

APPENDIX B

AIR QUALITY

MEMORANDUM

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Date: March 31, 2017

Subject: Brentwood Golf Course Redevelopment Project – Air Quality/Greenhouse Gas Emissions Technical Memorandum

PURPOSE

The purpose of this technical memorandum is to evaluate potential short- and long-term term air quality and greenhouse gas (GHG) impacts resulting from the construction of the proposed Brentwood Golf Course Redevelopment Project (project), located in Brentwood, California.

PROJECT LOCATION

The project site located within Deer Ridge Golf Club (Deer Ridge) and Shadow Lakes Golf Club (Shadow Lakes) in the City of Brentwood approximately 0.5 miles west of Highway 4. The Shadow Lakes site borders Balfour Road to the south and the Deer Ridge site is located south of Balfour Road bordering Foothill Drive to the west.

The project sites are within the existing PD-18 and PD-20 zoning uses respectively. This is comprised entirely of single-family residential and golf course uses. The Shadow Lakes Golf Club (PD-18) also encompasses a small portion of neighborhood commercial uses on the western portion of the site. Heritage High School is located directly west of the Deer Ridge Country Club, whereas the John Muir Medical Center as well as the R. Paul Krey Elementary School are located directly east. Residential uses surround the greater proximity of the two sites.

PROJECT DESCRIPTION

The proposed project includes the modification of the Shadow Lakes Golf Club and Deer Ridge Country Club to combine the two existing courses (18-holes each; 36-holes total) into one (1) eighteen (18) hole golf course. The project would then utilize a portion of the available land of each the existing golf courses and redevelop each portion into two new senior living facilities. The frontage of the Shadow Lakes Golf Club shall be developed into an approximately 17 acre senior living facility. The club house and parking area of Deer Ridge Country Club, as well as a portion of the golf course, would be developed into an additional approximately 9 acres of senior living. The area to the east of the Shadow Lakes Club House is identified as residential village (Village

1). The proposed village may accommodate up to 310 units in multiple buildings. It is anticipated that the buildings could be all used all as active adult residential buildings or could include up to 100 units as an assisted care facility. The area around the existing Deer Ridge Club House would be developed as a residential village (Village 2). The proposed village may accommodate up to 250 units in multiple buildings. It is anticipated that the buildings could be all used all as active adult residential buildings or could include up to 100 units as an assisted care facility.

The project would require a General Plan amendment, rezoning by way of a Planned Development, and subdivision approvals. The project would total approximately 364 acres with 338 acres devoted to open space areas and 17 acres devoted to village one and 9 acres devoted to village two.

CEQA THRESHOLDS

The environmental analysis in this memorandum is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines*, as amended. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Conflict with or obstruct implementation of the applicable air quality plan (refer to Impact AQ-1);
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation (refer to Impact AQ-2);
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors) (refer to Impact AQ-3);
- Expose sensitive receptors to substantial pollutant concentrations (refer to Impact AQ-4);
- Create objectionable odors affecting a substantial number of people (refer to Impact AQ-5);
- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (refer to Impact GHG-1); and
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases (refer to Impact GHG-2).

City of Brentwood General Plan

The City of Brentwood General Plan includes the following goals and policies applicable to air quality from the proposed project:

Goal CIR 2 Proactively support and encourage travel by non-automobile modes by maintaining and expanding safe and efficient pedestrian, bicycle, equestrian, and transit networks.

Goal CIR 3 Coordinate circulation facilities with land use and development patterns to create an environment that encourages walking, bicycling, and transit use.

Goal COS 8 Reduce air pollutants and greenhouse gas (GHG) emissions.

Policy COS 8-1: Improve air quality through continuing to require a development pattern that focuses growth in and around existing urbanized areas, locating new housing near places of employment, encouraging alternative modes of transportation, and requiring projects to mitigate significant air quality impacts.

Policy COS 8-2: Minimize exposure of sensitive receptors to concentrations of air pollutant emissions and toxic air contaminants.

Policy COS 8-3: Require discretionary projects involving sensitive receptors such as children, the elderly, or people with illnesses that are proposed within 500 feet of the State Route 4 corridor to include an analysis of mobile source toxic air contaminant health risks. The analysis, if necessary, shall identify feasible mitigation measures to reduce health risks to acceptable levels.

Policy COS 8-4: Encourage new development or significant remodels to install fireplaces, wood stoves, and/or heaters which meet Bay Area Air Quality Management District (BAAQMD) standards.

Policy COS 8-5: Continue to require all construction projects and ground disturbing activities to implement BAAQMD dust control and abatement measures.

Policy COS 8-6: Support the development and implementation of a GHG reduction plan, or Climate Action Plan, that addresses and reduces GHG emissions associated with community operations, including but not limited to, mobile sources (vehicle traffic), energy consumption, and solid waste.

Policy COS 8-7: Coordinate with Contra Costa County and nearby cities to implement regional GHG reduction plans and consolidate efforts to reduce GHGs throughout the county.

Policy COS 8-8: Encourage local businesses and industries to engage in voluntary efforts to reduce GHG emissions and energy consumption.

Policy COS 8-9: Preserve, protect, and enhance, as appropriate, the City's carbon sequestration resources, also referred to as "carbon sinks," to improve air quality and reduce net carbon emissions.

Policy COS 8-10: Encourage public transit, ridesharing and van pooling, shortened and combined motor vehicle trips to work and services, use of bicycles, and walking. Minimize single passenger motor vehicle use.

Policy COS 8-11: Encourage new construction to incorporate passive solar features.

Goal COS 9 Promote conservation of energy and other natural resources.

Policy COS 9-1: Require all new public and privately constructed buildings to meet and comply with the most current “green” development standards in the California Code of Regulations (CCR), Title 24.

Policy COS 9-13: Continue to encourage and support the use of bicycles as an alternative means of transportation.

Air Quality Thresholds

Under the California Environmental Quality Act (CEQA), the Bay Area Air Quality Management District (BAAQMD) is an expert commenting agency on air quality within its jurisdiction or impacting its jurisdiction. Under the Federal Clean Air Act (FCAA), the BAAQMD has adopted Federal attainment plans for ozone (O₃) and particulate matter 2.5 microns in diameter or less (PM_{2.5}). The BAAQMD reviews projects to ensure that they would not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any Federal attainment plan.

The BAAQMD *Options and Justification Report* (dated October 2009) establishes thresholds based on substantial evidence and the thresholds are consistent with the thresholds outlined within the 2010/2011 BAAQMD *CEQA Air Quality Guidelines*. The thresholds have been developed by the BAAQMD in order to attain state and national ambient air quality standards. Therefore, projects below these thresholds would not violate an air quality standard and would not contribute substantially to an existing or projected air quality violation. These recommendations, which are listed as follows, represent the best available science on the subject of what constitute significant air quality effects in the San Francisco Bay Area Air Basin:

- NO_x and ROG: 54 pounds/day
- PM₁₀: 82 pounds/day
- PM_{2.5}: 54 pounds/day
- CO: A quantitative CO impact analysis is not required (comparing project emissions to the CAAQS), if the following criteria are met:
 - Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or

highways, regional transportation plan, and local congestion management agency plans.

- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

Cumulative Emissions Thresholds

The BAAQMD's 2010 Clean Air Plan was prepared to accommodate growth, meet State and Federal air quality standards, and minimize the fiscal impact that pollution control measures have on the local economy. According to the BAAQMD *CEQA Air Quality Guidelines*, project-related emissions that fall below the established construction and operational thresholds should be considered less than significant unless there is pertinent information to the contrary. If a project exceeds these emission thresholds, the BAAQMD *CEQA Air Quality Guidelines* states that the significance of a project's contribution to cumulative impacts should be determined based on whether the rate of growth in average daily trips exceeds the rate of growth in population.

Greenhouse Gas Emissions

California is a substantial contributor of global GHGs, emitting over 400 million tons of carbon dioxide (CO₂) per year.¹ Climate studies indicate that California is likely to see an increase of three to four degrees Fahrenheit (°F) over the next century. Methane (CH₄) is also an important GHG that potentially contributes to global climate change. GHGs are global in their effect, which is to increase the earth's ability to absorb heat in the atmosphere. As primary GHGs have a long lifetime in the atmosphere, accumulate over time, and are generally well-mixed, their impact on the atmosphere is mostly independent of the point of emission.

The impact of anthropogenic activities on global climate change is apparent in the observational record. Air trapped by ice has been extracted from core samples taken from polar ice sheets to determine the global atmospheric variation of CO₂, CH₄, and nitrous oxide (N₂O) from before the start of industrialization (approximately 1750), to over 650,000 years ago. For that period, it was found that CO₂ concentrations ranged from 180 parts per million (ppm) to 300 ppm. For the period from approximately 1750 to the present, global CO₂ concentrations increased from a pre-industrialization period concentration of 280 ppm to 379 ppm in 2005, with the 2005 value far exceeding the upper end of the pre-industrial period range.

Regulations and Significance Criteria

The Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. It

¹ California Environmental Protection Agency Air Resources Board, *California Greenhouse Gas Inventory for 2000-2013*, June 16, 2015.

concluded that a stabilization of GHGs at 400 to 450 ppm carbon dioxide equivalent (CO₂eq)² concentration is required to keep global mean warming below 2 degrees Celsius (°C), which in turn is assumed to be necessary to avoid dangerous climate change.

Executive Order (EO) S-3-05 was issued in June 2005, which established the following GHG emission reduction targets:

- 2010: Reduce GHG emissions to 2000 levels;
- 2020: Reduce GHG emissions to 1990 levels; and
- 2050: Reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 32 (AB 32) requires that CARB determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. CARB has approved a 2020 emissions limit of 427 million metric tons (MMT) of CO₂eq.

Executive Order B-30-15, which was issued in April 2015, requires statewide GHG emissions to be reduced 40 percent below 1990 levels by 2030. Senate Bill 32 (SB 32), signed into law in September 2016, codifies the 2030 GHG reduction target in Executive Order B-30-15. The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

Due to the nature of global climate change, it is not anticipated that any single development project would have a substantial effect on global climate change. In actuality, GHG emissions from the proposed project would combine with emissions emitted across California, the United States, and the world to cumulatively contribute to global climate change.

In June 2008, the California Governor's Office of Planning and Research (OPR) published a Technical Advisory, which provides informal guidance for public agencies as they address the issue of climate change in *CEQA* documents. This is assessed by determining whether a proposed project is consistent with or obstructs the 39 Recommended Actions identified by California Air Resources Board (CARB) in its Climate Change Scoping Plan which includes nine Early Action Measures (qualitative approach). The Attorney General's Mitigation Measures identify areas where GHG emissions reductions can be achieved in order to achieve the goals of AB 32. As set forth in the OPR Technical Advisory and in the proposed amendments to the *CEQA Guidelines* Section 15064.4, this analysis examines whether the project's GHG emissions are significant based on a qualitative and performance based standard (*CEQA Guidelines* Section 15064.4(a)(1) and (2)).

