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Vanguard University Campus Master Plan
Initial Study/Mitigated Negative Declaration
City of Costa Mesa, Orange County, California

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius (Centigrade)
°F	degrees Fahrenheit
$\mu g/m^3$	micrograms per cubic meter
ACM	asbestos-containing materials
AELUP	Airport Environs Land Use Plan
AMC	Asbestos Management Consultancy
AP	Alquist-Priolo
ARB	California Air Resources Board
BIOS	Biogeographic and Information Observation System
BMPs	Best Management Practices
BUOW	burrowing owl
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CMFD	Costa Mesa Fire Department
CMMC	Costa Mesa Municipal Code
CMP	Congestion Management Program
CMPD	Costa Mesa Police Department
CMPHS	Congestion Management Program Highway System
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CWA	Clean Water Act
EOP	Emergency Operations Plan
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
GIS	Geographic Information System
HCP	habitat conservation plan
ICU	Intersection Capacity Utilization
IPaC	Information, Planning, and Conservation System
LOS	level(s) of service
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
mph	miles per hour

MWDOC	Municipal Water District of Orange County
MWRF	Mesa Water Reliability Facility
NCCP	natural community conservation plan
NMUSD	Newport-Mesa Unified School District
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NWI	National Wetlands Inventory
O&M	Operations and Maintenance
OCTA	Orange County Transit Authority
OHWM	ordinary high water mark
PRD	Permit Registration Documents
PWS	Public water supplier
RWQCB	Regional Water Quality Control Board
SAAAB	Santa Ana Army Air Base
SFHA	Special Flood Hazard Area
SWRCB	State Water Resources Control Board
tpd	tons per day
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Survey
VOC	volatile organic compounds

SECTION 1: INTRODUCTION

1.1 - Purpose

The purpose of this Initial Study/Mitigated Negative Declaration (IS/MND) is to identify any potential environmental impacts from implementation of the Vanguard University Campus Master Plan Project in the City of Costa Mesa, California. Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15367, the City of Costa Mesa is the Lead Agency in the preparation of this IS/MND and any additional environmental documentation required for the project. The City has discretionary authority over the proposed project. The intended use of this document is to determine the level of environmental analysis required to comply with CEQA and to provide the basis for input from public agencies, organizations, and interested members of the public.

The remainder of this section provides a brief description of the project location and the characteristics of the project. Section 2 includes an environmental checklist giving an overview of the potential impacts that may result from project implementation. Section 3 elaborates on the information contained in the environmental checklist, along with justification for the responses provided in the environmental checklist.

1.2 - 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 2015-2035 General Plan (Adopted June 2016). The Costa Mesa General Plan establishes the long-range planning and policy direction that guides change and preserves the qualities that define the community. The 2035 General Plan sets forth the Vision for Costa Mesa for the next two decades. This Vision recognizes that Costa Mesa's focus remains on protecting and enhancing Costa Mesa's diverse residential neighborhoods, accommodating an array of businesses that both serve local needs and attract regional and international spending, and continuing to provide cultural, educational, social, and recreational amenities that contribute to the quality of life in the community. Over the long term, General Plan implementation will ensure that development decisions and improvements to public and private infrastructure are consistent with the goals, objectives, and policies contained in this Plan.

City of Costa Mesa 2015-2035 General Plan Environmental Impact Report. The City of Costa Mesa 2015-2035 General Plan Environmental Impact Report analyzed the potential environmental impacts that would result from implementation of the City of Costa Mesa 2035 General Plan. This

information includes General Plan EIR Table 6-1, SCAG 2008-2035 Growth Forecast, forecast population, household, and employment growth for Costa Mesa. The environmental impact analysis contained in the General Plan EIR assumes an increase in population from 109,100 in 2008 to 114,000 in 2035, a 4 percent change. Households will increase from 39,700 in 2008 to 40,900 in 2035, a 3 percent change. Furthermore, employment will decrease from 94,200 in 2008 to 88,800, a 6 percent change. The General Plan EIR concluded that impacts in the following areas would be significant and unavoidable (see General Plan EIR Section 6.5):

- Air Quality
- Greenhouse Gas Emissions

The General Plan and General Plan EIR were used in this IS/MND as a source of baseline data.

City of Costa Mesa 2013–2021 Housing Element. The State of California has declared that "the availability of housing is of vital statewide importance and the early attainment of decent housing and a suitable living environment for every California family is a priority of the highest order." In addition, government and the private sector should make an effort to provide a diversity of housing opportunities and accommodate regional housing needs through a cooperative effort, while maintaining a responsibility toward economic, environmental and fiscal factors and community goals within the general plan.

Further, State Housing Element law requires "An assessment of housing needs and an inventory of resources and constraints relevant to the meeting of these needs." The law requires:

- An analysis of population and employment trends.
- An analysis of the City's fair share of the regional housing needs.
- An analysis of household characteristics.
- An inventory of suitable land for residential development.
- An analysis of governmental and non-governmental constraints on the improvement, maintenance and development of housing.
- An analysis of special housing needs.
- An analysis of opportunities for energy conservation.
- An analysis of publicly assisted housing developments that may convert to non-assisted housing developments.

The purpose of these requirements is to develop an understanding of the existing and projected housing needs within the community and to set forth policies and programs that promote preservation, improvement and development of diverse types and costs of housing throughout Costa Mesa.

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.

1.3 - Project Location

The project site is located at 55 Fair Drive, in the City of Costa Mesa, Orange County, California (Exhibit 1). More specifically, the site is located on approximately 38 acres bounded by Fair Drive, Vanguard Way, and Newport Boulevard (Exhibit 2). The site is located approximately 3.5 miles northwest of the Pacific Ocean.

Regional access to the site is provided via State Route 55 (SR-55) at the Fair Drive interchange, which is located approximately 0.60 mile northeast of the project site. Interstate 405 (I-405), which is located approximately 2.11 miles northeast of the site, and SR-73, which is located approximately 0.97 mile northeast of the site, also provide regional access. Local access to the site is provided via Fair Drive, Newport Boulevard, and Vanguard Way.

1.4 - Environmental Setting

Vanguard University currently exists on the project site. Vanguard University is zoned "Institutional & Recreation" (I&R). The total lot area of Vanguard University is 1,654,998 square feet on approximately 38 acres bounded by Fair Drive, Vanguard Way, and Newport Boulevard. According to the Vanguard University website, the current campus was moved to the project site in 1950.

In 1938, the earliest year for which aerials for the area are available, the site was undeveloped. In 1953, few structures appeared on the southern portion of the project area, three structures occupied the northern portion of the area, and Newport Boulevard was present. By 1963, Fair Drive was built and more structures occupied the southern portion of the project site. By 1980, the three structures were demolished and a large structure with its associated parking lot occupied the northwestern portion of the site. By 1995, a baseball field, softball field and soccer complex were built. Since then, the project site has resembled its current setting.

1.4.1 - Existing Surrounding Land Uses

The site is bound by Fair Drive, Civic Center Park, Pacific Amphitheatre, and residential housing units to the north. The site is bordered by the SR-55 and residential housing units across the freeway to the east. The site is bordered by residential housing units to the south. The site is bordered by Costa Mesa City Hall, Vanguard Way, and residential housing units to the west.

General Plan

According to the City of Costa Mesa General Plan Land Use Map (Exhibit 3), the site is currently designated PI (Public Institutional). The Public Institutional designation is intended for both publicly and privately owned land that provides recreation, open space, health and educational opportunities, as well as uses that provide a service to the public.

Zoning

As shown on Exhibit 4, the Official Zoning Map, the project site is currently zoned PI (Public Institutional). Under this designation the maximum building intensity for this designation is a floor area of 0.25 and a population density of 44 employees per acre.

1.5 - Project Description

According to the Vanguard University Campus Master Plan Executive Summary, the proposed Master Plan includes 12 separate projects that involve the removal and/or reconstruction of buildings on campus. The Master Plan is intended to establish and document for approval by the City of Costa Mesa, Development Areas and Development Guidelines for future buildings and related site improvements within a Master Plan framework. It is intended that the Development Areas and Development Guidelines remain fixed while allowing for the future development of buildings of various types, size and heights within these Areas, consistent with the Guidelines. The intent of the Master Plan is to enhance on campus pedestrian safety by removing internalized vehicular circulation and parking.

As shown on Exhibit 5, the following buildings are included in the Vanguard University Campus Master Plan:

- **Project A:** Gym/Events Center—This project replaces the existing gymnasium and provides adequate facilities for the Vanguard's athletics program. The center court will also transform into an events center for the campus to gather during planned events. This facility removes parking (existing Lot K) that is currently internal to the campus and a safety hazard. An outdoor space/quad will be created to the east of the facility, connecting this building to the campus core and improving pedestrian circulation.
- **Project B:** Student Center—This project removes the existing Café and Cove/Bookstore on campus, replacing them with a Student Center. The goal of this project is to build upon the collegial atmosphere of the campus while improving the facilities for campus food service, commuters, student clubs, etc. The development area for this facility includes the removal of parking lot L. The perimeter road that connects Vanguard Way to parking lot M will remain. This project will improve the campus quad and provide areas for students to gather, socialize, and study.
- **Project C:** Maintenance & Operations/Warehousing—This project relocates maintenance and operations to the southwest corner of the University. This will create a new access point to the campus for deliveries. Deliveries will enter from Vanguard Way, directly to the facility. Campus vehicles will distribute materials as needed throughout the University.

- **Project D:** Stem & Kinesiology—This project replaces antiquated Science, Technology, Engineering, Math and Kinesiology facilities on campus. The project is planned in two phases within one development area along Newport Blvd. Because of the location of the existing Smith Building, Phase 1 will ideally retain the facility, while Phase 2 will require Smith's demolition. In addition to the academic facilities, limited parking and a service road will connect the North and South parking lots along Newport Blvd. This project will remove parking lots E & F. Both lots are internal to campus and pose safety concerns.
- **Project E:** Multi-Disciplinary Academic Building—This project locates a new academic facility south of Scott Academic Center and west of Heath Academic Center. This project will replace existing modular offices and classrooms and provide growth for the campus (classrooms and offices).
- **Project F:** Learning Resource Center—This project locates a new Learning Resource Center (LRC) along the south edge of the campus core. The new LRC will replace the existing library and expand resources for all Vanguard Students.
- **Project G:** Student Housing—This project locates a Student Housing facility east of the new LRC. This facility could accommodate approximately 300 students depending on design and room size.
- **Project H:** Central Plant—This project locates a central plant on campus. Depending upon further engineering studies, the following sites within the Institutional Areas would be considered: Project A (Gym/Events Center), Project B (Student Union), Project D (STEM & Kinesiology).
- **Project I:** Athletics—This project identifies ongoing improvements to the athletic facilities.
- **Project J:** North East Parking—This project creates a new front entry for Vanguard University. Relocating the primary entry drive to the east allows direct access for vehicles to move into the parking lot and provides a formalized campus drop-off. The project also removes open space and re-organizes lots C and D.
- **Project K:** Parking Structure—This project removes lots H and G, locating a parking structure along Newport Blvd.
- **Project L:** Campus Beatification/Infrastructure—This project addresses all ongoing site improvements on campus.

Site Access

Site access would be provided by two access locations on Fair Drive, three access locations on Newport Boulevard, and one access location on Vanguard Way. Pedestrian facilities are provided via sidewalks and crosswalks in the project vicinity. There are sidewalks along Newport Boulevard South, Vanguard Way, and Fair Drive.

Architectural Features

Project implementation would introduce the construction of new buildings and remodeling of existing buildings on a college campus. Exhibit 6 illustrates the building elevations and perspectives of the proposed buildings. The buildings have been designed to blend in with the existing structures of the University for a uniform aesthetic. Decorative metal fences are proposed along the northeast and eastern edge of the project site. Numerous types of vegetation are proposed to enhance the campus and provide quality open space.

1.6 - Required Discretionary 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 the following permits/approvals from the City of Costa Mesa, including but not limited to:

- Planning Commission approval of the Initial Study/Mitigated Negative Declaration
- Planning Commission adoption of the Master Plan
- Demolition Permits for on-site structures and other improvements
- Grading and Building Permits to grade and construct the project
- Approval of a Construction Management Plan
- Design Review for the project

1.7 - Intended Uses of this Document

This IS/MND has been prepared to determine the appropriate scope and level of detail required in completing the environmental analysis for the proposed project. This document will also serve as a basis for soliciting comments and input from members of the public and public agencies regarding the proposed project. The Draft IS/MND will be circulated for a minimum of 30 days, during which period comments concerning the analysis contained in the IS/MND should be sent to:

Mel Lee, Senior Planner
City of Costa Mesa
Development Services Department
77 Fair Drive, Costa Mesa, CA 92628
Phone: 714.754.5611
Email: mel.lee@costamesaca.gov

Source: Census 2000 Data, The CaSIL, FCS GIS 2016.

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Exhibit 1
Regional Location Map

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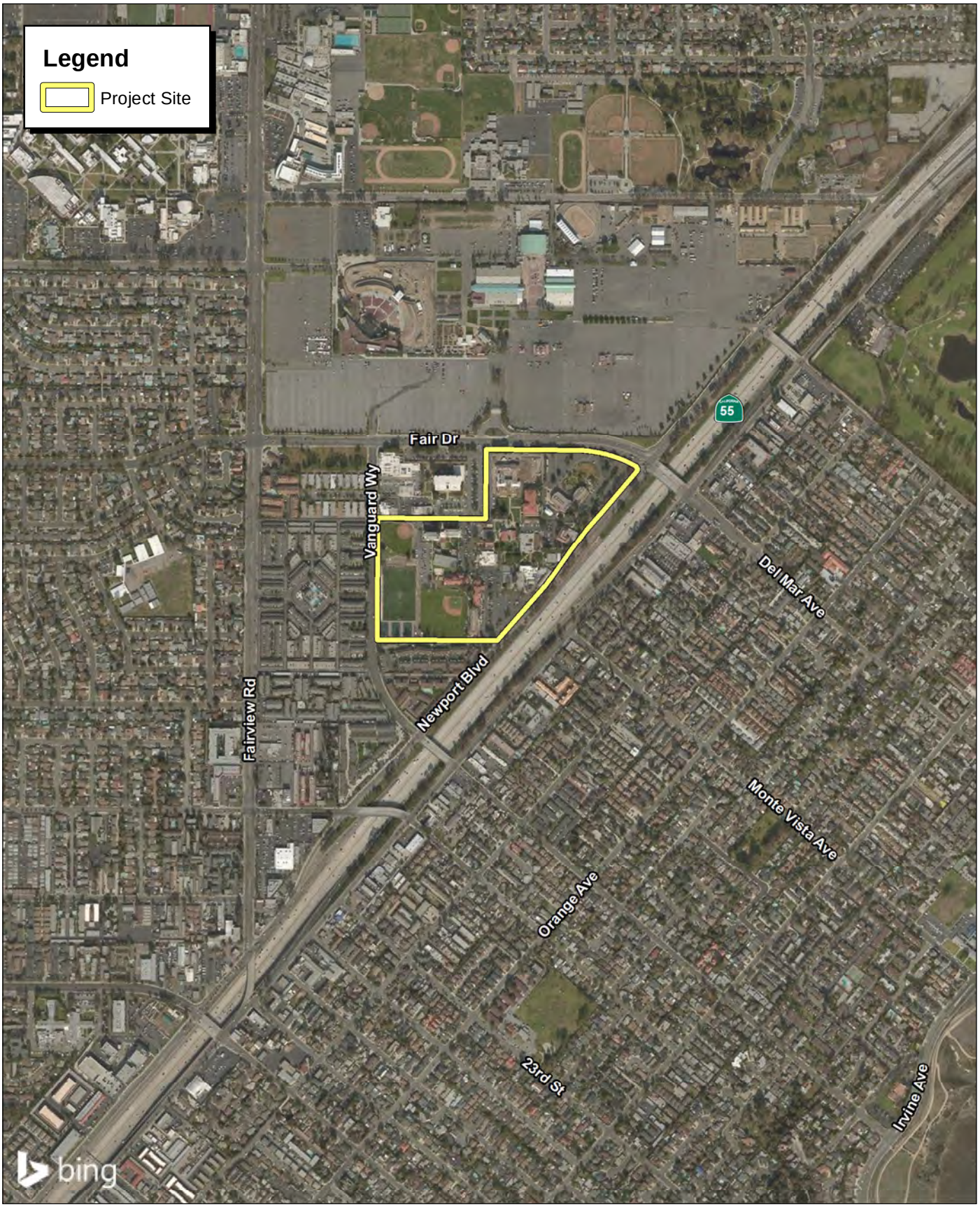

Source: Bing Imagery

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1,000 500 0 1,000 Feet

Exhibit 2
Local Vicinity Map
Aerial Base

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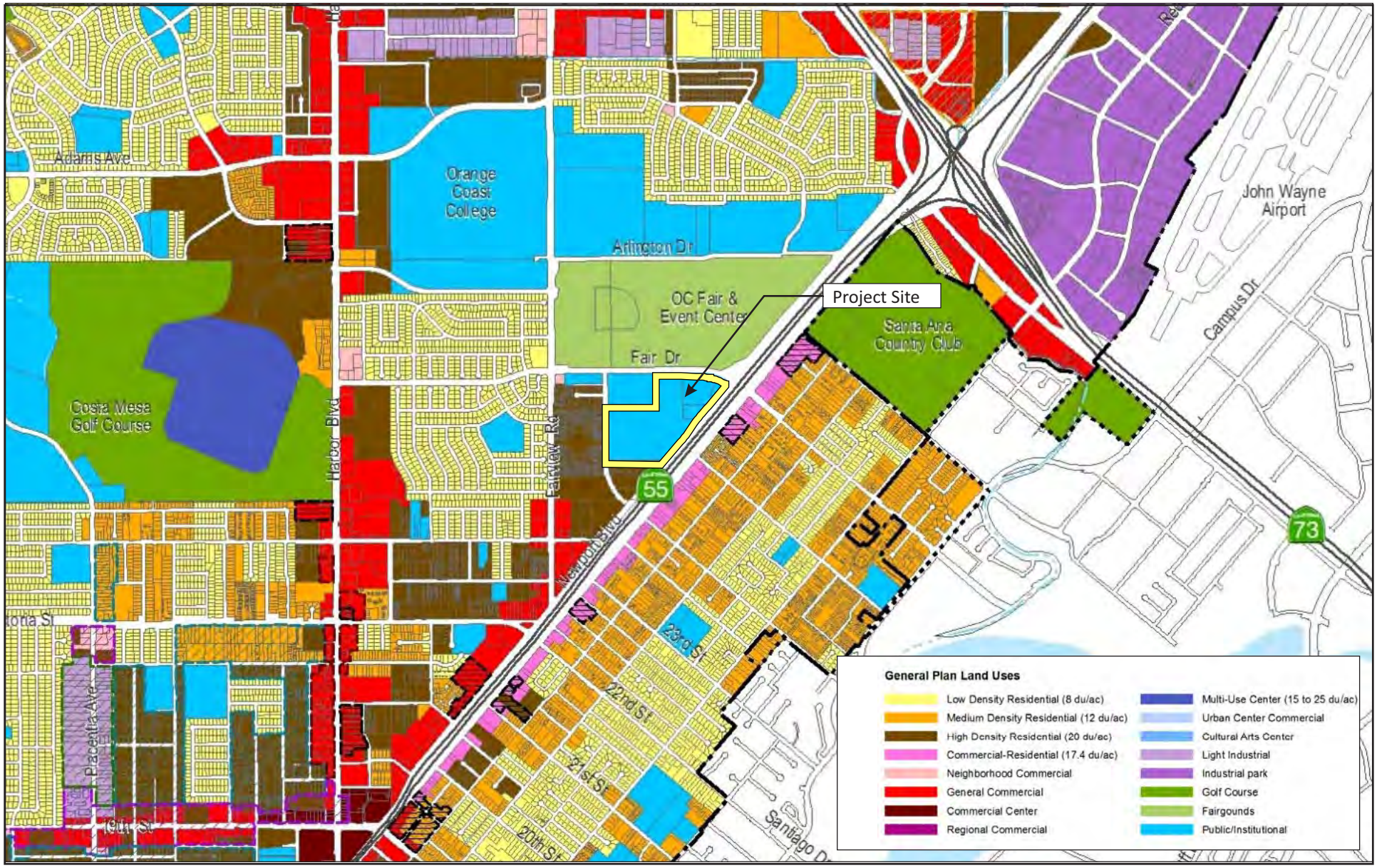

