5 Other CEQA Required Discussions

This section covers unique topics required to be addressed under the *CEQA Guidelines* including growth-inducing effects, significant irreversible changes, and energy effects as set forth in *CEQA Guidelines* Appendix F.

5.1 Growth-Inducing Effects

The *CEQA Guidelines* require a discussion of a project's potential to foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment, including, among others, ways in which a project could remove an obstacle to growth.

Growth inducement itself is not an environmental effect but has the potential to lead to environmental effects. These environmental effects may include increased demand on other community and public services and infrastructure. Depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects. The project's growth-inducing potential is therefore considered significant if it could result in significant physical effects in one or more environmental issue area.

A project can have the potential to induce direct and/or indirect growth. A project would directly induce growth by resulting in construction of new housing. It is important to note that direct forms of growth have secondary effects of expanding the size of local markets and attracting additional economic activity to the area. A project would indirectly induce growth by resulting in:

- Substantial new permanent employment opportunities, for example, commercial or industrial development;
- A construction effort with substantial short-term employment opportunities that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- Removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service; for example, construction of a major sewer line with excess capacity through an undeveloped area.

Typically, the growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population above what is assumed in local and regional land use plans, or in projections made by regional planning authorities. Significant growth impacts could also occur if the project provides infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies.

5.1.1 Population Growth

As discussed in Section 2, *Project Description*, the proposed project does not include residential uses and therefore would not directly generate population growth. However, the proposed project would accommodate between 175 and 250 new employees (full and part-time). Because the proposed project would include commercial retail development, it is anticipated that employment opportunities generated by the proposed project would generally draw workers primarily from the

existing regional work force. Therefore, population growth associated with the proposed project would not result in significant long-term physical environmental impacts.

5.1.2 Economic Growth

The proposed project would generate temporary employment opportunities during construction. Because construction workers would be expected to be drawn from the existing regional work force, construction of the project would not be growth-inducing from a temporary employment stand-point. However, the proposed project would also add long-term employment opportunities associated with operation of a retail center.

AMBAG forecasts that 6,451 jobs will be added to unincorporated Monterey County between 2015 and 2040 (AMBAG 2017). The potential 250 jobs anticipated by the proposed retail development would represent approximately 3.9 percent of forecasted employment growth between 2015 and 2040; therefore the potential 250 jobs generated by the development would be well within employment AMBAG forecasts. The proposed project would not be expected to induce substantial economic expansion to the extent that direct physical environmental effects would result.

5.1.3 Removal of Obstacles to Growth

The proposed project is located in a relatively urbanized area and would be served by existing infrastructure. As discussed in Section 4.9.17, *Utilities and Service Systems*, existing water infrastructure would be adequate to serve the project. Minor improvements to drainage infrastructure would be needed, but would be sized to specifically serve the proposed project. Also discussed in Section 4.9.17, *Utilities and Service Systems*, the proposed project would be served by the Monterey Peninsula Landfill, and construction and operation of the proposed project would not exceed existing annual capacity for the landfill.

According to the traffic study prepared for the proposed project by Keith Higgins Traffic Engineer (KHTE) in December 2017 (Appendix G), changes in traffic volumes would degrade several nearby roadway segments and intersections to unacceptable levels of service. These nearby roadway segments and intersections would experience a significant and unavoidable impact. However, because the proposed project constitutes development in a relatively urbanized area and does not require the extension of new infrastructure through undeveloped areas, project implementation would not remove an obstacle to growth.

5.2 Significant and Irreversible Environmental Effects

The CEQA Guidelines require that EIRs contain a discussion of significant irreversible environmental changes. This section addresses non-renewable resources, the commitment of future generations to the proposed uses, and irreversible impacts associated with the proposed project.

The proposed project involves infill development on a currently undeveloped lot in the unincorporated area of Monterey County, approximately 2,500 feet southeast of the City of Carmel-by-the-Sea corporate boundary. Construction and operation of the project would involve an irreversible commitment of construction materials and non-renewable energy resources. The project would involve the use of building materials and energy, some of which are non-renewable resources, to construct the overall building floor area of 42,310 gross square feet. Consumption of these resources would occur with any development in the region, and are not unique to the proposed project.

