4.3 AIR QUALITY

4.3.1 Setting

a. Climate and Topography. The project site is in the South Central Coast Air Basin (SCCAB), which includes all of San Luis Obispo, Santa Barbara, and Ventura Counties. The 2001 Clean Air Plan (2001 CAP) for San Luis Obispo County describes the air quality setting for the County in detail, including the local climate and meteorology, current and projected air quality, and the regulatory framework for the management of air quality. The climate of the SCCAB is strongly influenced by its proximity to the Pacific Ocean and the location of the semi-permanent high-pressure cell in the northeastern Pacific. The Mediterranean climate of the region produces moderate average temperatures, although extreme temperatures can be reached in the winter and summer. The warmest month of the year is September with an average maximum temperature of 69.8 degrees Fahrenheit (°F), while the coldest month of the year is January with an average minimum temperature of 46.7°F. Rainfall is concentrated in the winter months. Local climate conditions are shown in Table 4.3-1.

Table 4.3-1
San Luis Obispo Climate Conditions

Average annual rainfall	22.4 inches
Average maximum temperature (Annual)	69.8°F
Average minimum temperature (Annual)	46.7°F
Warmest Month	September
Coolest Month	January
Annual mean temperature	58.3°F

Source: Western Regional Climate Center 2016.
Note averages are based on the period of record, February 2, 1893 to June 10, 2016.

The region is subject to seasonal Santa Ana winds. Santa Ana winds are strong northerly to northeasterly winds that originate from high-pressure areas centered over the desert of the Great Basin. These winds are usually warm, dry, northerly winds which blow offshore at 15 to 20 miles per hour (mph), but can reach speeds in excess of 60 mph. Santa Ana winds are particularly strong in the mountain passes and at the mouths of canyons. However, seasonal and local topographic conditions may alter the winds experienced in San Luis Obispo.

Two types of temperature inversions (warmer air on top of cooler air) are created in the area: subsidence and radiational. The subsidence inversion is a regional effect created by the Pacific high in which air is heated when it flows from the high-pressure area to the low-pressure areas inland and is compressed. This type of inversion generally forms at about 1,000 to 2,000 feet and can occur throughout the year, but it is most evident during the summer months. Radiational, or surface, inversions are formed by the more rapid cooling of air near the ground at night, especially during winter. This type of inversion is typically lower and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed as the more stable the air (low wind speeds, uniform temperatures), the lower the amount of pollutant dispersion.

b. Air Pollutants of Primary Concern. The State and Federal Clean Air Acts mandate the control and reduction of certain air pollutants. Under these acts, the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (ARB) have established ambient air quality standards for certain "criteria" pollutants. Ambient air pollutant concentrations are affected by the rates and distributions of corresponding air pollutant emissions, as well as by the climactic and topographic influences discussed above. The primary determinant of concentrations of non-reactive pollutants (such as carbon monoxide [CO] and fine particulates [$PM_{2.5}$ and PM_{10}]) is proximity to major sources. Ambient CO levels usually closely follow the spatial and temporal distributions of vehicular traffic.

Federal and state standards have been established for ozone, CO, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead, and PM_{10} and $PM_{2.5}$. Standards have been set at levels intended to be protective of public health. California standards are more restrictive than federal standards for each of these pollutants except lead and the eight-hour average for CO. Table 4.3-2 illustrates the current Federal and State Ambient Air Quality Standards.

Table 4.3-2
Current Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	---	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	100 ppb	0.18 ppm
Sulfur Dioxide	Annual	0.030 ppm	---
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	75 ppb	0.25 ppm
PM_{10}	Annual	---	20 µg/m^3
	24-Hour	150 µg/m^3	50 µg/m^3
$PM_{2.5}$	Annual	12 µg/m^3	12 µg/m^3
	24-Hour	35 µg/m^3	---
Lead	30-Day Average	---	1.5 µg/m^3
	Rolling 3-Month Average	0.15 µg/m^3	---
	Calendar Quarter	1.5 µg/m^3	---

Source: ARB 2016.
ppm = parts per million
ppb = parts per billion
µg/m^3 = micrograms per cubic meter

The SLOAPCD monitors criteria pollutant levels to ensure that air quality standards are met, and if they are not met, develops strategies to meet the standards. Depending on whether or not the standards are met or exceeded, the air basin is classified as being in "attainment" or "non-attainment." As of August 2013 (the last date that SLOAPCD's attainment status was updated),

San Luis Obispo County is in non-attainment for the 1-hour and 8-hour State standards for ozone and the 24-hour State standard for PM_{10} (SLOAPCD 2013).

Table 4.3-3 summarizes the annual air quality data for the local airshed. The ARB maintains over 60 air quality monitoring stations throughout California, including ~~ten~~two stations in San Luis Obispo County. The remaining stations in San Luis Obispo County are maintained by SLOAPCD. The nearest monitoring station to the project site is the San Luis Obispo station, located at 3220 South Higuera Street and approximately 1,500 feet east of the project site. The San Luis Obispo station collects data on both ozone and PM concentrations. The data collected at this station is considered to be generally representative of the baseline air quality experienced at the project site.

Table 4.3-3
Ambient Air Quality Data at the San Luis Obispo Station

Pollutant	2013	2014	2015
Ozone, ppm – Hourly Maximum	0.067	0.080	0.066
Number of days of State exceedances (>0.090 ppm)	0	0	0
Number of days of Federal exceedances	0	0	0
Ozone, ppm – Eight Hour (State)	0.061	0.074	0.062
Number of days of State exceedances (>0.070 ppm)	0	1	0
Number of days of Nation exceedances (>0.070 ppm)	0	0	0
Particulate Matter <10 microns, μg/m3 Worst 24 Hours	75.6	43.2	43.1
Number of samples of State exceedances (>50 μg/m3)	3	0	0
Number of samples of Federal exceedances (>150 μg/m3)	0	0	0
Particulate Matter <2.5 microns, μg/m3 Worst 24 Hours	19.5	15.6	16.4
Number of samples of Federal exceedances (>35 μg/m3)	0	0	0

Source: ARB, Top 4 Summary, 2016b

The primary pollutants of concern in San Luis Obispo are ozone and particulate matter (PM_{10}). Table 4.3-3 provides the number of days of State or federal exceedance in a given year. As shown, pollutant concentrations have not exceeded State or federal standards since 2013 for hourly ozone and $PM_{2.5}$. The State eight hour ozone standard was exceeded once in 2014 and the PM_{10} 24 Hour standard was exceeded three times in 2013.

The major local sources for PM_{10} in the region are agricultural operations, vehicle dust, grading, and dust produced by high winds. Ozone is a secondary pollutant that is not produced directly by a source, but rather is formed by a reaction between nitrogen oxides (NO_X) and reactive organic gases (ROG) in the presence of sunlight. Reductions in ozone concentrations are dependent on reducing the amount of these precursors. In San Luis Obispo County, the major sources of ROG are motor vehicles, organic solvents, the petroleum industry, and pesticides; and the major sources of NO_X are motor vehicles, public utility power generation, and fuel combustion by various industrial sources (SLOAPCD 2001).

c. Regulatory Setting. Air quality is regulated by the U.S. EPA, ARB, and SLOAPCD. Each of these agencies develops rules, regulations, policies, and/or goals to comply with

applicable legislation. Although U.S. EPA regulations may not be superseded, state and local regulations may be more stringent.

The Federal Clean Air Act (CAA) required U.S. EPA to establish national ambient air quality standards (NAAQS) (Table 4.3-2). The CAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The Federal CAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments and whether implementation will achieve air quality goals. If the EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

The ARB is responsible for preparing and enforcing the federally-required SIP to achieve and maintain NAAQS, as well as the California Ambient Air Quality Standards (CAAQS), which were developed as part of the California Clean Air Act (1988) (Table 4.3-2). The State standards for criteria pollutants are equivalent to or more stringent than the national standards, and include other pollutants for which there are no national standards. The ARB is also responsible for assigning air basin attainment and nonattainment designations in California.

The ARB is the oversight agency responsible for regulating statewide air quality, but implementation and administration of the CAAQS is delegated to several regional air pollution control districts and air quality management districts. These districts have been created for specific air basins and have principal responsibility for: developing plans to comply with the NAAQS and CAAQS; developing control measures for non-vehicular sources of air pollution necessary to achieve and maintain NAAQS and CAAQS; implementing permit programs established for the construction, modification, and operation of air pollution sources; enforcing air pollution statutes and regulations governing non-vehicular sources; and developing employer-based trip reduction programs. With regards to toxic air contaminants (TACs), the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Chapter 1047, Statutes of 1983) sets forth a formal procedure for ARB to designate substances and develop control measures. The Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, Chapter 1252, Statutes of 1987) requires stationary sources to report the types and quantities of certain substances routinely released into the air.