Based upon the criteria derived from Appendix G of the *CEQA Guidelines*, a project normally would have a significant effect on the environment if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance; or

² Carbon Dioxide Equivalent (CO₂eq) – A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

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

Bay Area Air Quality Management District Thresholds

The Bay Area Air Quality Management District's (BAAQMD's) approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move us towards climate stabilization. If a project would generate GHG emissions above the threshold level, it would be considered to contribute considerably to a significant cumulative impact. Stationary-source projects include land uses that would accommodate processes and equipment that emit GHG emissions and would require an Air District permit to operate. If annual emissions of operational-related GHGs exceed these levels, the proposed project would result in a cumulatively considerable contribution to a cumulatively significant impact to global climate change. BAAQMD's recommended thresholds are as follows:

- Compliance with a Qualified Climate Action Plan or
- Meet one of the following thresholds:
 - 1,100 MT CO₂eq/year (yr); or
 - 4.6 MTCO₂eq/service population (sp)/yr (residents and employees)

It should be noted that the BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, the BAAQMD recommends quantification and disclosure of construction GHG emissions. The BAAQMD also recommends that the Lead Agency should make a determination on the significance of these construction generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals, as required by the Public Resources Code, Section 21082.2. The Lead Agency is encouraged to incorporate best management practices to reduce GHG emissions during construction, as feasible and applicable.

Exercising its own discretion as lead agency, the City of Brentwood relies on the thresholds within the Options and Justification Report (dated October 2009) prepared by the BAAQMD. The BAAQMD Options and Justification Report establishes thresholds based on substantial evidence and are consistent with the thresholds outlined in the 2010 CEQA Air Quality Guidelines. Although the BAAQMD failed to comply with CEQA before completing its 2010 guidelines, these recommendations still represent the best available science on the subject of what constitutes significant air quality and/or GHG effects for this project. Therefore, the BAAQMD's thresholds are used to analyze the project's GHG impacts on climate change.

For purposes of this analysis, project consistency with the 4.6 MTCO₂eq/sp/yr threshold (refer to Impact Statement GHG-1) is used as the basis to determine significance.

AIR QUALITY IMPACTS

Impact AQ-1: Would the Project Conflict with or Obstruct Implementation of the Applicable Air Quality Plan?

Less Than Significant Impact.

Clean Air Plan Consistency

The project site is in the City of Brentwood, which is located within the San Francisco Bay Area Air Basin (SFBAAB). The BAAQMD is responsible for assuring that the Federal and California Ambient Air Quality Standards are attained and maintained in the SFBAAB. The SFBAAB exceeds the state air quality standards for ozone (O₃) and particulate matter (PM₁₀ and PM_{2.5}). The area is designated nonattainment for national standards of 8-hour ozone, 24-hour PM_{2.5}, and state standards for 24-hour and annual PM₁₀, and annual PM_{2.5}.³



The 2010 Clean Air Plan, the regional air quality management plan for the SFBAAB, accounts for projections of population growth provided by the Association of Bay Area Governments (ABAG) and vehicle miles traveled provided by the Metropolitan Transportation Commission (MTC), and it identifies strategies to bring regional emissions into compliance with federal and state air quality standards. BAAQMD encourages local jurisdictions to include General Plan policies or elements that, when implemented, would improve air quality. Although air quality elements are not mandated, general plans are required to be consistent with any air quality policies and programs that exist within that jurisdiction.

A project would be consistent with the 2010 Clean Air Plan if the project would not exceed the growth assumptions in the plan. The primary method of determining consistency with the 2010 Clean Air Plan growth assumptions is consistency with the General Plan land use designations and zoning ordinance zoning designations for the site. If the General Plan growth forecast was adopted prior to the adoption of the 2010 Clean Air Plan, then it can be assumed that the 2010 Clean Air Plan incorporates the growth forecast from the General Plan.

The Clean Air Plan assumptions for projected air emissions and pollutants in the City are based on the land use and development projection assumptions in the General Plan. The project site currently has a land use designation of Semi-Public Facility and is zoned PD. The project would require a General Plan amendment, rezoning by way of a Planned Development, and subdivision approvals. However, as described below in Impact AQ-2, construction and operational air quality emissions generated by the proposed project would not exceed the BAAQMD's emissions thresholds. These thresholds are established to identify projects that have the potential to generate a substantial amount of criteria air pollutants. Because the proposed project would not exceed these thresholds, the proposed project would not be considered by the BAAQMD to be a substantial emitter of criteria air pollutants, and would not contribute to any non-attainment areas in the SFBAAB. Therefore, the project would be in compliance with the Clean Air Plan and impacts would be less than significant.

Mitigation Measures: No mitigation is required.

³ Bay Area Air Quality Management District, *Air Quality Standards and Attainment Status*, January 5, 2017. Website: <http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status>. Accessed: March 20, 2017.

Impact AQ-2: Would the project violate any air quality standards or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact.

Short-Term Construction

Short-term air quality impacts are predicted to occur during demolition, grading, and construction operations associated with implementation of the proposed project. Temporary air emissions would result from the following activities:

- Particulate (fugitive dust) emissions from grading and building construction; and
- Exhaust emissions from the construction equipment and the motor vehicles of the construction crew.

The project would be constructed over approximately 24 months, beginning in January 2018 and to be completed by December 2019. Construction activities would include grading, paving, building construction, and architectural coating. Site grading would require approximately 65,000 cubic yards of cut for Village 1 and 160,000 cubic yards of cut for Village 2; all cut would be exported off-site. Construction equipment would include excavators, graders, tractors, loaders, and backhoes during grading, pavers and rollers during paving, cranes, forklifts, generator sets, tractors, loaders, backhoes, and welders during building construction, and air compressors during architectural coating. Emissions for each construction phase have been quantified based upon the phase durations and equipment types. The analysis of daily construction emissions has been prepared utilizing the California Emissions Estimator Model (CalEEMod). Refer to [Appendix A, Air Quality/Greenhouse Gas Emissions Data](#), for the CalEEMod outputs and results. [Table 1, Short-Term Air Emissions](#), presents the anticipated daily short-term construction emissions.

As seen in [Table 1](#), unmitigated emissions would not exceed significance thresholds; therefore, a less than significant impact would occur with regard to construction emissions. It should be noted that although the proposed project would result in construction emissions below BAAQMD thresholds, Basic Construction Mitigation Measures would be required to be implemented during construction including dust control procedures (watering, covering/stabilizing disturbed areas, limiting on-site vehicle speeds, etc.) to further reduce emissions; refer to Mitigation Measure AQ-1.

Naturally Occurring Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by State, Federal, and international agencies and was identified as a toxic air contaminant by the CARB in 1986. Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may

have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed. According to the Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report* (August 2000), serpentinite and ultramafic rocks are not known to occur within the project area. Thus, there would be no impact in this regard.

**Table 1
Short-Term Air Emissions**

Emissions Source	Pollutant (pounds/day) ¹			
	ROG	NO _x	PM ₁₀	PM _{2.5}
2018				
Construction Unmitigated Emissions	46.59	50.18	8.97	5.54
Construction Mitigated Emissions	46.59	50.18	5.40	3.63
<i>BAAQMD Thresholds²</i>	<i>54</i>	<i>54</i>	<i>82</i>	<i>54</i>
Is Threshold Exceeded After Mitigation?	No	No	No	No
2019				
Construction Unmitigated Emissions	48.24	53.44	8.32	5.13
Construction Mitigated Emissions	48.24	53.44	4.74	3.22
<i>BAAQMD Thresholds²</i>	<i>54</i>	<i>54</i>	<i>82</i>	<i>54</i>
Is Threshold Exceeded After Mitigation?	No	No	No	No
ROG = reactive organic gases; NO _x = nitrogen oxides; PM ₁₀ = particulate matter 10 microns in diameter or less; PM _{2.5} = particulate matter 2.5 microns in diameter or less				
Notes:				
1. Emissions were calculated using CalEEMod.				
2. Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines, updated May 2012.				

Construction Odors

Potential odors could arise from the diesel construction equipment used on-site, as well as from architectural coatings and asphalt off-gassing. Odors generated from the referenced sources are common in the man-made environment and are not known to be substantially offensive to adjacent receptors. Additionally, odors generated during construction activities would be temporary and disperse rapidly. Therefore, construction odors are not considered to be a significant impact.

Total Daily Construction Emissions

In accordance with the BAAQMD Guidelines, CalEEMod was utilized to model construction emissions for ROG, NO_x, PM₁₀, and PM_{2.5}. Construction would occur over an approximate two year period with the greatest emissions being generated during the initial stages of construction. Additionally, the greatest amount of ROG emissions would typically occur during the final stages of development due to the application of architectural coatings. As depicted in Table 1,

construction emissions would not exceed BAAQMD thresholds. Thus, construction related air emissions would be less than significant.

Long-Term (Operational) Emissions

Mobile Source Emissions

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_x, PM₁₀, and PM_{2.5} are all pollutants of regional concern (NO_x and ROG react with sunlight to form O₃ [photochemical smog], and wind currents readily transport PM₁₀ and PM_{2.5}). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Project-generated vehicle emissions have been estimated using CalEEMod. Trip generation rates associated with the project were based on the *Project Traffic Impact Study* prepared by Kimley-Horn (March 2017). Based on the Traffic Impact Study, the proposed project would result in an average of approximately 1,841 daily trips. Trip rates were conservatively calculated using 600 dwelling units. Table 2, Long-Term Air Emissions, presents the anticipated mobile source emissions. As shown in Table 2, unmitigated net increase in emissions generated by vehicle traffic associated with the proposed project would not exceed established BAAQMD regional thresholds.

**Table 2
Long-Term Air Emissions**

Emissions Source	Pollutant (pounds/day) ¹			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Long-Term Emissions				
Area Source Emissions ²	9.26	2.32	0.31	0.31
Energy Emissions	0.13	1.09	0.09	0.09
Mobile Emissions	1.75	8.20	5.53	1.52
Total Project Unmitigated Emissions	11.14	11.61	5.93	1.92
<i>BAAQMD Threshold³</i>	<i>54</i>	<i>54</i>	<i>82</i>	<i>54</i>
Is Threshold Exceeded? (Significant Impact?)	No	No	No	No
Notes:				
1. Based on CalEEMod results, worst-case seasonal emissions for area, energy, and mobile emissions have been modeled. Refer to <u>Appendix A, Air Quality Emissions Data</u> , for the model outputs and assumptions used in this analysis.				
2. BAAQMD Regulation 6, Rule 3 (Wood Burning Devices) requires that only clean-burning, EPA-certified stoves and inserts are sold and used in local construction projects. Therefore, mitigated values were used for Area Source Emissions.				
3. Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines, 2011.				