Source: City of Costa Mesa, 2017

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Exhibit 3
City of Costa Mesa General Plan Land Use Map

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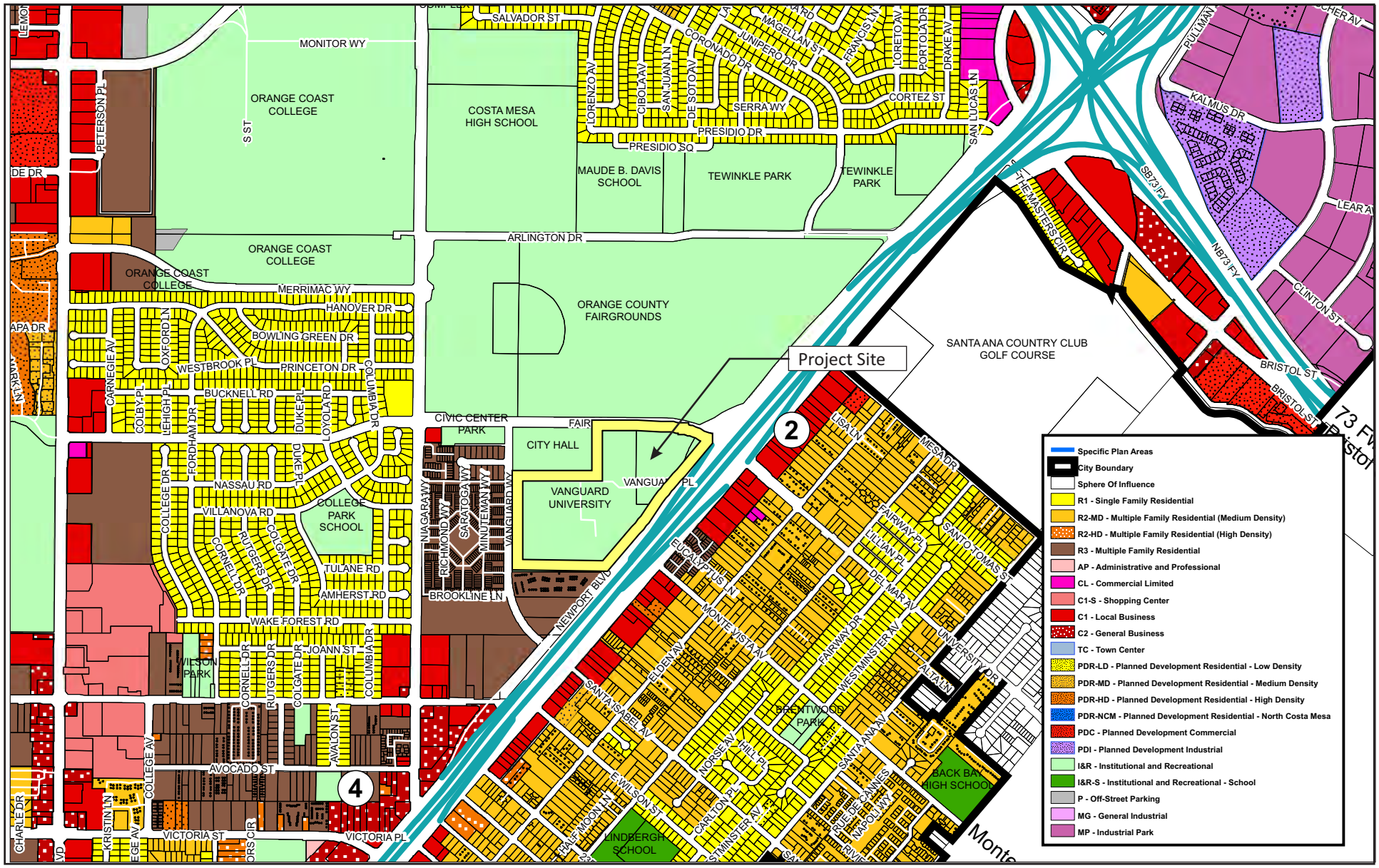

Source: City of Costa Mesa, 2017

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Exhibit 4
City of Costa Mesa Zoning Map

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BUILDING	IN FAR CALC.	GSF	DEMO (-)	TO REMAIN
SCOTT ACADEMIC CENTER	X	38,211		38,211
GYMNASIUM	X	13,700	13,700	
THE COVE / BOOKSTORE	X	4,000	4,000	
THE CAFE	X	9,900	9,900	
LIBRARY / LYCEUM THEATER / THEATER MOD.	X	19,900	19,900	
INFORMATION TECHNOLOGY / HR	X	8,264	8,264	
SMITH HALL	X	16,500	16,500	
NATURAL SCIENCES OFFICES / MUSIC STUDIOS	X	4,000	4,000	
NATURAL SCIENCES	X	7,650	7,650	
NEEDHAM CHAPEL	X	4,737		4,737
FINE ARTS OFFICES	X	4,000	4,000	
NEWPORT MESA CHURCH	X	32,291		32,291
SOCIAL SCIENCES OFFICES, PORTABLES, GRAD PSYCH., CLASSROOMS	X	11,340	11,340	
MAINTENANCE CENTRAL PLANT	X	7,000	7,000	
HEALTHACADEMIC CENTER	X	38,776		38,776
TOTAL		217,218	102,254	115,015
FAR CALCULATIONS (EXISTING PROPERTY AREA 1,054,968)		0.10		0.059

BUILDING	IN FAR CALC.	GSF	DEMO (-)	TO REMAIN
HUNTINGTON HALL		33,650		33,650
LAGUNA HALL		33,650		33,650
NEWPORT HALL		33,940		33,940
MALIBOU HALL		33,940		33,940
CATALINA HALL		41,980		41,980
TOTAL		177,170		177,170

Source: HPI Architecture, 2017

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Exhibit 5
Site Plan

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Source: HPI Architecture, 2017

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Exhibit 6
Renderings

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SECTION 2: ENVIRONMENTAL CHECKLIST

Environmental Factors Potentially Affected					
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.					
☐	Aesthetics	☐	Agriculture and Forestry Resources	☒	Air Quality
☒	Biological Resources	☒	Cultural/Tribal 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

Environmental Determination

On the basis of this initial evaluation:

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

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

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

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

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

Date: 3/14/18 Signed: _____
Mel Lee, Senior Planner

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SECTION 3: ENVIRONMENTAL EVALUATION

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
1. Aesthetics *Would the project:*				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Environmental Setting

The City of Costa Mesa planning area is almost completely urbanized. The City is approximately 1 mile from the Pacific Ocean and sits atop a plateau. Its proximity to the Pacific Ocean gives the City a distinctive visual background. The City is surrounded by the Pacific Ocean to the west, views of Upper Newport Bay to the east, and the San Gabriel Mountains and Santa Ana Mountains to the northeast. The City comprises primarily residential neighborhoods, with several commercial districts and light industrial districts scattered around the City. The City also has open space areas throughout, which include river-adjacent parks, city parks, and three golf courses.

Scenic vistas are generally defined as areas where natural landscapes form views of unique flora, geologic, or any other natural features that can be viewed without urban intrusions. The City's General Plan does not identify any scenic vistas/views in the City of Costa Mesa, although the views of the Santa Ana River and Mountains and the Pacific Ocean play a large role in the way the community defines itself. Scenic highways follow the same guidelines as scenic vistas. The City's General Plan identifies Highway 1 as an eligible State Scenic Highway, which has not yet been designated. Highway 1 runs parallel to the Pacific Ocean, but generally does not afford views toward Costa Mesa.

The existing visual character of Costa Mesa is divided into three sub-areas, or districts, that carry their own visual pattern: Residential Districts, Commercial Districts, and the Industrial Districts. Each district has its own sub-areas as well. The project site is located within the Downtown/Triangle District, which is identified in the General Plan as located at one of the busiest intersections in Costa Mesa, where Newport Boulevard and Harbor Boulevard intersect. The Triangle is an activity hub intended to draw both local and regional visitors.

The existing character of the project site consists of residential, institutional, and recreational uses. The project site is located on the existing college campus of Vanguard University. The Orange County Fairgrounds and City Hall are located directly north of the project site and residential uses are located to the west. The existing lighting on the project site comes from institutional uses as well as lighting around the project site from street lamps along Vanguard Way.

Environmental Evaluation

Would the project:

a) Have a substantial adverse effect on a scenic vista?

No impact. As described above, the General Plan does not designate any areas within Costa Mesa as scenic vistas. Furthermore, the project site exists on a college campus that is currently developed.

The proposed project is a university Master Plan that would construct a variety of new facilities for institutional, recreational, campus operations, housing and open space uses on the existing college campus for a total of 12 projects. Implementation would not have an adverse effect on a scenic vista or block any view sheds in the surrounding area.

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

No impact. The General Plan identifies the project site as Public/Institutional under the City's Land Use map. According to the California Department of Transportation's (Caltrans's) California Scenic Highway Mapping System, there are no officially designated scenic highways in the City of Costa Mesa. The closest state-designated scenic highway is SR-91, located approximately 35 miles northeast of the project site. Although the project site is considered a historic site because of the presence of historic buildings on the Vanguard University Campus, the project site is not located on a state scenic highway. As such, no impacts would occur.

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

No impact. The existing visual character of the surrounding area is highly urbanized and primarily defined by institutional and residential uses. No unique visual resources exist on the project site or in its surroundings. Project implementation would introduce the construction of new buildings and remodeling of existing buildings on a college campus.

Exhibit 6 illustrates the building elevations and perspectives of the proposed buildings. The buildings have been designed to blend in with the existing structures of the University for a uniform aesthetic. The proposed project is intended to bridge the vision of development for Vanguard University with the City's planning requirements and the larger community in which it resides. The architectural and landscape elements and design would ensure that the development of the proposed project is not detrimental to the surrounding area or uses and therefore would have no impact on the existing visual character or quality of the site and surrounding areas.

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

Less than significant impact. As described above, the existing visual character of the project site comprises residential and institutional uses. The project would not degrade the quality of the site or its surroundings, but would instead enhance the area by evolving the site to support the collegial environment that Vanguard University seeks to provide to its students and community. The site is an existing college campus that currently generates levels of light and glare typical of institutional and residential uses. Existing lighting conditions in the project area include light emanating from building interiors, security lights, and surrounding residential uses. Development of the project would introduce new lighting sources; however, these would be consistent with current lighting and follow the requirements and standards of the City of Costa Mesa Municipal Code and Standard Condition SC 4.1-1.

The Municipal Code includes the following lighting guidelines:

Chapter VI. Off-street Parking Standards, Article 3. Development Standards, Sec 13-93(d).—General Standards:

> (d) Lighting. All required parking areas and driveways shall be illuminated under the direction of the planning division. Lights used to illuminate parking areas shall be directed away from any adjoining premises located in any residential zone under direction of the planning division.

Because of the nature of the project and the existing levels of lighting on the site and surrounding area, project implementation would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

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.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2. Agriculture and Forestry Resources *In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. 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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Environmental Setting

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon

measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (ARB).

Prime Farmland or Farmland of Statewide Importance must meet the following two criteria; must have been used for irrigated agricultural production at some time during the 4 years prior to the important farmland map date; The soil must meet the physical and chemical criteria for Prime Farmland or Farmland of Statewide Importance as determined by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service. The project site is not currently used for farmland; however, the project site was used as agricultural/fallow land from at least 1938 to 1953 according to the Phase I Environmental Site Assessment (ESA) prepared for the project.

The Williamson Act allows county governments to enter into contracts with private landowners who agree to restrict parcels of land to agricultural uses or uses compatible with agriculture for at least 10 years. The City's 2035 General Plan EIR explains that there are no active Williamson Act contracts within the city limits.

Environmental Evaluation

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 zoned for I&R—Institutional and Recreational under the City's Zoning Map and is designated Public/Institutional under the City's General Plan. The site is currently developed land for institutional uses. According to the California Department of Conservation Land Conservation Act Maps, there are two parcels consisting of less than 1 square mile of farmland that are recognized as either Prime Farmland or Farmland of Statewide Importance in the City of Costa Mesa. One site consists only of Prime Farmland, and is located 2.7 miles northeast of the project site, next to John Wayne Airport. The other site is located 2 miles northwest of the project site along the I-405 Freeway. Because of the distance of the designated farmland from the project site, project implementation would have no impacts on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

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

No impact. The project site is zoned for I&R—Institutional and Recreational and designated Public/Institutional under the City's General Plan. The City of Costa Mesa Zoning Map does not have any lands that are zoned for agricultural use. There are no Williamson Act contracts in the City of Costa Mesa, and, therefore, the project would not impact a Williamson Act contract or any lands zoned for agricultural use.

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 for I&R—Institutional and Recreational and designated Public/Institutional under the City's General Plan. The City of Costa Mesa Zoning Map does not have any lands that are zoned as forest land or timberland. The 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 currently developed with the existing Vanguard University campus, and the implementation of the project would not have any impacts on 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 City contains less than 1 square mile of farmland designated Prime Farmland and Farmland of Statewide Importance under the California Department of Conservation Land Conservation Act Maps. However, as stated previously, each of the two parcels of farmland is 2 miles or more away from the project site. Project implementation would not covert any Farmland to non-agricultural use. The City does not have any land designated for forest land. The project site is currently developed with existing institutional uses, and the surrounding area is designated for residential and commercial uses. 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. Therefore, no impacts would occur.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
3. Air Quality *Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.* *Would the project:*				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Environmental Setting

This analysis is based on the Air Quality Impact Analysis report dated November 26, 2017. The report is contained in Appendix A of this IS/MND.

The project site is located in the City of Costa Mesa, California and within the jurisdiction of the South Coast Air Quality Management District (SCAQMD) and the South Coast Air Basin (SoCAB). The SCAQMD has developed daily regional and localized thresholds of significance to evaluate construction and operational emissions within its jurisdiction. The established emissions thresholds were based on the attainment status of the air basin relative to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emissions thresholds are considered conservative and would overstate an individual project's contribution related to air quality and health risks.

Significance Thresholds

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. For purposes of this assessment, the significance thresholds recommended by the SCAQMD below were adopted here to address the significance of impacts for purposes of CEQA analysis.

Regional Thresholds

SCAQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SCAQMD.

Regional Thresholds for Construction Emissions

Projects in the SoCAB would generate significant construction-related regional emissions if daily emissions would exceed:

- 75 pounds per day of volatile organic carbon (VOC), also known as reactive organic gases (ROG);
- 100 pounds per day of oxides of nitrogen (NO_X);
- 550 pounds per day of carbon monoxide (CO);
- 150 pounds per day of oxides of sulfur (SO_X);
- 150 pounds per day of particulate matter with a diameter of 10 microns or less (PM_{10}); or
- 55 pounds per day of particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$).

Regional Thresholds for Operational Emissions

Projects in the SoCAB would generate significant operational regional emissions if daily emissions would exceed:

- 55 pounds per day of VOC;
- 55 pounds per day of NO_X;
- 550 pounds per day of CO;
- 150 pounds per day of SO_X;
- 150 pounds per day of PM_{10}; or
- 55 pounds per day of $PM_{2.5}$.

Localized Air Quality Significance Thresholds

The SCAQMD published its first Final Localized Significance Threshold (LST) Methodology in June 2003, which was revised in October 2006 to include a methodology to calculate $PM_{2.5}$ and $PM_{2.5}$ thresholds—its Final Methodology to Calculate Particulate Matter (PM) and $PM_{2.5}$ Significance Thresholds—and revised again in July 2008 to include LST look-up tables for the 1-hour NO_2 ambient air quality standard. SCAQMD recommends that all air quality analyses include a localized assessment of both construction and operational emissions on nearby sensitive receptors. LSTs represent the maximum mass emissions from a project site that would not result in pollutant concentrations that exceed NAAQS or CAAQS. LSTs are based on the ambient concentrations of that pollutant within the Source Area Receptor (SRA) where a project is located, the distance to the nearest sensitive receptor, and the size of the project site, all of which are the primary factors that influence pollutant concentrations. The project site is located in the City of Costa Mesa, which is part of SRA 18 (North Coastal Orange County).

Environmental Evaluation

Would the project:

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

Less than significant impact. To evaluate whether or not a project conflicts with, or obstructs the implementation of the applicable air quality plan (2017 Air Quality Management Plan (AQMP) for the South Coast Air Basin), the *SCAQMD CEQA Air Quality Handbook* states that there are two key indicators. These indicators are identified by the criteria discussed below.

1. Indicator: Whether the Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
2. Indicator: According to Chapter 12 of the *SCAQMD CEQA Air Quality Handbook*, the purpose of the General Plan consistency findings is to determine whether a Project is inconsistent with the growth assumptions incorporated into the air quality plan, and thus, whether it would interfere with the region's ability to comply with federal and California air quality standards.

Considering the recommended criteria in the CEQA Handbook, this analysis uses the following criteria to address this potential impact:

- Criterion 1: Project's contribution to air quality violations (SCAQMD's first indicator);
- Criterion 2: Assumptions in AQMP (SCAQMP's second indicator); and
- Criterion 3: Compliance with applicable emission control measures in the AQMPs.

Criterion 1: Project's Contribution to Air Quality Violations

According to the SCAQMD, the project is consistent with the AQMP if the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP (SCAQMD AQMP 1993, page 12-3). The project would not violate any air quality standard or cumulatively contribute substantially to an existing or projected air quality violation based on conformance with the various SCAQMD regional and localized significance thresholds during construction and operation. Therefore, the project meets this criterion and would be consistent with the AQMP.

Step 2: Assumptions in AQMP

According to Chapter 12 of the SCAQMD CEQA Air Quality Handbook, the purpose of the General Plan consistency finding is to determine whether a project is inconsistent with the growth assumptions incorporated into the air quality plan and thus, whether it would interfere with the region's ability to comply with federal and California air quality standards. The proposed project involves the demolition and replacement of several on-campus buildings, which would result in an

increase of 504 full-time students based on the traffic study report provided by Kunzman Associates, Inc. Therefore, the project would not adversely affect growth assumptions within the AQMP.

Step 3: Control Measures

The project would also comply with all applicable rules and regulations of the SCAQMD. Because of the nature of the proposed project, which includes earthmoving activity, SCAQMD Rule 403 applies to this project (SCAQMD 2005). Rule 403 governs emissions of fugitive dust during construction and operation activities. The rule requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Compliance with this rule is achieved through application of standard Best Management Practices (BMPs). These BMPs include application of water or chemical stabilizers to disturbed soils; covering haul vehicles; restricting vehicle speeds on unpaved roads to 15 miles per hour; sweeping loose dirt from paved site access roadways; cessation of construction activity when winds exceed 25 miles per hour; and establishing a permanent ground cover on finished sites. The proposed project's compliance with SCAQMD Rule 403 would result in consistency with the applicable AQMP control measures. As such, emissions from fugitive dust during construction would be minimal.

Accordingly, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan; therefore, the impact would be 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 item addresses regional criteria pollutant impacts including ozone, VOC, NO_X, CO, SO_X, and particulate matter (PM_{10} and $PM_{2.5}$). The United States Environmental Protection Agency (EPA) and the ARB designate air basins within the State where ambient air quality standards are exceeded "non-attainment" areas. If standards are met, the area is designated an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National non-attainment areas are further designated marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the 3-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard. The SoCAB is designated non-attainment for the state and/or federal ozone, PM_{10}, and $PM_{2.5}$ standards.

Ozone is a regional pollutant formed by a photochemical reaction in the atmosphere and not directly emitted into the air. Ozone precursors, such as volatile organic compounds (VOC) and nitrogen oxides (NO_X), react in the atmosphere in the presence of sunlight to form ozone. Therefore, the SCAQMD does not specifically have an ozone significance threshold but bases its control of ozone levels by implementing significance thresholds on the emissions of the ozone precursors, VOC and

NO_X. This impact section includes analysis of, and significance determinations for VOC, NO_X, CO, SO_X, and particulate matter (PM_{10} and $PM_{2.5}$). The construction and operational emissions from the project were estimated using the CalEEMod Version 2016.3.1.