The SLOAPCD, the lead air quality regulatory agency for San Luis Obispo County, maintains air quality comprehensive programs for planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean-air strategy of SLOAPCD involves the preparation of plans and programs for the attainment of CAAQS and NAAQS, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. The 2001 Clean Air Plan for San Luis Obispo County, prepared by SLOAPCD, contains a comprehensive set of control measures and a regulatory framework designed to reduce criteria air pollutants and precursors from both stationary and mobile

sources. The SLOAPCD also inspects stationary sources to ensure they abide by permit requirements, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the Federal and State Clean Air Acts.

In 2009, SLOAPCD adopted guidelines for assessment and mitigation of air quality impacts under the California Environmental Quality Act (CEQA). The *CEQA Air Quality Handbook*, which was updated in 2012 (SLOAPCD 2012), is an advisory document that provides lead agencies, consultants, and project applicants with uniform procedures for addressing air quality issues in environmental documents. The *CEQA Air Quality Handbook* also includes standard construction and operational mitigation measures that may be applied to projects that exceed SLOAPCD thresholds.

d. Sensitive Receptors. Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. Standards are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. Therefore, the majority of sensitive receptor locations are residences, schools, and hospitals.

Sensitive receptors near the project site include the residential areas to the southwest and west. The nearest schools are Pacific Beach High School, located approximately 750 feet west of the project site and C.L. Smith Elementary School, located approximately 1,500 feet north of the project site. The nearest hospitals to the project site include French Hospital Medical Center, located approximately two miles northeast at 1911 Johnson Avenue, and Sierra Vista Regional Medical Center, located approximately 2.5 miles north at 1010 Murray Avenue. Therefore, the nearest sensitive receptors to the project site are the residences located approximately 75 feet to the west, separated from the project site by Prefumo Creek. The project's proposed residential uses would also be considered sensitive receptors.

e. Odors. The SLOAPCD *CEQA Air Quality Handbook* identifies multiple sources that may cause odors including, but not limited to, wastewater treatment plants, landfills, composting facilities, petroleum refineries, and chemical manufacturing. The main objectionable odor released from wastewater treatment plants is associated with hydrogen sulfide (H_2S), which emits an odor similar to rotten eggs. The nearest existing source of odor in the vicinity of the project site is the San Luis Obispo Water Resource Recovery Facility (WRRF) located approximately 500 feet east of the project site boundary, across U.S. 101.

4.3.2 Previous Program-Level Environmental Review

The 2014 Land Use and Circulation Elements Update EIR (LUCE Update EIR) analyzed air quality impacts for the City of San Luis Obispo related to the adoption of the updated General Plan Land Use and Circulation Elements. However, the LUCE Update EIR did not include a site-specific analysis of air quality impacts for the San Luis Ranch Specific Plan Area. The LUCE Update EIR identified significant but mitigable short-term construction-related air quality impacts associated with buildout of the General Plan. Mitigation measures required in the LUCE Update EIR to reduce this impact included implementation of the most current

SLOAPCD-recommended emissions reduction measures to reduce construction-generated emissions to less-significant levels at the project-specific level. The LUCE Update EIR identified significant and unavoidable long-term air quality impacts due to operational emissions from development under the General Plan and inconsistency with the 2001 CAP because the growth rate in vehicle miles travelled (VMT) under the updated Land Use and Circulation Elements would exceed the rate of population growth. However, the LUCE Update EIR concluded that implementation of the updated General Plan policies, and amendments to existing City policies, as well as the establishment of project-specific mitigation measures, where appropriate, would reduce cumulative air quality impacts to a less than significant level.

4.3.3 Impact Analysis

a. Methodology and Significance Thresholds. Procedures and guidance regarding the evaluation of air quality impacts associated with land development projects are provided by SLOAPCD's *CEQA Air Quality Handbook* (2012).

Methodology. The California Emissions Estimator Model (CalEEMod) version 2016.3.1 was utilized to estimate regional air pollutant emissions associated with project construction and operation. Proposed construction would occur in six phases between 2017 and 2023. Phases 1, 2, and 3 – which include the proposed residential build out – would be constructed between 2017 and 2020. Phases 4 and 5 – which include office and hotel build out – would be constructed between 2018 and 2023. Phase 6 – which includes commercial build out – would be constructed between 2017 and 2020. Each year of construction was modeled separately in CalEEMod based on the phasing plan described in Section 2.0, *Project Description*, and Section 7.7 of the Specific Plan (Appendix B) to account for multiple operational years. To provide a conservative estimate, it was assumed that office construction would be concentrated between 2018 and 2021. CalEEMod construction schedule defaults were used, except in the case of architectural coating. Architectural coating was extended to overlap with half of the default building construction phase because painting is generally completed as buildings within a phase are completed, rather than subsequent all building construction. Construction phasing assumptions are detailed in the CalEEMod output files (refer to Appendix D).

Grading of the project site would require approximately 248,000 cubic yards (cy) of import. Off-site hauling of import materials was included in the emissions modeling. This analysis assumes that soil would be imported to the site during each phase and, as exact import volumes per phase are unknown, total import was divided between phases proportionally by phase acreage. CalEEMod's default trip length of 20 miles per one-way trip was used for hauling. Existing buildings in the northern area of the project site were estimated to total approximately 17,500 square feet of building area. Demolition of these buildings was included in the modeling for Phase 3.

Estimates of vehicle trips associated with the proposed development were based on peak hour trip generation rates from the project Traffic Impact Study (refer to Section 4.12, *Transportation/Traffic* and Appendix L). The trip generation rates in the TIS are based on the Institute of Transportation Engineers 9th Edition *Trip Generation Manual*, and also account for reductions expected from the mixed use and pedestrian-oriented characteristics of the project (see Appendix L), including internal capture and pass-by trips. In addition, the open space and

park areas' use of reclaimed water was included in the emissions modeling. All other values utilized in the emissions modeling were based on applicable SLOAPCD defaults for the SCCAB.

Existing agricultural operations on the project site generate emissions from agricultural equipment, such as tractors, and vehicles accessing the site. The active agricultural area would be reduced from approximately 109 acres (refer to Section 4.2, *Agricultural Resources*) to 53 acres, a 50 percent decrease, which would result in a proportionate reduction in emissions from agricultural operations. The existing agricultural uses of the site are substantially less energy, water, and fuel intensive than the proposed residential and commercial land uses for the site. To provide a conservative estimate of the project's operational emissions, the analysis does not include the net reduction in emissions that would result from reducing to area of active agricultural operations on the project site.

Significance Thresholds. The following thresholds are based on Appendix G of the *State CEQA Guidelines*. Impacts would be significant if the project would:

1. *Conflict with or obstruct implementation of the applicable air quality plan;*
2. *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
3. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative guidelines for ozone precursors);*
4. *Expose sensitive receptors to substantial pollutant concentrations; or*
5. *Create objectionable odors affecting a substantial number of people.*

The Initial Study (Appendix A) determined that the project would not create objectionable odors that would affect a substantial number of people, nor would the project expose people to objectionable odors. Therefore, Threshold 5 is not discussed further in this section. See Section 4.14, *Issues Addressed in the Initial Study*, for a discussion of this issue.

As stated in the *State CEQA Guidelines*, the significance criteria established by the regional air quality management or air quality pollution control district may be relied upon to make determinations. SLOAPCD's recommended significance criteria are described in its *CEQA Air Quality Handbook* (2012) and included below.

Consistency with the 2001 CAP. Projects and programs requiring an analysis of consistency with the CAP include: General Plan updates and amendments, Community Plans, Specific Plans, Area Plans, large residential developments and large commercial/industrial developments. Therefore, the proposed San Luis Ranch Specific Plan Area is evaluated for impacts related to CAP consistency. The *CEQA Air Quality Handbook* (2012) indicates that if a project is consistent with the land use and transportation control measures and strategies outlined in the 2001 CAP, then the project is considered consistent with the 2001 CAP. The 2001 CAP guidance for project consistency analysis states that the following questions should be evaluated:

1. *Are the population projections used in the plan or project equal to or less than those used in the most recent CAP for the same area?*

2. *Is rate of increase in vehicle trips and miles traveled less than or equal to the rate of population growth for the same area?*

3. *Have all applicable land use and transportation control measures from the CAP been included in the plan or project to the maximum extent feasible?*

According to the 2001 CAP, if the answer to all of the above questions is yes, then the project is consistent with the CAP. If the answer to any of the above questions is no, the project is inconsistent with the CAP.