The proposed project would also irreversibly increase local demand for non-renewable energy resources such as petroleum products and natural gas. However, increasingly efficient building design would offset this demand to some degree by reducing energy demands of the project. The project would be subject to the energy conservation requirements of the California Energy Code (Title 24, Part 6, of the California Code of Regulations, *California's Energy Efficiency Standards for Residential and Nonresidential Buildings*) and the California Green Building Standards Code (Title 24, Part 11 of the California Code of Regulations). The California Energy Code provides energy conservation standards for all new and renovated residential and nonresidential buildings constructed in California, and the Green Building Standards Code requires solar access, natural ventilation, and stormwater capture. Consequently, the project would not use unusual amounts of energy or construction materials and impacts related to consumption of non-renewable and slowly renewable resources would be less than significant. Again, consumption of these resources would occur with any development in the region, and is not unique to the proposed project.

Additional vehicle trips associated with the proposed project would increase local traffic, regional air pollutant concentrations, and GHG emissions. As discussed in Section 4.1, *Air Quality*, development and operation of the project would not generate air pollutant emissions that would result in a significant impact. Additionally, as discussed in Section 4.3, *Climate Change*, GHG emissions would not exceed SLOAPCD's efficiency threshold with mitigation implemented and would result in a less than significant impact. However, Section 4.8, *Transportation and Circulation*, identifies significant and unavoidable impacts related to traffic operations as a result of addition vehicle trips that would be generate by the project. CEQA requires decision-makers to balance the benefits of a proposed project against its unavoidable environmental risks in determining whether to approve a project. The analysis contained in this EIR concludes that the proposed project would result in a significant and unavoidable impact to transportation and circulation, as well as a significant and unavoidable cumulative impact to noise associated with increase traffic. As discussed in Section 4.8, *Transportation and Circulation,* no feasible Mitigation Measures have been identified that would reduce impacts to less than significant.

5.3 Energy Effects

Public Resources Code Section 21100(b)(2) and Appendix F of the CEQA Guidelines require that EIRs include a discussion of the potential energy consumption and/or conservation impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful or unnecessary consumption of energy.

The proposed project would involve the use of energy during the construction and operational phases of the project. Energy use during the construction phase would be in the form of fuel consumption (e.g., gasoline and diesel fuel) to operate heavy equipment, light-duty vehicles, and machinery. In addition, temporary grid power may also be provided to any temporary construction trailers or electric construction equipment. Long-term operation of the proposed project would require permanent grid connections for electricity and natural gas service to power internal and exterior building lighting, and heating and cooling systems.

Pacific Gas and Electric Co. (PG&E) would provide gas and electricity service for the proposed project. In 2015, PG&E's electricity power mix consisted of approximately 30 percent renewable energy sources (wind, geothermal, solar, small hydro, and biomass) (PG&E 2015). New technologies also offer the potential to capture methane, the primary ingredient in natural gas, from existing waste stream sources to make a renewable form of natural gas.

California used 282,896.3 gigawatt-hours (GWh) of electricity in 2015 (CEC 2017a) and 10,054.2 million therms of natural gas in 2015 (CEC 2017b). In addition, California's transportation sector, including on-road and rail transportation, consumed roughly 558.1 million bbl of petroleum fuels in 2015 (EIA 2017).

CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Further, the model identifies Mitigation Measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from measures chosen by the user. Complete CalEEMod results and assumptions can be viewed in Appendix B of this EIR. The proposed project's estimated motor vehicle fuel as calculated from CalEEMod is shown in Table 50.

Table 50 Estimated Project-Related Annual Motor Vehicle Fuel Consumption

Vehicle Type	Percent of Vehicle Trips[1]	Annual Vehicle Miles Traveled[2]	Average Fuel Economy (miles/gallon)[3]	Total Annual Fuel Consumption (gallons)
Passenger Cars	53.31	4,295,540	36.4	118,009
Light/Medium Trucks	37.47	3,019,008	23.5	128,468
Heavy Trucks/Other	8.13	655,045	7.7	85,071
Motorcycles	0.79	7,292	50	146
Total	100.00	8,057,133	–	331,694

[1] Percent of vehicle trips found in Table 4.4 "Fleet Mix" in CalEEMod output (see Appendix B)

[2] Mitigated annual VMT found in Table 4.2 "Trip Summary Information" in CalEEMod output (see Appendix B)

[3] Average fuel economy for light/medium trucks, heavy trucks/other, and motorcycles provided by the United States Department of Transportation, Bureau of Transportation Statistics (2010); average fuel economy for passenger vehicles provided by the United States Department of Transportation, Bureau of Transportation Statistics (2016).