Area Source Emissions

Area source emissions would be generated due to an increased demand for consumer products, architectural coating, hearths, and landscaping. As shown in Table 2, unmitigated area source emissions from the proposed project would not exceed BAAQMD thresholds for ROG, NO_x, PM₁₀, or PM_{2.5}.

Energy Source Emissions

Energy source emissions would be generated as a result of electricity and natural gas (non-hearth) usage associated with the proposed project. The primary use of electricity and natural gas by the project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. As shown in Table 2, unmitigated energy source emissions from the proposed project would not exceed BAAQMD thresholds for ROG, NO_x, PM₁₀, or PM_{2.5}.

Conclusion

As indicated in Table 2, unmitigated operational emissions from the proposed project would not exceed BAAQMD thresholds. As such, the project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation. Thus, operational air quality impacts would be less than significant.

Mitigation Measures: No mitigation is required.

Impact AQ-3: **Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

Less Than Significant Impact.

Cumulative Short-Term Emissions

The SFBAAB is designated nonattainment for O₃, PM₁₀, and PM_{2.5} for state standards and nonattainment for O₃ and PM_{2.5} for federal standards. As discussed above, the project's construction-related emissions by themselves would not have the potential to exceed the BAAQMD significance thresholds for criteria pollutants.

Since these thresholds indicate whether an individual project's emissions have the potential to affect cumulative regional air quality, it can be expected that the project-related construction emissions would not be cumulatively considerable. The BAAQMD recommends Basic Construction Mitigation Measures for all projects whether or not construction-related emissions exceed the thresholds of significance. Compliance with BAAQMD construction-related mitigation requirements are considered to reduce cumulative impacts at a Basin-wide level. Therefore, construction emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Impacts

The BAAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. The BAAQMD developed the operational thresholds of significance based on the level above which a project's individual emissions would result in a cumulatively considerable

contribution to the Basin's existing air quality conditions. Therefore, a project that exceeds the BAAQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact. As depicted in Table 2, the proposed project's operational emissions would not exceed BAAQMD thresholds. Therefore, operational emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Mitigation Measures: No mitigation is required.

Impact AQ-4: Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact.

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. Sensitive receptors closest to the project site include adjoining residential uses to the north and a church to the west.

Toxic Air Contaminants

Off-Site Impacts. The proposed senior housing development is not considered a source of toxic air contaminants (TACs) that would pose a possible risk to off-site uses. The project involves the construction of approximately 26 acres and up to 560 dwelling units. The project would not include stationary sources that emit TACs and would not generate a significant amount of heavy-duty truck trips (a source of diesel particulate matter [DPM]). Therefore, the project would not result in risk impacts to surrounding receptors.

Construction of the proposed project would require the use of heavy-duty diesel equipment that are considered sources of DPM and other TACs. Most of the heavy-duty diesel equipment would be used during the grading and earthwork phase. As noted above, grading would not require significant amounts of earthwork (cut and fill would be balanced and no excavation or soil import/export is required). The amount to which receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to toxic air contaminant emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer.

The use of diesel-powered construction equipment would be temporary and episodic. The duration of exposure would be short and exhaust from construction equipment dissipates rapidly. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities.

CARB generally considers construction projects contained in a site of such size to represent less

than significant health risk impacts due to (1) limitations on the off-road diesel equipment able to operate and thus a reduced amount of generated DPM, (2) the reduced amount of dust-generating ground disturbance possible compared to larger construction sites, and (3) the reduced duration of construction activities compared to the development of larger sites. Furthermore, construction would be subject to and would comply with California regulations limiting the idling of heavy-duty construction equipment to no more than 5 minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. For these reasons, DPM generated by construction activities, in and of itself, would not be expected to expose sensitive receptors to substantial amounts of air toxics and the project would have a less than significant impact.

On-Site Impacts. The project site is located more than 1,800 feet away from Highway 4, which is outside of the BAAQMD's 1,000 screening distance. Additionally, Balfour Road is not a designated truck route. As such, these roadways are not expected to generate DPM or TAC emissions at a level that would result in substantial risk. Regarding emissions from stationary sources, the BAAQMD has developed a stationary source screening tool that identifies stationary sources and the associated estimated risk and hazard impacts. The closest stationary sources are located more than 1,000 feet away from the project site.

Furthermore, in May 2016 the BAAQMD released the *Planning Healthy Places* guidebook that provides air quality and public health information for locations throughout the Bay Area. The BAAQMD also provides web-based interactive maps that show the location of communities and places throughout the region that are estimated to have elevated levels of fine particulates and/or TACs. The maps identify where best practices and further study should be applied. Based on the mapping, the project site is not located in a best practices or further study area. As indicated above, the project is a mixed use development that is located outside of the BAAQMD's recommended 1,000 foot buffer from freeways. Additionally, the project would place the parking uses on the ground floors. As such, the project design maximizes the buffer between potential TAC sources and residential units and implements the recommended best practices. Thus, TAC impacts to proposed on-site receptors would be less than significant.

Localized Carbon Monoxide Hotspots

The SFBAAB is designated as attainment for carbon monoxide (CO). Emissions and ambient concentrations of CO have decreased dramatically in the SFBAAB with the introduction of the catalytic converter in 1975. No exceedances of the CAAQS or NAAQS for CO have been recorded at nearby monitoring stations since 1991. As a result, the BAAQMD screening criteria notes that CO impacts may be determined to be less than significant if a project is consistent with the applicable congestion management plan (CMP) and would not increase traffic volumes at local intersections to more than 24,000 vehicles per hour for locations in heavily urban areas, where "urban canyons" formed by buildings tend to reduce air circulation. Based on the scope of the proposed project (26 acres of senior living villages totaling up to 560 dwelling units), traffic would increase along surrounding roadways during long-term operational activities. However, according to the Traffic Impact Study for the proposed project, the entire project would generate 1,841 daily trips. Therefore, the project would not generate a significant number of vehicle trips and effects related to CO concentrations would be less than significant.

Mitigation Measures: No mitigation is required.

Impact AQ-5: Would the project create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. According to the BAAQMD, land uses associated with odor complaints typically include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. The proposed project does not include any uses identified by the BAAQMD as being associated with odors.

Construction activities associated with the project may generate detectable odors from heavy-duty equipment exhaust. Construction-related odors would be short-term in nature and cease upon project completion. Any impacts to existing adjacent land uses would be short-term and are less than significant.

Mitigation Measures: No mitigation is required.

GREENHOUSE GAS EMISSIONS IMPACTS

Impact GHG-1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact.

Project-Related Sources of Greenhouse Gases

Project-related GHG emissions would include emissions from direct and indirect sources. The proposed project would result in direct and indirect emissions of CO₂, N₂O, and CH₄, and would not result in other GHGs that would facilitate a meaningful analysis. Therefore, this analysis focuses on these three forms of GHG emissions. Direct project-related GHG emissions include emissions from construction activities, area sources, and mobile sources, while indirect sources include emissions from electricity consumption, water demand, and solid waste generation. Operational GHG estimations are based on energy emissions from natural gas usage and automobile emissions. CalEEMod relies upon trip data within the *Brentwood Golf Redevelopment Traffic Impact Study* and project specific land use data to calculate emissions. The proposed project involves the construction of two senior living villages with up to a total of 560 dwelling units. Table 3, *Estimated Greenhouse Gas Emissions*, presents the estimated CO₂, CH₄, and N₂O emissions of the proposed project. The CalEEMod outputs are contained within the Appendix A, *Air Quality/Greenhouse Gas Emissions Data*.

Direct Proposed Project-Related Sources of Greenhouse Gases

- **Construction Emissions.** Construction GHG emissions are typically summed and amortized over the lifetime of a project (assumed to be 30 years), then added to the operational emissions.⁴ As seen in Table 3, the proposed project would result in 44.98 MTCO₂eq/yr (amortized over 30 years).

⁴ The project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008).

**Table 3
Estimated Greenhouse Gas Emissions**

Source	CO ₂	CH ₄		N ₂ O		Total MTCO ₂ eq ³
	MT/yr ¹	MT/yr ¹	MTCO ₂ eq ²	MT/yr ¹	MTCO ₂ eq ²	
Existing Greenhouse Gas Emissions						
Area Source ³	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source	0.00	0.00	0.00	0.00	0.00	0.00
Water Demand	152.44	0.01	0.17	0.00	0.43	153.04
Waste	0.49	0.03	0.72	0.00	0.00	1.21
<i>Total Existing Emissions³</i>	<i>154.25 MTCO₂eq</i>					
Proposed Project-Related Greenhouse Gas Emissions						
Construction (amortized over 30 years)	44.73	0.01	0.25	0.00	0.00	44.98
Area Source	31.25	0.01	0.19	0.00	0.13	31.57
Mobile Source	1,605.47	0.07	1.64	0.00	0.00	1,607.11
Energy	986.79	0.04	0.91	0.01	3.60	991.29
Water Demand	82.71	1.02	25.56	0.02	7.36	115.65
Waste	28.01	1.66	41.39	0.00	0.00	69.40
<i>Total Proposed Project-Related Emissions³</i>	<i>2,860.00 MTCO₂eq</i>					
<i>Total Net Greenhouse Gas Emissions</i>	<i>2,705.75 MTCO₂eq</i>					
<i>Total Service Population Emissions⁴</i>	<i>3.1 MTCO₂eq⁵/sp</i>					
<i>Threshold of Significance</i>	<i>4.6 MTCO₂eq/sp</i>					
<i>Project Exceed Thresholds?</i>	<i>No</i>					
Notes:						
1. Emissions calculated using the California Emissions Estimator Model.						
2. Carbon dioxide equivalent values calculated using the United States Environmental Protection Agency Website, Greenhouse Gas Equivalencies Calculator, https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator , accessed March 29, 2017.						
3. Totals may be slightly off due to rounding.						
4. Service population emissions are based on a service population of 920 assuming one trip is made to and from the project site by the anticipated total daily trips associated with number of residents and employees (1,841). The service population also conservatively assumes only a single occupant for each trip						
5. The project's total service population emissions were calculated by dividing the total proposed project-related emissions (2,860.00 MTCO ₂ eq/yr) by the service population (920); therefore, 2,860.00/920 = 3.1.						
Refer to Appendix A, <i>Air Quality/Greenhouse Gas Emissions Data</i> , for detailed model input/output data.						

- **Area Source.** Area source emissions were calculated using CalEEMod and project-specific land use data. As noted in Table 3, the proposed project would result in 31.57 MTCO₂eq/yr of area sources GHG emissions.
- **Mobile Source.** CalEEMod relies upon trip data within the *Traffic Impact Study* and project specific land use data to calculate mobile source emissions. The proposed project would directly result in 1,607.11 MTCO₂eq/yr of mobile source-generated GHG emissions; refer to Table 3.