Construction Emissions Thresholds. The SLOAPCD has developed specific daily and quarterly numeric thresholds that apply to projects within the SCCAB. Daily thresholds are for projects that would be completed in less than one quarter (90 days). The SLOAPCD's quarterly construction thresholds are applicable to the proposed project because construction would last for more than one quarter. These include:

ROG and NO_X Emissions

- Quarterly – Tier 1: For construction projects lasting more than one quarter, exceedance of the 2.5 tons per quarter threshold requires Standard Mitigation Measures and Best Available Control Technology (BACT) for construction equipment. If implementation of the Standard Mitigation and BACT measures cannot bring the project below the threshold, off-site mitigation may be necessary; and,
- Quarterly – Tier 2: For construction projects lasting more than one quarter, exceedance of the 6.3 tons per quarter threshold requires Standard Mitigation Measures, BACT, implementation of a Construction Activity Management Plan (CAMP), and off-site mitigation.

Diesel Particulate Matter (DPM) Emissions

- Quarterly - Tier 1: For construction projects lasting more than one quarter, exceedance of the 0.13 tons per quarter threshold requires Standard Mitigation Measures, BACT for construction equipment; and,
- Quarterly - Tier 2: For construction projects lasting more than one quarter, exceedance of the 0.32 ton per quarter threshold requires Standard Mitigation Measures, BACT, implementation of a CAMP, and off-site mitigation.

Fugitive Particulate Matter (PM_{10}), Dust Emissions

- Quarterly: Exceedance of the 2.5 tons per quarter threshold requires Fugitive PM_{10} Mitigation Measures and may require the implementation of a CAMP.

Operational Emissions Thresholds. SLOAPCD's long-term operational emission thresholds are summarized in Table 4.3-4.

Table 4.3-4
SLOAPCD Operational Emissions Significance Thresholds

Pollutant	Threshold	
	Daily	Annual
ROG + NO_X (combined)[1]	25 lbs/day	25 tons/year
Diesel Particulate Matter (DPM)[1]	1.25 lbs/day	---
Fugitive Particulate Matter (PM_{10}), Dust	25 lbs/day	25 tons/year
CO	550 lbs/day	---

Source: SLOAPCD 2012
1. SLOAPCD specifies that CalEEMod winter emission outputs should be compared to operational thresholds for these pollutants (2012).

b. Project Impacts and Mitigation Measures.

Threshold 1:	*Would the project conflict with or obstruct implementation of the applicable air quality plan?*

Impact AQ-1 The project would be inconsistent with the SLOAPCD 2001 Clean Air Plan because it would result in an increase in vehicle miles traveled (VMT) that would exceed the rate of population growth. This impact would be Class I, *significant and unavoidable.*

As described in Section 4.3.3(a), *Methodology and Thresholds*, significant impacts related to consistency with the 2001 CAP are identified by determining whether the project would exceed the population projections used in the CAP for the same area, whether the vehicle trips and vehicle miles traveled generated by the project would exceed the rate of population growth for the same area, and whether all applicable land use management strategies and transportation control measures from the CAP have been included in the project to the maximum extent feasible. The consistency of the project with each of these criteria is discussed in the following paragraphs.

Population Growth Consistency. Development of the project would add an estimated 1,293 residents to the City (546 new single family and multi-family dwelling units x 2.29 people/unit and 34 new affordable units x 1.25 people/unit).[1] When added to the existing population within the City of approximately 46,117 (California Department of Finance 2016), buildout of the Specific Plan Area would increase the City's total population to an estimated 47,410 residents, an increase of 2.8 percent. The 2001 CAP's population estimate for the City is 48,499 by 2015, which represents growth of 22 percent over the 20-year period from 1995 to 2015. Because the project would not cause the City's population to exceed the 2001 CAP's 2015 population estimate for the City of 48,499, the project would not result in an exceedance of the population projections contained in the 2001 CAP.

[1] Population growth rate from City's Land Use and Circulation Element Appendix I Water Supply Assessment (page 9), as referred to in SB610 Water Supply Assessment – San Luis Ranch prepared by Cannon (2016; Appendix M).

Vehicle Trip Rate Increase and Miles Traveled. The Traffic Impact Study determined that the project would add a total of 662 vehicle trips in the AM peak hour and 899 vehicles in the PM peak hour to local roadways under existing and short-term conditions (Appendix L; also refer to Section 4.12, *Transportation/Traffic*). Under 2035 conditions, the project would add a total of 648 vehicle trips in the AM peak hour and 879 vehicles trips in the PM peak hour. The LUCE Update EIR determined that buildout under the updated General Plan would result in 1,356,310 daily VMT in 2035. Based on the CalEEMod analysis (see Appendix D), the project would result in annual VMT of 14,737,087, or a daily VMT of 40,376 (annual VMT divided by 365 days per year). Buildout of the Specific Plan Area would increase the City's daily VMT to 1,396,686, an increase of approximately 3.0 percent. The LUCE Update EIR determined that the City's population in 2035 would be 48,550, assuming a moderate growth rate. Buildout of the Specific Plan Area would increase the City's total population in 2035 to an estimated ~~49,795~~ 49,843, an increase of ~~2.6~~ 2.7 percent. The project's increase in total vehicle miles traveled (3.0 percent) would exceed the project's increase to population (~~2.6~~ 2.7 percent); therefore the project would be inconsistent with the CAP assumptions for VMT.

Implementation of Land Use and Transportation Control Measures. Five of the transportation control measures (TCMs) and four of the land use planning strategies contained in the CAP are applicable to the proposed project. The project's consistency with the CAP's applicable land use and transportation control measures is assessed in Table 4.3-5.

Table 4.3-5
Project Consistency with Applicable 2001 CAP
Land Use and Transportation Control Measures

2001 CAP Control Measure	Project Consistency
Land Use Planning Strategies	
L-1 Planning Compact Communities. Maintaining compact city and village areas reduces reliance on the automobile by enhancing the viability of public transit and maximizing the potential for walking and bicycling to work, shopping, and other destinations.	**Consistent** The project's internal circulation would include an emphasis on pedestrian and bicycle circulation. Proposed neighborhoods would be connected with a local street and trail system, and would contain recreational areas. Furthermore, the project would utilize the surrounding developed areas, streets, and bike path to connect to the existing urban pattern. The project would incorporate multimodal access to the site, including transit stops and bike staging areas. See Figure 2-8 *Multimodal Circulation Plan* in Section 2.0, *Project Description*. The project includes Class I bike paths on the main streets throughout the project site and Class II paths on local streets. The bicycle circulation network would connect single- and multi-family residential areas with the Bob Jones Trail and a series of loops that join the various project land uses.
L-2 Providing for Mixed Land Use. Communities should allow a mixture of land uses that enables people to walk or bicycle to work or to purchase necessary household items or service, at locations convenient to their neighborhood.	**Consistent** The project is a mixed-use project and includes residential, commercial, office, hotel, agriculture and open space. This mix of land uses combined with a walkable-bikeable neighborhood design would enable people to utilize alternative modes of transportation to go to work or purchase goods. Figure 6.8 of the Specific Plan (Appendix B) shows a five and ten minute walk from the center of the neighborhood to nearby commercial areas where residents would have access to a wide variety of goods and services.

Table 4.3-5
Project Consistency with Applicable 2001 CAP
Land Use and Transportation Control Measures

2001 CAP Control Measure	Project Consistency
L-3 Balancing Jobs and Housing. Within cities and unincorporated communities, the gap between the availability of jobs and housing should be narrowed and should not be allowed to expand.	**Consistent** An objective of the project is to create entry-level, workforce housing opportunities within the city. The project also includes 34 units of affordable housing. The proposed project is a mixed use development that would locate housing near existing and proposed job opportunities.
L-4 Circulation Management. The primary goal of the recommended Circulation Management Policies and Programs is to encourage the design and construction of the county's transportation system in a manner that supports alternative travel modes and decreases reliance on single occupant motor vehicles. Policies include: • Promoting accessibility in the transportation system • Promoting walking and bicycling • Parking management • Transportation demand management	**Consistent** *See discussion of strategy L-1.* The project would also provide a fair-share financial contribution towards public circulation improvements, which could be used towards design and construction of the County's transportation system in a manner that supports alternative travel modes and decreases reliance on single occupant motor vehicles.
Transportation Control Measures	
T-2A Local Transit System Improvements. The focus of this measure is on improving local transit service and infrastructure to increase ridership by enhancing the convenience and overall viability of the system.	**Consistent** The project would improve local transit service by creating a new transit center that would connect the project to downtown San Luis Obispo. As discussed in Section 6.3.1 of the Specific Plan, revised bus routes and the creation and maintenance of transit facilities would be coordinated with the City of San Luis Obispo based on an analysis of expected demand. Access to SLO Transit would also provide San Luis Ranch residents a connection to the Regional Transit Authority (RTA) bus routes. If transit ridership meets specified demand thresholds, direct Regional Transit Authority access will be considered at this future transit center.
T-2B Regional Public Transit Improvements. San Luis Obispo Regional Transit Authority (SLORTA) operates the regional fixed route system, Central Coast Area Transit (CCAT). The focus of this measure is to improve regional transit service and infrastructure with the goal of increasing ridership rates in excess of countywide population growth rates.	**Consistent** *See discussion of strategy T-2A.*
T-3 Bicycling and Bikeway Enhancements. To effectively encourage the modal shift to bicycles, a comprehensive program to promote bicycle use was adopted in the 1991 Clean Air Plan.	**Consistent** The project's internal circulation would include an emphasis on pedestrian and bicycle circulation. Proposed neighborhoods would be connected with a local street and trail system, and would contain recreational areas.
T-6 Traffic Flow Improvements. This control measure focuses on traffic flow improvements and "traffic-calming" to improve the flow of all transportation modes. Traffic-calming refers to a full range of methods designed to improve the flow of nonmotorized transportation by	**Consistent** The project's Neighborhood Traffic Management program would incorporate strategies outlined in the City's Neighborhood Traffic Management program. A key component of the program would be the slowing of traffic speeds and reduction of traffic volumes. As described in the Specific Plan, the project includes a range of