Construction Emissions

Construction-related emissions are described as short-term (or temporary) in duration. Construction activities associated with the project would result in emissions of criteria air pollutants (i.e., PM_{10}, $PM_{2.5}$, CO, and the Ozone precursors VOC and NO_X) from (1) construction equipment that performs excavation, grading, and erection of building materials; (2) material handling and transport; and (3) other miscellaneous activities, including worker commuting vehicles and application of architectural coatings. Construction was assumed to commence in 2018 and be completed in 2020 with a construction schedule of 8 hours per day, 5 days per week. The traffic Impact Study prepared by Kunzman Associates, Inc. estimated the opening year as 2020. Therefore, to be consistent with the traffic study, the project was assumed to begin construction in January 2018 and completed and operational by 2020.

The construction schedule assumptions and construction equipment are discussed in the project's Air Quality Analysis Report, provided as Appendix A to this ISMND. The unmitigated regional maximum daily concentration emissions are shown in Table 1, and include those emissions generated from both on-site construction activities and from off-site sources such as construction vehicle travel.

Table 1: Maximum Daily Regional Construction Emissions—Unmitigated

Activity	Daily Emissions (pounds per day)					
	NO_X	VOC	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition	42.10	3.90	23.74	0.05	3.47	2.09
Site Preparation	48.26	4.65	23.13	0.04	10.91	6.89
Grading	108.48	6.56	47.49	0.18	8.66	4.98
Building Construction—2018	34.92	4.23	29.20	0.07	4.77	2.36
Building Construction—2019	31.99	3.79	27.79	0.07	4.55	2.15
Building Construction—2020	29.18	3.43	26.58	0.07	4.35	1.97
Paving	14.11	1.80	15.11	0.19	0.80	0.74
Architectural Coating	1.81	55.37	3.22	0.01	0.63	0.25
Maximum Daily Emissions	108.48	55.37	47.49	0.19	10.91	6.89
SCAQMD Air Quality Significance Thresholds	100	75	550	150	150	55
Exceed Threshold?	**Yes**	No	No	No	No	No

Notes:
NO_X = nitrogen oxides; VOC = volatile organic compounds; CO = carbon monoxide
PM_{10} = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
$PM_{2.5}$ = particulate matter with an aerodynamic resistance diameter of 2.5 micrometers
The PM_{10} and $PM_{2.5}$ emissions reflect the exhaust and "mitigated" fugitive dust emissions in accordance with SCAQMD Rule 403.
Source of emissions: FCS 2017—For each source, the maximum emissions between summer and winter are shown.

As shown in Table 1, the maximum daily regional construction emissions of NO_X would exceed the SCAQMD's recommended threshold of significance. Therefore, Mitigation Measure (MM) AIR-1 is recommended, which would require off-road construction equipment meeting EPA Tier III construction equipment emission standards. The construction emissions after mitigation are shown in Table 2. As shown below, the regional maximum daily construction emissions are below SCAQMD's significance thresholds with implementation of Mitigation Measure AIR-1.

Table 2: Maximum Daily Regional Construction Emissions—Mitigated

Activity	Daily Emissions (pounds per day)					
	NO_X	VOC	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition	22.09	1.10	26.11	0.05	2.40	1.15
Site Preparation	19.13	1.02	23.62	0.04	9.28	5.47
Grading	78.94	2.99	49.12	0.18	7.84	3.85
Building Construction-2018	25.76	2.22	29.50	0.07	4.17	1.85
Building Construction-2019	25.14	2.10	28.50	0.07	4.16	1.84
Building Construction-2020	24.22	1.98	27.61	0.07	4.14	1.82
Paving	11.34	1.01	17.75	0.19	0.65	0.65
Architectural Coating	1.48	55.18	3.22	0.01	0.61	0.23
Maximum Daily Emissions	78.94	55.18	49.12	0.19	9.28	5.47
SCAQMD Air Quality Significance Thresholds	100	75	550	150	150	55
Exceed Threshold?	No	No	No	No	No	No

Notes:
NO_X = nitrogen oxides; VOC = volatile organic compounds; CO = carbon monoxide
PM_{10} = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
$PM_{2.5}$ = particulate matter with an aerodynamic resistance diameter of 2.5 micrometers
The PM_{10} and $PM_{2.5}$ emissions reflect the exhaust and "mitigated" fugitive dust emissions in accordance with SCAQMD Rule 403.
Source of emissions: FCS 2017—For each source, the maximum emissions between summer and winter are shown.

Operational Emissions

Operational emissions are generated by area, energy and mobile sources once a project commences operation. Area sources would include activities such as landscape maintenance and occasional architectural coatings. Energy sources would include electricity and natural gas combustion for space and water heating. Mobile sources would include vehicle trips associated with project-generated traffic. The operational emissions were estimated separately for summer and winter seasons. Note that the project proposes to replace several buildings with new buildings. Therefore, the operational emissions for the existing buildings were also estimated for the year 2020, the first operational year for the project. Table 3 and Table 4 show the estimated operational-related regional daily emissions for the existing project and proposed project, respectively. The net changes

in operational emissions are also provided in Table 4 and compared with the SCAQMD regional emission significance thresholds.

Table 3: Maximum Daily Existing Regional Operational Emissions (2020)

Emission Source	Mass Daily Emissions (pounds per day)					
	NO_X	VOC	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	<0.01	7.49	0.20	<0.01	<0.01	<0.01
Energy	1.46	0.16	1.23	0.01	0.11	0.11
Mobile	33.72	8.46	109.21	0.39	33.56	9.23
Existing Stationary Source Emissions	0.09	0.02	0.35	<0.01	0.03	0.03
Total Existing Operation Emissions	35.27	16.13	110.99	0.40	33.70	9.37

Notes:
ROG = reactive organic gases
NO_X = oxides of nitrogen
PM_{10} = particulate matter 10 microns in diameter
$PM_{2.5}$ = particulate matter 2.5 microns in diameter
Source: CalEEMod Version 2016.3.1, see Appendix A.

Table 4: Maximum Daily Project and Net Regional Operational Emissions (2020)

Emission Source	Mass Daily Emissions (pounds per day)					
	NO_X	VOC	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	<0.01	9.50	0.36	<0.01	<0.01	<0.01
Energy	1.85	0.20	1.55	0.01	0.14	0.14
Mobile	43.80	10.52	132.33	0.47	42.34	11.64
Total Operational Emissions (2020)	45.65	20.22	134.24	0.48	42.48	11.79
Existing Operational Emissions (2020)	35.27	16.13	110.99	0.40	33.70	9.37
Net Operational Emissions	10.38	4.08	23.25	0.08	8.77	2.42
SCAQMD Average Daily Emission Thresholds (lbs/day)	55	55	550	150	150	55
Exceeds thresholds?	No	No	No	No	No	No

Notes:
ROG = reactive organic gases
NO_X = oxides of nitrogen
PM_{10} = particulate matter 10 microns in diameter
$PM_{2.5}$ = particulate matter 2.5 microns in diameter
Source: CalEEMod Version 2016.3.1, see Appendix A.

As shown in Table 4, the net regional operational daily emissions generated by the project would not exceed the SCAQMD's regional significance thresholds.

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

Less than significant impact. The project's regional construction and operational emissions with Tier III mitigation for off-road construction equipment were determined to result in emissions below the SCAQMD's project-level thresholds of significance. The thresholds of significance represent the allowable amount of emissions each project can generate without generating a cumulatively considerable contribution to regional air quality impacts. If an area is in non-attainment for a criteria pollutant, then the background concentration of that pollutant has historically exceeded the ambient air quality standard. It follows that if a project exceeds the regional thresholds for that non-attainment pollutant, then it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

As discussed above, the region is non-attainment for the federal and state ozone standards, the state PM_{10} standards, and the federal and state $PM_{2.5}$ standards. Therefore, a project that would not exceed the SCAQMD thresholds of significance on a project-level would also not result in a cumulatively considerable contribution to these regional air quality impacts, and impacts from the project would be cumulatively less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant impact. To result in a less than significant impact, the following criteria must be true:

- **Criterion 1:** Localized significance threshold assessment: emissions and air quality impacts during project construction or operation must be below the SCAQMD local significance thresholds.
- **Criterion 2:** Toxic air contaminant (TAC) analysis must demonstrate that the project would not result in significant health risk impacts to sensitive receptors during construction.
- **Criterion 3:** TAC analysis must demonstrate that TAC emissions from sources external to the project would not result in significant health risk impacts to the new on-site sensitive receptors.
- **Criterion 4:** CO hot spot assessment must demonstrate that the project would not result in the development of a CO hot spot that would result in an exceedance of the CO ambient air quality standards.

Criterion 1: Localized Significance Threshold

The localized effects from the on-site portion of daily emissions were evaluated at sensitive receptor locations according to the SCAQMD's LST method, which applies to the following criteria pollutants: NO_2, carbon monoxide, PM_{10} and $PM_{2.5}$. The LST Method is a two-step process.

1. To determine if any of the emissions require a detailed analysis (i.e., dispersion modeling), each phase of construction was first screened using the SCAQMD's Mass Rate LST Look-Up Tables Tables); the tables were developed by the SCAQMD to readily determine if the daily on-site emissions from a project could result in a significant impact to the local air quality; by their nature as a screening tool, the tables provide conservative estimates of emission impacts in terms of over-estimating air quality impacts.
2. If the emission screening using the Tables indicate an exceedance of the thresholds after mitigation, then a detailed air dispersion modeling the project's air quality impacts would be necessary; such a modeling impact assessment would use site-specific information such as the location of emissions and receptors, and meteorological data representative of the project site.

Specifically, LSTs represent the maximum on-site emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. When quantifying mass emissions for localized analysis, only emissions that occur on-site are considered. Consistent with the SCAQMD's LST guidelines, emissions related to off-site delivery/haul truck activity and employee trips are not considered in the evaluation of localized impacts. The SCAQMD has recommended LSTs for both project construction and operational emissions.

The project is located within SRA 18, North Coastal Orange County. The nearest sensitive receptors from the project site would be in the student housing area located approximately 30 meters to the northwest of the project construction area.

Construction

The project's on-site emissions from construction activities were compared with the LSTs for a 4-acre site in SRA 18 at a distance of 25 meters to the nearest sensitive receptor (the closest distance to the nearest sensitive receptor contained in the tables). The use of a 4-acre construction area was based on the amount of disturbed area in a single day during grading operations that require the largest numbers of construction equipment. Table 5 shows the maximum daily on-site construction emissions.

Table 5: Maximum Daily Construction Localized Significance Emissions—Unmitigated

Activity	Mass Daily Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	38.32	22.30	3.08	1.98
Site Preparation	48.20	22.48	10.71	6.84
Grading	59.52	35.09	5.55	3.99
Building Construction-2018	23.39	17.58	1.50	1.41
Building Construction-2019	21.08	17.16	1.29	1.21

Table 5 (cont.): Maximum Daily Construction Localized Significance Emissions—Unmitigated

Activity	Mass Daily Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Building Construction-2020	19.19	16.85	1.12	1.05
Paving	14.07	14.65	0.75	0.69
Architectural Coating	1.68	1.83	0.11	0.11
Maximum On-site Daily Emissions	59.52	35.09	10.71	6.84
SCAQMD LST Significance Thresholds	175	1563.3	11.7	7.7
Exceed Threshold?	No	No	No	No

Notes:
NO_X = nitrogen oxides; VOC = volatile organic compounds; CO = carbon monoxide
PM_{10} = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
$PM_{2.5}$ = particulate matter with an aerodynamic resistance diameter of 2.5 micrometers
The PM_{10} and $PM_{2.5}$ emissions reflect the exhaust and "mitigated" fugitive dust emissions in accordance with SCAQMD Rule 403.
Source of emissions: FCS 2017—For each source, the maximum emissions between summer and winter are shown.

As shown in Table 5, unmitigated on-site construction emissions are below the LSTs. 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 appropriate ambient air quality standard. Therefore, the project would not result in an exceedance of, or contribute to an exceedance of an ambient air quality standard or expose receptors to substantial criteria pollutant concentrations from construction from construction activities.

Operations

Similar to the construction LST analysis above, the applicable operational LSTs were obtained for a project located in SRA 18, a four-acre project site, and the nearest sensitive receptor of 25 meters away. Because a majority of the project's mobile-source emissions would occur on the local and regional roadway network away from the project, only the on-site area-, energy-, and mobile-source emissions were included in this analysis. A trip length of 0.5 mile was used in the modeling input assumptions to account for on-site emissions from mobile sources. The net change in operational emissions between existing on-site emissions and the proposed project's on-site emissions was compared with the SCAQMD's LST to determine if the net change in emissions would exceed the significance thresholds. Table 6 presents the project's maximum daily on-site emissions compared with the operational LSTs.

Table 6: Maximum Daily Project Localized Operational Emissions—Unmitigated

Operational Activity	On-site Emissions (pounds per day)[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	<0.01	0.24	<0.01	<0.01
Energy	1.85	1.55	0.14	0.14
Mobile	15.25	28.78	2.04	0.58
Maximum On-site Daily Emissions	17.10	30.57	2.18	0.72
Operations Localized Significance Threshold	175	1,563	3.3	2
Exceed Threshold?	No	No	No	No

Notes:
NO_X = nitrogen oxides; CO = carbon monoxide; PM_{10} and $PM_{2.5}$ = particulate matter
Source of emissions: CalEEMod Output (Appendix A).
[1] Emissions shown represent the maximum daily emissions from summer and winter seasons for each operational emission source and pollutant. Therefore, total daily operational emissions represent maximum daily emissions that could occur throughout the year.
Source of thresholds: South Coast Air Quality Management District 2009, for SRA 18, 25 meters, 4-acre site.

As shown above, the project's maximum daily on-site operational emissions would not exceed the SCAQMD's LSTs. Note that since the project's operational emissions do not in and of themselves exceed thresholds, the net change from existing emissions would also not exceed the thresholds. Therefore, the net change in on-site operational emissions would not exceed the SCAQMD's LST and would not result in significant localized impacts.

Criterion 2: Toxic Air Contaminant Analysis

Health risks from TACs are twofold. First, TACs are carcinogens according to the State of California. Second, short-term acute and long-term chronic exposure to TACs can cause non-cancer health effects to the respiratory system and other organs. Each of these health risks has been analyzed and is discussed below.

Estimated annual average air concentrations of diesel particulate matter (DPM) were made applying an air dispersion model, the EPA AERMOD model. The AERMOD (Version 16216r) air dispersion model is a mathematical formulation used to estimate the air quality impacts at specific locations (receptors) surrounding a source of emissions given the rate of emissions and prevailing meteorological conditions. Specifically, the AERMOD model was used to estimate levels of air emissions at sensitive receptor locations from the project's construction PM_{10} exhaust emissions. The use of the AERMOD model provides a refined methodology for estimating construction impacts by utilizing long-term, measured representative meteorological data for the project site and a representative construction schedule.

Cancer Risks

Health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to TAC concentrations over a period of time will contract cancer, based on the use of standard risk-assessment methods. The cancer risk assessment method applied in this assessment is based on the guidance provided in SCAQMD Rule 1401 that addresses the increased sensitivity and susceptibility of infants and young children to exposures to TACs. For purposes of this assessment, the duration of exposure was taken as the duration of the construction period from 2018 to 2020. Two types of sensitive receptors were accounted for in the health risk assessment for construction:

- Off-site sensitive receptors, aged from the third trimester before birth to 3 years of age
- On-site sensitive reports, exposed as adult students (aged 18 and older)

The most important TAC with regard to potential health impacts during construction results from emissions of DPM from the operation of off-site construction equipment and material haul and vendor truck operations. Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program (ARB 1998) demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

Non-cancer Hazards

Chronic health effects are characterized by prolonged or repeated exposure to a TAC over many days, months, or years. Symptoms from chronic health impacts may not be immediately apparent and are often irreversible. This risk is measured with the Chronic Hazard Index, an expression of potential for non-cancer health effects; SCAQMD's significance threshold for chronic TAC exposure is a Hazard Index increase of one or more.

Health Impacts during Construction

Annual average construction exhaust emissions of DPM were estimated using the CalEEMod model (Version 2016.3.1) as shown in Table 7. Detailed assumptions and methodologies are explained in detail in the Air Quality Analysis Report, provided in Appendix A.

Table 7: Project DPM (as PM_{10} Exhaust) Construction Emissions—Unmitigated

Year	On-site DPM (grams/m^2-sec)	Off-site DPM From SR-55 to Project (grams/sec)
2018	3.25E-07	4.07E-05
2019	2.22E-07	4.81E-05

Table 7 (cont.): Project DPM (as PM_{10} Exhaust) Construction Emissions—Unmitigated

Year	On-site DPM (grams/m^2-sec)	Off-site DPM From SR-55 to Project (grams/sec)
2020	1.54E-07	5.82E-05

Note:
DPM = diesel particulate matter
Source: CalEEMod and FirstCarbon Solutions; see Appendix B.

The estimated health and hazard impacts at the maximum impacted sensitive receptor (MIR) from the project's construction emissions are provided in Table 8 for off-site sensitive receptors. The health risk impacts analysis for off-site receptors included exposures from pre-birth to adult ages. The health risks for on-site sensitive receptors included receptors located at existing student residences.

Table 8: Estimated Health Risks and Hazards During Construction—Unmitigated

Health Impact Metric	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[(2)]
Risks and Hazards at the Maximum Impacted Off-site Sensitive Receptor (MIR): Infants to children[(1)]	5.1	0.02
Risks and Hazards at the Maximum Impacted Sensitive Receptor (MIR): Adult[(2)]	0.6	<0.01
SCAQMD Significance Threshold	10.0	1.0
Exceeds Individual Source Threshold?	No	No

Notes:
1 Infants and children age groups are for off-site residential receptors only. The maximum impacted off-site sensitive receptors are the residents located east of the SR-55, which is approximately 470 feet southeast of the project site.
2 Maximum impacted sensitive receptor is the student housing Huntington Hall located on campus, which is approximately 100 feet east of the project construction site.
Source: CalEEMod and FirstCarbon Solutions, see appendix B.

As shown above, the cancer risks and non-cancer hazard index at the MIR would not exceed the SCAQMD's recommended thresholds of significance during construction.

During Operations

The operation of the project is not expected to emit TACs in any meaningful quantity, as it is a continuation of the existing university use and would not generate high volumes of heavy truck trips or include other uses that emit TACs. Therefore, no health risk impacts are expected from the operation of the project.

Criterion 3: Toxic Air Contaminant Analysis—SR-55 Traffic

The SR-55 is located approximately 0.6 mile northeast of the project site. The principal concern from SR-55 is TAC emissions from the vehicle traffic that travels along the freeway every day and the resulting health impacts on the project's sensitive receptors. Principal among these TACs are DPM emissions from diesel fueled vehicles and total organic gases from both diesel and gasoline-fueled vehicles.

Traffic along the SR-55 was estimated from traffic information in terms of annual average daily travel (AADT) available from Caltrans monitoring site near the Mesa Drive/SR55 overpass. The traffic was subdivided into automobiles and trucks in accordance with Caltrans traffic vehicle mix and projected to the 2020–2025 analysis period based on measured AADT trends at the Caltrans monitoring site. Emissions from the traffic along SR-55 were derived from the vehicle AAADT, vehicle mix, vehicle speed, and emission factors provided by the ARB EMFAC2014 mobile source emission model. The 2020–2025 analysis period was used to characterize potential exposures to DPM emissions for students who would remain on-site during their pursuit of a bachelor's and/or a master's degree.

The estimated health risks and hazard impacts at the MIR from SR-55's vehicle emissions are provided in Table 9.

Table 9: Estimated Health Risks and Hazards from SR-55

Health Impact Metric	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[(2)]	1-hr Acute Non-Cancer Hazard Index
Risks and Hazards at the Maximum Impacted On-site Sensitive Receptor (MIR): Adult[(1)]	0.6	<0.01	<0.01
SCAQMD Significance Threshold	10.0	1.0	1.0
Exceeds Individual Source Threshold?	No	No	No

Notes:
1 Maximum impacted sensitive receptor is the southeast corner of the new student housing located on campus, which is approximately 110 feet west of SR-55.
2 Chronic non-cancer hazard index was estimated by dividing the annual DPM concentration (as PM_{10} exhaust) by the REL of 5 $\mu g/m^3$.
Source: CalEEMod and FirstCarbon Solutions, see appendix B.

As shown above, the cancer risks, and non-cancer hazard index at the MIR would not exceed the SCAQMD's recommended thresholds of significance, due to the proximity of SR-55 to the project site.