Indirect Proposed Project-Related Sources of Greenhouse Gases

- **Energy Consumption.** Energy consumption emissions were calculated using CalEEMod and project-specific land use data. Electricity would be provided to the project site via Southern California Edison. The proposed project would indirectly result in 991.29 MTCO₂eq/yr due to energy consumption; refer to Table 3.

- Water Demand. The proposed project's water supply would be provided by local groundwater and imported surface water. Emissions from indirect energy impacts due to water supply would result in 115.65 MTCO₂eq/yr (net decrease of 37.39 MTCO₂eq/yr); refer to Table 3.
- Solid Waste. Solid waste associated with operations of the proposed project would result in 69.40 MTCO₂eq/yr (net increase of 68.19 MTCO₂eq/yr); refer to Table 3.

Total Proposed Project-Related Sources of Greenhouse Gases

As shown in Table 3, GHG emissions resulting from both construction and operation of the proposed project would result in approximately 2,860 MTCO₂eq/yr. The project's service population would be made up of the residents and employees associated with the assisted living facility. In order to conservatively estimate the service population, the number of potential project-related daily vehicle trips is divided by two to account for each service population member making one trip to and one trip from the project site (i.e., each project resident and employee would count for two trips). This is a conservative assumption since many seniors may not drive (especially those within assisted living). According to project daily traffic data provided by Kimley-Horn, the proposed project would generate approximately 1,976 daily trips during the weekday and 1,520 daily trips on the weekend, which results in an annual average of 1,841 daily trips. The total number of daily trips is divided by two (920 trips per day) to derive the service population. Therefore, the project service population is 920. As shown in Table 3, dividing the GHG emissions by the project's service population would result in approximately 3.1 MTCO₂eq per SP per year, which is below the BAAQMD significance thresholds (4.6 MTCO₂eq per SP per year). Therefore, the project's contribution of GHG emissions would be less than significant.

Mitigation Measures: No mitigation is required.

Impact GHG-2: Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions apply to the project. In addition, the project would be subject to applicable Federal, State, and local regulatory requirements, further reducing project-related GHG emissions. The project would not conflict with or impede implementation of reduction goals identified in AB 32 and other strategies to help reduce GHG emissions. Therefore, the project would not conflict with an applicable GHG reduction plan, policy, or regulation. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

CONCLUSION

Project implementation would result in less than significant short-term, long-term regional, and localized air quality impacts. Additionally, the proposed project would result in less than significant GHG impacts. No mitigation measures would be required. Therefore, the proposed project would not result in significant effects related to the State CEQA Guidelines.

REFERENCES

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- California Environmental Protection Agency Air Resources Board, *California Greenhouse Gas Inventory for 2000-2013*, June 16, 2015.
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- Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report* August 2000.
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Appendix A
Air Quality/Greenhouse Gas Emissions Data

Brentwood Existing - Contra Costa County, Annual

Brentwood Existing
Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Golf Course	18.00	Hole	125.66	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use -
- Construction Phase - existing operations only
- Trips and VMT -
- Grading -
- Vehicle Trips - net vehicle trips modeled for project
- Construction Off-road Equipment Mitigation -
- Mobile Land Use Mitigation -
- Area Mitigation -
- Off-road Equipment - equipment
- Energy Mitigation - exceed title 24 2013 standards with 2016 standards+RPS

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	310.00	1.00
tblConstructionPhase	PhaseEndDate	3/8/2019	1/1/2018
tblProjectCharacteristics	OperationalYear	2018	2020
tblVehicleTrips	ST_TR	40.63	0.00
tblVehicleTrips	SU_TR	39.53	0.00
tblVehicleTrips	WD_TR	35.74	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	2.5900e-003	0.0298	0.0179	3.0000e-005	4.4200e-003	1.3200e-003	5.7300e-003	1.8200e-003	1.2100e-003	3.0300e-003	0.0000	2.9065	2.9065	8.8000e-004	0.0000	2.9286
Maximum	2.5900e-003	0.0298	0.0179	3.0000e-005	4.4200e-003	1.3200e-003	5.7300e-003	1.8200e-003	1.2100e-003	3.0300e-003	0.0000	2.9065	2.9065	8.8000e-004	0.0000	2.9286

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	2.5900e-003	0.0298	0.0179	3.0000e-005	4.4200e-003	1.3200e-003	5.7300e-003	1.8200e-003	1.2100e-003	3.0300e-003	0.0000	2.9065	2.9065	8.8000e-004	0.0000	2.9286
Maximum	2.5900e-003	0.0298	0.0179	3.0000e-005	4.4200e-003	1.3200e-003	5.7300e-003	1.8200e-003	1.2100e-003	3.0300e-003	0.0000	2.9065	2.9065	8.8000e-004	0.0000	2.9286

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2018	3-31-2018	0.0231	0.0231
		Highest	0.0231	0.0231

2.2 Overall Operational Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.0000e-005	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.4872	0.0000	0.4872	0.0288	0.0000	1.2070
Water						0.0000	0.0000		0.0000	0.0000	0.0000	152.4448	152.4448	6.8900e-003	1.4300e-003	153.0421
Total	2.0000e-005	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4872	152.4451	152.9323	0.0357	1.4300e-003	154.2494

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.0000e-005	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	0.00	0.00	0.00	0.00
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.00	0.00	0.00	0.00
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00	0.00	0.00	0.00
Waste						0.0000	0.0000		0.0000	0.0000	0.4872	0.0000	0.49	0.03	0.00	1.21
Water						0.0000	0.0000		0.0000	0.0000	0.0000	152.4448	152.44	0.01	0.00	153.04
Total	2.0000e-005	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4872	152.4451	152.93	0.04	0.00	154.25

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2018	1/1/2018	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.3400e-003	0.0000	4.3400e-003	1.8000e-003	0.0000	1.8000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5500e-003	0.0298	0.0175	3.0000e-005		1.3200e-003	1.3200e-003		1.2100e-003	1.2100e-003	0.0000	2.8324	2.8324	8.8000e-004	0.0000	2.8545
Total	2.5500e-003	0.0298	0.0175	3.0000e-005	4.3400e-003	1.3200e-003	5.6600e-003	1.8000e-003	1.2100e-003	3.0100e-003	0.0000	2.8324	2.8324	8.8000e-004	0.0000	2.8545

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.2000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0741	0.0741	0.0000	0.0000	0.0742
Total	4.0000e-005	3.0000e-005	3.2000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0741	0.0741	0.0000	0.0000	0.0742

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.3400e-003	0.0000	4.3400e-003	1.8000e-003	0.0000	1.8000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5500e-003	0.0298	0.0175	3.0000e-005		1.3200e-003	1.3200e-003		1.2100e-003	1.2100e-003	0.0000	2.8324	2.8324	8.8000e-004	0.0000	2.8545
Total	2.5500e-003	0.0298	0.0175	3.0000e-005	4.3400e-003	1.3200e-003	5.6600e-003	1.8000e-003	1.2100e-003	3.0100e-003	0.0000	2.8324	2.8324	8.8000e-004	0.0000	2.8545

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Golf Course	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Golf Course	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Golf Course	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.0000e-005	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Unmitigated	2.0000e-005	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Total	2.0000e-005	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Total	2.0000e-005	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e

Category	MT/yr			
Mitigated	152.4448	6.8900e-003	1.4300e-003	153.0421
Unmitigated	152.4448	6.8900e-003	1.4300e-003	153.0421

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Golf Course	0 / 149.721	152.4448	6.8900e-003	1.4300e-003	153.0421
Total		152.4448	6.8900e-003	1.4300e-003	153.0421

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Golf Course	0 / 149.721	152.4448	6.8900e-003	1.4300e-003	153.0421
Total		152.4448	6.8900e-003	1.4300e-003	153.0421

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.4872	0.0288	0.0000	1.2070
Unmitigated	0.4872	0.0288	0.0000	1.2070

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Golf Course	2.4	0.4872	0.0288	0.0000	1.2070
Total		0.4872	0.0288	0.0000	1.2070

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Golf Course	2.4	0.4872	0.0288	0.0000	1.2070
Total		0.4872	0.0288	0.0000	1.2070

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Brentwood - Shadow Lakes - Village 1 - Contra Costa County, Annual

**Brentwood - Shadow Lakes - Village 1
Contra Costa County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Retirement Community	325.00	Dwelling Unit	16.00	325,000.00	930

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - site is approximately 16 acres
- Construction Phase - Per construction schedule
- Trips and VMT - cut/fill balanced, no import/export
- Grading - balanced cut/fill conservative estimates from engineer
- Vehicle Trips - Per traffic study
- Construction Off-road Equipment Mitigation - Tier 4 equipment applied
- Mobile Land Use Mitigation -
- Area Mitigation -
- Off-road Equipment - equipment

Energy Mitigation - exceed title 24 2013 standards with 2016 standards+RPS

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	109.00
tblConstructionPhase	NumDays	300.00	96.00
tblConstructionPhase	NumDays	30.00	154.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	PhaseEndDate	7/2/2019	12/31/2018
tblConstructionPhase	PhaseEndDate	12/14/2018	12/31/2018
tblConstructionPhase	PhaseEndDate	6/1/2018	8/2/2018
tblConstructionPhase	PhaseEndDate	12/31/2018	8/17/2018
tblConstructionPhase	PhaseStartDate	1/1/2019	8/1/2018
tblConstructionPhase	PhaseStartDate	6/2/2018	8/18/2018
tblConstructionPhase	PhaseStartDate	12/15/2018	8/3/2018
tblGrading	AcresOfGrading	231.00	16.00
tblGrading	MaterialImported	0.00	65,000.00
tblLandUse	LotAcreage	65.00	16.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblTripsAndVMT	HaulingTripNumber	8,125.00	4,063.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblVehicleTrips	ST_TR	2.03	2.61
tblVehicleTrips	SU_TR	1.95	2.61
tblVehicleTrips	WD_TR	2.40	3.43

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2018	3-31-2018	1.6749	1.6749
2	4-1-2018	6-30-2018	1.6962	1.6962
3	7-1-2018	9-30-2018	2.2030	2.2030
		Highest	2.2030	2.2030

