Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project (including planning, acquisition, development, and operation) be considered when evaluating the project's impact on the environment. Section 15126 also sets forth general content requirements for environmental impact reports (EIRs). This section identifies (1) significant irreversible environmental changes that would result from implementing the proposed project; (2) growth-inducing impacts of the proposed project; and (3) potential energy impacts of the proposed project.

9.1 SIGNIFICANT IRREVERSIBLE CHANGES DUE TO THE PROPOSED PROJECT

Section 15126.2(c) of the CEQA Guidelines requires that an environmental impact report (EIR) describe any significant irreversible environmental changes that would be caused by the proposed project should it be implemented.

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highways improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The following are the significant irreversible changes that would be caused by the Museum House project, should it be implemented:

- Implementation of the proposed project would include construction activities that would entail the commitment of nonrenewable and/or slowly renewable energy resources, human resources, and natural resources such as lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, other metals, water, and fossil fuels. Operation of the proposed project would require the use of natural gas and electricity, petroleum-based fuels, fossil fuels, and water. The commitment of resources required for the construction and operation of the proposed project would limit the availability of such resources for future generations or for other uses during the life of the project.
- An increased commitment of social services and public maintenance services (e.g., police, fire, schools, libraries, and sewer and water services) would also be required. The energy and social service commitments would be long-term obligations in view of the low likelihood of returning the land to its original condition once it has been developed.

- An increase in project-related vehicle trips would accompany project-related population growth. Over the long term, emissions associated with such vehicle trips would continue to contribute to the South Coast Air Basin's nonattainment designation for ozone (O₃) and particulate matter (PM_{2.5} and PM₁₀), nonattainment for lead (Los Angeles County only) under the California and National Ambient Air Quality Standards (AAQS), and nonattainment for nitrogen dioxide (NO₂) under the California AAQS.
- The project would remove the Orange County Museum of Arts building that has been onsite for about 39 years and redevelop the site with the proposed condominium tower. Upon project completion, it is very unlikely that the conversion of institutional land use to residential use would be reversed.

Given the low likelihood that the project site would revert to lower intensity uses or to its existing form (i.e., a museum), the proposed project would generally commit future generations to these environmental changes.

9.2 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT

Pursuant to Sections 15126(d) and 15126.2(d) of the CEQA Guidelines, this section is provided to examine ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also required is an assessment of other projects that would foster other activities which could affect the environment, individually or cumulatively. To address this issue, potential growth-inducing effects will be examined through analysis of the following questions:

- Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?
- Would this project result in the need to expand one or more public services to maintain desired levels of service?
- Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?
- Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

Please note that growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment. This issue is presented to provide additional information on ways in which this project could contribute to significant changes in the environment, beyond the direct consequences of developing the land use concept examined in the preceding sections of this EIR.

Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?

The Museum House project would not remove obstacles to growth through the construction or extension of major infrastructure facilities. The project site is already developed with the Orange County Museum of Art building, and multistory office buildings and residential apartment complexes surround the site. Therefore, the project area is already developed, and existing utilities and service systems (i.e., water, wastewater, solid waste, natural gas, and electricity) are available to provide services to the proposed project. While upgrades to the existing utilities may be necessary, major infrastructure is already present in the area and there are no known obstacles to growth.

In addition, approval of the project would not remove any existing regulatory obstacle to growth, but would redefine the nature of future growth in the area. For example, the current and proposed land use designations and zoning for the project site have varying allowable densities and permitted uses, but growth would be allowed under both the current and proposed land use designations and zoning. Therefore, the proposed project is not considered growth inducing with respect to removal of obstacles to growth within the project site.

Would this project result in the need to expand one or more public services to maintain desired levels of service?

The project site is in a developed and highly urbanized area of Newport Beach. As described in Sections 5.11, *Public Services*, and 5.14, *Utilities and Service Systems*, all public services and utilities are currently available at the project site. Public service and utilities agencies were consulted during preparation of this DEIR—Newport Beach Fire Department, Newport Beach Police Department, Newport-Mesa Unified School District, Newport Beach Public Library, Newport Beach Municipal Operations Department, Newport Beach General Services Department, Orange County Sanitation District, and OC Waste & Recycling.

None of the service providers indicated that the Museum House project would necessitate the immediate expansion of their service and facilities in order to maintain desired levels of service. Therefore, no future expansion of public services would be required to maintain existing levels of service.

Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?

Implementation of the proposed project would encourage or facilitate economic effects. During project construction, a number of design, engineering, and construction-related jobs would be created. These jobs would be available from planning to construction, lasting until the final tower and associated hardscape improvements are completed. This would be a direct but temporary growth-inducing impact of the proposed project.