Criterion 4: 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.

The largest contributor of CO emissions during project operations is typically from motor vehicles. A CO hotspot represents a condition where high concentrations of CO may be produced by motor vehicles accessing a congested traffic intersection under heavy traffic volume conditions. The CO hotspot thresholds are represented by the most stringent state or federal CO ambient air quality standard:

- 8-hour CO standard: 9 ppm (state/federal)

It has long been recognized that CO exceedances are caused by vehicular emissions (EPA 2000), primarily when idling at intersections (SCAQMD 1993, 2003). Accordingly, vehicle emissions standards have become increasingly more stringent. Before the first vehicle emission regulations, cars in the 1950s were typically emitting about 87 grams of CO per mile (EPA).

Since the first regulation of CO emissions from vehicles (model year 1966) in California, vehicle emissions standards for CO applicable to light duty vehicles have decreased by 96 percent for automobiles, and new cold weather CO standards have been implemented, effective for the 1996 model year. Currently, the CO standard in California is a maximum of 3.4 grams/mile for passenger cars (with provisions for certain cars to emit even less) (ARB 2010). With the turnover of older vehicles, introduction of cleaner fuels and implementation of control technology on industrial facilities, CO concentrations in the SoCAB have steadily declined.

The analysis prepared for CO attainment in the SoCAB by the SCAQMD can be used to assist in evaluating the potential for CO exceedances in the SoCAB. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 Air Quality Management Plan (2003 AQMP) and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) (SCAQMD 1992). As discussed in the 1992 CO Plan, peak CO concentrations in the SoCAB are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections. Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of 1992 CO Plan and subsequent plan updates and air quality management plans. In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood); Wilshire Boulevard and Veteran Avenue (Westwood); Sunset Boulevard and Highland Avenue (Hollywood); and La Cienega Boulevard and Century Boulevard (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which had a daily traffic volume of approximately 100,000 vehicles.

Kunzman Associates, Inc. provided the traffic study for the proposed project, which included existing, existing plus project and opening year traffic conditions. Each traffic condition estimated the average daily traffic volumes (AADT) during peak hour for the nearby intersections. The intersection of Newport Blvd and Projected South Driveway has the highest AADT within the project area. The highest AADT is 184 trips during PM peak hour. The traffic study estimated the project would generate 1,361 daily trips along the roadways within the project vicinity. Therefore, none of the intersections near the proposed project site would have peak hourly traffic volumes exceeding those at the intersections modeled in the 2003 AQMP, nor would there be any reason unique to the

local meteorology to conclude that intersections affected by the project would yield higher CO concentrations if modeled in detail. Therefore, the operational CO impact would be less than significant.

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

Less than significant impact. Odors can cause a variety of responses. The impact of an odor often results from interacting factors such as frequency (how often), intensity (strength), duration (time), offensiveness (unpleasantness), location, and sensory perception.

Odor is typically a warning system that prevents animals and humans from consuming spoiled food or toxic materials. Odor-related symptoms reported in a number of studies include nervousness, headache, sleeplessness, fatigue, dizziness, nausea, loss of appetite, stomachache, sinus congestion, eye irritation, nose irritation, runny nose, sore throat, sough and asthma exacerbation (SCAQMD 2007).

The SCAQMD's role is to protect the public's health from air pollution by overseeing and enforcing regulations (SCAQMD 2007). The SCAQMD's resolution activity for odor compliance is mandated under California Health & Safety Code Section 41700, and falls under SCAQMD Rule 402. The Public Nuisance Regulation states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals."

During construction, the various diesel-powered vehicles and equipment in use on-site would create localized odors. These odors would be temporary and would not likely be noticeable beyond the project's site boundaries. The potential for diesel odor impacts associated with construction activities at the project site is therefore less than significant. Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations, and these types of land uses are not located in the project's vicinity. The project does not contain land uses typically associated with emitting objectionable odors.

The project would develop campus buildings that are not typical odor-generating land uses. Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. Minor sources of odors, such as exhaust from mobile sources, are not typically associated with numerous odor complaints, but are known to have temporary and less concentrated odors. The project's long-term operational activities would not have any substantial odor sources that would expose nearby receptors. Considering the low intensity of potential odor emissions, the project's operational activities would not expose receptors to objectionable odor emissions. Impacts would be less than significant.

Mitigation Measures

MM AIR-1 Prior to issuance of grading permits, the applicant shall submit documentation to the City of Costa Mesa demonstrating that all off-road construction equipment in excess of 50 horsepower is equipped with engines meeting the EPA Tier III off-road engine emission standards.

The project shall also implement the following:

Best Available Control Measures

All construction contractors shall comply with 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 cover with temporary coverings;
- Water exposed surfaces at least twice a day under calm conditions. Water exposed areas as often as needed on days when winds are less than 25 miles per hour 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-site by trucks departing Project sites;
- Securely cover loads with a tight fitting tarp on any truck leaving the construction sites to dispose of debris; and
- Cease grading activities during periods when winds exceed 25 miles per hour.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
4. Biological Resources *Would the project:*				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Environmental Setting

Literature Review

An FCS biologist researched readily available information, including relevant literature, databases, agency web sites, various previously completed reports and management plans, Geographic Information System (GIS) data, maps, aerial imagery from public domain sources, and in-house records to (1) assess habitats, special-status plant and wildlife species, jurisdictional waters, critical habitats, and wildlife corridors that may occur in and near the project site, and (2) identify local or regional plans, policies, and regulations that may apply to the project. Plant and wildlife species

protected by federal agencies, state agencies, and nonprofit resource organizations, such as the California Native Plant Society (CNPS), are collectively referred to as "special-status species" in this report. Some of these plant and wildlife species are afforded special legal or management protection because they are limited in population size, and typically have a limited geographic range and/or habitat. The following data sources were accessed.

- United States Geological Survey (USGS) 7.5-Minute Topographic Map Newport Beach Quadrangle and current aerial imagery.
- California Natural Diversity Database (CNDDB) provided by the California Department of Fish and Wildlife (CDFW 2017c).
- Information, Planning and Conservation (IPaC) provided by the United States Fish and Wildlife Service (USFWS 2017b).
- Inventory of Rare and Endangered Plants of California provided by the CNPS (2017).
- National Wetlands Inventory (NWI) and Wetlands Mapper provided by the USFWS (2017c).
- Biogeographic Information and Observation System (BIOS) provided by CDFW (2017a and 2017b).
- Critical Habitat Portal provided by the USFWS (2017a).

Field Survey

Following the literature review, FCS's biologist, Mr. Damien Edwards, conducted a reconnaissance-level biological survey on the project site on August 31, 2017. The survey included the following:

- Habitat assessment and plant community mapping
- General plant survey
- General wildlife survey
- Jurisdictional assessment
- Wildlife movement evaluation

The pedestrian survey was conducted on foot during the daylight hours and covered all accessible areas of the project site. The biologist characterized the existing habitat and searched for the presence of sensitive plant communities, special-status plants and wildlife, jurisdictional areas, and potential wildlife corridors. The purpose of the survey was not to extensively search for every species occurring within the project site, but to ascertain general site conditions and identify potentially suitable habitat areas for various special-status plant and wildlife species

Existing Conditions

The project site is located in a primarily developed portion of the City and is completely developed, and no longer supports natural plant communities or native soils. The project site contains no undeveloped natural open land capable of supporting natural vegetation or habitats. Natural topography such as slopes, canyons, mounds, gullies, draws, rivulets, terraces, channels, drainages, and other natural features are absent from the project site.

Land Cover Types

One land cover type was determined to be present within the project site as determined by the literature review and field survey:

- Developed lands and ornamental landscaping.

Developed lands are non-vegetated features and describe areas occupied by man-made structures, paving and other impermeable surfaces that cannot support vegetation. On-site developed lands consist of buildings, paved streets, paved access roads, parking lots, driveways, sidewalks, and other permanent structures. Landscaping associated with the developed lands is also included within this category. Landscaping is scattered throughout the site and consists of non-native horticulture trees, shrubs, garden flowers and plants, and turf grass planted for landscaping and aesthetic purposes. The developed areas provide virtually no habitat for wildlife species; however, birds could use the ornamental trees for roosting, foraging, and nesting. Developed lands are not considered a sensitive plant community.

Special-Status Plants

No listed, sensitive, or rare plant species were observed within the project site during the field survey. In addition, the literature review and field survey determined that the project site lacks suitable habitats, soils, and/or other factors to support special-status plant species.

Special-Status Wildlife

No listed or sensitive wildlife species were observed within the project site during the field survey. In addition, the literature review and field survey concluded that the project site lacks suitable and adequate biological and physical features that are needed to support special-status wildlife species. The wildlife observed and/or detected within the project site during the field survey represents the diversity of wildlife in the surrounding areas and in urban built out areas.

One species of particular concern that has been sighted in the City is burrowing owl (BUOW) (*Athene cunicularia*), a special-status wildlife species (MIG, Inc. 2016). The literature review and habitat assessment determined that the project site does not support suitable BUOW foraging and nesting habitat and clearly lacks suitable and adequate biological and physical features that are needed to support BUOWs. BUOWs are unlikely to occur within the project site now or in the future. For these reasons, focused BUOW surveys are not recommended.

Protected Trees

The City of Costa Mesa is committed to the preservation, proper maintenance and continued growth of its community forest. Landmark trees in Costa Mesa are protected under Title 15 (Public Works), Chapter V (Parkway Trees), Sections 15-138 of the Costa Mesa Municipal Code (Costa Mesa 2017). Landmark tree(s) include those on public property designated by the City Council to be particularly valuable because its species, condition and/or age, or because of its cultural or historical significance. Landmark trees may be located within parks or streetscape corridors. On private property, trees are voluntarily nominated by the property owner.

In addition to the above, the municipal code protects trees located on public property during construction. No person shall begin any construction or excavation without first providing sufficient protection for trees on public property, such as a fence, guard or frame within a 5-foot minimum distance of the tree trunk. This 5-foot minimum may be extended at the sole discretion of the director of public services for other unforeseen horticultural circumstances. Furthermore, no person shall install, replace, or alter any tree located within city medians, parkways or tree easements, without first obtaining a permit as specified in Chapter V.

Jurisdictional Areas

The literature review determined that the project site does not contain NWI wetlands. The jurisdictional assessment determined that the project site does not contain hydrological features, wetlands, marshes, vernal pools, channels with a bed or bank, or evidence of an ordinary high water mark (OHWM); therefore, the project site does not contain federal or state wetlands, waters, or habitats that are potentially subject to the jurisdictional authority of the United States Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), or CDFW.

Critical Habitats

The literature review determined that the project site is not located within a designated or proposed critical habitat for listed plant or wildlife species.

Wildlife Corridors

The literature review determined that the project site is not located within a CDFW designated Essential Habitat Connectivity Area or a Natural Landscape Block. The field survey determined that the project site does not function as a wildlife movement corridor. The project site does not contain wildlife travel routes, such as a riparian strip, ridgeline, or drainage; or wildlife crossings, such as a tunnel, culvert, or underpass. In addition, the project site is not located adjacent to nor does it connect large blocks of habitat. The project site does not represent a wildlife movement corridor because the site is completely developed and is completely surrounded by other development, walls, and roadways. These permanent structures serve as significant barriers to wildlife movement through the project site and region.

Nursery Sites

The project site does not support resident or migratory fish species and no native wildlife nursery sites or rookeries were observed within the project site during the field survey.

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?

Less than significant impact with mitigation incorporated. The project is not anticipated to have direct or indirect impacts on special-status plants or wildlife. In relation to the significance criterion, the project is anticipated to have no 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 CDFW or USFWS.

Even though the project site is developed, it supports landscaped/ornamental trees and/or structures that could potentially provide cover, foraging, and nesting habitat for resident and migratory birds that have adapted to urban areas, such as rock pigeons (*Columba livia*), mourning doves (*Zenaida macroura*), and American crows (*Corvus brachyrhynchos*). Mourning doves and American crows are protected by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (Sections 3503, 3503.5, and 3513), which render it unlawful to take native breeding birds, and their nests, eggs, and young. The project has the potential to result in direct impacts on breeding birds, if project activities occur during the breeding bird season and birds are nesting within the project site and/or immediate vicinity at that time. Temporary direct impacts on breeding birds could occur from increased noise, vibration, and dust during construction, which could adversely affect the breeding behavior of some birds, and lead to the loss (take) of eggs and chicks, or nest abandonment. Impacts on nesting birds would be considered significant. Implementation of Mitigation Measure BIO-1 would help to avoid, eliminate or reduce direct impacts on breeding birds to less than significant levels.

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. Riparian habitats are those on, relating to, or near the banks of a river, stream, creek, spring, seep, pond or lake. The project site is developed and completely dry and does not support aquatic features, natural or man-made water bodies, wetlands or jurisdictional areas necessary to support riparian vegetation. Sensitive plant communities (sensitive habitats) are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental impacts of projects (CDFG 2009). No riparian habitat or other sensitive natural communities were observed on the project site; therefore, the project is not anticipated to have direct or indirect impacts on riparian habitats or other sensitive natural communities. In relation to the significance criterion, the project is anticipated to have no substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS.

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 site is developed and completely dry and does not support aquatic features, natural water bodies, wetlands or jurisdictional areas; therefore, the project is not anticipated to have direct or indirect impacts on federally protected wetlands as defined by section 404 of the CWA. In relation to the significance criterion, the project is anticipated to have no substantial

adverse effect on federally protected wetlands through direct removal, filling, hydrological interruption, or other means.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

No impact. The project site does not contain and is not connected to an established wildlife corridor; therefore, the project is not anticipated to have direct or indirect impacts on wildlife corridors or wildlife movement. The project site does not support resident or migratory fish species or wildlife nursery sites; therefore, the project is not anticipated to have direct or indirect impacts on wildlife nursery sites. In relation to the significance criterion, the project is not anticipated to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors; or impede the use of native wildlife nursery sites.

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

No impact. The project site contains several landscape trees on private property; however, none of these trees meet the definition of landmark trees or would otherwise fall under the provisions of Title 15 (Public Works), Chapter V (Parkway Trees), Sections 15-138 of the Costa Mesa Municipal Code. The City of Santa Ana does not have a native tree or native shrub protective ordinance, and Title 15, Chapter V, Sections 15-138 of the Costa Mesa Municipal Code does not provide specific protection for trees on private property. For these reasons, the project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

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

No impact. The project site is located within areas covered by the Natural Community Conservation Plan/Habitat Conservation Plan for the Central/Coastal Subregion of Orange County (Central/Coastal Orange County NCCP/HCP), specifically within the Coastal Subregion of the plan (R.J. Meade Consulting, Inc. 1996). However, the site is not within the designated Reserve System or classified as a Special Linkage Area or Existing Use Area. Even though the City of Costa Mesa is within the NCCP/HCP plan boundary, the City is not a signatory to the plan implementation agreement (MIG, Inc. 2016). Not being a signatory means that any projects receiving development permits in the City would not be covered for incidental take of state or federally listed species addressed in the Central/Coastal Orange County NCCP/HCP.

The project site does not contain undeveloped natural lands subject to the Central/Coastal Orange County NCCP/HCP. The project site does not contain biological features that could potentially support covered habitats or covered plant/wildlife species and the project is not anticipated to impact covered habitats or species. For these reasons, the project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

Mitigation Measures

This section lists the measures recommended to avoid, eliminate, and/or reduce the project's anticipated and potential direct and indirect impacts on biological resources to less than significant levels.

MM BIO-1 Construction during Breeding Season and Pre-construction Breeding Bird Surveys

To comply with the MBTA and the California Fish and Game Code, and to avoid and reduce direct and indirect impacts on migratory non-game breeding birds, and their nests, young, and eggs to less than significant levels, the following measures shall be implemented.

- Project activities that would remove or disturb potential nest sites would be scheduled outside the breeding bird season, if feasible. The breeding bird nesting season is typically from February 15 through September 15, but can vary slightly from year to year, usually depending on weather conditions. Removing all physical features that could potentially serve as nest sites outside of the breeding bird season also would help to prevent birds from nesting within the project site during the breeding season and during construction activities.
- If project activities that would remove or disturb potential nest sites cannot be avoided during February 15 through September 15, a qualified biologist would conduct a pre-construction clearance and nesting bird survey to search for all potential nesting areas, breeding birds, and active nests or nest sites within the limits of project disturbance up to seven days prior to mobilization, staging and other disturbances. The survey shall end no more than three days prior to vegetation, substrate, and structure removal and/or disturbance.
- If no breeding birds or active nests are observed during the pre-construction survey, or if they are observed and would not be disturbed, then project activities may begin and no further mitigation would be required.
- If an active bird nest is located during the pre-construction survey and potentially would be disturbed, a no-activity buffer zone would be delineated on maps and marked (flagging or other means) up to 500 feet for special-status avian species and raptors, or 75 feet for non-special-status avian species. The limits of the buffer would be demarcated so as to not provide a specific indicator of the location of the nest to predators or people. Materials used to demarcate the nests would be removed as soon as work is complete or the fledglings have left the nest. The biologist would determine the appropriate size of the buffer zone based on the type of activities planned near the nest and bird species because some bird species are more tolerant than others to noise and other disturbances. Buffer zones would not be disturbed until a qualified biologist determines that the nest is inactive. Additionally, the area would also not be disturbed until the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young would no longer be impacted by project activities.

- Birds or their active nests will not be disturbed, captured, handled, or moved. Inactive nests may be moved by a qualified biologist, if necessary, to avoid disturbance by project activities.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
5. Cultural and Tribal Cultural Resources *Would the project:*				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
e) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☐	☒	☐
f) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒

Environmental Setting

The history of Costa Mesa is the story of three communities of the past; an old boomtown called Fairview, a farming colony named Paularino, and the Village of Harper. During the year 1887, the town of Fairview was introduced. It only lasted until 1889 because of the land boom of Southern California's fall. The farming community of Paularino did not amount to more than a name with a few scattered farmhouses, one public school building, and a railroad siding. Finally, Harper came after the decline of Paularino. Harper would be renamed Costa Mesa in 1920.

The City of Costa Mesa has gathered a Historical Resources Inventory that can be found within the City's General Plan EIR on page 4.5-4, Table CUL-1. The table outlines 31 historical resources that are either eligible for the National, State, or Local Register Listings.

FCS prepared a Phase I Cultural Resources Assessment (CRA) dated November 17, 2017, which is included as Appendix B of this report. As part of the Phase I CRA, FCS conducted a records search at the SCCIC on August 22, 2017 for the project site. Sources consulted to identify historic properties included the current inventories of the National Register of Historic Places (NRHP), California Register of Historical Resources (CR), California Historical Landmarks, and California Points of Historical Interest. FCS also reviewed the Historic Resource Inventory and archival maps to determine the existence of previously documented cultural resources. The record search included a 0.5-mile buffer around the perimeter of the project area. The records searches show that two resources are recorded within a 0.5-mile radius of the subject property. Both resources are historic sites. No recorded prehistoric sites are recorded on or within 0.5 mile of the project site.

Environmental Evaluation

Cultural Resources

Would the project:

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

Less than significant impact. The evaluation and assessment of built-environment resources located within the project site was conducted by Pamela Daly, M.S.H.P., Principal Architectural Historian, and is included as Appendix G of this report. In order to identify and evaluate the subject built-environment resources as potential historical resources, a multi-step methodology was utilized. An inspection of the property and the existing buildings, combined with a review of archival materials provided by Vanguard University, was performed to document existing conditions and assist in assessing and evaluating the property for significance. Photographs were taken of the individual buildings on the Vanguard University campus, including photographs of architectural details, surrounding buildings, or other points of interest, during the intensive-level survey. Additional research was performed by accessing regional newspaper archives about the history of Santa Ana Army Air Base (SAAAB), the Southern California Bible College (SCBC), the Southern California College, Southern California University, Vanguard University, and the history of SAAAB from the California State Military Museum.

Ms. Daly performed a pedestrian-level survey of the buildings scheduled for removal from the project area on December 18, 2017.

The buildings surveyed included 10 permanent structures and seven portable/temporary structures. Four of permanent buildings are the last SAAAB barracks buildings that were rehabilitated and reused by SCBC; the gymnasium building that may have also been constructed at SAAAB, and then used by Orange Coast College before being moved to SCBC in 1960; and three buildings that date from the 1960s–1970s period of Modern architecture.