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3217	0.0453	3.4538	2.1800e-003		0.1609	0.1609		0.1609	0.1609	14.8167	10.0278	24.8444	0.0277	9.7000e-004	25.8254
Energy	0.0233	0.1995	0.0849	1.2700e-003		0.0161	0.0161		0.0161	0.0161	0.0000	689.6131	689.6131	0.0252	8.5300e-003	692.7828
Mobile	0.3025	1.3590	3.4442	0.0108	0.8960	0.0107	0.9067	0.2404	0.0101	0.2505	0.0000	988.2826	988.2826	0.0382	0.0000	989.2381
Waste						0.0000	0.0000		0.0000	0.0000	30.3472	0.0000	30.3472	1.7935	0.0000	75.1838
Water						0.0000	0.0000		0.0000	0.0000	6.7179	46.9245	53.6423	0.6921	0.0167	75.9310
Total	2.6475	1.6038	6.9828	0.0143	0.8960	0.1878	1.0837	0.2404	0.1871	0.4276	51.8817	1,734.8479	1,786.7296	2.5766	0.0262	1,858.9611

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.5731	0.0392	2.4260	2.0000e-004		0.0142	0.0142		0.0142	0.0142	0.0000	16.9252	16.9252	4.0900e-003	2.4000e-004	17.0984

Energy	0.0173	0.1477	0.0629	9.4000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	534.5090	534.5090	0.0197	6.5400e-003	536.9496
Mobile	0.2918	1.2782	3.1848	9.7600e-003	0.8023	9.7300e-003	0.8121	0.2153	9.1200e-003	0.2244	0.0000	892.3176	892.3176	0.0356	0.0000	893.2062
Waste						0.0000	0.0000		0.0000	0.0000	15.1736	0.0000	15.1736	0.8967	0.0000	37.5919
Water						0.0000	0.0000		0.0000	0.0000	5.3743	39.4289	44.8032	0.5538	0.0134	62.6415
Total	1.8822	1.4651	5.6736	0.0109	0.8023	0.0359	0.8382	0.2153	0.0353	0.2506	20.5479	1,483.1806	1,503.7285	1.5099	0.0202	1,547.4876

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	28.91	8.65	18.75	23.56	10.45	80.89	22.65	10.45	81.15	41.39	60.39	14.51	15.84	41.40	23.07	16.76

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2018	8/2/2018	5	154	
2	Paving	Paving	8/3/2018	8/17/2018	5	11	
3	Building Construction	Building Construction	8/18/2018	12/31/2018	5	96	
4	Architectural Coating	Architectural Coating	8/1/2018	12/31/2018	5	109	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 16

Acres of Paving: 0

Residential Indoor: 658,125; Residential Outdoor: 219,375; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40

Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	20.00	0.00	4,063.00	10.80	7.30	0.10	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	234.00	35.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	47.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4759	0.0000	0.4759	0.2564	0.0000	0.2564	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3036	3.4904	2.0253	3.6100e-003		0.1597	0.1597		0.1470	0.1470	0.0000	329.6813	329.6813	0.1026	0.0000	332.2472
Total	0.3036	3.4904	2.0253	3.6100e-003	0.4759	0.1597	0.6356	0.2564	0.1470	0.4033	0.0000	329.6813	329.6813	0.1026	0.0000	332.2472

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6100e-003	0.2058	0.0319	2.1000e-004	2.1000e-004	2.1000e-004	4.2000e-004	6.0000e-005	2.0000e-004	2.6000e-004	0.0000	20.1312	20.1312	3.6600e-003	0.0000	20.2228
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-003	4.8500e-003	0.0490	1.3000e-004	0.0122	9.0000e-005	0.0123	3.2500e-003	8.0000e-005	3.3300e-003	0.0000	11.4114	11.4114	3.4000e-004	0.0000	11.4200
Total	0.0109	0.2107	0.0808	3.4000e-004	0.0124	3.0000e-004	0.0127	3.3100e-003	2.8000e-004	3.5900e-003	0.0000	31.5426	31.5426	4.0000e-003	0.0000	31.6427

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Fugitive Dust					0.2034	0.0000	0.2034	0.1096	0.0000	0.1096	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3036	3.4904	2.0253	3.6100e-003		0.1597	0.1597		0.1470	0.1470	0.0000	329.6810	329.6810	0.1026	0.0000	332.2468
Total	0.3036	3.4904	2.0253	3.6100e-003	0.2034	0.1597	0.3632	0.1096	0.1470	0.2565	0.0000	329.6810	329.6810	0.1026	0.0000	332.2468

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6100e-003	0.2058	0.0319	2.1000e-004	2.1000e-004	2.1000e-004	4.1000e-004	6.0000e-005	2.0000e-004	2.6000e-004	0.0000	20.1312	20.1312	3.6600e-003	0.0000	20.2228
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-003	4.8500e-003	0.0490	1.3000e-004	0.0116	9.0000e-005	0.0117	3.0900e-003	8.0000e-005	3.1700e-003	0.0000	11.4114	11.4114	3.4000e-004	0.0000	11.4200
Total	0.0109	0.2107	0.0808	3.4000e-004	0.0118	3.0000e-004	0.0121	3.1500e-003	2.8000e-004	3.4300e-003	0.0000	31.5426	31.5426	4.0000e-003	0.0000	31.6427

3.3 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.0400e-003	0.0964	0.0814	1.3000e-004		5.2600e-003	5.2600e-003		4.8400e-003	4.8400e-003	0.0000	11.4464	11.4464	3.5600e-003	0.0000	11.5355
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.0400e-003	0.0964	0.0814	1.3000e-004		5.2600e-003	5.2600e-003		4.8400e-003	4.8400e-003	0.0000	11.4464	11.4464	3.5600e-003	0.0000	11.5355

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.6000e-004	2.6200e-003	1.0000e-005	6.5000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.6113	0.6113	2.0000e-005	0.0000	0.6118
Total	3.4000e-004	2.6000e-004	2.6200e-003	1.0000e-005	6.5000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.6113	0.6113	2.0000e-005	0.0000	0.6118

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.0400e-003	0.0964	0.0814	1.3000e-004		5.2600e-003	5.2600e-003		4.8400e-003	4.8400e-003	0.0000	11.4464	11.4464	3.5600e-003	0.0000	11.5355
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.0400e-003	0.0964	0.0814	1.3000e-004		5.2600e-003	5.2600e-003		4.8400e-003	4.8400e-003	0.0000	11.4464	11.4464	3.5600e-003	0.0000	11.5355

Mitigated Construction Off-Site

Vendor	9.2800e-003	0.2270	0.0608	4.6000e-004	0.0111	1.8600e-003	0.0129	3.1900e-003	1.7800e-003	4.9800e-003	0.0000	44.3506	44.3506	2.4600e-003	0.0000	44.4121
Worker	0.0460	0.0353	0.3570	9.2000e-004	0.0891	6.2000e-004	0.0897	0.0237	5.7000e-004	0.0243	0.0000	83.2291	83.2291	2.5000e-003	0.0000	83.2917
Total	0.0553	0.2623	0.4179	1.3800e-003	0.1001	2.4800e-003	0.1026	0.0269	2.3500e-003	0.0292	0.0000	127.5797	127.5797	4.9600e-003	0.0000	127.7038

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1286	1.1227	0.8439	1.2900e-003		0.0720	0.0720		0.0677	0.0677	0.0000	114.1281	114.1281	0.0280	0.0000	114.8272
Total	0.1286	1.1227	0.8439	1.2900e-003		0.0720	0.0720		0.0677	0.0677	0.0000	114.1281	114.1281	0.0280	0.0000	114.8272

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.2800e-003	0.2270	0.0608	4.6000e-004	0.0106	1.8600e-003	0.0125	3.0800e-003	1.7800e-003	4.8600e-003	0.0000	44.3506	44.3506	2.4600e-003	0.0000	44.4121
Worker	0.0460	0.0353	0.3570	9.2000e-004	0.0845	6.2000e-004	0.0851	0.0226	5.7000e-004	0.0231	0.0000	83.2291	83.2291	2.5000e-003	0.0000	83.2917
Total	0.0553	0.2623	0.4179	1.3800e-003	0.0950	2.4800e-003	0.0975	0.0256	2.3500e-003	0.0280	0.0000	127.5797	127.5797	4.9600e-003	0.0000	127.7038

3.5 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.2878					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0163	0.1093	0.1011	1.6000e-004		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	13.9153	13.9153	1.3200e-003	0.0000	13.9483
Total	2.3041	0.1093	0.1011	1.6000e-004		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	13.9153	13.9153	1.3200e-003	0.0000	13.9483

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0105	8.0600e-003	0.0814	2.1000e-004	0.0203	1.4000e-004	0.0205	5.4000e-003	1.3000e-004	5.5300e-003	0.0000	18.9807	18.9807	5.7000e-004	0.0000	18.9950
Total	0.0105	8.0600e-003	0.0814	2.1000e-004	0.0203	1.4000e-004	0.0205	5.4000e-003	1.3000e-004	5.5300e-003	0.0000	18.9807	18.9807	5.7000e-004	0.0000	18.9950

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.2878					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0163	0.1093	0.1011	1.6000e-004		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	13.9152	13.9152	1.3200e-003	0.0000	13.9483
Total	2.3041	0.1093	0.1011	1.6000e-004		8.2100e-003	8.2100e-003		8.2100e-003	8.2100e-003	0.0000	13.9152	13.9152	1.3200e-003	0.0000	13.9483

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0105	8.0600e-003	0.0814	2.1000e-004	0.0193	1.4000e-004	0.0194	5.1400e-003	1.3000e-004	5.2700e-003	0.0000	18.9807	18.9807	5.7000e-004	0.0000	18.9950
Total	0.0105	8.0600e-003	0.0814	2.1000e-004	0.0193	1.4000e-004	0.0194	5.1400e-003	1.3000e-004	5.2700e-003	0.0000	18.9807	18.9807	5.7000e-004	0.0000	18.9950

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Implement NEV Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2918	1.2782	3.1848	9.7600e-003	0.8023	9.7300e-003	0.8121	0.2153	9.1200e-003	0.2244	0.0000	892.3176	892.3176	0.0356	0.0000	893.2062
Unmitigated	0.3025	1.3590	3.4442	0.0108	0.8960	0.0107	0.9067	0.2404	0.0101	0.2505	0.0000	988.2826	988.2826	0.0382	0.0000	989.2381

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Retirement Community	1,114.75	848.25	848.25	2,398,775	2,148,103
Total	1,114.75	848.25	848.25	2,398,775	2,148,103

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Retirement Community	0.577244	0.040114	0.186710	0.126359	0.018084	0.005120	0.010527	0.023222	0.001588	0.001850	0.005513	0.002759	0.000910

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	363.4452	363.4452	0.0164	3.4000e-003	364.8693
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	458.6135	458.6135	0.0207	4.2900e-003	460.4105
NaturalGas Mitigated	0.0173	0.1477	0.0629	9.4000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	171.0638	171.0638	3.2800e-003	3.1400e-003	172.0804
NaturalGas Unmitigated	0.0233	0.1995	0.0849	1.2700e-003		0.0161	0.0161		0.0161	0.0161	0.0000	230.9996	230.9996	4.4300e-003	4.2300e-003	232.3723