Table 4.3-5
Project Consistency with Applicable 2001 CAP
Land Use and Transportation Control Measures

2001 CAP Control Measure	Project Consistency
slowing down the speed of motorized traffic. Traffic-calming is generally used in residential areas on non-arterial local streets and roads.	traffic control strategies, including narrow drive lanes, speed and warning signs, turn restriction signs, roundabouts, and speed humps.
T-8 Teleworking, Teleconferencing, and Telelearning. This control measure seeks to reduce emissions by promoting telecommuting for any employee whose job can accommodate working from home.	**Inconsistent** The project includes commercial and office development. The project would not preclude employees of businesses within the future development from telecommuting. However, the project does not include promotion of telecommuting.

Three transportation control measures are not applicable to the project, T-1B Campus Trip Reduction Program; T-4 Park and Ride Lots; T-5 Motor Vehicle Inspection and Control Programs, because the project does not include a college campus, park and ride lots, or smog check program.

As shown in Table 4.3-5, the project does not include provisions for future employers on the site to encourage telecommuting (TCM T-8). Therefore, the project is inconsistent with the CAP and mitigation would be required.

Mitigative Components of the Specific Plan and Impact Conclusion. As shown in Table 4.3-5, the Specific Plan includes a mix of commercial and residential uses, a new transit connection, and workforce housing to balance jobs and housing. The project also emphasizes bikeways and pedestrian connections, all of which contribute to reduced VMT and air pollutant emissions. However, the Specific Plan would increase VMT in the Specific Plan Area at a rate greater than population growth and does not include specific policies to require future employers to encourage telecommuting (TCM T-8). Therefore, impacts would be potentially significant.

Mitigation Measures. The following mitigation measure is required to reduce the project's impacts related to inconsistency with the CAP.

AQ-1 **Encourage Telecommuting**. The project applicant or developers of individual projects within the Specific Plan Area shall include provisions to encourage employers within the proposed commercial, office, and hotel components of the project to implement telecommuting programs and include teleconferencing capabilities, such as web cams or satellite linkage, which will allow employees to attend meetings remotely without requiring them to travel out of the area.

Plan Requirements and Timing. The project applicant or developers of individual projects within the Specific Plan Area shall submit proof that employers within the proposed commercial, office, and hotel components of the project have either implemented telecommuting programs or include teleconferencing capabilities, or proof that such a program is infeasible.

Monitoring. The ~~Commercial~~ Community Development Department shall verify teleconferencing capabilities, if feasible, are included in tenant improvements prior to issuance of occupancy permits.

Significance After Mitigation. Implementation of the above mitigation measure, as well as Mitigation Measure AQ-3(a) and AQ-3(b) described below, would reduce regional air pollutant emissions and ensure that the project would be consistent with the CAP transportation control measures and land use strategies. However, mitigation is not available that would reduce projected VMT such that the project's vehicle trip rate increase would not exceed population growth in the region. Therefore, impacts related to consistency with the 2001 CAP would remain significant and unavoidable (Class I).

Threshold 2:	*Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Impact AQ-2 Construction of the project would generate temporary increases in localized air pollutant emissions. Construction emissions of ROG, NO_X, and DPM would exceed SLOAPCD construction thresholds. Impacts would be Class II, *less than significant with mitigation incorporated*.

Construction of the project would generate temporary emissions of air pollutants. Ozone precursors, NO_X and ROG, as well as DPM (exhaust $PM_{2.5}$ and PM_{10}) would be emitted by the operation of construction equipment, while fugitive dust (PM_{10}) would be emitted by activities that disturb the soil, such as grading and excavation, road construction, and building construction. The project's maximum quarterly emissions are shown in Table 4.3-6. As shown in Table 4.3-6, the project's combined ROG and NO_X emissions would exceed SLOAPCD's Quarterly Tier 1 and Tier 2 thresholds, and the project's DPM emissions would exceed SLOAPCD's Quarterly Tier 1 thresholds, but would not exceed Tier 2 thresholds. The project's dust emissions would not exceed Tier 1 or 2 thresholds. Nonetheless, SLOAPCD requires any project with grading areas greater than 4.0 acres or that are within 1,000 feet of any sensitive receptor to implement standard fugitive dust mitigation measures.

Mitigative Components of the Specific Plan and Impact Conclusion. The Specific Plan does not contain any mitigative components that would reduce impacts from construction emissions; therefore, construction emissions would exceed SLOAPCD thresholds and impacts would be potentially significant.

Table 4.3-6
Estimated Construction Maximum Quarterly
Air Pollutant Emissions (tons/quarter)[1]

Construction Year	Maximum Quarter Per Year (tons/quarter)[2]		
	ROG + NO_X	DPM	Dust
2017	2.9	0.14	0.1
2018	6.1	0.20	0.2
2019	6.9	0.17	0.3
2020	4.6	0.12	0.2
2021	4.2	0.16	0.2
Maximum tons/quarter	**6.9**	**0.20**	**0.3**
SLOAPCD Quarterly Tier 1 Thresholds (tons/quarter)	2.5	0.13	2.5
Threshold Exceeded?	**Yes**	**Yes**	**No**
SLOAPCD Quarterly Tier 2 Thresholds (tons/quarter)	6.3	0.32	2.5
Threshold Exceeded?	**Yes**	**No**	**No**

Notes: All calculations were made using CalEEMod. See Appendix D for model results. DPM equal to combined exhaust PM_{10} and $PM_{2.5}$ and dust equal to fugitive PM_{10} from CalEEMod.
1 Maximum daily emissions include on-site and off-site emissions.
2 CalEEMod calculates quarterly emissions of ROG+NO_X, but does not generate quarterly emissions for DPM and dust; therefore, maximum annual construction emissions of DPM and dust were divided by the number of quarters undergoing construction in a year to estimate maximum quarterly emissions.

Mitigation Measures. The following mitigation measures are required to reduce construction emissions of ROG, NO_X, and DPM. Although the project's dust emissions would not exceed Tier 1 or 2 thresholds, SLOAPCD requires any project with grading areas greater than 4.0 acres or that are within 1,000 feet of any sensitive receptor to implement standard fugitive dust mitigation measures. Therefore, Mitigation Measure AQ-2(a) is also required.

AQ-2(a) **Fugitive Dust Control Measures.** Construction projects shall implement the following dust control measures so as to reduce PM_{10} emissions in accordance with SLOAPCD requirements.

- Reduce the amount of the disturbed area where possible;
- Water trucks or sprinkler systems shall be used during construction in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency shall be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water or a SLOAPCD-approved dust suppressant shall be used whenever possible~~;~~, to reduce the amount of potable water used for dust control;
- All dirt stock pile areas shall be sprayed daily as needed;
- Permanent dust control measures identified in the approved project revegetation and landscape plans shall be

implemented as soon as possible following completion of any soil disturbing activities;

- Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading shall be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established;
- All disturbed soil areas not subject to revegetation shall be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the SLOAPCD;
- All roadways, driveways, sidewalks, etc. to be paved shall be completed as soon as possible after grading unless seeding or soil binders are used;
- Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site;
- All trucks hauling dirt, sand, soil, or other loose materials are to be covered or shall maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with California Vehicle Code Section 23114;
- Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site;
- Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water shall be used where feasible;
- All of these fugitive dust mitigation measures shall be shown on grading and building plans; and
- The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below 20 percent opacity, and to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the SLOAPCD Compliance Division prior to the start of any grading, earthwork or demolition.

