access driveway along 16th Street and a second driveway with direct access to the southern terminus of Whittier

Avenue. The internal driveways that would provide access to the proposed units would be 26 feet wide. Emergency access to the proposed units would be provided via the same entry points on Whittier Avenue and 16th Street, as well as via internal drives. The project does not propose or require improvements to roadways or intersections, thus, the project would not substantially increase hazards due to a design feature.

The future businesses in the live/work units would be reviewed under the City's discretionary review process, upon their request for a permit to operate. The City's review would verify compliance with the Mesa West Bluffs Urban Plan standards pertaining to land use compatibility. The Mesa West Bluffs Urban Plan, Table C, provides the allowable uses for mixed-use development projects, in order to minimize the exposure to residents to incompatible land uses. The project would be consistent with these allowable uses; therefore, the project would not substantially increase hazards due to incompatible uses.

e) Result in inadequate emergency access?

Less than significant impact. Refer to Responses 4.8.g. and 4.16.a.

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. The project site is served by the Orange County Transportation Authority (OCTA), a multi-modal transportation agency serving Orange County. OCTA provides countywide bus and paratransit service and Metrolink rail service, among other services. The nearest bus lines to the project site are located along Placentia Avenue, near the intersection of Placentia and West 16th Street, just east of the project site.

Based on CMP guidelines, person transit trips are typically estimated using a 1.4 percent factor to convert total vehicle trips to person trips, and a 3.5 percent factor to convert person trips to total transit trips. As discussed above, under Response 4.16.a, the project would generate up to 981 daily trips (which represents an additional 557 trips than currently occur under existing conditions). Based on the CMP guidelines and given the proximity of the various land uses in relation to available transit routes in the project vicinity, the project would generate up to 49 transit trips (Orange County CMP, 2013). Since these project-related transit trips can be accommodated by the existing transit services in the project vicinity, project-related CMP transit impacts would be less than significant. Project implementation would not conflict with adopted policies, plans, or programs regarding public transit.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.17 Utilities and Service Systems <i>Would the project:</i>				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

Would the project:

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

Less than significant impact. The Regional Water Quality Control Board, Santa Ana Region, issued a National Pollutant Discharge Elimination System (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 project, project implementation would not cause an exceedance of 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?**

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 involves construction of an 89-unit, residential and live/work development in place of the industrial buildings and a single-family residence that exist on the property. Project implementation would result in a net increase of 88 dwelling units that include approximately 13,090 sq ft of commercial space, with a resultant population increase of approximately 240 persons. Project implementation would generate a demand for approximately 45,816 gallons per day⁴. The increase in water demand would place an incremental increase in the demand for water supplies and treatment facilities. The increase is not considered substantial, since the project is consistent with the site's General Plan land use designation and City 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.

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,

⁴ Based on water use factors of 178.9 gallons per capita per day for residential uses and 0.22 gallons per day per square foot of commercial uses.

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. 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 increase in wastewater generation would place an incremental increase in the demand for wastewater conveyance and treatment facilities. 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 project. Service to the project would be conditioned upon approval of sewer infrastructure construction plans by the Sanitary District's Engineers, processing of 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.

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 City 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/her 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.

- 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.

- 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

SB 610 requires a detailed report regarding water availability and planning for additional water supplies to be included with the environmental document for specified projects. Under SB 610, water supply assessments are required to be included in environmental documentation for certain projects, as defined in Water Code 10912[a], subject to CEQA. Under SB 221, approval by a city or county of certain residential subdivisions requires a written verification of sufficient water supply. Thus, no future action is necessary under the provisions of SB 221 and 610. All projects that meet any of the following criteria require the water availability assessment:

- 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 sq ft of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 sq ft of floor space;
- A proposed hotel and motel having more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or an industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 sq ft of floor area;
- A mixed-use project that includes one or more of the projects specified in this subdivision; 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

While SB 610 primarily affects the Water Code, SB 221 principally applies to the Subdivision Map Act. The primary effect of SB 221 is to condition every tentative map for an applicable subdivision on the applicant by verifying that the public water supplier (PWS) has sufficient water supply available to serve it. Under SB 221, approval by a city or county of certain residential subdivisions requires a written verification of sufficient water supply. SB 221 applies to any subdivision, defined as:

- A proposed residential development of more than 500 dwelling units (if the PWS has more than 5,000 service connections); or
- Any proposed development that increases connections by 10 percent or more (if the PWS has fewer than 5,000 connections).

The project does not satisfy the criteria outlined above, thus, preparation of a Water Supply Assessment, in order 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.

- 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.

- 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:

- Frank R. Bowerman Sanitary Landfill
- Olinda Alpha Sanitary Landfill
- Prima Deschecha Sanitary Landfill

In total, 110,886.46 tons of solid waste was generated by the City of Costa Mesa in 2012.