Buildout of the Museum House project would not increase employment in the project area by a substantial amount, but would introduce up to 224 additional residents in the 100 condominium units. The increase in

residents could spur new economic investment in commercial uses serving the project site. Future residents would also represent an increased demand for economic goods and services and could, therefore, encourage the creation of new businesses and/or the expansion of existing businesses in Newport Center/Fashion Island. While the proposed project would have an indirect growth-inducing effect, this would be accommodated by the surrounding Newport Center/Fashion Island and its ability to absorb local business growth.

Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

The approval of the Museum House project would require approval of the following discretionary actions by the City of Newport Beach:

- Approval of City of Newport Beach General Plan Amendment No. 2015-001
- Approval of San Joaquin Plaza Planned Community Development Plan Amendment No. 2015-001
- Approval of Site Development Review No. SD2016-001
- Approval of Tentative Tract Map No. NT2016-001
- Approval of Development Agreement No. DA2016-001
- Approval of Traffic Study No. TS2015-004

The approval of these actions changes the existing restrictions on growth set by the Newport Beach General Plan and Zoning Code, which may encourage growth in a similar manner in the City. However, future projects would need to complete applicable environmental review and would need discretionary approval following review by the Newport Beach City Council. The proposed project would not change the existing protocol for project approval and would not provide precedents or make it more likely for other projects to gain approval of similar applications.

Moreover, no changes to any of the City's building safety standards (i.e., building, grading, plumbing, mechanical, electrical, fire codes) are proposed or required to implement the proposed project. Therefore, the proposed project would not involve a precedent-setting action that would encourage and/or facilitate other activities that could significantly affect the environment.

9.3 ENERGY IMPACTS OF THE PROPOSED PROJECT

Section 21100(b)(3) of the California Environmental Quality Act (CEQA) requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing any inefficient, wasteful, and unnecessary consumption of energy. Although not specifically in Appendix G of the CEQA Guidelines, Appendix F of the CEQA Guidelines states that the goal of conserving energy implies the wise and efficient use of energy and the means of achieving this goal include 1) decreasing overall per capita energy consumption; 2) decreasing reliance on fossil fuels such as coal, natural gas and oil; and 3) increasing reliance on renewable energy sources. To address this issue, project-related energy impacts will be examined through analysis of the following questions:

- Would this project increase demand for energy that requires expanded supplies or the construction of new infrastructure or expansion of existing facilities, the construction of which could cause significant environmental effects?
- Would this project result in an inefficient, wasteful and unnecessary consumption of energy?

As detailed in Section 5.14, *Utilities and Service Systems*, the project site is already developed with the existing OCMA building and is served by Southern California Edison (SCE) and Southern California Gas Company (SoCalGas). Based on the air quality modeling, the proposed project has an average annual electricity demand of approximately 988,512 kilowatt hour (kWh) per year and average natural gas demand of 249,090 thousand British thermal units (kBTU) per year.

9.3.1 Construction

Construction of the proposed project would require the use of construction equipment for grading, hauling, and building activities. Equipment proposed for these types of activities is listed in Table 3-2 of Chapter 3, *Project Description.* Electricity use during construction would vary during different phases of construction—the majority of construction equipment during demolition and grading would be gas powered or diesel powered, and the later construction phases would require electricity-powered equipment, such as interior construction and architectural coatings. Construction also includes the vehicles of construction workers traveling to and from the project site and haul trucks for the export of materials from site clearing and demolition and the export and import of soil for grading. Since the project site is already served by onsite electrical infrastructure by SoCalGas, where current usage would cease upon demolition of the OCMA building, adequate infrastructure capacity is available to accommodate the electricity and natural gas demand for construction activities and would not require additional or expanded infrastructure.

The construction contractors are also anticipated to minimize idling of construction equipment during construction and reduce construction and demolition waste by recycling. These required practices would limit wasteful and unnecessary electrical energy consumption. Furthermore, there are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in other parts of the state. Therefore, the proposed short-term construction activities would not result in inefficient, wasteful, or unnecessary fuel consumption.

9.3.2 Transportation

Short-Term Construction Impacts

Transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and travel mode. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary. The majority of construction equipment during demolition and grading would be gas powered or diesel powered, and the later construction phases

would require electricity-powered equipment. Impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure. Impacts would not be significant.

Long-Term Operational Impacts

The proposed project would consume transportation energy during operations from the use of motor vehicles. Estimates of transportation energy use are based on the overall vehicle miles traveled (VMT) and related transportation energy use. As modeled in CalEEMod, the existing annual VMT for the OCMA building is 316,486. Under existing conditions, the transportation energy demand is estimated at 16,325 gallons per year¹ of gasoline and diesel fuel.

Project-related VMT would come from resident, visitor, and employee vehicle trips; delivery and supply trucks, and trips by maintenance and repair crews. The proposed project would increase total VMT from 316,486 to 1,398,103. At buildout, the proposed project would consume approximately 53,753 gallons per year² of gasoline and diesel fuel. Compared to existing conditions, this results in a net increase in fuel consumption of 37,427 gallons per year of gasoline and diesel fuel.