AQ-2(b) **Standard Control Measures for Construction Equipment**. The following standard air quality mitigation measures shall be implemented during construction activities at the project site:

- Maintain all construction equipment in proper tune according to manufacturer's specifications;
- Fuel all off-road and portable diesel powered equipment with ARB certified motor vehicle diesel fuel (non-taxed version suitable for sue off-road);

- Use diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State Off-Road Regulation;
- Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
- Construction or trucking companies with fleets that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NO_X exempt area fleets) may be eligible by proving alternative compliance;
- On-road diesel vehicles shall comply with Section 2485 of Title 13 of the California Code of Regulations. This regulation limits idling from diesel-fueled commercial motor vehicles with gross vehicular weight ratings of more than 10,000 pounds and licensed for operation on highways. It applies to California and non-California based vehicles. In general, the regulation specifies that drivers of said vehicles:
  1. Shall not idle the vehicle's primary diesel engine for greater than 5-minutes at any location, except as noted in Subsection (d) of the regulation; and,
  2. Shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5.0 minutes at any location when within 1,000 feet of a restricted area, except as noted in Subsection (d) of the regulation.
- Off-road diesel equipment shall comply with the 5-minute idling restriction identified in Section 2449(d)(2) of the California Air Resources Board's In-Use Off-Road Diesel regulation.
- ~~All on and off-road diesel equipment shall not idle for more than 5 minutes.~~ Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5 minute idling limit;
- In addition to the state required diesel idling requirements, the project applicant shall comply with these more restrictive requirements to minimize impacts to nearby sensitive receptors:
  1. Signs that specify the no idling areas shall be posted and enforced at the site.
  2. Diesel idling within 1,000 feet of sensitive receptors is not permitted;
  3. Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;
  4. Use of alternative fueled equipment is recommended;

- Electrify equipment when feasible;
- Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and
- Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.

AQ-2(c) **Best Available Control Technology (BACT) for Construction Equipment**. The following BACT for diesel-fueled construction equipment shall be implemented during construction activities at the project site, where feasible:

- Further reducing emissions by expanding use of Tier 3 and Tier 4 off-road and 2010 on-road compliant engines where feasible;
- Repowering equipment with the cleanest engines available; and
- Installing California Verified Diesel Emission Control Strategies, such as level 2 diesel particulate filters. These strategies are listed at: http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm

AQ-2(d) **Architectural Coating.** To reduce ROG and NO_X levels during the architectural coating phase, low or no VOC-emission paint shall be used with levels of 50 g/L or less.

AQ-2(e) **Construction Activity Management Plan.** Emissions reduction measures and construction practices required to comply with Mitigation Measures AQ-2(a) through AQ-2(d) shall be documented in a Construction Activity Management Plan (CAMP) and submitted to SLOAPCD for review and approval at least three months before the start of construction. The CAMP shall include a Dust Control Management Plan, tabulation of on and off-road construction equipment (age, horse-power and miles and/or hours of operation), construction truck trip schedule, construction work-day period, and construction phasing. If implementation of the Standard Mitigation and Best Available Control Technology measures cannot bring the project below the Tier 1 threshold (2.5 tons of NO_X+ROG per quarter), off-site mitigation shall be implemented in coordination with SLOAPCD to reduce NO_X and ROG emissions to below the Tier 1 threshold.

Significance After Mitigation. According to the SLOAPCD *CEQA Air Quality Handbook,* if estimated construction emissions are expected to exceed either of the SLOAPCD Quarterly Tier 2 thresholds of significance after the standard and BACT measures are factored into the estimation, then an SLOAPCD approved Construction Activity Management Plan (CAMP) and offsite mitigation need to be implemented in order to reduce potential air quality impacts to a

less than significant level. If construction emissions do not exceed Tier 2 thresholds with implementation of standard and BACT measures, SLOAPCD considers emissions less than significant, even if Tier 1 thresholds continue to be exceeded. Table 4.3-7 shows mitigated construction emissions with implementation of Tier 3 off-road engine compliance and level 2 diesel particulate filters required by Mitigation Measure AQ-2(c), as well as low VOC-emission paint required by Mitigation Measure AQ-2(d). As shown therein, with implementation of Mitigation Measures AQ-2(c) and AQ-2(d) construction emissions would not exceed either of the SLOAPCD Quarterly Tier 2 thresholds of significance. Therefore, implementation of a CAMP and offsite mitigation is not required and impacts would be less than significant with mitigation.

Table 4.3-7
Estimated Mitigated Construction Maximum Quarterly Air Pollutant Emissions (tons/quarter)[a]

	Maximum Quarter Per Year (tons/quarter)		
Construction Year	**ROG + NO_X**	**DPM**	**Dust**
2017	1.9	0.04	0.1
2018	3.9	0.08	0.2
2019	3.0	0.07	0.3
2020	2.4	0.06	0.2
2021	2.1	0.07	0.2
Maximum tons/quarter	**3.9**	**0.08**	**0.3**
SLOAPCD Quarterly Tier 1 Thresholds (tons/quarter)	2.5	0.13	2.5
Threshold Exceeded?	**Yes**	**No**	**No**
SLOAPCD Quarterly Tier 2 Thresholds (tons/quarter)	6.3	0.32	2.5
Threshold Exceeded?	**No**	**No**	**No**

Notes: All calculations were made using CalEEMod. See Appendix D for model results. DPM equal to combined exhaust PM_{10} and $PM_{2.5}$ and dust equal to fugitive PM_{10} from CalEEMod.
1 Maximum daily emissions include on-site and off-site emissions.
2 CalEEMod calculates quarterly emissions of ROG+NO_X, but does not generate quarterly emissions for DPM and dust; therefore, maximum annual construction emissions of DPM and dust were divided by the number of quarters undergoing construction in a year to estimate maximum quarterly emissions.

Threshold 2:	*Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*
Threshold 3:	*Would project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative guidelines for ozone precursors)?*

Impact AQ-3 Operation of the project would generate air pollutant emissions on an ongoing daily and annual basis. The project's daily emissions would exceed SLOAPCD daily emissions thresholds, but would not exceed annual thresholds. Implementation of SLOAPCD's standard mitigation measures and off-site mitigation would reduce emissions to a less than significant level. Impacts would be Class II, *less than significant with mitigation incorporated.*

Operation of the project would result in ongoing emissions associated with vehicle trips, natural gas use, and area sources, such as landscaping, consumption of consumer products, and off-gassing from architectural coatings. Daily and annual operational emissions associated with the proposed project are shown in Table 4.3-8 and Table 4.3-9 (see Appendix D for complete CalEEMod results), and compared to the applicable SLOAPCD operational emissions thresholds.

Table 4.3-8
Estimated Operational Daily Air Pollutant Emissions [a]

Source	Emissions (lbs/day)			
	ROG + NO_X	DPM	Dust	CO
Total Daily Emissions	115.9	2.49	30.9	188.6
SLOAPCD Daily Thresholds	*25*	*1.25*	*25*	*550*
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	**No**

Notes: All calculations were made using CalEEMod. See Appendix D for calculations. DPM equal to combined exhaust PM_{10} and $PM_{2.5}$ from CalEEMod. Dust equal to fugitive PM_{10} from CalEEMod.
[a] Maximum emissions include on-site and off-site emissions.

Table 4.3-9
Estimated Operational Annual Air Pollutant Emissions [a]

Source	Emissions (tons/year)	
	ROG + NO_X	**Dust**
Total Emissions	19.9	4.9
SLOAPCD Annual Thresholds	*25*	*25*
Threshold Exceeded?	**No**	**No**

Notes: All calculations were made using CalEEMod. See Appendix D for calculations. DPM equal to combined exhaust PM_{10} and $PM_{2.5}$ from CalEEMod. Dust equal to fugitive PM_{10} from CalEEMod.
[a] Maximum emissions include on-site and off-site emissions.

As shown in Table 4.3-8, the project's operational emissions would exceed SLOAPCD's daily operational emissions thresholds. However, as shown in Table 4.3-9, the operational emissions would not exceed SLOAPCD's annual operational emissions thresholds.

Mitigative Components of the Specific Plan and Impact Conclusion. The Specific Plan includes a mix of commercial and residential uses, a new transit connection, and workforce housing intended to balance jobs and housing. The project also emphasizes bikeways and pedestrian connections, all of which contribute to reduced VMT and air pollutant emissions. However, as shown in Table 4.3-8, buildout of the Specific Plan would result in daily ROG and NO_X emissions above SLOAPCD's daily operational thresholds. The Specific Plan's consistency with SLOACPD's standard operational mitigation measures is described in Table 4.3-10.

As shown in Table 4.3-10, the Specific Plan includes mitigative components that would reduce operational emissions. However, according to SLOAPCD's *CEQA Air Quality Handbook*, if a project generates 50 pounds per day or more of combined ROG and NO_X, then the project should be required to implement all feasible operational mitigation measures listed in the *CEQA Air Quality Handbook*. As the Specific Plan would not implement all applicable measures identified in Table 4.3-10, impacts from operational emissions would be potentially significant and mitigation is required.