Project implementation would result in a net increase of 88 dwelling units that include approximately 13,090 sq ft of commercial space, with a resultant population increase of approximately 240 persons. Demolition and construction activities associated with the project would generate construction debris. The live/work development's operational activities would also increase the volume of solid waste generated over existing conditions. Based on generation rates of 5 pounds per 1,000 sq ft of commercial space per day and 4 pounds per dwelling unit per day, it is estimated that the project would generate approximately 77 tons of solid waste per year. The increased solid waste generation would contribute to incrementally shortening the lifespan of the landfills identified above. However, given 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 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.

Standard Conditions

- SC 4.17-5** Unless an offsite 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.

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 Cal Recycle.

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.

The Applicant is currently working with the Costa Mesa Sanitary District to establish service for the project and will be required to integrate District requirements into the project design (e.g. established locations for trash carts and bulky pickup, sufficient clearance and appropriate routing for trucks).

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.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.18 Mandatory Findings of Significance				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

Would the project:

- 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 residential and 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 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 has already been subject to extensive disruption. Given the highly disturbed condition of the site, the potential for project implementation to impact a yet unidentified archeological resource is considered remote. Therefore, project implementation would not eliminate important examples of the major periods of California 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)?**

Less than significant impact with mitigation incorporated. The project would result in several potentially significant project-level impacts in the following areas: Air Quality, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, and Noise. However, mitigation measures have been identified that would reduce each of these impacts to less than significant. Standard conditions will also be imposed upon the project, including the payment of fair-share development impact fees, design standards, etc. Other new development projects within the City would also be subject to these requirements.

All other impacts of the project were determined either to have no impact, or to be less than significant without the need for mitigation. Cumulatively, the project would not result in any significant impacts that would substantially combine with impacts of other current or probable future impacts. Therefore, the project, in conjunction with other future development projects, would not result in any cumulatively considerable impacts.

- c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?**

Less than significant impact 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.

SECTION 5: INVENTORY OF STANDARD CONDITIONS AND MITIGATION MEASURES

5.1 - Standard Conditions

5.1.1 - 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-foot candle 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.

5.1.2 - 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-4.3-1 Prohibits permanently installed wood burning devices into any new development. A wood burning device means any fireplace, wood burning heater, or pellet-fueled wood heater, or any similarly enclosed, permanently installed, indoor or outdoor device burning any solid fuel for aesthetic or space-heating purposes, which has a heat input of less than one million British thermal units per hour.

SC-4.3-2 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:

- Double paned glass or window treatment for energy conservation shall be used in all exterior windows;
- Building shall be oriented north/south where feasible.

SC 4.3-3 The Applicant shall contact the Air Quality Management District (AQMD) at (800) 288-7664 for potential additional conditions of development or for additional permits required by the AQMD.

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.

5.1.3 - Biological Resources

SC 4.5-1 The Applicant shall comply with the requirements of the California Department of Food and Agriculture (CDFA) to determine if red imported fire ants exist on the property prior to any soil movement or excavation. Call CDFA at (714) 708-1910 for information.

5.1.4 - Cultural Resources

SC 4.5-1 In the event that archaeological resources 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 paleontological resources impact mitigation plan (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.

5.1.5 - Geology and Soils

SC 4.6-1 The Applicant shall comply with the requirements of the 2013 California Building Code, 2013 California Residential code, 2013 California Electrical code, 2013 California Mechanical code, 2013 California Plumbing code, 2013 California Green Building Standards Code, 2013 California Energy Code (or the applicable adopted, California Building code, California Residential code, California Electrical code, California Mechanical code, California Plumbing Code, California Green Building Standards and California Energy Code at the time of plan submittal or permit issuance) and California Code of Regulations also known as the California Building Standards Code, as amended by the City of Costa Mesa. Areas of alteration and

additions shall comply with 2013 California Green Building Standards Code section 5.303.2 and 5.303.2

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 onsite 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 Applicant shall submit a Soils Report for this project. Soils Report recommendations shall be blueprinted on both the architectural and grading plans. For existing slopes or when new slopes are proposed, the Soils Report shall address how existing slopes or the new slopes will be maintained to avoid erosion or future failure.

SC 4.6-4 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, non-sediment 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 the SWPPP implementation and the BMP maintenance during and after grading. The project Applicant shall implement the SWPPP and modify the SWPPP as directed by the Construction General Permit.

5.1.6 - 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.

5.1.7 - Hydrology and Water Quality

Refer to Standard Condition 4.6-4 above.

SC 4.9-1 In order to comply with the 2003 DAMP, the proposed 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 and 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.

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

SC 4.9-3 The Applicant shall submit grading plans, an erosion control plan, and a hydrology study.

SC 4.9-4 On graded sites, the top of exterior foundation shall extend above the elevation of the street gutter at point of discharge or the inlet of an approved discharge device a minimum of 12 inches plus 2 percent. 2010 California Building Code CRC 403.1.7.3. Lot shall be graded to drain surface water away from foundation walls. The grade shall fall a minimum of 6 inches within the first 10 feet. CRC R401.3.