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Retirement Community	4.32877e+006	0.0233	0.1995	0.0849	1.2700e-003		0.0161	0.0161		0.0161	0.0161	0.0000	230.9996	230.9996	4.4300e-003	4.2300e-003	232.3723
Total		0.0233	0.1995	0.0849	1.2700e-003		0.0161	0.0161		0.0161	0.0161	0.0000	230.9996	230.9996	4.4300e-003	4.2300e-003	232.3723

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Retirement Community	3.20562e+006	0.0173	0.1477	0.0629	9.4000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	171.0638	171.0638	3.2800e-003	3.1400e-003	172.0804
Total		0.0173	0.1477	0.0629	9.4000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	171.0638	171.0638	3.2800e-003	3.1400e-003	172.0804

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Retirement Community	1.57647e+006	458.6135	0.0207	4.2900e-003	460.4105
Total		458.6135	0.0207	4.2900e-003	460.4105

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Retirement Community	1.24933e+006	363.4452	0.0164	3.4000e-003	364.8693

Total		363.4452	0.0164	3.4000e-003	364.8693
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6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.5731	0.0392	2.4260	2.0000e-004		0.0142	0.0142		0.0142	0.0142	0.0000	16.9252	16.9252	4.0900e-003	2.4000e-004	17.0984
Unmitigated	2.3217	0.0453	3.4538	2.1800e-003		0.1609	0.1609		0.1609	0.1609	14.8167	10.0278	24.8444	0.0277	9.7000e-004	25.8254

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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SubCategory	tons/yr								MT/yr							
Architectural Coating	0.2288					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Consumer Products	1.2693					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Hearth	0.7499	0.0173	1.0326	2.0500e-003		0.1476	0.1476		0.1476	0.1476	14.8167	6.0859	20.9026	0.0238	9.7000e-004	21.7875
Landscaping	0.0737	0.0280	2.4212	1.3000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	3.9419	3.9419	3.8400e-003	0.0000	4.0380
Total	2.3217	0.0453	3.4538	2.1800e-003		0.1609	0.1609		0.1609	0.1609	14.8167	10.0278	24.8444	0.0277	9.7000e-004	25.8254

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr								MT/yr							
Architectural Coating	0.2288					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2693					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.3100e-003	0.0112	4.7700e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	12.9833	12.9833	2.5000e-004	2.4000e-004	13.0604
Landscaping	0.0737	0.0280	2.4212	1.3000e-004		0.0133	0.0133		0.0133	0.0133	0.0000	3.9419	3.9419	3.8400e-003	0.0000	4.0380
Total	1.5731	0.0392	2.4260	2.0000e-004		0.0142	0.0142		0.0142	0.0142	0.0000	16.9252	16.9252	4.0900e-003	2.4000e-004	17.0984

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	44.8032	0.5538	0.0134	62.6415
Unmitigated	53.6423	0.6921	0.0167	75.9310

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Retirement Community	21.1751 / 13.3495	53.6423	0.6921	0.0167	75.9310
Total		53.6423	0.6921	0.0167	75.9310

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
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Land Use	Mgal	MT/yr			
Retirement	16.94 /	44.8032	0.5538	0.0134	62.6415
Community	12.5352				
Total		44.8032	0.5538	0.0134	62.6415

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	15.1736	0.8967	0.0000	37.5919
Unmitigated	30.3472	1.7935	0.0000	75.1838

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Retirement Community	149.5	30.3472	1.7935	0.0000	75.1838
Total		30.3472	1.7935	0.0000	75.1838

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Retirement Community	74.75	15.1736	0.8967	0.0000	37.5919
Total		15.1736	0.8967	0.0000	37.5919

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Brentwood - Shadow Lakes - Village 1 - Contra Costa County, Summer

Brentwood - Shadow Lakes - Village 1 Contra Costa County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Retirement Community	325.00	Dwelling Unit	16.00	325,000.00	930

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - site is approximately 16 acres
- Construction Phase - Per construction schedule
- Trips and VMT - cut/fill balanced, no import/export
- Grading - balanced cut/fill conservative estimates from engineer
- Vehicle Trips - Per traffic study
- Construction Off-road Equipment Mitigation - Tier 4 equipment applied
- Mobile Land Use Mitigation -
- Area Mitigation -
- Off-road Equipment - equipment

Energy Mitigation - exceed title 24 2013 standards with 2016 standards+RPS

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	109.00
tblConstructionPhase	NumDays	300.00	96.00
tblConstructionPhase	NumDays	30.00	154.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	PhaseEndDate	7/2/2019	12/31/2018
tblConstructionPhase	PhaseEndDate	12/14/2018	12/31/2018
tblConstructionPhase	PhaseEndDate	6/1/2018	8/2/2018
tblConstructionPhase	PhaseEndDate	12/31/2018	8/17/2018
tblConstructionPhase	PhaseStartDate	1/1/2019	8/1/2018
tblConstructionPhase	PhaseStartDate	6/2/2018	8/18/2018
tblConstructionPhase	PhaseStartDate	12/15/2018	8/3/2018
tblGrading	AcresOfGrading	231.00	16.00
tblGrading	MaterialImported	0.00	65,000.00
tblLandUse	LotAcreage	65.00	16.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblTripsAndVMT	HaulingTripNumber	8,125.00	4,063.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblVehicleTrips	ST_TR	2.03	2.61
tblVehicleTrips	SU_TR	1.95	2.61
tblVehicleTrips	WD_TR	2.40	3.43

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	142.6873	3.2660	203.4927	0.3416		25.2176	25.2176		25.2176	25.2176	2,720.5250	1,252.6913	3,973.2163	3.7700	0.1923	4,124.7693
Energy	0.1279	1.0930	0.4651	6.9800e-003		0.0884	0.0884		0.0884	0.0884		1,395.2520	1,395.2520	0.0267	0.0256	1,403.5433
Mobile	2.1167	7.7524	21.4529	0.0684	5.4695	0.0631	5.5326	1.4636	0.0592	1.5227		6,885.3536	6,885.3536	0.2520		6,891.6546
Total	144.9319	12.1113	225.4107	0.4170	5.4695	25.3690	30.8385	1.4636	25.3651	26.8287	2,720.5250	9,533.2968	12,253.8219	4.0488	0.2179	12,419.9671

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	9.2633	2.3239	27.7585	0.0143		0.3107	0.3107		0.3107	0.3107	0.0000	2,617.6913	2,617.6913	0.0963	0.0471	2,634.1369
Energy	0.0947	0.8094	0.3444	5.1700e-003		0.0654	0.0654		0.0654	0.0654		1,033.2362	1,033.2362	0.0198	0.0189	1,039.3762
Mobile	2.0514	7.3026	19.6760	0.0617	4.8979	0.0572	4.9552	1.3106	0.0537	1.3643		6,215.1354	6,215.1354	0.2334		6,220.9710
Total	11.4094	10.4358	47.7789	0.0811	4.8979	0.4333	5.3313	1.3106	0.4298	1.7404	0.0000	9,866.0629	9,866.0629	0.3495	0.0661	9,894.4841

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	92.13	13.83	78.80	80.54	10.45	98.29	82.71	10.45	98.31	93.51	100.00	-3.49	19.49	91.37	69.68	20.33

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2018	8/2/2018	5	154	
2	Paving	Paving	8/3/2018	8/17/2018	5	11	
3	Building Construction	Building Construction	8/18/2018	12/31/2018	5	96	
4	Architectural Coating	Architectural Coating	8/1/2018	12/31/2018	5	109	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 16

Acres of Paving: 0

Residential Indoor: 658,125; Residential Outdoor: 219,375; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	20.00	0.00	4,063.00	10.80	7.30	0.10	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	234.00	35.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	47.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1800	0.0000	6.1800	3.3294	0.0000	3.3294			0.0000			0.0000
Off-Road	3.9432	45.3302	26.3027	0.0469		2.0745	2.0745		1.9085	1.9085		4,719.6296	4,719.6296	1.4693		4,756.3617
Total	3.9432	45.3302	26.3027	0.0469	6.1800	2.0745	8.2545	3.3294	1.9085	5.2379		4,719.6296	4,719.6296	1.4693		4,756.3617

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0567	2.7156	0.3468	2.8700e-003	2.8600e-003	2.3700e-003	5.2300e-003	8.3000e-004	2.2700e-003	3.1000e-003		303.8344	303.8344	0.0494		305.0688
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0886	0.0563	0.7056	1.7900e-003	0.1643	1.1100e-003	0.1654	0.0436	1.0200e-003	0.0446		178.0548	178.0548	5.3000e-003		178.1874
Total	0.1453	2.7719	1.0524	4.6600e-003	0.1672	3.4800e-003	0.1706	0.0444	3.2900e-003	0.0477		481.8892	481.8892	0.0547		483.2562

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6420	0.0000	2.6420	1.4233	0.0000	1.4233			0.0000			0.0000
Off-Road	3.9432	45.3302	26.3027	0.0469		2.0745	2.0745		1.9085	1.9085	0.0000	4,719.6296	4,719.6296	1.4693		4,756.3617
Total	3.9432	45.3302	26.3027	0.0469	2.6420	2.0745	4.7164	1.4233	1.9085	3.3318	0.0000	4,719.6296	4,719.6296	1.4693		4,756.3617

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0567	2.7156	0.3468	2.8700e-003	2.7500e-003	2.3700e-003	5.1200e-003	8.1000e-004	2.2700e-003	3.0700e-003		303.8344	303.8344	0.0494		305.0688
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0886	0.0563	0.7056	1.7900e-003	0.1557	1.1100e-003	0.1568	0.0415	1.0200e-003	0.0425		178.0548	178.0548	5.3000e-003		178.1874
Total	0.1453	2.7719	1.0524	4.6600e-003	0.1585	3.4800e-003	0.1620	0.0423	3.2900e-003	0.0456		481.8892	481.8892	0.0547		483.2562

3.3 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0665	0.0422	0.5292	1.3400e-003	0.1232	8.3000e-004	0.1241	0.0327	7.6000e-004	0.0335		133.5411	133.5411	3.9800e-003		133.6405

Total	0.0665	0.0422	0.5292	1.3400e-003	0.1232	8.3000e-004	0.1241	0.0327	7.6000e-004	0.0335		133.5411	133.5411	3.9800e-003		133.6405
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0665	0.0422	0.5292	1.3400e-003	0.1168	8.3000e-004	0.1176	0.0311	7.6000e-004	0.0319		133.5411	133.5411	3.9800e-003		133.6405
Total	0.0665	0.0422	0.5292	1.3400e-003	0.1168	8.3000e-004	0.1176	0.0311	7.6000e-004	0.0319		133.5411	133.5411	3.9800e-003		133.6405