Table 4.3-10
Applicable Mitigation Measures from SLOAPCD *CEQA Air Quality Handbook*

#	Measure Type	Mitigation Measure	Pollutant Reduced[1]	Specific Plan Consistency
1	Site design, Transportation	Improve job/housing balance opportunities within communities.	Ozone, Particulate, Greenhouse Gases	**Consistent** The project includes 34 units of affordable housing. The proposed project is a mixed use development that would locate housing near existing and proposed job opportunities.
2	Site design	Orient buildings toward streets with automobile parking in the rear to promote a pedestrian-friendly environment.	Ozone, Particulate, Greenhouse Gases	**Consistent** As described in Chapter 3 of the Specific Plan, garage entries, carports, and parking areas would be internalized in building groups or oriented away from street frontages.
3	Site design	Provide a pedestrian-friendly and interconnected streetscape to make walking more convenient, comfortable and safe (including appropriate signalization and signage).	Ozone, Particulate, Greenhouse Gases	**Consistent** The project would establish links in the City's Bicycle Transportation Plan. The project would construct a segment of the Bob Jones Bike Trail and provide a connection from Laguna Lake area neighborhoods and businesses along Madonna Road to the southern portion of the City Limit at Froom Ranch Way.
4	Site design	Provide good access to/from the development for pedestrians, bicyclists, and transit users.	Ozone, Particulate, Greenhouse Gases	**Consistent** See consistency discussion for Measure #3. In addition, the project would create interior bicycle trails and lanes, including a Class I Bike Trail and Class II Bike lanes. These facilities are consistent with the goals established by San Luis Obispo's 2013 Bicycle Transportation Plan. The project also includes a transit stop.
5	Site design	Incorporate outdoor electrical outlets to encourage the use of electric appliances and tools.	Ozone, Particulate, Greenhouse Gases	**Consistent** These are provided per City code and are optional on all houses.
6	Site design	Provide shade tree planting in parking lots to reduce evaporative emissions from parked vehicles. Design should provide 50% tree coverage within 10 years of construction using low ROG emitting, low maintenance native drought resistant trees.	Ozone, Particulate, Greenhouse Gases	**Consistent** Per City requirement for tree planting in parking lots.
7	Site design	Pave and maintain the roads and parking areas	Particulate	**Consistent** Roads and parking areas would be paved and on-going maintenance would be required.
8	Site design	Driveway design standards (e.g., speed bumps, curved driveway) for self-enforcing of reduced speed limits for unpaved driveways.	Particulate	**Consistent** City has a requirement that the design speeds in local and collector roads not exceed 25 mph. Additionally, there are no unpaved roads or driveways proposed in the Specific Plan Area.
9	Site design	Use of an SLOAPCD-approved suppressant on private unpaved roads leading to the site, unpaved driveways and parking areas; applied at a rate and frequency that ensures	Particulate	**Consistent** There are no unpaved roads, private or otherwise proposed in the Specific Plan Area.

Table 4.3-10
Applicable Mitigation Measures from SLOAPCD *CEQA Air Quality Handbook*

#	Measure Type	Mitigation Measure	Pollutant Reduced[1]	Specific Plan Consistency
		compliance with SLOAPCD Rule 401, visible emissions and ensures offsite nuisance impacts do not occur.		
10	Site design	Development is within 1/4 mile of transit centers and transit corridors.	Ozone, Particulate, Greenhouse Gases	**Consistent** The project includes a transit stop in the Specific Plan Area.
11	Site design	Design and build compact communities in the urban core to prevent sprawl.	Ozone, Particulate, Greenhouse Gases	**Consistent** The project is infill development near existing residential and commercial uses. The proposed compact, mixed use development would utilize the surrounding developed areas, streets, and bike path to connect to the existing urban pattern.
12	Site design	Increase density within the urban core and urban reserve lines.	Ozone, Particulate, Greenhouse Gases	**Consistent** See consistency discussion for Measure #11.
13	Site design	No residential wood burning appliances.	Ozone, Particulate, Greenhouse Gases	**Inconsistent** Although the project does not specifically propose wood burning appliances, the Specific Plan does not include provisions restricting the installation of wood burning devices in proposed development.
14	Site design; transportation	Incorporate traffic calming modifications to project roads, such as narrower streets, speed platforms, bulb-outs and intersection designs that reduce vehicles speeds and encourage pedestrian and bicycle travel.	Ozone, Particulate, Greenhouse Gases	**Consistent** City has a requirement that the design speeds in local and collector roads not exceed 25 mph. The project includes a range of traffic control strategies, including narrow drive lanes, speed and warning signs, turn restriction signs, roundabouts, and speed humps.
15	Site design; transportation	Increase number of connected bicycle routes/lanes in the vicinity of the project.	Ozone, Particulate, Greenhouse Gases	**Consistent** See consistency discussion for Measures #3 and #4.
16	Site design; transportation	Provide easements or land dedications and construct bikeways and pedestrian walkways.	Ozone, Particulate, Greenhouse Gases	**Consistent** See consistency discussion for Measures #3 and #4.
17	Site design; transportation	Link cul-de-sacs and dead-end streets to encourage pedestrian and bicycle travel to adjacent land uses.	Ozone, Particulate, Greenhouse Gases	**Consistent** See consistency discussion for Measures #3 and #4.
18	Site design; transportation	Project is located within one-half mile of a 'Park and Ride' lot or project installs a 'Park and Ride' lot with bike lockers in a location of need defined by SLOCOG.	Ozone, Particulate, Greenhouse Gases	~~**Inconsistent**~~**Consistent** The project is not within one-half mile of a Park and Ride lot, but the project would include a Transit Center with parking for commuters and bike lockers~~nor would it include development of a Park and Ride lot with bike lockers~~.
19	Site design	Tract maps resulting in parcels of one-half acre or less shall orient at least 75% of all lot lines to create easy due south orientation of future structures.	Greenhouse Gases	**Consistent** Most proposed streets run east-west, which provide future structures with solar access.

Table 4.3-10
Applicable Mitigation Measures from SLOAPCD *CEQA Air Quality Handbook*

#	Measure Type	Mitigation Measure	Pollutant Reduced[1]	Specific Plan Consistency
20	Site design	Trusses for south-facing portions of roofs shall be designed to handle dead weight loads of standard solar-heated water and photovoltaic panels. Roof design shall include sufficient south facing roof surface, based on structures size and use, to accommodate adequate solar panels. For south facing roof pitches, the closest standard roof pitch to the ideal average solar exposure shall be used.	Ozone, Greenhouse Gases	**Inconsistent** The Specific Plan does not include standards requiring roof trusses for solar panels or solar-heated water.
21	Energy efficiency	Increase the building energy rating by 20% above Title 24 requirements. Measures used to reach the 20% rating cannot be double counted.	Ozone, Greenhouse Gases	**Inconsistent** Although the Specific Plan includes the goal of "Meeting or Exceeding Title 24 Standards," the Specific Plan does not include standards requiring building development to exceed Title 24 requirements by 20 percent.
22	Energy efficiency	Plant drought tolerant, native shade trees along southern exposures of buildings to reduce energy used to cool buildings in summer.	Ozone, Greenhouse Gases	**Consistent** As described in Chapter 7 of the Specific Plan, water conservation measures require all landscaped areas to include drought-tolerant landscape to the maximum extent possible.
23	Energy efficiency	Utilize green building materials (materials which are resource efficient, recycled, and sustainable) available locally if possible.	Ozone, Diesel Particulate Matter, Greenhouse Gases	**Consistent** Per Specific Plan Program 7.2.1, the Specific Plan would maximize use of building materials that are locally resourced, require minimal mineral extraction and production, and area easily salvaged and recycled.
24	Energy efficiency	Install high efficiency heating and cooling systems.	Ozone, Greenhouse Gases	**Consistent** As described in Chapter 5 of the Specific Plan, the project would install energy efficient HVAC systems..
25	Energy efficiency	Orient 75% or more of homes and/or buildings to be aligned north/south to reduce energy used to cool buildings in summer.	Ozone, Greenhouse Gases	**Consistent** See consistency discussion for Measure #19.
26	Energy efficiency	Design building to include roof overhangs that are sufficient to block the high summer sun, but not the lower winter sun, from penetrating south facing windows (passive solar design).	Ozone, Greenhouse Gases	**Inconsistent** The Specific Plan does not include development standards that require passive solar design.
27	Energy efficiency	Utilize high efficiency gas or solar water heaters.	Ozone, Particulate, Greenhouse Gases	**Inconsistent** The Specific Plan does not include standards requiring installation of high efficiency gas or solar water heaters.