5.1.8 - Land Use and Planning

Refer to Standard Condition SC 4.1-2 above.

5.1.9 - Public Services

- SC 4.14-1** 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. The Applicant shall then pay the appropriate fee in effect to mitigate the project's proportionate impact to additional demands on fire protection services, if any.
- SC 4.14-2** Projections, including eaves, shall be one-hour fire resistive construction, heavy timber or of noncombustible material if they project into the 5 ft. (setback area from the property line. They may project a maximum of 12 inches beyond the 3 ft. setback. CRC Tables R302.1 (1) and R302.1 (2).
- SC 4.14-3** 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 that 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.
 - Prior to the issuance of a Building Permit, the City of Costa Mesa Police Department shall review and approve the developer's project design features to satisfy local requirements. The applicant shall then pay the appropriate fee in effect to mitigate the project's proportionate impact to additional demands on police protection services, if any.
- SC 4.14-4** 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.
- SC 4.14-5** 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 \$13,572 per new multi-family dwelling unit.

5.1.10 - Transportation/Traffic

- SC 4.16-1** The project Applicant shall be responsible for the payment of fees in accordance with Costa Mesa's traffic impact fee program to mitigate project-generated traffic impacts (including regional traffic).

5.1.11 - Utilities and Service Systems

- 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.
- SC 4.17-5** Unless an offsite 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.

5.2 - Mitigation Measures

5.2.1 - Air Quality

- MM AQ-1** All rubber tired dozers and graders used during the grading phase of construction shall be powered by Tier 3 engines.

5.2.2 - Hazards and Hazardous Materials

- MM HAZ-1** Prior to demolition activities, removal and/or abatement of asbestos containing building materials, lead based paints, and hazardous materials associated with the existing building materials shall be conducted by a qualified environmental professional in consultation with the Costa Mesa Fire Department. An asbestos and hazardous materials abatement specification shall be developed by the qualified environmental professional, in order to clearly define the scope and objective of the abatement activities.

MM HAZ-2 Prior to the issuance of a grading permit, the project applicant shall provide documentation to the City of Costa Mesa Planning Division indicating DTSC approval of a plan containing all corrective measures required for the project.

Prior to the issuance of an occupancy permit, the applicant shall implement all feasible corrective measures and establish any on-going measures required (i.e. monitoring).

5.2.3 - Hydrology and Water Quality

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

- Prepared 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 by City of Costa Mesa requirements and in accordance with the Orange County Local Drainage Manual including a minimum spacing between manholes of 300 feet.

5.2.4 - Noise

MM NOI-1 Implementation of the following multi-part mitigation measure is required to reduce the potential construction period noise impacts:

- The construction contractor shall ensure that all noise producing construction activities, including warming-up or servicing equipment and any preparation for construction, shall be limited to the hours between 7:00 a.m. and 7:00 p.m. Monday through Friday, and between 9:00 a.m. and 6:00 p.m. on Saturdays, with no noise-generating construction on Sundays or federal holidays.
- The applicant shall construct the proposed northern and eastern soundwalls prior to issuance of the project-building permit.
- The construction contractor shall ensure that all internal combustion engine-driven equipment is equipped with mufflers, which are in good condition and appropriate for the equipment.
- The construction contractor shall utilize quiet models of air compressors and other stationary noise sources where such technology exists.
- The construction contractor shall locate onsite equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during construction.
- Where feasible, the project contractor shall place all stationary construction equipment so that emitted noise is directed away from the closest off-site sensitive receptors.
- The construction contractor shall prohibit unnecessary idling of internal combustion engines.

- MM NOI-2** A minimum 6-foot high perimeter wall shall be constructed along the project site's eastern property line between the commercial building and the project site. The perimeter wall shall have a surface density of at least 3.5 pounds per square foot, and have no openings or gaps. It may be constructed of wood studs with stucco exterior, 3/8-inch plate glass, 5/8-inch Plexiglas, any masonry material, or a combination of these materials.
- MM NOI-3** Prior to issuance of building permits, the developer shall show evidence, and the Development Services Director shall approve, an alternative form of ventilation, such as air conditioning systems or noise-attenuated passive ventilation, shall be included in the building design to ensure that windows can remain closed for prolonged periods of time in order to meet the interior noise standard of 45 dBA CNEL established by the City and the Uniform Building Code Requirements. In addition, prior to issuance of building permits, the developer shall show evidence, and the Development Services Director shall approve, that all project residential unit wall assemblies (windows, doors, and wall combinations) have been designed and will be constructed to have a minimum STC-34 exterior to interior noise reduction.

SECTION 6: 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 Lighthouse 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.

Date: September 10, 2014

Signed: _____



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