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1902	4.6603	1.1910	9.7700e-003	0.2369	0.0386	0.2755	0.0682	0.0369	0.1051		1,029.2153	1,029.2153	0.0544		1,030.5742
Worker	1.0367	0.6584	8.2554	0.0209	1.9223	0.0129	1.9352	0.5099	0.0119	0.5218		2,083.2414	2,083.2414	0.0620		2,084.7924
Total	1.2269	5.3187	9.4464	0.0307	2.1591	0.0515	2.2107	0.5781	0.0489	0.6269		3,112.4566	3,112.4566	0.1164		3,115.3666

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1902	4.6603	1.1910	9.7700e-003	0.2268	0.0386	0.2654	0.0657	0.0369	0.1026		1,029.2153	1,029.2153	0.0544		1,030.5742
Worker	1.0367	0.6584	8.2554	0.0209	1.8220	0.0129	1.8350	0.4853	0.0119	0.4972		2,083.2414	2,083.2414	0.0620		2,084.7924
Total	1.2269	5.3187	9.4464	0.0307	2.0488	0.0515	2.1003	0.5510	0.0489	0.5998		3,112.4566	3,112.4566	0.1164		3,115.3666

3.5 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	41.9781					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	42.2767	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.2082	0.1322	1.6581	4.2000e-003	0.3861	2.6000e-003	0.3887	0.1024	2.3900e-003	0.1048		418.4288	418.4288	0.0125			418.7404
Total	0.2082	0.1322	1.6581	4.2000e-003	0.3861	2.6000e-003	0.3887	0.1024	2.3900e-003	0.1048		418.4288	418.4288	0.0125			418.7404

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	41.9781					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267			282.1171
Total	42.2767	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267			282.1171

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2082	0.1322	1.6581	4.2000e-003	0.3660	2.6000e-003	0.3686	0.0975	2.3900e-003	0.0999		418.4288	418.4288	0.0125		418.7404
Total	0.2082	0.1322	1.6581	4.2000e-003	0.3660	2.6000e-003	0.3686	0.0975	2.3900e-003	0.0999		418.4288	418.4288	0.0125		418.7404

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Implement NEV Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0514	7.3026	19.6760	0.0617	4.8979	0.0572	4.9552	1.3106	0.0537	1.3643		6,215.1354	6,215.1354	0.2334		6,220.9710
Unmitigated	2.1167	7.7524	21.4529	0.0684	5.4695	0.0631	5.5326	1.4636	0.0592	1.5227		6,885.3536	6,885.3536	0.2520		6,891.6546

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Retirement Community	1,114.75	848.25	848.25	2,398,775	2,148,103
Total	1,114.75	848.25	848.25	2,398,775	2,148,103

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Retirement Community	0.577244	0.040114	0.186710	0.126359	0.018084	0.005120	0.010527	0.023222	0.001588	0.001850	0.005513	0.002759	0.000910

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0947	0.8094	0.3444	5.1700e-003		0.0654	0.0654		0.0654	0.0654		1,033.2362	1,033.2362	0.0198	0.0189	1,039.3762
NaturalGas Unmitigated	0.1279	1.0930	0.4651	6.9800e-003		0.0884	0.0884		0.0884	0.0884		1,395.2520	1,395.2520	0.0267	0.0256	1,403.5433

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	11859.6	0.1279	1.0930	0.4651	6.9800e-003		0.0884	0.0884		0.0884	0.0884		1,395.2520	1,395.2520	0.0267	0.0256	1,403.5433
Total		0.1279	1.0930	0.4651	6.9800e-003		0.0884	0.0884		0.0884	0.0884		1,395.2520	1,395.2520	0.0267	0.0256	1,403.5433

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	8.78251	0.0947	0.8094	0.3444	5.1700e-003		0.0654	0.0654		0.0654	0.0654		1,033.2362	1,033.2362	0.0198	0.0189	1,039.3762
Total		0.0947	0.8094	0.3444	5.1700e-003		0.0654	0.0654		0.0654	0.0654		1,033.2362	1,033.2362	0.0198	0.0189	1,039.3762

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.2633	2.3239	27.7585	0.0143		0.3107	0.3107		0.3107	0.3107	0.0000	2,617.6913	2,617.6913	0.0963	0.0471	2,634.1369
Unmitigated	142.6873	3.2660	203.4927	0.3416		25.2176	25.2176		25.2176	25.2176	2,720.5250	1,252.6913	3,973.2163	3.7700	0.1923	4,124.7693

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2536					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.9550					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	133.6595	2.9548	176.5907	0.3402		25.0696	25.0696		25.0696	25.0696	2,720.5250	1,204.4118	3,924.9368	3.7229	0.1923	4,075.3129
Landscaping	0.8192	0.3112	26.9020	1.4200e-003		0.1479	0.1479		0.1479	0.1479		48.2795	48.2795	0.0471		49.4564
Total	142.6873	3.2660	203.4927	0.3416		25.2176	25.2176		25.2176	25.2176	2,720.5250	1,252.6913	3,973.2163	3.7700	0.1923	4,124.7693

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2536					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.9550					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2355	2.0127	0.8565	0.0129		0.1627	0.1627		0.1627	0.1627	0.0000	2,569.4118	2,569.4118	0.0493	0.0471	2,584.6805
Landscaping	0.8192	0.3112	26.9020	1.4200e-003		0.1479	0.1479		0.1479	0.1479		48.2795	48.2795	0.0471		49.4564
Total	9.2633	2.3239	27.7585	0.0143		0.3107	0.3107		0.3107	0.3107	0.0000	2,617.6913	2,617.6913	0.0963	0.0471	2,634.1369

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Brentwood - Shadow Lakes - Village 1 - Contra Costa County, Winter

Brentwood - Shadow Lakes - Village 1
Contra Costa County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Retirement Community	325.00	Dwelling Unit	16.00	325,000.00	930

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - site is approximately 16 acres
- Construction Phase - Per construction schedule
- Trips and VMT - cut/fill balanced, no import/export
- Grading - balanced cut/fill conservative estimates from engineer
- Vehicle Trips - Per traffic study
- Construction Off-road Equipment Mitigation - Tier 4 equipment applied
- Mobile Land Use Mitigation -
- Area Mitigation -
- Off-road Equipment - equipment

Energy Mitigation - exceed title 24 2013 standards with 2016 standards+RPS

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	109.00
tblConstructionPhase	NumDays	300.00	96.00
tblConstructionPhase	NumDays	30.00	154.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	PhaseEndDate	7/2/2019	12/31/2018
tblConstructionPhase	PhaseEndDate	12/14/2018	12/31/2018
tblConstructionPhase	PhaseEndDate	6/1/2018	8/2/2018
tblConstructionPhase	PhaseEndDate	12/31/2018	8/17/2018
tblConstructionPhase	PhaseStartDate	1/1/2019	8/1/2018
tblConstructionPhase	PhaseStartDate	6/2/2018	8/18/2018
tblConstructionPhase	PhaseStartDate	12/15/2018	8/3/2018
tblGrading	AcresOfGrading	231.00	16.00
tblGrading	MaterialImported	0.00	65,000.00
tblLandUse	LotAcreage	65.00	16.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblTripsAndVMT	HaulingTripNumber	8,125.00	4,063.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblVehicleTrips	ST_TR	2.03	2.61
tblVehicleTrips	SU_TR	1.95	2.61
tblVehicleTrips	WD_TR	2.40	3.43

2.2 Overall Operational Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	142.6873	3.2660	203.4927	0.3416		25.2176	25.2176		25.2176	25.2176	2,720.5250	1,252.6913	3,973.2163	3.7700	0.1923	4,124.7693
Energy	0.1279	1.0930	0.4651	6.9800e-003		0.0884	0.0884		0.0884	0.0884		1,395.2520	1,395.2520	0.0267	0.0256	1,403.5433
Mobile	1.7526	8.1999	21.3889	0.0630	5.4695	0.0636	5.5331	1.4636	0.0597	1.5232		6,349.5886	6,349.5886	0.2556		6,355.9776
Total	144.5678	12.5588	225.3467	0.4116	5.4695	25.3695	30.8390	1.4636	25.3656	26.8291	2,720.5250	8,997.5318	11,718.0569	4.0523	0.2179	11,884.2901

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	9.2633	2.3239	27.7585	0.0143		0.3107	0.3107		0.3107	0.3107	0.0000	2,617.6913	2,617.6913	0.0963	0.0471	2,634.1369
Energy	0.0947	0.8094	0.3444	5.1700e-003		0.0654	0.0654		0.0654	0.0654		1,033.2362	1,033.2362	0.0198	0.0189	1,039.3762
Mobile	1.6890	7.7019	19.8554	0.0569	4.8979	0.0577	4.9557	1.3106	0.0542	1.3648		5,731.2602	5,731.2602	0.2382		5,737.2163
Total	11.0470	10.8351	47.9584	0.0763	4.8979	0.4338	5.3318	1.3106	0.4303	1.7409	0.0000	9,382.1877	9,382.1877	0.3544	0.0661	9,410.7294

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	92.36	13.72	78.72	81.46	10.45	98.29	82.71	10.45	98.30	93.51	100.00	-4.28	19.93	91.26	69.68	20.81

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2018	8/2/2018	5	154	
2	Paving	Paving	8/3/2018	8/17/2018	5	11	
3	Building Construction	Building Construction	8/18/2018	12/31/2018	5	96	
4	Architectural Coating	Architectural Coating	8/1/2018	12/31/2018	5	109	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 16

Acres of Paving: 0

Residential Indoor: 658,125; Residential Outdoor: 219,375; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	20.00	0.00	4,063.00	10.80	7.30	0.10	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	234.00	35.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	47.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1800	0.0000	6.1800	3.3294	0.0000	3.3294			0.0000			0.0000
Off-Road	3.9432	45.3302	26.3027	0.0469		2.0745	2.0745		1.9085	1.9085		4,719.6296	4,719.6296	1.4693		4,756.3617
Total	3.9432	45.3302	26.3027	0.0469	6.1800	2.0745	8.2545	3.3294	1.9085	5.2379		4,719.6296	4,719.6296	1.4693		4,756.3617

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0643	2.6117	0.5016	2.5200e-003	2.8600e-003	3.0900e-003	5.9500e-003	8.3000e-004	2.9600e-003	3.7900e-003		266.5917	266.5917	0.0564		268.0011
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0900	0.0694	0.6553	1.6200e-003	0.1643	1.1100e-003	0.1654	0.0436	1.0200e-003	0.0446		161.3494	161.3494	4.9400e-003		161.4728
Total	0.1543	2.6812	1.1570	4.1400e-003	0.1672	4.2000e-003	0.1714	0.0444	3.9800e-003	0.0484		427.9411	427.9411	0.0613		429.4739