Table 4.3-10
Applicable Mitigation Measures from SLOAPCD *CEQA Air Quality Handbook*

#	Measure Type	Mitigation Measure	Pollutant Reduced[1]	Specific Plan Consistency
28	Energy efficiency	Utilize built-in energy efficient appliances (i.e. Energy Star®).	Ozone, Particulate, Greenhouse Gases	**Consistent** The Specific Plan would require installation of energy efficient appliances.
29	Energy efficiency	Utilize double-paned windows.	Ozone, Particulate, Greenhouse Gases	**Consistent** City standard.
30	Energy efficiency	Utilize low energy street lights (i.e. sodium).	Ozone, Particulate, Greenhouse Gases	**Consistent** City uses LED street lights.
31	Energy efficiency	Utilize energy efficient interior lighting.	Ozone, Particulate, Greenhouse Gases	**Consistent** This measure is required by CalGreen; therefore, the Project would include energy efficient interior lighting.
32	Energy efficiency	Utilize low energy traffic signals (i.e. light emitting diode).	Ozone, Particulate, Greenhouse Gases	**Consistent** The project does not include traffic signals onsite. Nonetheless, the City uses LED traffic lights.
33	Energy efficiency	Install door sweeps and weather stripping (if more efficient doors and windows are not available).	Ozone, Particulate, Greenhouse Gases	**Inconsistent** The Specific Plan does not include development standards requiring the installation of door sweeps or weather stripping.
34	Energy efficiency	Install energy-reducing programmable thermostats.	Ozone, Particulate, Greenhouse Gases	**Inconsistent** The Specific Plan does not include development standards requiring the installation of energy-reducing programmable thermostats.
35	Energy efficiency	Participate in and implement available energy-efficient rebate programs including air conditioning, gas heating, refrigeration, and lighting programs.	Ozone, Particulate, Greenhouse Gases	**Inconsistent** The Specific Plan does not include development standards requiring participating in energy-efficient rebate programs.
36	Energy efficiency	Use roofing material with a solar reflectance values meeting the EPA/DOE Energy Star® rating to reduce summer cooling needs.	Ozone, Particulate, Greenhouse Gases	**Inconsistent** The Specific Plan does not include development standards requiring the use of roofing materials with solar reflectance to reduce summer cooling needs.
37	Energy efficiency	Utilize onsite renewable energy systems (e.g., solar, wind, geothermal, low-impact hydro, biomass and bio-gas).	Ozone, Particulate, Greenhouse Gases	**Inconsistent** The Specific Plan does not include onsite renewable energy systems.
38	Energy efficiency	Eliminate high water consumption landscape (e.g., plants and lawns) in residential design. Use native plants that do not require watering and are low ROG emitting.	Ozone, Greenhouse Gases	**Consistent** See consistency discussion for Measure #22.
39	Energy efficiency	Provide and require the use of battery powered or electric landscape maintenance equipment for new development.	Ozone, Greenhouse Gases	**Inconsistent** The Specific Plan does not include standards requiring use of battery powered or electric landscape maintenance equipment.

Table 4.3-10
Applicable Mitigation Measures from SLOAPCD *CEQA Air Quality Handbook*

#	Measure Type	Mitigation Measure	Pollutant Reduced[1]	Specific Plan Consistency
40	Transportation	Develop recreational facility (e.g., parks, gym, pool, etc.) within one-quarter of a mile from site.	Ozone, Particulate, Greenhouse Gases	**Consistent** Parks are provided within walking distance of each residence.
41	Transportation	If the project is located on an established transit route, provide improved public transit amenities (i.e., covered transit turnouts, direct pedestrian access, covered bench, smart signage, route information displays, lighting etc.).	Ozone, Particulate, Greenhouse Gases	**Consistent** The project includes a transit stop in the Specific Plan Area.
42	Transportation	Project provides a display case or kiosk displaying transportation information in a prominent area accessible to employees or residents.	Ozone, Particulate, Greenhouse Gases	**Inconsistent** The Specific Plan does not include the provision of transportation information in a display case.
43	Transportation	Provide electrical charging station for electric vehicles.	Ozone, Particulate, Greenhouse Gases	**Consistent** As described in Chapter 5 of the Specific Plan, electrical vehicle charging stations would be provided at some parking spaces within the Specific Plan Area. Spaces would be prioritized for electrical vehicles.
~~44~~	~~Transportation~~	~~Provide neighborhood electric vehicles / car share program for the development.~~	~~Ozone, Particulate, Greenhouse Gases~~	~~**Inconsistent**~~ ~~The Specific Plan does not include a neighborhood electric vehicle/car share program.~~
~~45~~	~~Transportation~~	~~Provide bicycle-share program for development.~~	~~Ozone, Particulate, Greenhouse Gases~~	~~**Inconsistent**~~ ~~The Specific Plan does not include a bicycle share program.~~
46	Transportation	Provide preferential parking / no parking fee for alternative fueled vehicles or vanpools**.**	Ozone, Particulate, Greenhouse Gases	**Consistent** See consistency discussion for Measure #43.
47	Transportation	Provide bicycle lockers for existing 'Park and Ride' lots where absent or insufficient.	Ozone, Particulate, Greenhouse Gases	~~**Inconsistent**~~**Consistent** See consistency discussion for Measure #18.
~~48~~	~~Transportation~~	~~Provide vanpool, shuttle, mini bus service (alternative fueled preferred).~~	~~Ozone, Particulate, Diesel Particulate Matter, Greenhouse Gases~~	~~**Inconsistent**~~ ~~The Specific Plan does not provide for vanpool, shuttle, or minibus service.~~
49	Transportation	Provide storage space in garage for bicycle and bicycle trailers, or covered racks / lockers to service the residential units.	Ozone, Particulate, Greenhouse Gases	**Consistent** The Specific Plan includes garages for residential areas where bicycles or bicycle trailers could be stored. The Specific Plan also includes bicycle racks.
50	Transportation	Provide free-access telework terminals and/or wi-fi access in multi-family projects.	Ozone, Particulate, Greenhouse Gases	**Inconsistent** The Specific Plan does not provide free-access telework terminals or wi-fi access in multi-family projects.

Mitigation Measures. Implementation of the following mitigation measures would be required to reduce operational emissions. All feasible on-site mitigation (Mitigation Measure AQ-3(a) shall be implemented prior to implementation of off-site mitigation (Mitigation Measure AQ-3[b]).

AQ-3(a) Standard Operational Mitigation Measures. Prior to issuance of grading permits, the applicant shall define and incorporate into the San Luis Ranch Specific Plan standard emission reduction measures from the SLOAPCD *CEQA Air Quality Handbook* to reduce emissions to below daily threshold levels. Emission reduction measures ~~may~~shall include, but would not be limited to:

- ~~Prohibit residential wood burning appliances;~~
- ~~Install a 'Park and Ride' lot with bike lockers in a location of need defined by SLOCOG;~~
- ~~Trusses for south-facing portions of roofs shall be designed to handle dead weight loads of standard solar-heated water and photovoltaic panels. Roof design shall include sufficient south facing roof surface, based on structures size and use, to accommodate adequate solar panels. For south facing roof pitches, the closest standard roof pitch to the ideal average solar exposure shall be used;~~
- Increase the building energy rating by 20 percent above 2013 Title 24 requirements (used in the California Emissions Estimator Model) or consistent with 2016 Title 24 requirements, whichever is stricter. Measures used to reach the 20 percent rating cannot be double counted;
- ~~Design building to include roof overhangs that are sufficient to block the high summer sun, but not the lower winter sun, from penetrating south facing windows (passive solar design);~~
- ~~Utilize high efficiency gas or solar water heaters;~~
- ~~Install door sweeps and weather stripping (if more efficient doors and windows are not available);~~
- ~~Install energy-reducing programmable thermostats;~~
- ~~Participate in and implement available energy-efficient rebate programs including air conditioning, gas heating, refrigeration, and lighting programs;~~
- ~~Use roofing material with a solar reflectance values meeting the U.S. EPA/DOE Energy Star® rating to reduce summer cooling needs.~~
- Utilize onsite renewable energy systems (e.g., solar, wind, geothermal, low-impact hydro, biomass and bio-gas); and
- ~~Provide and require the use of battery-powered or electric landscape maintenance equipment for new development;~~
- ~~Provide a display case or kiosk displaying transportation information in a prominent area accessible to employees or residents;~~
- ~~Provide neighborhood electric vehicles/ car share program;~~
- Provide bicycle-share program~~;~~.

- ~~Provide bicycle lockers for 'Park and Ride' lots;~~
- ~~Provide vanpool, shuttle, mini bus service (alternative fueled preferred);~~
- ~~Provide free-access telework terminals and/or wi-fi access in multi-family projects.~~

In addition, the proposed hotel component of the Specific Plan shall participate in the SLO Car Free Program, provide incentives to car-free travelers, and promote the program in their communication tools.