Note: Totals may not add up due to rounding.

Total estimated energy usage for the proposed project, including motor vehicle fuel, is summarized and compared to statewide usage in Table 51. The proposed project would result in increased weekday trips, and vehicle miles traveled (VMT) as compared to the current site. However, the proposed project would make a minimal contribution to statewide energy consumption and would not adversely affect energy supplies.

Table 51 Estimated Project-Related Energy Usage Compared to State-Wide Energy Usage

Form of Energy	Units	Annual Project-Related Energy Use	Annual State-Wide Energy Use	Project percent of State-Wide Energy Use
Electricity	MWh	1,237[1]	282,896,300[2]	0.000004
Natural Gas	Therms	564,837,800[1]	2,313,000,000,000[3]	0.0002
Motor Vehicle Fuels	Gallons	331,694[4]	18,019,000,000[5]	0.00002

[1] Energy Use provided in the Initial Study(see Appendix B);

[2] California Energy Commission (CEC). 2017a. Electricity Consumption by Planning Area. Available at: http://ecdms.energy.ca.gov/elecbyplan.aspx. Accessed September 15, 2017.

[3] California Energy Commission (CEC). 2017b. Gas Consumption by Planning Area. Available at: http://ecdms.energy.ca.gov/gasbyplan.aspx. Accessed September 15, 2017.

[4] See Table 50.

[5] United States Information Energy Administration (EIA). 2017. CALIFORNIA: Table CT7. Transportation Sector Energy Consumption Estimates, 1960-2015, California. Available at: https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_use/tra/use_tra_CA.html&sid=CA. Accessed September 15, 2017.

As discussed previously, the proposed project would also be subject to the energy conservation requirements of the California Energy Code (Title 24 of the California Code of Regulations, Part 6 [24 CCR 6], *California's Energy Efficiency Standards for Residential and Nonresidential Buildings)* and the California Green Building Standards Code (24 CCR 11). The California Energy Code provides energy conservation standards for all new and renovated commercial buildings constructed in California. The Code applies to the building envelope, space-conditioning systems, and water-heating and lighting systems of buildings and appliances. The Code provides guidance on construction techniques to maximize energy conservation. Minimum efficiency standards are given for a variety of building elements, including: appliances; water and space heating and cooling equipment; and insulation for doors, pipes, walls and ceilings. The Code also emphasizes saving energy at peak periods and seasons and improving the quality of installation of energy efficiency measures. In addition, the California Green Building Standards Code sets targets for: energy efficiency; water consumption; dual plumbing systems for potable and recyclable water; diversion of construction waste from landfills; and use of environmentally sensitive materials in construction and design, including eco-friendly flooring, carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels.

Furthermore, the proposed project would be required to comply with Monterey County Code Chapter 18.06, *Energy Code*, which adopts the 2016 California Energy Code (24 CCR 6) as the Energy Code for the County of Monterey. In addition, the Monterey County General Plan Conservation and Open Space Element includes Goal OS-9, and associated policies, to promote efficient energy use. The following policies included under Goal OS-9, *Promote Efficient Energy Use*, are most applicable to the proposed project:

> **Policy OS-9.2.** Development shall be directed toward cities, Community Areas, and Rural Centers where energy expended for transportation and provisions of services can be minimized.
>
> **Policy OS-9.6.** Development shall incorporate features that reduce energy used for transportation, including pedestrian and bicycle pathways, access to transit, and roadway design as appropriate.

The project is consistent with Policy OS-9.2 as it would be located on an infill lot surrounded by development in the mouth of the Carmel Valley, and is located in proximity to the City of Carmel-by-the-Sea. The project is also consistent with Policy OS-9.6 as it would provide bicycle lockers (long term), bike racks (short term), and a relocated bus turnout along Rio Road. Further, the project site is located approximately 340 feet east of a regional bicycle trail running north to south and east of Highway 1; and an existing bus shelter along the Rio Road project frontage would provide bus service directly to and from the site.

Adherence to Title 24 and County energy conservation requirements would ensure that energy is not used in an inefficient, wasteful, or in an unnecessary manner.