The evaluations concluded that some of the buildings were of insufficient age to warrant evaluation, had been physically altered, resulting in loss of integrity, or did not possess exceptional design characteristics. In short, none of the buildings are eligible under federal, state, or local jurisdiction for listing individually or as part of an historic district. As such, less than significant impacts would occur.

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

Less than significant impact with mitigation incorporated. During the construction phase of the project, ground-disturbing activities such as grading or excavation could disturb previously unidentified subsurface archaeological resources. However, as described in previous sections, the project site consists of developed land that has been permanently disturbed by the construction of belowground and aboveground improvements (buildings, driveways, streets, hardscapes, and utilities). Given the highly disturbed condition of the site, the potential 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. Furthermore, implementation of Mitigation Measures CUL-1 through CUL-3 would further reduce the project's impacts to a less than significant level for archaeological resources.

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

Less than significant impact with mitigation incorporated. The results of the Vertebrate Paleontology Records Check indicated that no previously recorded paleontological resource localities are present within the boundaries of the project site. However, the underlying formation is considered highly sensitive for vertebrate marine fossils at depths of 8 to 10 feet or deeper. Therefore, construction-related monitoring for paleontological resources is recommended at this time, as there is a higher potential to encounter such resources during construction-related earthmoving activities. Mitigation Measures CUL-4 and CUL-5 would reduce impacts to less than significant.

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

Less than significant impact. As noted above, the project site has been significantly disturbed and developed. Therefore, the potential for the disturbance of any human remains is considered low. However, in the event that human remains are encountered during earth removal or disturbance activities, 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. If the Coroner determines the human remains are 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 (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 impacts involving the disturbance of human remains to less than significant levels.

Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

e) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

Less than significant impact. The City of Costa Mesa has gathered a Historical Resources Inventory that can be found within the City's General Plan EIR on page 4.5-4, Table CUL-1. The table outlines 31 historical resources that are either eligible for the National, State, or Local Register Listings. The project site is not located on or within the vicinity of any site listed on that table. A records search conducted at the South Central Coastal Information Center did not indicate any recorded archaeological sites are located on the project. Moreover, any phase of this project will be conducted in compliance with Assembly Bill (AB) 52 and Senate Bill (SB) 18, which require lead agency consultation with California Native American tribes for projects that involve an amendment to a general plan or specific plan, for the purpose of preserving or mitigating impacts to tribal cultural resources. The NAHC has provided the City a list of tribes requesting consultations pursuant to AB 52.

f) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than significant impact. Each phase of this project will be conducted in compliance with AB 52 and SB 18, which require lead agency consultation with California Native American tribes for projects that involve an amendment to a general plan or specific plan, for the purpose of preserving or mitigating impacts to tribal cultural resources. The NAHC has provided the City a list of tribes requesting consultations pursuant to AB 52. The City sent AB 52 notification letters to the tribes on December 14, 2017.

Standard Conditions

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 4.5-3 If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section

5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Mitigation Measures

MM CUL-1 In the event that buried cultural resources are discovered during construction, operations shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archeologist and shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria.

MM CUL-2 If the resources are determined to be unique historic resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.

MM CUL-3 No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any archaeological artifacts recovered as a result of mitigation shall be donated to a qualified scientific institution approved by the Lead Agency where they would be afforded long-term preservation to allow future scientific study.

MM CUL-4 In the event that fossils or fossil-bearing deposits are discovered during construction activities, excavations within a 50-foot radius of the find shall be temporarily halted or diverted. The project contractor shall notify a qualified paleontologist, approved by the County of Orange, to examine the discovery. The paleontologist shall document the discovery as needed (in accordance with Society of Vertebrate Paleontology [1995] standards), evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5.

MM CUL-5 A qualified paleontological monitor will be on-site to monitor all excavations occurring at depths of 8 feet or deeper. In the event of an important paleontological discovery, the paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If the Applicant determines that avoidance is not feasible, and the paleontologist cannot easily jacket and/or remove the specimen(s), the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The plan shall be submitted to the Lead Agency for review and approval prior to implementation, and the Applicant shall adhere to the recommendations in the plan.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
6. Geology and Soils *Would the project:*				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Environmental Setting

Information and analysis for Geology and Soil impacts are based on the City of Costa Mesa General Plan.

The project site is located within a seismically active region that contains active earthquake faults, including the San Andreas, Newport-Inglewood, and the Yorktown faults. The site is not located within an Alquist-Priolo Fault-Rupture Hazard Zone established by the State geologist. According to Figure 4.6-6, Geologic Hazards Map, in the General Plan EIR, the project is adjacent to the approximate location of the Newport-Inglewood Fault Zone: Bolsa-Fairview fault. The site is not

located in a State Seismic Hazard Zone for liquefaction identified on the City's General Plan EIR Liquefaction Map, Figure 4.6-4.

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.

Less than significant 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 to occur along active faults, and typically occurs during earthquakes of magnitude 5.0 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).

As mentioned above, the site is not located within an Alquist-Priolo Fault-Rupture Hazard Zone established by the State Geologist. As such, the project would not expose substantial numbers of people or structures to significant risk of loss, injury, or death due to a rupture of a known fault. Therefore, impacts would be less than significant.

ii) Strong seismic ground shaking?

Less than significant impact. The project is located in Southern California, and would therefore be subject to strong ground shaking associated with seismic activity, especially since it is located near faults with the potential to cause moderate to large earthquakes. As previously discussed in Impact 6a)i, the project site is not located within an earthquake fault zone. In addition, the project would be required to adhere 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 reduced to less than significant levels.

iii) Seismic-related ground failure, including liquefaction?

Less than significant impact. Liquefaction describes the behavior whereby a saturated or partially saturated soil substantially loses strength and stiffness in response to an applied stress, usually strong ground shaking during an earthquake. 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. According to the General Plan EIR, the project site is not located within a State Seismic Hazard Zone for liquefaction.

The project must be compliant with Standard Condition 4.6-1, which requires compliance with the California Building Code. The project must also be compliant with Standard Condition 4.6-2, which requires that the applicant, prior to project implementation, must prepare a geotechnical report for the proposed buildings that fully identifies any site-specific risk for liquefaction. The geotechnical report would also outline certain building recommendations in accordance with the CBC. Providing a geotechnical report for the project would identify the liquefaction potential and appropriate design considerations, and thus reduce the impacts to a less than significant level.

iv) Landslides?

No impact. The project site is located within a relatively flat area. Therefore, landslides are not anticipated to occur on the project site. The California Geologic Survey 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 map—Newport Beach Quadrangle (California Department of Conservation released April 15, 1998)—the project site is not located in an earthquake-induced landslide zone of required investigation. Therefore, no impacts would occur from landslides.

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

Less than significant impact. The project site is currently developed. The project site is generally flat. The highest potential for erosion impacts would occur during the project's grading and excavation phases. During construction, there is potential for temporary erosion to occur. To reduce the erosion-related impacts, the project would be required to comply with BMPs and all federal, state, and local regulations for erosion control. In addition, as discussed in Section 9.a), the project would also be subject to compliance with the National Pollutant Discharge Elimination System (NPDES) permitting process, since one or more acres of soil would be disturbed. Compliance with the aforementioned regulations would ensure that project-related erosion impacts would be less than significant. As such, impacts would be less than significant.

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. Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are generally susceptible to subsidence include those with high silt or clay content. 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. Thus, impacts would be less than significant.

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 contain significant amount of clay particles that swell and shrink periodically when exposed to liquid and then dried. Some of the geologic units in the City, including both surficial soils and bedrock, have fine-grained components that are moderate to highly expansive. The soils located on-site could have the potential to be expansive, according to the California Geologic Survey. The project-specific geotechnical report will identify on-site soils and evaluate such soils for expansiveness. The final design of the project buildings would be based on the results of the geotechnical report, thereby ensuring that impacts would be reduced to less than significant levels.

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 proposed project would be connected to the existing wastewater treatment system that the school currently utilizes. The project does not propose the use of septic tanks. As such, no impacts would occur.

Standard Conditions

SC 4.6-1 The Applicant shall comply with the requirements of the 2016 California Building Code, 2016 California Residential Code, 2016 California Electrical Code, 2016 California Mechanical Code, 2016 California Plumbing Code 2016 California Green Building Standards Code, and the 2016 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 2016 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 on-site soils to cause unstable conditions. Design, grading, and construction shall be performed in accordance with the requirements of the California Building Code applicable at the time of grading, appropriate local grading regulations, and the recommendations of the geotechnical consultant as summarized in a final written report, subject to review by the City of Costa Mesa Department of Building Safety.

SC 4.6-3 The 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, 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.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
7. Greenhouse Gas Emissions *Would the project:*				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

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. Although construction-related GHG emissions are temporary in nature, the total amount of emissions could have a substantial contribution to a project's total GHG emissions. SCAQMD recommends that construction-related GHG emissions be amortized over the life of the project, which is defined as 30 years, and added to annual operational emissions. As described in Appendix A, Greenhouse Gas Technical Study, construction-related GHG emissions were modeled using the same assumptions and model (CalEEMod Version 2016.3.1) as those for air quality emissions. Construction-related GHG emissions would occur from fossil fuel combustion for heavy-duty construction equipment, material delivery and haul trucks, and construction worker vehicles. Table 10 presents the project's total construction-related GHG emissions and amortized construction emissions.

Table 10: Construction Greenhouse Gas Emissions—Unmitigated

Construction Phase	Total Emissions (MT CO_2e)
Demolition	87.7
Site Preparation	35
Grading	506
Building Construction-2018	518.1
Building Construction-2019	894.6
Building Construction-2020	515

Table 10 (cont.): Construction Greenhouse Gas Emissions—Unmitigated

Construction Phase	Total Emissions (MT CO_2e)
Paving	41.1
Architectural Coating	13.2
Total Construction Emissions	**2,611**
30 years Amortized [1]	87

Notes:
MT CO_2e/yr = metric tons of carbon dioxide equivalent per year
Unrounded numbers were used in calculations, including reported totals.
[1] Pursuant to SCAQMD's guidance, total construction emissions are amortized over the 30-year life of the project.
Source: CalEEMod Output (Appendix A).

Following buildout of the project, long-term operational emissions would be generated from area-, energy-, and mobile-source emissions. In addition, as described in the Greenhouse Gas Technical Study, section 3.3, GHG emissions with water consumption, electricity and solid waste disposal would also be generated by the project operation. Table 11 shows the estimated operational-related GHG emissions from existing uses. Table 12 shows the estimated operational GHG emissions along with the amortized construction emissions. The net changes are compared with the SCAQMD regional emission significance thresholds.

Table 11: Existing Operational GHG Emissions (2020)

Source	Total Emissions (MT CO_2e)
Area	<1
Energy	1,732
Mobile	5398
Waste	177
Water	46
Existing Stationary Source	71
Total Existing Operation Emissions	**7,424**

Table 12: Projected Operational GHG Emissions (2020)

Source	Total Emissions (MT CO_2e)
Area	<1
Energy	2364
Mobile	6808
Waste	223
Water	57.7
Total Projected Operation Emissions	9,453
Total Existing Operation Emissions	7,424
Operational Net Emissions	2,029
30 years Amortized	87
Total Net Project Emissions	2,116
SCAQMD Threshold of Significance	3,000
Exceeds Threshold	No

Note:
MT CO_2e = metric tons of carbon dioxide equivalent
Source: CalEEMod output file, see appendix A.

As shown above, the project's net annual operational GHG emissions with amortized construction emissions are less than the SCAQMD's significance threshold. Therefore, the project's annual GHG emissions would not exceed the applicable threshold of significance and its long-term GHG emissions would not result in a significant impact to the environment. The impact would be less than significant.

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. The City of Costa Mesa does not currently have formal GHG emissions reduction plans or recommended emissions thresholds for determining significance associated with GHG emissions from development projects. In addition, the City has not completed the GHG inventory, benchmarking, and goal-setting process required to identify a reduction target and to take advantage of the streamlining provisions contained in the CEQA Guidelines amendments adopted for SB 97. Since no other local or regional Climate Action Plan is in place, the project is assessed for its consistency with ARB's adopted Scoping Plan. This would be achieved with an assessment of the project's compliance with Scoping Plan measures.

AB 32 Scoping Plan

The ARB's adopted AB 32 Scoping Plan (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 2008a). 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 shown below in Table 13, 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.

Table 13: Scoping Plan Measures Consistency Analysis

Scoping Plan Reduction Measure	Project Consistency
1. California Cap-and-Trade Program Linked to Western Climate Initiative. Implement a broad-based California Cap-and-Trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.	**Not applicable.** Although the cap-and-trade system is on-going, the project is not one targeted by the cap-and-trade system regulations, and, therefore, this measure does not apply to the project.
2. California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	**Not directly applicable.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. However, the standards would be applicable to the light-duty vehicles that would access the project site.
3. Energy Efficiency. Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	**Consistent.** This is a measure for the State to increase its energy efficiency standards in new buildings. The project is required to build to the latest standards and would increase its energy efficiency through compliance.
4. Renewable Portfolio Standard. Achieve 33 percent renewable energy mix statewide. Renewable energy sources include (but are not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.	**Not applicable.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. Southern California Edison is required to increase its percent of power supply from renewable sources to 33 percent by the year 2020 pursuant to the Renewable Portfolio Standard. The project would purchase power from more renewable sources and could install renewable solar power systems that will assist the utility in achieving the mandate.

Table 13 (cont.): Scoping Plan Measures Consistency Analysis

Scoping Plan Reduction Measure	Project Consistency
5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.	**Not directly applicable.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. All fuel consumption associated with the project's construction and operational activities would use fuel that meets these standards.
6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles. This measure refers to SB 375.	**Not applicable.** The project is not related to developing GHG emission reduction targets.
7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.	**Not directly applicable.** The standards would be applicable to the light-duty vehicles that would access the project site.
8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	**Not applicable.** The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
9. Million Solar Roofs Program. Install 3,000 Megawatts of solar-electric capacity under California's existing solar programs.	**Consistent.** This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. The project would comply with Title 24, which requires new buildings to be "solar ready." The project would not preclude the implementation of this strategy.
10. Medium/Heavy-Duty Vehicles. Adopt medium and heavy-duty vehicle efficiency measures.	**Not directly applicable.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. The standards phase in over model years 2014 through 2018 and are applicable to the vehicles that access the project site.
11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive CH_4 emissions and reduce flaring at refineries.	**Not applicable.** This measure would apply to the direct GHG emissions at major industrial facilities emitting more than 500,000 MT CO_2e per year. The project is not an industrial land use.
12. High Speed Rail. Support implementation of a high-speed rail system.	**Not applicable.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. The proposed project would not preclude the implementation of this strategy.
13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	**Consistent.** The project would comply with the California Energy Code, and thus incorporate applicable energy efficiency features designed to reduce project energy consumption.

Table 13 (cont.): Scoping Plan Measures Consistency Analysis

Scoping Plan Reduction Measure	Project Consistency
14. High Global Warming Potential Gases. Adopt measures to reduce high global warming potential gases.	**Not applicable.** This measure is applicable to the high global warming potential gases that would be used by sources with large equipment (such as in commercial refrigerators) that are not part of this residential project.
15. Recycling and Waste. Reduce CH_4 emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero waste.	**Consistent**. The project would utilize City of Costa Mesa recycling services.
16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	**Not applicable.** The project site is not forested; therefore, no preservation is possible.
17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.	**Consistent.** The project would comply with the California Energy Code and the California Updated Model Landscape Ordinance. With adherence to these regulations, the project will consume energy and water in an efficient manner.
18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.	**Not applicable.** The project site is not designated or in use for agriculture purposes. No grazing, feedlot, or other agricultural activities that generate manure occur on-site or are proposed to be implemented by the project.
Source of ARB Scoping Plan Reduction Measures: California Air Resources Board 2008.	

As shown in Table 13, the project is consistent with the applicable strategies and would not conflict with the recommendations of AB 32 in achieving a statewide reduction in greenhouse emissions. The impact would be less than significant.

In summary, the project incorporates a number of features that would minimize GHG emissions. These features are consistent with project-level strategies identified by the ARB's Scoping Plan. As shown in Table 13, the project would achieve a net reduction in GHG emissions compared with baseline emissions. Furthermore, annual project-generated annual emissions would fall below the SCAQMD bright-line threshold of 3,000 MT CO_2e per year for mixed-use development. Considering this information, the project would not significantly hinder or delay the State's ability to meet the reduction targets contained in AB 32 or conflict with implementation of the Scoping Plan. The project promotes the goals of the Scoping Plan through implementation of design measures that reduce energy consumption, water consumption, and reduction in vehicle miles traveled. Therefore, the project does not conflict with any plans to reduce GHG emissions. The impact would be less than significant.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
8. Hazards and Hazardous Materials *Would the project:*				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Environmental Setting

A Phase I Environmental Site Assessment (ESA) was prepared in November 2017 for the project and is included as Appendix C of this report. The purpose of the Phase I ESA was to identify recognized

environmental conditions associated with the project site. To achieve this objective, the Phase I ESA included visual observations of the project site and observations of the surrounding properties, a visual survey for suspect asbestos-containing materials/debris piles/lead-based paint (LBP), limited historical land use review, review of regulatory database listings, and reviews of readily available geologic and hydrogeologic data. This report represents a summary of these findings. A parcel map, campus map, current street and topographic maps, historical aerial photos and topographic maps, site photographs, Sanborn Map abstract, City Directory abstract, Wetlands Map, flood insurance map, regulatory database report, questionnaires, and additional supporting documentation are included as attachments to this report.

FCS visually observed the project site on November 29, 2017 to identify potential sources or indications of chemical contamination such as underground storage tanks (USTs), aboveground storage tanks (ASTs), polychlorinated biphenyls (PCBs), chemicals and hazardous waste materials, areas with surficial staining or distressed vegetation, and visual evidence of asbestos-containing materials (ACMs) and/or LBP. Lands immediately adjacent to the project site were visually inspected for possible sources of contamination or environmental impairment, which could migrate to the project site via surface water runoff, groundwater transport, and other pathways. FCS conducted a regulatory records review, reviewed historical aerial photographs, historical maps, building permits (upon availability), and contacted regulatory agency personnel.

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. During demolition and construction activities associated with the proposed project, potentially hazardous building materials (LBP, asbestos, mercury, etc.) may be encountered because of the age of the structures currently present on the site. Removal of these materials, if present, by contractors licensed to remove and handle these materials in accordance with existing federal, state, and local regulations would ensure that risks associated with the transport, storage, use, and disposal of such materials would be reduced to less than significant.

The proposed project would be required to comply with existing hazardous materials regulations, and verification of compliance would be monitored by state agencies (such as the Occupational Safety and Health Administration in the workplace or Department of Toxic Substances Control for Hazardous waste) and local agencies (such as the Costa Mesa Fire Department [CMFD]). According to Costa Mesa Municipal Code (CMMC) Title 7 Chapter II, the City adopted the California Fire Code, 2016 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 (e.g., 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.

In addition, the proposed project would result in the on-site use of common types of hazardous materials, such as cleaning and degreasing solvents, fertilizers, pesticides, and other materials used by the maintenance team on-site. Thus, the project would result in an increase in the use of cleaning products and other materials routinely used in building maintenance and landscaping. These potentially hazardous materials, however, would not be of a type or occur in sufficient quantities to pose a significant hazard to the public and safety or the environment. Therefore, project implementation would result in less than significant impacts.

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. The proposed project involves twelve separate projects that involve the removal and/or reconstruction of buildings on campus. Based on the nature and limited quantities of the hazardous materials that would be used and stored during construction (e.g., diesel-fueled equipment, asphalt), and operation (e.g., household cleaners) of the project, it is unlikely that upset and accident conditions involving the release of hazardous materials into the environment would occur. As indicated in Impact 8.a) above, all hazardous materials would be handled in accordance with applicable laws.

Buildings that were constructed prior to 1978 are likely to contain asbestos-containing materials (ACMs) and LBP. Because of the history of the project site, there is a potential that ACMs are present. According to available historical sources, the subject property was developed as early as 1950. If ACMs are identified and need to be disturbed, repaired or removed, a licensed abatement contractor should be consulted. The project would comply with the survey, notification and work plan requirements of SCAQMD Rule 1403, Asbestos Emissions from Demolition/Renovation Activities. Suspect ACMs can also be managed under the auspices of an Operations and Maintenance (O&M) plan. In addition, implementation of Mitigation Measure HAZ-1 would reduce impacts to a less than significant level. Standard Conditions SC 4.8-1 through 4.8-5 are included to 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.