Although the project would increase annual fuel consumption, average corporate fuel economy would increase from 19.4 to 26.0 gallons per year from 2016 to 2020. This improvement is a result of state and federal laws, including the Pavley Advanced Clean Cars program, as well as vehicle turnover, which improves the overall fuel economy of California's vehicle fleets.

The City of Newport Beach and its surrounding areas are highly urbanized with numerous gasoline fuel facilities and infrastructure. Consequently, the proposed project would not result in a substantial demand for energy that would require expanded supplies or the construction of other infrastructure or expansion of existing facilities. Additionally, fuel consumption associated with vehicle trips generated by the proposed project would not be considered inefficient, wasteful, or unnecessary.

9.3.3 Energy Demand

Electricity

Based on the air quality modeling prepared for the proposed project, the Museum House project would require approximately 988,512 kWh per year. In comparison, the existing OCMA building requires approximately 400,834 kWh per year. The increased demand is expected to be adequately served by the existing SCE electrical facilities on the project site currently serving the OCMA building. SCE forecasts that it would have adequate electricity to meet the expected growth in its service area through 2022. Using SCE's anticipated consumption in 2022 in a high-demand consumption scenario, electricity demand is expected to be 116,637 GWh (CEC 2012). The increase in electricity demand from the proposed project would be 0.0008

¹ Based on CARB's EMFAC 2014 fleet efficiency for year 2016 based on the fleet mix included in the traffic study, as modeled in CalEEMod.

² Based on CARB's EMFAC 2014 fleet efficiency for year 2027 based on the fleet mix included in traffic study, as modeled in CalEEMod.

percent of overall demand in SCE's service area. Therefore, projected electrical demand would not significantly impact SCE's level of service.

Prior to issuance of a building permit, the City of Newport Beach Public Utilities Department would review and verify the project plans demonstrate compliance with the 2013 Building and Energy Efficiency Standards. The project would also be required adhere to the provisions of CALGreen, which establishes planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. Several water efficiency features of the proposed tower include installation of water-efficient fixtures for each unit to provide an overall 20 to 30 percent reduction in water use and landscape irrigation systems designed with weather sensors, timers, and low-flow irrigation devices.

Additionally, the proposed tower is expected to be commissioned and certified as a LEED for New Construction Silver building and is designed to be 10 to 15 percent more energy efficient than required under the California Energy Code (Title 24). Some design features include high efficiency wall assemblies and windows to reduce heating and cooling loads; Energy Star refrigerators, dishwashers, clothes washers, etc.; high efficiency heating and cooling systems; high efficiency domestic hot water systems; and high efficiency light-emitting diode (LED) lighting in residential units, common areas, and landscape design. Overall, impacts would not result in inefficient, wasteful, or unnecessary energy consumption.

Natural Gas

The proposed project would generate a demand for 1,151,230 kBTU per year compared to 249,090 kBTU per year for the existing OCMA building. This is an increase in natural gas demand of approximately 902,140 kBTU per year.

Total supplies of natural gas available to SoCalGas are expected to remain stable at 3.875 billion cubic feet of natural gas per day (bcfd), that is, 1,414,375 billion BTU per year, between 2015 and 2035 (CGEU 2014). Total natural gas consumption in SoCalGas's service area is forecast to be 2.647 bcfd (966,155 billion BTU per year) in 2035. Therefore, the natural gas demand from the proposed project would represent a nominal percentage of overall demand in SoCalGas' service area.

Additionally, the 2014 California Gas Report discussed that in 2013, single family and multi-family average annual use per meter was 49.3 and 32.3 kBTU, respectively. Over the forecast period through 2035, the demand per customer is expected to decline at an annual rate of 1.3 percent due to conservation and the energy savings resulting from tightened building and appliance standards and energy efficiency programs and demand reductions anticipated as a result of the deployment of the Advanced Meter Infrastructure (AMI) project in the Southern California area. With AMI, customers will have more timely information available about their daily and hourly gas use and thereby are expected to use gas more efficiently

Thus, SoCalGas facilities that currently provide natural gas to the OCMA building can also serve the proposed project. SoCalGas can provide additional connections if necessary once utility plans are finalized for the proposed project. Impacts to natural gas services would be less than significant and would not result in inefficient, wasteful, or unnecessary natural gas consumption.

9.3.4 References

California Energy Commission (CEC). 2012, June. California Energy Demand 2012-2022 Final Forecast, Volume 2: Electricity Demand by Utility Planning Area. http://www.energy.ca.gov/2012publications/CEC-200-2012-001/CEC-200-2012-001-CMF-V2.pdf.

California Gas and Electric Utilities (CGEU). 2014. 2014 California Gas Report. https://www.socalgas.com/regulatory/documents/cgr/2014-cgr.pdf.

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