Plan Requirements and Timing. Future development shall incorporate the listed provisions into development plans and submit proof that emissions have been reduced to below daily threshold levels through a combination of these measures and off-site mitigation (described in Mitigation Measure AQ-3[b]) prior to issuance of grading permits.

Monitoring. The ~~Commercial~~ Community Development Department shall verify compliance prior to issuance of grading permits. The ~~Commercial~~ Community Development Department shall site inspect to ensure development is in accordance with approved plans prior to occupancy clearance. ~~Commercial~~ Community Development staff shall verify installation in accordance with approved building plans.

AQ-3(b) **Off-Site Mitigation**. If implementation of standard emission reduction measures from the SLOAPCD *CEQA Air Quality Handbook* described in Mitigation Measure AQ-3(a) is insufficient to reduce emissions to below daily threshold levels, then the applicant shall coordinate with SLOAPCD to provide funding for off-site emission reduction measures to reduce emissions to below daily threshold levels. In accordance with SLOAPCD methodology, the excess emissions shall be multiplied by the cost effectiveness of mitigation as defined in the State's current Carl Moyer Incentive Program Guidelines to determine the annual off-site mitigation amount. This amount shall then be extrapolated over the life of the project to determine total off-site mitigation. Off-site emission reduction measures may include, but would not be limited to:

- Developing or improving park-and-ride lots;
- Retrofitting existing homes in the project area with SLOAPCD-approved wood combustion devices;
- Retrofitting existing homes in the project area with energy-efficient devices;
- Constructing satellite worksites;
- Funding a program to buy and scrap older, higher emission passenger and heavy-duty vehicles;
- Replacing/re-powering transit buses;

- Replacing/re-powering heavy-duty diesel school vehicles (i.e. bus, passenger or maintenance vehicles);
- Funding an electric lawn and garden equipment exchange program;
- Retrofitting or re-powering heavy-duty construction equipment, or on-road vehicles;
- Re-powering marine vessels;
- Re-powering or contributing to funding clean diesel locomotive main or auxiliary engines;
- Installing bicycle racks on transit buses;
- Purchasing particulate filters or oxidation catalysts for local school buses, transit buses or construction fleets;
- Installing or contributing to funding alternative fueling infrastructure (i.e. fueling stations for CNG, LPG, conductive and inductive electric vehicle charging, etc.);
- Funding expansion of existing transit services;
- Funding public transit bus shelters;
- Subsidizing vanpool programs;
- Subsidizing transportation alternative incentive programs;
- Contributing to funding of new bike lanes;
- Installing bicycle storage facilities; and
- Providing assistance in the implementation of projects that are identified in City or County Bicycle Master Plans.

Plan Requirements and Timing. The applicant shall coordinate with SLOAPCD to provide funding for off-site emissions reduction measures prior to issuance of grading permits. The project applicant or developers of individual projects within the Specific Plan Area shall submit proof that emissions have been reduced to below daily threshold levels to the ~~Commercial~~ Community Development Department.

Monitoring. The ~~Commercial~~ Community Development Department shall verify compliance prior to issuance of grading permits.

Significance After Mitigation. Implementation of the measures identified in Mitigation Measure AQ-3(a) and AQ-3(b) would reduce impacts to regional air quality. For informational purposes, Table 4.3-11 and Table 4.3-12 show anticipated project emissions with incorporation of measures achieving a 20 percent exceedance of Title 24 requirements and a prohibition on residential wood burning devices, which are quantifiable in CalEEMod. As shown in Table 4.3-11 and Table 4.3-12, implementation of these measures alone would not reduce daily operational emissions of ROG, NO_X, DPM, or dust to below SLOAPCD's daily significance thresholds. However, with implementation of Mitigation Measures AQ-3(a), Standard Operational Mitigation Measures, and AQ-3(b), Off-Site Mitigation, annual emissions would be reduced below SLOAPCD's annual operational thresholds. Therefore, long-term operational impacts would be less than significant.

Table 4.3-11
Estimated Mitigated Operational Daily Air Pollutant Emissions [a]

Source	Emissions (lbs/day)			
	ROG + NO_X	DPM	Dust	CO
Total Daily Emissions	114.4	2.31	30.9	187.7
SLOAPCD Daily Thresholds	*25*	*1.25*	*25*	*550*
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	**No**

Notes: All calculations were made using CalEEMod. See Appendix D for calculations. DPM equal to combined exhaust PM_{10} and $PM_{2.5}$ from CalEEMod. Dust equal to fugitive PM_{10} from CalEEMod.
[a] *Maximum emissions include on-site and off-site emissions.*

Table 4.3-12
Estimated Mitigated Operational Annual Air Pollutant Emissions [a]

Source	Emissions (tons/year)	
	ROG + NO_X	Dust
Total Emissions	19.6	4.9
SLOAPCD Annual Thresholds	*25*	*25*
Threshold Exceeded?	**No**	**No**

Notes: All calculations were made using CalEEMod. See Appendix D for calculations. DPM equal to combined exhaust PM_{10} and $PM_{2.5}$ from CalEEMod. Dust equal to fugitive PM_{10} from CalEEMod.
[a] *Maximum emissions include on-site and off-site emissions.*

Threshold 4: Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact AQ-4 The project would not expose sensitive receptors to substantial pollutant concentrations. This impact would be Class III, *less than significant*.

The primary sources of toxic air contaminant emissions in urbanized and suburban areas include vehicle trips on area roadways and industrial uses. There are no major industrial uses near the project site, and the project does not include any industrial uses. Vehicle exhaust emissions include diesel exhaust from heavy duty trucks, which is considered a toxic air contaminant. Future land uses within the immediate vicinity of U.S. 101 would be exposed to the highest concentrations of localized vehicle exhaust emissions. ARB currently recommends that local agencies avoid siting new sensitive land uses within 500 feet of freeways or urban roads with 100,000 vehicles per day (ARB, *Air Quality and Land Use Handbook*, April 2005). As shown in Figure 2-6, Project Site Plan, proposed new residences on the project site would be located over 500 feet from U.S. Highway 101. In addition, based on traffic volumes from the Caltrans Traffic Data Branch (Caltrans, 2015), annual average daily traffic along U.S. Highway

101 next to the project site is approximately 61,100 vehicles per day, less than the 100,000 vehicles per day threshold recommended by ARB for urban roadways (ARB 2005). Therefore, potential impacts from exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

Naturally occurring asbestos (NOA) has been identified by the State Air Resources Board as a toxic air contaminant. Serpentine and ultramafic rocks are common in San Luis Obispo County and may contain naturally occurring asbestos. According to the SLOAPCD NOA Map for San Luis Obispo County, the project site is located in an area that is known to contain naturally occurring asbestos (SLOAPCD 2016). The project would result in excavation and grading and therefore may encounter naturally occurring asbestos. Under ARB's Air Toxics Control Measure (NOA ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, prior to any grading activities at a site within the green "buffer" areas on SLOAPCD's NOA map, the Owner or Operator would be required to comply with the NOA ATCM. The NOA ATCM requires submittal of a geologic evaluation determining whether serpentine rock is present on a project site, and if so, to what extent (less or more than one acre). Depending on the results of the geologic evaluation, a project would be required to file an exemption request form (if on serpentine is present), a Mini Dust Control Measure Plan (if less than one acre of serpentine is present), or an Asbestos Dust Control Measure Plan (if more than one acre of serpentine is present). A Soil Engineering Report prepared for the project by GeoSolutions, Inc. in 2015 (Appendix E) indicates that the nearest serpentine formation is located approximately 1,000 feet northeast of the project site (see Figure 4 of the Soil Engineering Report, Appendix E). Furthermore, only clay soils were found in the soil borings taken on the project site. The project would be required to submit a geologic evaluation and exemption request to SLOAPCD for approval. Therefore, with compliance to ARB's NOA ATCM, impacts associated with naturally occurring asbestos would be less than significant.

Mitigation Measures. No mitigation measures would be required.

Significance After Mitigation. The project's potential to expose sensitive receptors to substantial pollutant concentrations is less than significant.

c. Cumulative Impacts. A project that does not exceed applicable SLOAPCD thresholds and is consistent with the 2001 CAP would have a less than significant cumulative impact on the airshed. Conversely, a project that exceeds applicable SLOAPCD significance thresholds or is found to be inconsistent with the CAP would result in significant cumulative impacts. As discussed under Impacts AQ-1 ~~through~~ and AQ-3~~(b)~~, the project is inconsistent with the 2001 CAP and would exceed SLOAPCD construction and operational thresholds. As such, cumulative impacts on air quality would be Class I, *significant and unavoidable*.