Compliance with applicable regulations, Standard Conditions, and Mitigation Measure HAZ-1 would ensure impacts related to accidental release of hazardous materials into the environment during project construction would be less than significant.

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

Less than significant impact. The project site itself is a higher education institution. In addition, Hoover Elementary School is located approximately 0.2 mile east of the project site. As explained in discussions in Impacts 8a) and 8b), the project would not involve the use of significant quantities of

hazardous materials and therefore would not have the potential to expose nearby schools to hazardous materials, substances, or wastes. 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. Impacts would be less than significant.

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

No impact. The California Department of Toxic Substances Control compiles a list, most commonly known as a Cortese List, of known sites containing hazardous materials. The project site is not listed as a known site containing hazardous materials; therefore, no impacts would occur.

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

Less than significant impact. The project site is approximately 5.5 miles north of John Wayne Airport and is not within any Airport Impact Zone or Airport Safety Zone. However, the project site, and the majority of the City, is located within the Federal Aviation Regulation (FAR) Part 77 Notification Area for John Wayne Airport and the Airport Environs Land Use Plan (AELUP) Height Restriction Zone. FAR Part 77 Notification allows the Federal Aviation Administration (FAA) to identify potential aeronautical hazards in advance to prevent or minimize the adverse impacts to the safe and efficient use of navigable airspace. Thus, the Applicant would be required to contact the FAA for project review (FAA 2014). The project is also located within the AELUP Height Restriction Zone, and would be required to comply with the standards, criteria, and procedures promulgated by the FAA to ensure the stability of local air transportation. Upon approval, project implementation would not result in an airport-related safety hazard for people residing or working at the proposed project. Impacts would be less than significant.

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. The nearest private airstrip is the South Coast Metro Center Heliport, located approximately 5.5 miles northeast of the site. Therefore, project implementation would not result in an airstrip-related safety hazard for people residing or working at the proposed project.

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 considered the City's evacuation routes in its planning. General Plan Safety Element Figure S-7, Emergency Evacuation Routes, illustrates the City's emergency evacuation routes and indicates that Adams Avenue, located approximately 7 miles south of the project site, and Harbor Boulevard, located west of the project site, are designated emergency evacuation routes. 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 wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

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

Standard Conditions

SC 4.8-1 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.

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 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 4.8-3 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.

SC 4.8-4 Prior to investigations, demolition, or renovation, all activities shall be coordinated with Dig Alert (811).

SC 4.8-5 Visual inspections for areas of impact to soil shall be conducted during site grading. If unknown or suspect materials are discovered during construction by the contractor that are believed to involve hazardous wastes or materials, the contractor shall:

- Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area;
- Notify the City Engineer and Costa Mesa Fire Department;
- Secure the area(s) in question;

Implement required corrective actions, including remediation if applicable.

Mitigation Measures

MM HAZ-1 Based on the age of the existing improvements, there is a potential that asbestos-containing materials (ACMs) and lead-based paints (LBPs) are present within the on-site structures. In the event that on-site structures are to be impacted or demolished during redevelopment/construction activities, an asbestos and lead paint survey shall be conducted prior to the disturbance or removal of any suspect ACMs and LBPs; these materials should be characterized for asbestos and lead by a reliable method. All activities involving ACMs and LBPs shall be conducted in accordance with governmental regulations.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
9. Hydrology and Water Quality *Would the project:*				
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Environmental Setting

A Water Quality Management Plan (WQMP) Figure C2, prepared by BKF Engineers, was provided by the applicant for peer review by KWC Engineers. The WQMP Figure and Peer-Review Memo are included as Appendix D of this report. Based on Figure C2, the concept of treating urban runoff generated from the Vanguard University Campus using Bio-Retention BMPs appears to be feasible and consistent with the recommendations as specified in the "Technical Guidance Document-California State Water Resources Control Board" dated March 22, 2011. As specified in the guidance document, Bio-Retention BMPs can be used for treating runoff generated from commercial, residential, mixed use, institutional, and subdivision type of land uses.

As indicated in Figure C2, the campus is divided into 24 drainage areas, each with its own Bio-Retention area shown. Water quality calculations were tabulated for each drainage area indicating the required bio-retention area needed for BMP treatment. The required bio-retention areas per the tabulated calculations were shown and approximately drawn to scale (Figure C2) and appear to be located appropriately to capture drainage of surface flows generated from buildings and parking areas.

Based on the information provided, the review concluded that the bio-retention BMPs as presented in Figure C2 of the Vanguard University Master Plan are feasible and that the level of detail provided is appropriate for master planning level purposes, unless the City request further details during the permitting process.

Mesa Water District currently provides high-quality drinking water to residents and business in Costa Mesa, including the project site, parts of Newport Beach, and areas of unincorporated Orange County, including John Wayne Airport. Mesa Water District currently supplies water to 110,000 residents in an 18-square-mile area.

Environmental Evaluation

Would the project:

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

Less than significant impact with mitigation incorporated. Project-related impacts related to water quality could occur over three different periods:

- During demolition of existing uses, when risk of pollution exposure is present;
- 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 remain similar to existing conditions.

National Pollutant Discharge Elimination System

Under Section 402 of the Clean Water Act, the EPA has established regulations under the 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 RWQCB to preserve, protect, enhance, and restore water quality.

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 1 or more acres and 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 or maps that show the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography required to list BMPs the discharger will use to protect stormwater both before and after construction, and drainage patterns across the project site. 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 stormwater runoff from the project site. Prior to the City’s issuance of a Grading or Building Permit for the project, the Development Services Department and Public Services Department would review the plans and impose terms, conditions, and requirements, as needed, in accordance with CMMC Section 8-32. Additionally, the City enforces its Master Plan of Drainage, and CMMC Title 15 Chapter III addresses drainage protocols within the City during construction of new projects.

Overall, the project's demolition and construction activities would be subject to compliance with NPDES requirements, which include obtaining coverage under the General Construction Permit by filing the Permit Registration Documents (an NOI and a 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 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.

Developers must incorporate appropriate WQMP requirements into their project plans. Each Permittee must approve the project plan as part of the development plan approval process and prior to issuing Grading and Building Permits for projects covered by the model WQMP requirements.

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 Orange County DAMP.

To summarize, the project requires compliance with NPDES, DAMP, and CMMC requirements. Compliance with the aforementioned regulations would ensure that the long-term, project-related impacts to water quality would be less than significant. Furthermore, implementation of Mitigation Measure HYD-1 would ensure project-related impacts to water quality would be less than significant.

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

Less than significant impact. The project would result in a less than significant increase in water demand. The project would meet or exceed all building code requirements including Title 24 and CALGreen. The project would also utilize water efficient toilets, fixtures, and irrigation systems, as well as drought-tolerant landscaping to reduce the project's overall water demand.

The proposed project would not deplete groundwater supplies nor substantially interfere with groundwater recharge such that there would be a new deficit in aquifer volume or a lowering of the

local groundwater table level, as it would comply with the conditions set forth by the NPDES, DAMP, and CMMC. As such, project implementation would therefore result in a less than significant impact to groundwater supplies.

As discussed further under Impact 17.b), Utilities, Mesa Water has concluded it is capable of meeting the water demands of their customers in normal, single dry, and multiple dry years between 2020 and 2040. Further, Mesa Water's water supply is anticipated to significantly increase with completion of the Colored Water Treatment Facility (CWTF) expansion. Therefore, project implementation would not substantially deplete groundwater supplies. 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 impact. The City's storm water collection system includes catch basins, drainage basins, pumping stations, and force mains. As part of the 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.

Standard Condition SC 4.9-2 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 Standard Conditions, the project would result in less than significant impacts to on- or off-site erosion and/or siltation.

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. Project implementation would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. 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 15-65 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 also be subject to compliance with the CMMC provisions and thus would result in less than significant impacts on drainage patterns and flooding.

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

Less than significant impact. The project would continue to 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 the 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. 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 Federal Emergency Management Agency Flood Insurance Rate Map are identified as a Special Flood Hazard Area (SFHA), which 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 1-percent annual chance flood is also referred to as the base flood or 100-year flood.

The project is not located within an SFHA. Therefore, project development will not place housing within a 100-year flood hazard area.

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

No impact. As previously addressed in Impact 9g), the project site is not located within the 100-year floodplain. Therefore, no impacts associated with placing structures within a 100-year flood hazard area would occur.

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?

No impact. As depicted in Orange County's General Plan Figure IX-9: Prado Dam and Santiago Reservoir Inundation Areas, the project site is not located within the inundation area of a levee or dam. 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. No impacts would occur.

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. The project is located approximately 0.89 mile northwest from the Upper Newport Bay.

A tsunami is a sea wave generated by an earthquake, landslide, volcanic eruption, or even by a large meteor hitting the ocean. The Pacific Ocean is located approximately 3.5 miles from the project site. According to General Plan S-5 Figure: Tsunami and Sea Level Rise Hazard Areas, 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 (mudslide, debris flow) does not exist within the project area, as steep slopes are not located on or close 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.

Standard Conditions

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 Services 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 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.

SC 4.9-3 Prior to approval of Plans, the project shall fulfill the City of Costa Mesa Drainage Ordinance No. 06-19 requirements.

SC 4.9-4 The project Applicant shall submit grading plans, an erosion control plan, and a hydrology study.

Mitigation Measures

MM HYD-1 A preliminary WQMP shall be prepared and submitted to the City for approval prior to the issuance of grading permits.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
10. Land Use and Planning *Would the project:*				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	☐	☐	☐	☒

Environmental Evaluation

Would the project:

a) Physically divide an established community?

No impact. The proposed project is located at 55 Fair Drive. More specifically, the site is located on approximately 38 acres bounded by Fair Drive, Vanguard Way, and Newport Boulevard. Vanguard University was founded in 1920 and has been at its current location since 1950. The site is in a highly urbanized area of the City and is currently zoned for I&R—Institutional and Recreational and has a land use designation of Public/Institutional.

The project involves the reconstruction of existing buildings on Vanguard University's campus. The objective of the project is to enhance the area by evolving the site to support the collegial environment that Vanguard University seeks to provide to its students and community.

The campus is located in a residential area. However, implementation of the project would not physically divide an established community, as the University has existed on-site since the 1950s. The project's design and use would be compatible with the surrounding uses and would not result in alteration or modification of the existing public street or sidewalk systems and patterns in the area. Furthermore, development of the proposed project would not physically divide the existing communities in the area in any way because the project would be developed within the confines of the existing project site and would not introduce roadways or other infrastructure improvements that would bisect or transect the residential communities. Access to the existing residential communities would also not be interrupted as a result of the project development, since residents of these communities do not have to cross the project site to access their community.

Therefore, the proposed project would not create any land use barriers or otherwise divide or disrupt the physical arrangement of the existing residential communities. No impacts would occur and no mitigation measures are necessary.

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?

No impact. Adopted land use regulations applicable to the project site include the City's General Plan and Zoning Regulations. Following is an analysis of the proposed project's consistency with these land use regulations.

The Land Use Element of the General Plan directs long-range development in the City by indicating the location and extent of development to be allowed. The General Plan sets forth land use goals, policies, and objectives that guide new development. The City of Costa Mesa General Plan Land Use Map identifies the land use designation of the project site as Public/Institutional.

City of Costa Mesa 2035 General Plan

The Land Use Element of the General Plan directs long-range development in the City by indicating the location and extent of development to be allowed. The General Plan sets forth land use goals, policies, and objectives that guide new development. The City of Costa Mesa General Plan Land Use Map currently identifies the land use designation of the project site as Public/Institutional. According to the General Plan (pp. LU-49–LU-50) "The Public/Institutional designation applies to both publically and privately owned land that provides recreation, open space, health, and educational opportunities, as well as uses that provide a service to the public . . . . Areas included in this designation are park sites, health care facilities, educational institutions, religious facilities, fairgrounds, and public facilities."

General Plan Consistency

According to the City's General Plan Land Use Element, Costa Mesa is 99 percent built out, with 46 percent residential, 14 percent commercial, and 10 percent industrial land uses. The City's General Plan land use designation for the project site is Public/Institutional. This land use designation applies to publicly and privately owned properties that provide recreation, open space, health, and educational opportunities, as well as uses that provide a service to the public. A total of 1,263.4 acres in the City are designated Public/Institutional.

The proposed project is intended to bridge the vision of development for Vanguard University with the City's planning requirements and the larger community in which it resides. The project would enhance the area by evolving the site to support the collegial environment that Vanguard University seeks to provide to its students and community, while adhering to the City's General Plan requirements.

The project is consistent with applicable General Plan land use goals, objectives, and policies as follows:

- **General Plan 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.
- **General Plan Policy LU-1.1:** Provide for the development of a mix and balance of housing opportunities, commercial goods and services, and employment opportunities in consideration of the needs of business and residential segments of the community.

The proposed project would enhance an existing educational institution, including the provision of student housing and additional employment opportunities. The character of the surrounding area is defined by residential and institutional uses. The project would be compatible with the mix of uses and character of its surroundings, and would maintain the quality of the environment. The proposed project's planned development standards will be fully evaluated by the final decision-making body.

Therefore, the project would not 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 or zoning regulations) adopted for the purpose of avoiding or mitigating an environmental effect.

Zoning Ordinance

The City's Zoning Ordinance is the primary implementation tool for the City's General Plan Land Use Element and the goals and policies contained therein. For this reason, the Zoning Map must be consistent with the General Plan Land Use Map. The General Plan Land Use Map indicates the general location and extent of future land use in the City. The Zoning Ordinance, which includes the Zoning Map, contains more detailed information about permitted land uses, building intensities, and required development standards.

Zoning Consistency

According to the City's zoning map, the zoning district of the project site is Institutional and Recreational—I&R. Zoning and development standards for the I&R district are incorporated into Chapter 13-20 (Zoning Districts) of the City's zoning code. The I&R zoning district is intended to allow land uses which provide recreation, open space, health and public service uses. Development in this designation may occur on either public or private property. Areas included in this designation are parks, health care facilities, educational institutions, religious facilities, fairgrounds, and public facilities. The I&R zoning district permits 0.25 FAR and 44 employees per acre.

Development of the proposed project would not require the approval of a zoning code amendment or zone change; nor would it require a variance from the City's zoning standards. Specifically, the proposed project has been designed consistent with the development standards outlined in Chapter 13-20 of the City's Zoning Code.

The proposed project would reconstruct existing buildings on the site in order to enhance the existing campus to support the collegial environment that Vanguard University seeks to provide its students and community. The project would not be incompatible with the existing uses of the site or the character of its surroundings, and would maintain the quality of the environment. Therefore, the project would not 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.

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

No impact. As stated in Section 3.4.f), the project site is located within areas covered by the Natural Community Conservation Plan/Habitat Conservation Plan for the Central/Coastal Orange County NCCP/HCP, specifically within the Coastal Subregion of the plan (R.J. Meade Consulting, Inc. 1996). However, the project site is not within the designated Reserve System or classified a Special Linkage Area or Existing Use Area. The project site is currently developed land and does not contain biological features that could maintain plant/wildlife species and is not anticipated to impact any habitats or species. The proposed project would not conflict with any HCP or NCCP.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
11. Mineral Resources *Would the project:*				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

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 City's General Plan does not identify any known mineral resources in the City. As stated previously, Costa Mesa is 99 percent built up land and does not contain any locally important mineral resource recovery sites in the city or near the project site. The site is zoned as Institutional and Recreational not a permitted for mining or mineral extraction. The site is fully developed/ disturbed by existing college buildings and associated parking lots. Thus, the site does not support mineral extraction operations, thereby precluding the possibility of related impacts. No impacts 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. As stated above, the project site is located in a highly urbanized area. There are no mineral resource recovery sites or mining practices in Costa Mesa. The site is zoned Institutional and Recreational and no mining activities are permitted under this designation. The site is fully developed/disturbed by existing college buildings and associated parking lots. Thus, the site does not support mineral extraction operations. No impacts would occur.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
12. Noise *Would the project result in:*				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Environmental Setting

Descriptions and analysis in this section are based on the Noise Impact Analysis dated November 10, 2017, located in Appendix E.

Environmental Evaluation

Would the project result in:

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

Traffic Noise Impacts

Less than significant impact. A significant impact would occur if implementation of the project would expose the proposed project to noise levels in excess of the City's land use compatibility

standard or in excess of acceptable interior noise level standards. However, it should be noted that proposed structures would be an addition to the existing university; thus, this project would not involve development of any new land uses.

The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate traffic-related noise conditions in the vicinity of the project site. Traffic data used in the model was obtained from the traffic analysis prepared for the project by Kunzman Associates, Inc. (Appendix F). The resultant noise levels were weighed and summed over a 24-hour period in order to determine the CNEL values. The traffic noise modeling input and output files are included in Appendix E. Table 14 shows a summary of the traffic noise levels for existing, existing plus project, opening year (2020) no project, and opening year (2020) plus project conditions, as measured at 50 feet from the centerline of the outermost travel lane.

Table 14: Traffic Noise Model Results Summary

Roadway Segment	Existing No Project (dBA) CNEL	Existing Plus Project (dBA) CNEL	Increase over Existing No Project (dBA)	Opening Year (2020) No Project (dBA) CNEL	Opening Year (2020) Plus Project (dBA) CNEL	Increase over Opening Year (2020) No Project (dBA)
Newport Boulevard South—Santa Isabel Avenue to Project South Driveway	67.7	68.0	0.3	67.8	68.1	0.3
Newport Boulevard South—Project South Driveway to Project Central Driveway	67.8	68.3	0.5	67.9	68.5	0.6
Newport Boulevard South—Project Central Driveway to Project North Driveway	67.7	68.0	0.3	67.9	68.1	0.2
Newport Boulevard South—Project North Driveway to Fair Drive	67.7	68.0	0.3	67.8	68.1	0.3
Fair Drive—Newport Boulevard South to Project Access (NS)	70.5	70.3	-0.2	70.6	70.4	-0.2
Fair Drive—Project Access (NS) to Civic Center	71.2	71.2	0.0	71.3	71.3	0.0
Fair Drive—Civic Center to Vanguard Way	71.2	71.3	0.1	71.3	71.5	0.2
Vanguard Way—Fair Drive to Morristown Lane	57.2	56.6	-0.6	57.3	56.8	-0.5

Note:
CNEL (dBA) is stated as measured at 50 feet from the centerline of the outermost travel lane.
Source: FirstCarbon Solutions, 2017.

The projected traffic noise levels along Newport Boulevard South to the east of the project site would range up to 68.3 dBA CNEL as measured at 50 feet from the centerline of the nearest travel lane under existing plus project conditions. Traffic noise levels are projected to range up to 68.5 dBA CNEL along the same stretch with implementation of the proposed project under the opening year (2020) plus project conditions. The nearest proposed façade along this roadway segment would be setback approximately 140 feet from the centerline of the roadway. At this distance, traffic noise levels would attenuate to below 64 dBA CNEL. These noise levels are considered "conditionally acceptable" for new school land use development.

The projected traffic noise levels along Vanguard Way to the west of the project site would range up to 56.6 dBA CNEL as measured at 50 feet from the centerline of the nearest travel lane under existing plus project conditions. Traffic noise levels are projected to range up to 56.8 dBA CNEL along the same stretch with implementation of the proposed project under the opening year (2020) plus project conditions. These noise levels are considered "normally acceptable" for new school land use development. The reduction of traffic noise levels along Vanguard Way is due to the proposed project's site plan, which draws future traffic away from Vanguard Way to Newport Boulevard and Fair Drive, as is shown in the traffic analysis prepared for this project.

The projected traffic noise levels along Fair Drive to the north of the project site would range up to 71.3 dBA CNEL as measured at 50 feet from the centerline of the nearest travel lane under existing plus project conditions. Traffic noise levels are projected to range up to 71.5 dBA CNEL along the same stretch with implementation of the proposed project under the opening year (2020) plus project conditions. The nearest proposed façade along this roadway segment would be setback approximately 70 feet from the centerline of the outermost travel way. At this distance, traffic noise levels would attenuate to 69 dBA CNEL. These noise levels are considered "normally unacceptable" for new school land use developments. It should be noted that the reduction of traffic noise levels on Fair Drive from Newport Boulevard South to Project Access (NS) is due to the proposed project's site plan, which draws traffic to other areas along Fair Drive and Newport Boulevard, as is shown in the traffic analysis prepared for this project.

The traffic noise levels along Fair Drive are considered "normally unacceptable" for new school land use developments. Under these conditions, new construction and development should generally be discouraged, however the proposed project would only include new structures that would be in addition to the structures existing at the university; thus, this project would not involve any new land use development. Nevertheless, the inclusion of noise-reducing insulating features to the project would attenuate noise levels from 69 dBA to 45 dBA, which would be below the 55 dBA noise level that is considered normally acceptable for office and school land uses. As such, traffic noise impacts would be less than significant.

Stationary Noise Impacts

Less than significant impact. A significant impact would occur if operational noise levels from new stationary noise sources associated with the proposed project site would exceed levels indicated by the City's performance standard at the property line of receiving residential land uses or if noise levels from proposed stationary noise sources were to exceed the maximum acceptable exterior noise levels for residential areas.

The proposed project would include new stationary noise sources such as heating, ventilation, and air conditioning (HVAC) systems. At the time of preparation of this analysis, details were not available pertaining to proposed mechanical ventilation systems for the project. Therefore, a reference noise level for typical mechanical ventilation systems was used in this analysis. Noise levels from typical commercial mechanical ventilation equipment are anticipated to range up to approximately 60 dBA L_{eq} at a distance of 25 feet.

The nearest off-site receptors are the multi-family residences located near the southern boundary of the project site and immediately north of the Vanguard Way and Newport Boulevard intersection. Proposed mechanical ventilation systems could be located as close as 40 feet from these receptors. In addition, there is an existing 8-foot-high solid fence along the project's southern property line at this location. Therefore, at this distance and with a minimum 6 dBA reduction for the screening provided by the solid fence, noise levels generated by proposed mechanical ventilation systems would attenuate to below 50 dBA L_{eq} at the nearest sensitive off-site receptor. The resulting noise levels would not exceed 55 dBA L_{eq} from 7:00 a.m. to 11:00 p.m. or 50 dBA L_{eq} from 11:00 p.m. to 7:00 a.m. at any residential land use in the project vicinity. Additionally, resulting noise levels would not exceed the City's maximum acceptable exterior noise level of 65 dBA CNEL at any receiving residential land use in the project vicinity. As such, project-related stationary source noise impacts would be less than significant.

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

Less than significant impact. A significant impact would occur if the proposed project would expose persons to or generate groundborne vibration levels that would exceed established standards. The City of Costa Mesa does not have established vibration criteria, however, the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment manual (2006) establishes construction vibration impact criteria that are considered the industry-accepted thresholds for vibration impacts.

Short-term Construction Vibration Impacts

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of a construction site respond to these vibrations with varying results ranging from no perceptible effects at low levels to slight damage at the highest levels. Of the variety of equipment expected to be used during construction of the proposed project, the compactors that would be used in the site preparation phase of construction would produce the greatest groundborne vibration levels. Compactor equipment can produce groundborne vibration levels ranging up to 0.138 inch per second (in/sec) peak particle velocity (PPV) at 25 feet from the operating equipment.

The nearest sensitive off-site structure would be the multi-family residential receptor located near the southern boundary of Vanguard University, in the northwestern corner of the existing multi-family residential complex. This receptor would be located approximately 30 feet from the nearest construction footprint where the heaviest construction equipment would potentially operate. At

this distance, groundborne vibration levels would range up to 0.099 PPV. This is well below the industry standard vibration damage criterion of 0.2 PPV for this type of structure. Therefore, groundborne vibration impacts to off-site structures would be less than significant, and construction-related groundborne vibration impacts would be less than significant.

Operational Vibration Impacts

The project includes twelve separate projects that involve the demolition or construction of buildings on the Vanguard Campus. As such, implementation of the project would not include any permanent sources that would expose persons in the project vicinity to groundborne vibration levels that could be perceptible without instruments at any existing sensitive land use in the project vicinity. Furthermore, there are no existing significant permanent sources of groundborne vibration to which the proposed project would be exposed. Therefore, project operational groundborne vibration-level impacts would be considered less than significant.

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

Less than significant impact. 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 or greater) in noise level. A change of 5 dBA is considered to be the minimum change considered readily perceptible to the human ear in outdoor environments. A significant impact would occur if implementation of the proposed project resulted in an increase in ambient noise levels of 5 dBA or greater above existing background noise levels in the project vicinity.

This highest traffic noise level increase with implementation of the project would occur along Newport Boulevard South from Project South Driveway to Project Central Driveway under existing plus project conditions. The project would result in an increase of 0.5 dBA along this roadway segment. This increase is below the level that is considered a perceptible change (a 3 dBA increase), and is well below a 5 dBA increase that would be considered a substantial permanent increase in noise levels compared with noise levels that would exist without the project. Therefore, project-related traffic noise impacts on off-site receptors would be less than significant.

As described in Impact 12a) above, new mechanical equipment noise sources resulting from implementation of the project could result in noise levels ranging up to 50 dBA L_{eq} as measured at the nearest off-site sensitive receptors (the multi-family residences south of the project site). As shown in Table 5 of the Noise Impact Analysis report, the existing measured ambient noise levels at noise monitoring locations ST-5 and ST-6 range from 51.2 dBA to 56.1 dBA $L_{eq.}$ Therefore, project-related stationary sources would not result in a substantial permanent increase compared with noise levels existing without the project, and noise impacts from new stationary noise sources on off-site receptors would be less than significant.

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

Less than significant impact with mitigation incorporated. Two types of short-term noise impacts could occur during the construction of the proposed 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 (vehicle engine noise, the sound of vehicle doors shutting, etc.). 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 associated with 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.

The demolition and construction that would take place during this project would likely require the use of scrapers, bulldozers, water trucks, haul trucks, and pickup trucks. The maximum noise level generated by each scraper is assumed to be 85 dBA L_{max} at 50 feet from this equipment. Each bulldozer would also generate 85 dBA L_{max} at 50 feet. The maximum noise level generated by graders is approximately 85 dBA L_{max} at 50 feet. Each doubling of sound sources with equal strength increases the noise level by 3 dBA. Assuming that each piece of construction equipment operates at some distance from the other equipment, a reasonable worst-case combined noise level during this phase of construction would be 90 dBA L_{max} at a distance of 50 feet from the acoustic outer boundary of a construction area. This would result in a reasonable worst-case hourly average of 86 dBA L_{eq}.

The closest noise sensitive receptors are the multi-family residences located immediately south of the project site. The closest building façade of these receptors would be located approximately 30 feet from the acoustic center of construction activity. At this distance, construction noise levels would range up to approximately 94 dBA L_{max}, with a worst-case hourly average of 90 dBA L_{eq}, if multiple pieces of heavy construction equipment operate simultaneously during construction of the proposed maintenance and operations warehousing buildings.

The second-closest noise sensitive receptors are the multi-family residences located west of the project site. The closest building façade of these receptors would be located approximately 200 feet from the acoustic center of construction activity. At this distance, construction noise levels would range up to approximately 78 dBA L_{max}, with a relative worst-case hourly average of 74 dBA L_{eq}, if multiple pieces of heavy construction equipment operate simultaneously during construction of the proposed maintenance and operations warehousing buildings.

The third-closest noise sensitive receptors are the single-family residences located southeast of the project site, across the Costa Mesa Highway. The closest building façade of the nearest receptor would be located approximately 410 feet from the southeast end of construction activity. At this distance, construction noise levels would range up to approximately 72 dBA L_{max}, with a relative worst-case hourly average of 68 dBA L_{eq}, if multiple pieces of heavy construction equipment would operate simultaneously during construction of the proposed student housing, parking structure, and STEM and kinesiology buildings.

Although there could be a relatively high single event noise exposure potential causing an intermittent noise nuisance, the effect of construction noise levels on longer-term (hourly or daily) ambient noise levels would be small but could result in annoyance or sleep disturbances at nearby sensitive receptors. However, the City's Municipal Code provides certain exemptions from noise-producing construction activities. The City requires that construction activities only take place 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. Construction activities are not exempt from the City's noise performance standards outside of these hours, including any time on Sundays or during specified federal holidays. Therefore, restricting construction activities to these stated time periods, as well as implementing the best management noise reduction techniques and practices outlined in Mitigation Measure NOI-1, would ensure that potential short-term construction noise impacts to sensitive receptors in the project vicinity would be reduced to a less than significant level.

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?

Less than significant impact. The nearest airport to the project site is the John Wayne Airport, located approximately 1 mile northeast of the project site. Because of the distance from and orientation of the airport runways, the project site is located outside of the airport's 65-dBA CNEL noise contours. While aircraft noise is occasionally audible on the project site from aircraft flyovers, aircraft noise associated with nearby airport activity would not expose people residing or working near the project site to excessive noise levels. Therefore, implementation of the project would not expose persons residing or working in the project vicinity to noise levels from airport activity that would be in excess of normally acceptable standards for school land use developments. Impacts associated with public airport noise 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 within the vicinity of a private airstrip. Therefore, no impacts associated with private airstrip noise would occur.

Mitigation Measures

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

- The construction contractor shall ensure that all equipment driven by internal combustion engines shall be equipped with mufflers, which are in good condition and appropriate for the equipment.
- The construction contractor shall ensure that unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes) is prohibited.
- The construction contractor shall utilize "quiet" models of air compressors and other stationary noise sources where technology exists.
- At all times during project grading and construction, the construction contractor shall ensure that stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from adjacent residences.
- The construction contractor shall ensure that the construction staging areas shall be located to create the greatest feasible distance between the staging area and noise-sensitive receptors nearest the project site.
- The construction contractor shall ensure that all on-site demolition and construction activities, including deliveries and engine warm-up, shall be restricted 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 Saturday. Construction work is not to be performed on Sunday or on the federal holidays that are listed in the City ordinances.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
13. Population and Housing *Would the project:*				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

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. The project involves the remodeling and construction of university buildings. This project includes the construction of student housing which could accommodate an additional 300 students depending on design and room size.

Enrollment at Vanguard University for fall 2017 is 2,098 students. Costa Mesa had a population of 112,822 in 2016; a potential increase of 300 students would represent a less than 0.003 percent increase of the City's population. Students would be expected to reside only on the project site during the time they are completing their degree programs (4 to 6 years), and would not be permanent, long-term residents of the project site.

In addition, the project does not propose the construction of any new roads or infrastructure that could increase population. Implementation of the project would have a less than significant impact on population growth directly or indirectly, having a less than significant impact.

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

No impact. The project site is located on an existing college campus. Implementation of the project would not displace any existing housing, but instead would provide additional housing options for students enrolled at the university.

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

No impact. As stated above, the proposed project is for the construction of institutional facilities and is located on a currently developed college campus. Implementation of the project would not displace people or necessitate the construction of replacement housing.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
14. Public Services *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☒	☐
e) Other public facilities?	☐	☐	☒	☐

Environmental Evaluation

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 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 comprises three divisions: Administration; Suppression/Mobile Intensive Care (Emergency Medical Services); and Fire Prevention. There is one paramedic engine company with four personnel, a 100-foot aerial ladder truck company,[1] an urban search and rescue squad,[2] and three Battalion Chiefs[3] of whom at least one chief is on duty 24-hours a day, 7 days a week. These fire personnel respond from six fire stations strategically located within the City.[4] The nearest fire station to the project site is Civic Center Fire Station, located at 2450 Fair Drive, which is adjacent to the western portion of the project site. The closest station to the project is the Costa Mesa Fire Station #5, located at 2450 Fair Drive, approximately 0.1 miles north of the project site. Depending on the nature, size, and location of the alarm, units from multiple stations will respond.

[1] City of Costa Mesa Fire Department 2015 100-Foot Aerial Ladder Truck Website: https://www.costamesaca.gov/index.aspx?page=1452. Accessed November 15, 2017.
[2] City of Costa Mesa Fire Department 2015 Urban Search and Rescue. Website: http://costamesaca.gov/index.aspx?page=1453. Accessed November 15, 2017.
[3] City of Costa Mesa Fire Department 2015 Organization Chart. Website: http://costamesaca.gov/modules/showdocument.aspx?documentid=6377. Accessed November 15, 2017.
[4] City of Costa Mesa Fire Department 2015 Station Locations. Website: http://costamesaca.gov/index.aspx?page=230. Accessed November 15, 2017.

The project does not propose new or physically altered fire protection facilities. The project involves the reconstruction of institutional buildings on a university campus. Project implementation would result in a residence hall to accommodate up to 300 additional students. According to the City's Housing Element of the General Plan, Costa Mesa had a population of 112,822 in 2016. A potential increase of 300 students would have a less than 0.003 percent increase on the population of the City.

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 2016 California Fire Code and all amendments, including the provision of fire sprinkler systems throughout the project site. The development would also be subject to compliance with the fire provisions specified in the 2016 California Building Code and all incorporated amendments, and the 2015 International Fire Code. Additionally, the project would be subject to compliance with the Standard Conditions specified below, in order to enhance fire protection measures. The project plans would be reviewed and approved by the Costa Mesa Building and Fire Departments, which would ensure adequate emergency access, fire hydrant availability, and compliance with all applicable codes and standards.

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

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, located approximately 0.2 mile away from the project site. The CMPD is composed of three divisions: Administration; Field Operations; and Support Services.[5] The CMPD comprises 196 full-time positions, of which 130 are sworn officers and 66 are civilians, with various part-time positions to aid throughout the organization.[6]

The project does not propose new or physically altered police protection facilities. The project involves reconstruction of existing institutional facilities on a university campus. Project implementation includes the construction of a residence hall that would result in a maximum of 300-resident increase. According to the City's Housing Element of the General Plan, Costa Mesa had a population of 112,822 in 2016. A potential increase of 300 students would have a less than 0.003 percent increase on the population of the City.

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 SC4.14-9, in order to enhance police protection services. In addition, the project plans would be reviewed and approved by the

[5] City of Costa Mesa Police Department 2015 Department Division. Website: http://38.106.5.76/index.aspx?page=971. Accessed November 15, 2017.
[6] City of Costa Mesa Police Department 2015 Department Division. Website: http://38.106.5.76/index.aspx?page=971. Accessed November 15, 2017.

Costa Mesa Building and Police Departments, which would ensure that adequate safety and crime prevention measures are provided. Compliance with the City's discretionary review process would ensure that project implementation would result in a less than significant impact to police protection services.

c) Schools?

No impact. The project site is located within the Newport-Mesa Unified School District (NMUSD). The project site is located in the College Park Elementary School (grades K–6), and Costa Mesa High School (grades 7–12) service areas, with school enrollments of approximately 589 and 1,779, respectively.

The project involves the reconstruction of institutional facilities at Vanguard University; however, project implementation would not result in a corresponding increase in the demand for public school facilities. Because this project is associated with a private higher-educational institution, there would be no impact on the surrounding schools.

d) Parks?

Less than significant impact. According to the City's General Plan, there are 2,067.06 acres of parks and open space in Costa Mesa. The City seeks to provide 4.26 acres of park and recreational land for every 1,000 residents.

The project does not propose new or physically altered park facilities, but it does include improvements to current athletic facilities on campus.

Project implementation would include the construction of residence halls with a maximum occupancy of 300 students. Based on parkland demand factor of 4.26 acres per 1,000 residents, project implementation would generate a demand for approximately 1.28 acres of parkland. The total open space for the project equals 4.9 acres. Most students and staff are likely to utilize on-site facilities and open space. Because of the amount of open space provided on the campus, there would be less than significant impact to parkland in the City.

e) Other public facilities?

Less than significant impact. There are three public libraries within the City. The nearest public library to the project site is the Costa Mesa Technology Library located approximately 0.67 mile southwest of the project site at 2263 Fairview Road.

Project F of the master plan proposes to replace the existing on-campus library with a new Learning Resource Center. Most students and staff would utilize the Learning Resource Center once construction is completed. Given the nature of the project, there would be negligible impacts to the City's public library facilities and construction of new or physically altered library facilities would not be required.

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.

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 The final master plan for development of the project shall provide sufficient capacity for fire flows required by the City of Costa Mesa Fire Department.

SC 4.14-4 Vehicular access shall be provided and maintained serviceable throughout construction to all required fire hydrants.

SC 4.14-5 The project shall provide approved smoke detectors to be installed in accordance with the 2016 Edition of the Uniform Fire Code.

SC 4.14-6 The project shall provide fire extinguishers with a minimum rating of 2A to be located within 75 feet of travel distance from all areas. Extinguishers may be of a type rated 2A, 10BC as these extinguishers are suitable for all types of fires and are less expensive.

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

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

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

- Lighting shall be provided in open areas and parking lots.
- Required building address numbers shall be readily apparent from the street and rooftop building identification shall be readily apparent from police helicopters for emergency response agencies.
- Landscaping requirements (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.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

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 the CMMC requirements and the provision of on-site landscaping.

The project does not propose new or physically altered park facilities. However, the project seeks to replace the existing gymnasium to provide adequate facilities for the Vanguard's athletics program and an events center for the campus to gather during planned events.

Project implementation would result in campus housing to accommodate a maximum of 300 students. Based on a parkland demand factor of 4.26 acres per 1,000 residents, project implementation would generate a demand for approximately 1.28 acres of parkland. The project provides 4.9 acres of open space on the Vanguard campus; therefore, the impact on existing parks and recreational facilities would be less than significant.

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 includes the construction of recreational facilities and seeks to replaces the existing gymnasium to provide adequate facilities for the Vanguard's athletics program and an events center for the campus to gather during planned events. The potential environmental effects of the construction of this facility are accounted for within the various topical sections of this IS/MND as part of the overall Master Plan. Compliance with the identified mitigation

measures, Standard Conditions, and CMMC would ensure that the impacts would be less than significant.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
16. Transportation/Traffic *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?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

Environmental Setting

A Traffic Impact Analysis (TIA) was prepared by Kunzman Associates, Inc. in October 2017 for the project and is included as Appendix F of this report. The TIA analyzes the morning peak-hour (between 7:00 a.m. and 9:00 a.m.) and the evening peak-hour (between 4:00 p.m. and 6:00 p.m.) at the following six (6) study area intersections:

1. Vanguard Way at Morristown Lane
2. Civic Center at Fair Drive
3. Project Access at Fair Drive
4. Newport Boulevard South at Project North Driveway
5. Newport Boulevard South at Project Central Driveway
6. Newport Boulevard South at Project South Driveway

The driveway on the southwest portion of the project site along Vanguard Way was not included in this analysis as it is for maintenance and operations vehicles only and does not allow student access.

Methodology

The technique used to assess the operation of a signalized intersection is known as Intersection Capacity Utilization (ICU). To calculate an ICU value, the volume of traffic using the intersection is compared with the capacity of the intersection. An ICU value is usually expressed as a decimal. The decimal represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity.

The technique used to assess the capacity needs of an unsignalized intersection is known as the Intersection Delay Method. To calculate delay, the volume of traffic using the intersection is compared with the capacity of the intersection.

Significance Criteria

The City of Costa Mesa has established Level of Service (LOS) D as the minimum acceptable Level of Service for its arterial roadway system. If a project increases the Intersection Capacity Utilization (ICU) for a signalized intersection by more than 1 percent and achieves unacceptable LOS E or F, then a significant impact has occurred and feasible improvements must be identified that will mitigate the intersection Level of Service to an acceptable LOS D or better.

Existing Traffic Conditions

The project site is currently in operation as a university and is generating significant trips. Morning and evening peak hour intersection turning movement counts were taken at each project driveway to determine the existing trip generation for the existing campus. Under ICU and Intersection Delay methodologies, the study intersections currently operate at acceptable LOS during the peak hours under Existing traffic conditions.

Trip Generation

The trips generated by the project are determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and life styles remain similar to what are known today.

The existing project site currently generates a total of approximately 5,208 daily vehicle trips, 436 of which currently occur during the morning peak hour and 507 of which currently occur during the evening peak hour.

The proposed development is projected to generate a total of approximately 6,569 daily vehicle trips, 550 of which would occur during the morning peak hour and 640 during the evening peak hour.

Therefore, the proposed project would generate a net increase of approximately 1,361 daily vehicle trips, 114 of which will occur during the morning peak hour and 133 during the evening peak hour.

Trip Distribution

The trip distributions have been formulated for the morning and evening peak hour by inbound and outbound direction. This has been done so that the inbound and outbound turning movements directly match the intersection turning movement counts by peak hour for each existing project driveway. Formulations of these directional distributions of the project trips were based on existing turning movement counts, existing parking lots, existing internal circulation, proposed parking lots, proposed new development locations, and proposed internal circulation.

Existing Plus Project Traffic Conditions

To assess Existing Plus Project traffic conditions, existing traffic volumes are combined with the project trips. The signalized study intersection is projected to operate at acceptable LOS during the peak hours for Existing Plus Project traffic conditions. The unsignalized intersections are projected to operate at acceptable LOS during the peak hours using the Intersection Delay Method, except for the intersection of Newport Boulevard South at Project Central Driveway, which is projected to operate at an unacceptable LOS during the evening peak hour. This unsignalized intersection is projected to operate at acceptable LOS during the peak hours for Existing Plus Project traffic conditions using the ICU methodology.

It is recommended that because of the nature of the unsignalized intersection along Newport Boulevard South, the Intersection Capacity Utilization methodology should take precedence. Because of relatively high southbound traffic volumes on Newport Boulevard South (the roadway is one-way only in the southbound direction), minimal conflicting turning movements on this roadway causes a significant delay for these traffic movements, creating a situation that is not able to be mitigated without the installation of a traffic signal. This occurs even though these intersections have relatively low minor street movements that would not warrant traffic signals and the only movements consist of southbound through/right and eastbound right turning movements. The Intersection Delay methodology does not account for acceptable gaps created on Newport Boulevard South for traffic volumes to enter/exit the existing driveways, due to the traffic signal located north of these intersections on Newport Boulevard South at Fair Drive. This traffic signal produces periodic gaps in traffic volumes for downstream traffic volumes as they are fulfilling their traffic cycles, which allows for the creation of gaps to occur. The intersection Capacity Utilization methodology is preferred because it does not single out the most minimalistic movements in relation to total traffic volumes utilizing that intersection to then assess the entire intersection performance.

Opening Year (2020) Without Project Traffic Conditions

For Opening Year (2020) traffic conditions, an areawide growth rate has been utilized to account for areawide growth on study area roadways. Opening Year (2020) traffic volumes have been calculated from a 1.0 percent annual growth rate of existing traffic volumes over a 3-year period. The areawide growth rate has been obtained from previous traffic studies conducted in the City of Costa Mesa. Areawide growth has been added to existing daily and peak-hour traffic volumes on surrounding roadways.

The study intersections are projected to operate at acceptable LOS during the peak hours for Opening Year (2020) Without Project traffic conditions.

Opening Year (2020) With Project Traffic Conditions

To assess Opening Year (2020) With Project traffic conditions, Opening Year (2020) Without Project volumes are combined with the project trips. The signalized study intersections are projected to operate at acceptable LOS during the peak hours for Opening Year (2020) With Project traffic conditions. The unsignalized intersections are projected to operate at acceptable LOS during the peak hours using the Intersection Delay Method, except for the intersections of Newport Boulevard South at Project North Driveway and Newport Boulevard South at Project Central Driveway, which are projected to operate at unacceptable LOS during the evening peak hour. These unsignalized intersections are projected to operate at acceptable LOS during the peak hours for Opening Year (2020) With Project traffic conditions using the ICU methodology.

It is recommended that because of the nature of the unsignalized intersection along Newport Boulevard South, the Intersection Capacity Utilization methodology should take precedence. Because of relatively high southbound traffic volumes on Newport Boulevard South (the roadway is one-way only in the southbound direction), minimal conflicting turning movements on this roadway cause a significant delay for these traffic movements, thereby creating a situation that is not able to be mitigated without the installation of a traffic signal. This occurs even though these intersections have relatively low minor street movements that would not warrant traffic signals and the only movements consist of southbound through/right and eastbound right turning movements. The Intersection Delay methodology does not account for acceptable gaps created on Newport Boulevard South for traffic volumes to enter/exit the existing driveways, due to the traffic signal located north of these intersections on Newport Boulevard South at Fair Drive. This traffic signal produces periodic gaps in traffic volumes for downstream traffic volumes as they are fulfilling their traffic cycles which allow for the creation of gaps to occur. The intersection Capacity Utilization methodology is preferred because it does not single out the most minimalistic movements in relation to total traffic volumes utilizing that intersection to then assess the entire intersection performance.

Traffic Signal Warrants

Caltrans provides warrant criteria for traffic signals to determine if a traffic signal is warranted at an intersection, as specified in the Manual of Uniform Traffic Control Devices 2014 Edition (Revision 1) revised December 9, 2015. Chapter 4C.01 lists a set of factors should be considered when determining whether a traffic signal is justified at a particular location.

Based on the warrant criteria established by Caltrans, the installation of traffic signals at the intersections of Newport Boulevard South at Project North Driveway or Newport Boulevard South at Project Central Driveway is not recommended for the following reasons:

- In adherence to Section 4C.01.06, traffic signals at either location are not anticipated to improve overall safety and/or operation of the intersection. SR-55 is located adjacent to Newport Boulevard South to the east, running parallel with the roadway. Therefore, there is

no known benefit for a crosswalk across Newport Boulevard South for pedestrian travel since there are no destination points on the east side of the roadway. Considering that the Delay Methodology provides a LOS based on the worst individual movement (eastbound right for both locations) without consideration of other movements, this methodology gives preferential treatment to a movement that provides a fraction of the overall turning movements of the intersection.

The installation of a traffic signal at either location would impede southbound flow for a considerable amount of vehicles, providing no discernible safety benefit while directly degrading the operation of each intersection since a considerable amount of southbound vehicles will be forced to slow down and stop at either intersection (if signalized), thus increasing southbound vehicular delay; whereas southbound motorists currently do not experience any delay at these intersections. Therefore, a traffic signal should not be installed at either location.

- Section 4C.01.07 states that traffic signals should not be installed if they seriously disrupt progressive traffic flow. Since both intersections are one-directional for the major street (southbound) and currently provide for free-flow operations, a traffic signal would seriously disrupt progressive traffic flow for the reasons identified for Section 4C.01.05 specified above. Therefore, a traffic signal should not be installed at either location.

- Section 4C.01.08 allows for engineering judgment to determine the amount of turning movement volumes for right turning movements that may be removed on minor street approaches. The minor street approach for both intersections only consists of eastbound right turning movements. Since both intersections do not allow for eastbound left or through turning movements or any westbound turning movements, and northbound traffic is non-existent, eastbound right turning movements only need to be aware of southbound through movements as they wait for an acceptable gap to occur and complete this movement onto Newport Boulevard South. Queuing issues are also not pervasive since eastbound right turning vehicles will stack internally within the project site.

  Because of these conditions, these eastbound right turning movements on the minor street (Project Driveways) can be either reduced significantly or removed in their entirety. As such, the minimum minor street (project driveways) volume necessary to warrant a traffic signal for any of the warrants provided by Caltrans is not met at either intersection. Therefore, a traffic signal should not be installed at either location.

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. As detailed in the TIA and summarized above, the project is not anticipated to result in a significant impact on the study area intersections under existing and future traffic conditions based on the City of Costa Mesa's Significance Criteria. As such, the project would comply with the City's standards. The project would not conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Thus, the project would result in less than significant impacts on traffic/circulation and the surrounding roadway network. No mitigation is required. Please refer to the discussion in Impact 16f) for a discussion of pedestrian and bicycle paths, and mass transit.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

No 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 CMP 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. Since the proposed development is projected to generate a total (existing and proposed) of approximately 6,569 daily vehicle trips, 550 of which will occur during the morning peak hour and 640 of which will occur during the evening peak hour, a TIA was prepared for the project by Kunzman Associates, Inc. in October 2017 and is included as Appendix F of this report.

The Orange County CMP was adopted in November 2015. There is currently a Draft 2017 Orange County CMP that has not yet been adopted. In 1991, the Orange County Transportation Authority (OCTA) implemented an ICU monitoring method, developed with technical staff members from local and State agencies, for measuring the LOS at CMPHS intersections. CMP statute requires that CMPHS intersections maintain a LOS grade of E or better unless the baseline is lower than E, in which case, the ICU rating cannot increase by more than 0.10.

As identified in the 2015 Orange County CMP, the following three intersections are the only CMP facilities located in the City of Costa Mesa included in the CMPHS:

1. Harbor Boulevard and Adams Avenue
2. I-405 Southbound Ramps and Harbor Boulevard
3. I-405 Northbound Ramps and Harbor Boulevard

As none of the above intersections are study area intersections, the project is anticipated to contribute less than 50 peak-hour trips to these CMP locations. Furthermore, as detailed in the above analysis, all study area intersections are anticipated to operate at LOS D or better with the implementation of the proposed project. As such, the project would not have any impact on the applicable CMP.

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 site is located 5.5 miles north of John Wayne Airport and is not within any Airport Impact Zone or Airport Safety Zone. Because of the nature and scope of the proposed development, 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 with mitigation incorporated. Access to the project will be provided via the following six existing intersections:

1. Vanguard Way at Morristown Lane—cross-street stop controlled intersection
2. Civic Center at Fair Drive—signalized intersection
3. Project Access at Fair Drive—cross-street stop controlled intersection
4. Newport Boulevard South at Project North Driveway—cross-street stop controlled intersection
5. Newport Boulevard South at Project Central Driveway—cross-street stop controlled, exit only access driveway
6. Newport Boulevard South at Project South Driveway—entrance only access driveway

Implementation of Mitigation Measures TRANS-1 through TRANS-7 would ensure the project would not increase hazards due to design features and impacts would be less than significant.

e) Result in inadequate emergency access?

Less than significant impact. Emergency access to the project site would continue to be provided via the above existing six project driveways and drive aisles. The project does not propose to alter or impede on existing emergency access. As such, impacts to emergency access would be less than significant.

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. OCTA currently provides transit service to the City of Costa Mesa, including the project site. Transit service is currently provided along Fair Drive by Route 178, and along Newport Boulevard South by Route 71. Fair Drive is a Community Bus Route Type and Newport Boulevard South is a Local Bus Route Type. Bus stops are currently located along Fair Drive and Newport Boulevard South.

Fair Drive is an existing Class I and Class II facility with Newport Boulevard South north of Fair Drive also being a Class I facility. A Class IV Bicycle Facility is proposed on Vanguard Way in the City's General Plan Conceptual Bicycle Master Plan.

Currently, pedestrian facilities are provided via sidewalks and crosswalks in the project vicinity. There are sidewalks along Newport Boulevard South, Vanguard Way, and Fair Drive. Crosswalks on all four legs are provided at the intersection of Vanguard Way and Fair Drive. Crosswalks are provided on the north, south, and west leg of Civic Center and Fair Drive. Crosswalks are provided on the south and west legs of the intersection of Newport Boulevard South and Fair Drive. Crosswalks are provided on the north and west leg of Newport Boulevard South and Vanguard Way. On-site pedestrian/bicycle access is provided at the core of the project site with access to parking lots, athletic facilities, classrooms, etc. located around the periphery.

Although project construction may temporarily disrupt pedestrian facilities, the implementation of the proposed project would not permanently alter bus routes, bike lanes, or pedestrian facilities. As such, impacts would be less than significant.

Mitigation Measures

MM TRANS-1 During the construction of the residential dorms, the project developer shall construct Vanguard Way from Morristown Lane to the south project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary, to the satisfaction of the Department of Public Works.

MM TRANS-2 During the construction in the area along Fair Drive, the project developer shall construct Fair Drive from Civic Center to Newport Boulevard South at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary, to the satisfaction of the Department of Public Works.

MM TRANS-3 During the construction of the area along Newport Boulevard, the project developer shall construct Newport Boulevard South from Fair Drive to the south project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary, to the satisfaction of the Department of Public Works.

MM TRANS-4 Sufficient on-site parking shall be provided to meet City of Costa Mesa parking code requirements.

MM TRANS-5 On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project. Circulation within the project site should allow relatively free flow of vehicular traffic volumes with no constrictions.

MM TRANS-6 Sight distance at project accesses shall comply with standard California Department of Transportation and City of Costa Mesa sight distance standards. The final grading,

landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.

MM TRANS-7 As is the case for any roadway design, the City of Costa Mesa should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
17. Utilities and Service Systems *Would the project:*				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☒	☐	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Environmental Evaluation

Water

The project site is located within the Mesa Consolidated Water District (Mesa Water) service area and specifically within its Division Area 2. Mesa Water provides water service to more than 108,000 residents in an 18-square-mile area including the City of Costa Mesa, parts of Newport Beach, and parts of unincorporated Orange County. The project site would be served by existing public utilities (pipes).

In compliance with legislative requirements, Mesa Water has prepared its 2015 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 seven active wells within the Orange County Basin and imported water from Metropolitan Water District of Southern California through Municipal Water District of Orange County (MWDOC).

Water Treatment

Mesa Water currently owns and operates the Mesa Water Reliability Facility (MWRF) with a capacity of 8.6 million gallons per day (mgd) that removes color from the water using nanofiltration membrane treatment. According to the UWMP, Mesa Water's main sources of water supply are groundwater pumped from seven active wells within the Orange County Basin and imported water from MWDOC through Municipal Water District of Orange County. Six wells pump "clear" groundwater directly into the distribution system, following disinfection with chloramines. The two wells that pump colored groundwater are treated first at the MWRF and then pumped into the distribution system. Prior to 2011, the colored water was treated at the CWTF, which has since been replaced by the MWRF. As of January 2013 when the MWRF came online, Mesa Water has not needed to import water in order to meet demand.

Water Conveyance

The project would result in an increase in water demand. However, the Mesa Water District has the capacity to meet these demands, and the project would be served by existing infrastructure. The project would connect to existing water conveyance facilities.

Environmental Evaluation

Would the project:

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

Less than significant impact with mitigation incorporated. The RWQCB, Santa Ana Region issued an 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 result in an increase in wastewater generation, and related treatment demand. Wastewater from the project would mainly consist of effluent typical of education institutions. Small quantities of hazardous household materials such as cleaning solvents may be present, but not in quantities sufficient to exceed treatment requirements. However, the current capacity of local sewers is unknown and additional study is required, pursuant to Costa Mesa Sanitary District requirements.

To determine the available sewer capacity for the proposed project, a sewer flow study of the sewer line on Fair Drive is required. Flow studies typically consist of checking the master planned flows versus existing capacity along with installing flow meters in the pipe to check the level of existing

flows. Once the flow study is completed by the applicant, the District will determine if additional sewer capacity is necessary for the proposed project. In the event where additional capacity of the sewer is required, the Applicant shall pay a proportional fair share cost as determined by the Costa Mesa Sanitary District (Mitigation Measure UTL-1).

Additionally, the project would be required to comply with all applicable regulations and standards, including the RWQCB standards. The project is also subject to Standard Conditions SC 4.17-1 to 4.17-4. Therefore, impacts would be less than significant.

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.

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 and currently provides sanitary sewer service to the project site. The Sanitary District provides collection and transmission while the Orange County Sanitation District provides treatment, recycling, and disposal.

Wastewater Generation

The increase in wastewater generation would result in an incremental increase in the demand for wastewater conveyance and treatment facilities. The project will be consistent with the City of Costa Mesa General Plan, which forms the basis for issuance of the County Sanitation's NPDES wastewater discharge permits.

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 increase the demand for wastewater generation. The Sanitary District would issue a Sewer Service Confirmation Letter indicating that it will provide sanitary sewer service 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 4.17-1 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, and a less than significant impact would occur.

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 of the wastewater generated within its 572-square-mile service area. These facilities also include two treatment/reclamation plants and 15 off-site pump stations in order to serve more than 2.5 million residents within the 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 210 million gallons of wastewater daily (average). County Sanitation operates under an NPDES ocean discharge permit issued by the California Regional Water Quality Control Board.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than significant impact. The project would not include the development of on-site drainage facilities and would not include the construction of off-site drainage facilities. The proposed project is located in a presently urbanized area where existing water draining facilities exist. Therefore, impacts associated with the construction or expansion of stormwater drainage facilities would be less than significant.

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. As discussed, the project represents an increase in water demand, since the project involves the construction of a Student Housing facility that would accommodate 300 students. Implementation of the project would result in a water demand of approximately 53,700 gallons per day based on an increase of student housing to accommodate up to 300 students.[7] However, the Mesa Water District facility has sufficient capacity available to accommodate the project. Mesa Water has concluded it is capable of meeting the water demands of its customers in normal, single dry, and multiple dry years between 2015 and 2035. Additionally, the Applicant will be required to obtain a Will-Serve Letter from the Mesa Water District to confirm its ability to accommodate the additional water demand associated with the proposed project. Additionally, the project would utilize water efficient fixtures, toilets, and irrigation as well as drought-tolerant landscaping, thereby reducing impacts.

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. The Mesa Water District has the capacity to treat 8.6 mgd of water. The project would not result in demand for wastewater treatment over and above the capacity of facilities serving the project. Impacts would be less than significant.

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 following solid waste facilities and landfills that currently serve the City:

[7] (179 X 29=5,191) Mesa Consolidated Water District. 2010 Urban Water Management Plan (page 2-10).

- Frank R. Bowerman Sanitary Landfill: Permitted for 11,500 tons per day (tpd) maximum with an 8,500 tpd annual average. The landfill has enough projected capacity to serve residents and businesses until approximately 2053.
- Olinda Alpha Sanitary Landfill: Permitted to receive a daily maximum of no more than 8,000 tpd. Olinda Landfill is approximately 565 acres with about 420 acres permitted for refuse disposal. The proposed end use after landfill closure is a county regional park.
- Prima Deshecha Sanitary Landfill: The site averages approximately 1,400 tons per day, with a daily maximum permitted tonnage of 4,000. The Prima Deshecha site has a projected capacity to serve residents and businesses until approximately 2067.

Additionally, the project would be subject to compliance with Standard Conditions SC 4.16-5, and SC 4.16-6, which would ensure that impacts are less than significant.

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 (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.

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 introduced a per capita disposal measurement system that measures the 50 percent diversion requirement using a disposal measurement equivalent.

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 were 8.5 pounds per day per resident and 11.3 pounds per day per employee.

Participation in the City's recycling programs during project construction and operation, including CalRecycle's requirements, would ensure that the project would not conflict with federal, state, and

local statutes and regulations related to solid waste. Furthermore, the project would meet or exceed standards set forth in CALGreen as well as Title 24, and a less than significant impact would occur.

Standard Conditions

SC 4.17-1 County Sanitation District fees, fixtures fees, inspection fees, and sewer permit are required prior to installation of sewer.

SC 4.17-2 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 4.17-3 Applicant will be required to coordinate with the Costa Mesa Sanitary District to comply with all recommended studies and improvements, prior to issuance of a building permit.

SC 4.17-4 Applicant shall contact Costa Mesa Sanitary District for any additional district requirements.

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.

Mitigation Measures

MM UTL-1 To determine the available sewer capacity for the proposed project, a sewer flow study of the sewer line on Fair Drive is required. Flow studies typically consist of checking the master planned flows versus existing capacity along with installing flow meters in the pipe to check the level of existing flows. Once the flow study is completed by the applicant, the District shall determine if additional sewer capacity is necessary for the proposed project. In the event where additional capacity of the sewer is required, the Applicant shall pay a proportional fair-share cost as determined by the Costa Mesa Sanitary District.

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

Environmental Evaluation

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 with mitigation incorporated. As described in the analysis section, above, implementation of the proposed project would not degrade the quality of the environment; substantially reduce the habitats of fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animals; or eliminate important examples of major periods of California history or prehistory with the incorporation of the identified mitigation measures.

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 proposed project would result in potentially significant project-specific impacts to biological resources and cultural resources, and could result in hazards, noise and traffic impacts. However, all mitigation measures have been identified that would reduce these impacts to less than significant levels. Furthermore, the Air Quality and Transportation/Traffic analyses presented in Section 3.3 and Section 3.16, respectively, of this document considered cumulative impacts and determined that cumulative air quality and traffic impacts would less than significant. No additional mitigation measures would be required to reduce cumulative impacts to less than significant levels.

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. As described in the analysis section, above, the proposed project would involve the removal and/or reconstruction of buildings on the Vanguard University campus. Implementation would not displace or otherwise significantly impact existing residences. Other impact areas with the potential to adversely affect humans (air quality, noise, vibration) have been analyzed herein. All identified impacts are less than significant or would be reduced to less than significant levels with mitigation; therefore, the project would not cause substantial adverse effects on human beings.

Mitigation Measures

None.

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