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6420	0.0000	2.6420	1.4233	0.0000	1.4233			0.0000			0.0000
Off-Road	3.9432	45.3302	26.3027	0.0469		2.0745	2.0745		1.9085	1.9085	0.0000	4,719.6296	4,719.6296	1.4693		4,756.3617
Total	3.9432	45.3302	26.3027	0.0469	2.6420	2.0745	4.7164	1.4233	1.9085	3.3318	0.0000	4,719.6296	4,719.6296	1.4693		4,756.3617

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0643	2.6117	0.5016	2.5200e-003	2.7500e-003	3.0900e-003	5.8500e-003	8.1000e-004	2.9600e-003	3.7700e-003		266.5917	266.5917	0.0564		268.0011
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0900	0.0694	0.6553	1.6200e-003	0.1557	1.1100e-003	0.1568	0.0415	1.0200e-003	0.0425		161.3494	161.3494	4.9400e-003		161.4728
Total	0.1543	2.6812	1.1570	4.1400e-003	0.1585	4.2000e-003	0.1627	0.0423	3.9800e-003	0.0463		427.9411	427.9411	0.0613		429.4739

3.3 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0675	0.0521	0.4915	1.2200e-003	0.1232	8.3000e-004	0.1241	0.0327	7.6000e-004	0.0335		121.0120	121.0120	3.7000e-003		121.1046

Total	0.0675	0.0521	0.4915	1.2200e-003	0.1232	8.3000e-004	0.1241	0.0327	7.6000e-004	0.0335		121.0120	121.0120	3.7000e-003		121.1046
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0675	0.0521	0.4915	1.2200e-003	0.1168	8.3000e-004	0.1176	0.0311	7.6000e-004	0.0319		121.0120	121.0120	3.7000e-003		121.1046
Total	0.0675	0.0521	0.4915	1.2200e-003	0.1168	8.3000e-004	0.1176	0.0311	7.6000e-004	0.0319		121.0120	121.0120	3.7000e-003		121.1046

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1991	4.7308	1.3602	9.5300e-003	0.2369	0.0392	0.2761	0.0682	0.0375	0.1057		1,003.7239	1,003.7239	0.0593		1,005.2065
Worker	1.0533	0.8125	7.6674	0.0190	1.9223	0.0129	1.9352	0.5099	0.0119	0.5218		1,887.7875	1,887.7875	0.0578		1,889.2321
Total	1.2524	5.5433	9.0276	0.0285	2.1591	0.0521	2.2112	0.5781	0.0494	0.6275		2,891.5115	2,891.5115	0.1171		2,894.4386

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1991	4.7308	1.3602	9.5300e-003	0.2268	0.0392	0.2659	0.0657	0.0375	0.1032		1,003.7239	1,003.7239	0.0593		1,005.2065
Worker	1.0533	0.8125	7.6674	0.0190	1.8220	0.0129	1.8350	0.4853	0.0119	0.4972		1,887.7875	1,887.7875	0.0578		1,889.2321
Total	1.2524	5.5433	9.0276	0.0285	2.0488	0.0521	2.1009	0.5510	0.0494	0.6004		2,891.5115	2,891.5115	0.1171		2,894.4386

3.5 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	41.9781					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	42.2767	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.2116	0.1632	1.5400	3.8100e-003	0.3861	2.6000e-003	0.3887	0.1024	2.3900e-003	0.1048		379.1710	379.1710	0.0116			379.4612
Total	0.2116	0.1632	1.5400	3.8100e-003	0.3861	2.6000e-003	0.3887	0.1024	2.3900e-003	0.1048		379.1710	379.1710	0.0116			379.4612

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	41.9781					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267			282.1171
Total	42.2767	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267			282.1171

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2116	0.1632	1.5400	3.8100e-003	0.3660	2.6000e-003	0.3686	0.0975	2.3900e-003	0.0999		379.1710	379.1710	0.0116		379.4612
Total	0.2116	0.1632	1.5400	3.8100e-003	0.3660	2.6000e-003	0.3686	0.0975	2.3900e-003	0.0999		379.1710	379.1710	0.0116		379.4612

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Implement NEV Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.6890	7.7019	19.8554	0.0569	4.8979	0.0577	4.9557	1.3106	0.0542	1.3648		5,731.2602	5,731.2602	0.2382		5,737.2163
Unmitigated	1.7526	8.1999	21.3889	0.0630	5.4695	0.0636	5.5331	1.4636	0.0597	1.5232		6,349.5886	6,349.5886	0.2556		6,355.9776

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Retirement Community	1,114.75	848.25	848.25	2,398,775	2,148,103
Total	1,114.75	848.25	848.25	2,398,775	2,148,103

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Retirement Community	0.577244	0.040114	0.186710	0.126359	0.018084	0.005120	0.010527	0.023222	0.001588	0.001850	0.005513	0.002759	0.000910

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0947	0.8094	0.3444	5.1700e-003		0.0654	0.0654		0.0654	0.0654		1,033.2362	1,033.2362	0.0198	0.0189	1,039.3762
NaturalGas Unmitigated	0.1279	1.0930	0.4651	6.9800e-003		0.0884	0.0884		0.0884	0.0884		1,395.2520	1,395.2520	0.0267	0.0256	1,403.5433

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	11859.6	0.1279	1.0930	0.4651	6.9800e-003		0.0884	0.0884		0.0884	0.0884		1,395.2520	1,395.2520	0.0267	0.0256	1,403.5433
Total		0.1279	1.0930	0.4651	6.9800e-003		0.0884	0.0884		0.0884	0.0884		1,395.2520	1,395.2520	0.0267	0.0256	1,403.5433

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	8.78251	0.0947	0.8094	0.3444	5.1700e-003		0.0654	0.0654		0.0654	0.0654		1,033.2362	1,033.2362	0.0198	0.0189	1,039.3762
Total		0.0947	0.8094	0.3444	5.1700e-003		0.0654	0.0654		0.0654	0.0654		1,033.2362	1,033.2362	0.0198	0.0189	1,039.3762

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.2633	2.3239	27.7585	0.0143		0.3107	0.3107		0.3107	0.3107	0.0000	2,617.6913	2,617.6913	0.0963	0.0471	2,634.1369
Unmitigated	142.6873	3.2660	203.4927	0.3416		25.2176	25.2176		25.2176	25.2176	2,720.5250	1,252.6913	3,973.2163	3.7700	0.1923	4,124.7693

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2536					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.9550					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	133.6595	2.9548	176.5907	0.3402		25.0696	25.0696		25.0696	25.0696	2,720.5250	1,204.4118	3,924.9368	3.7229	0.1923	4,075.3129
Landscaping	0.8192	0.3112	26.9020	1.4200e-003		0.1479	0.1479		0.1479	0.1479		48.2795	48.2795	0.0471		49.4564
Total	142.6873	3.2660	203.4927	0.3416		25.2176	25.2176		25.2176	25.2176	2,720.5250	1,252.6913	3,973.2163	3.7700	0.1923	4,124.7693

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2536					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.9550					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2355	2.0127	0.8565	0.0129		0.1627	0.1627		0.1627	0.1627	0.0000	2,569.4118	2,569.4118	0.0493	0.0471	2,584.6805
Landscaping	0.8192	0.3112	26.9020	1.4200e-003		0.1479	0.1479		0.1479	0.1479		48.2795	48.2795	0.0471		49.4564
Total	9.2633	2.3239	27.7585	0.0143		0.3107	0.3107		0.3107	0.3107	0.0000	2,617.6913	2,617.6913	0.0963	0.0471	2,634.1369

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Brentwood - Deer Ridge - Village 2 - Contra Costa County, Annual

Brentwood - Deer Ridge - Village 2
Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Retirement Community	275.00	Dwelling Unit	19.00	275,000.00	787

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - .
- Land Use - site is approximately 19 acres
- Construction Phase - Per construction schedule
- Off-road Equipment - equipment
- Trips and VMT - cut/fill balanced, no import/export
- Grading - balanced cut/fill conservative estimates from engineer
- Vehicle Trips - Per traffic study
- Construction Off-road Equipment Mitigation - Tier 4 equipment applied
- Mobile Land Use Mitigation -
- Area Mitigation -

Energy Mitigation - exceed title 24 2013 standards with 2016 standards+RPS

Water Mitigation -

Waste Mitigation -

Energy Use -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	87.00
tblConstructionPhase	NumDays	300.00	92.00
tblConstructionPhase	NumDays	30.00	164.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	PhaseEndDate	5/31/2019	12/31/2019
tblConstructionPhase	PhaseEndDate	12/14/2018	12/31/2019
tblConstructionPhase	PhaseEndDate	8/2/2018	8/16/2019
tblConstructionPhase	PhaseEndDate	12/31/2018	8/23/2019
tblConstructionPhase	PhaseStartDate	1/1/2019	9/1/2019
tblConstructionPhase	PhaseStartDate	8/3/2018	8/24/2019
tblConstructionPhase	PhaseStartDate	1/1/2018	1/1/2019
tblConstructionPhase	PhaseStartDate	12/15/2018	8/17/2019
tblGrading	AcresOfGrading	246.00	19.00
tblGrading	MaterialImported	0.00	160,000.00
tblLandUse	LotAcreage	55.00	19.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblVehicleTrips	ST_TR	2.03	2.45
tblVehicleTrips	SU_TR	1.95	2.45

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
5	1-1-2019	3-31-2019	1.8473	1.8473
6	4-1-2019	6-30-2019	1.8814	1.8814
7	7-1-2019	9-30-2019	1.9025	1.9025
		Highest	1.9025	1.9025

2.2 Overall Operational Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.9649	0.0384	2.9258	1.8500e-003		0.1362	0.1362		0.1362	0.1362	12.5372	8.4850	21.0222	0.0234	8.2000e-004	21.8528
Energy	0.0198	0.1688	0.0718	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	583.5188	583.5188	0.0213	7.2100e-003	586.2008
Mobile	0.2578	1.1453	2.9395	8.6500e-003	0.6966	9.6700e-003	0.7062	0.1870	9.0900e-003	0.1961	0.0000	790.0492	790.0492	0.0323	0.0000	790.8555
Waste						0.0000	0.0000		0.0000	0.0000	25.6784	0.0000	25.6784	1.5176	0.0000	63.6170
Water						0.0000	0.0000		0.0000	0.0000	5.6844	39.7053	45.3897	0.5856	0.0142	64.2493
Total	2.2425	1.3524	5.9371	0.0116	0.6966	0.1595	0.8561	0.1870	0.1589	0.3459	43.8999	1,421.7583	1,465.6582	2.1801	0.0222	1,526.7754

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3315	0.0333	2.0561	1.7000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	14.3213	14.3213	3.4800e-003	2.0000e-004	14.4684

Energy	0.0146	0.1250	0.0532	8.0000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	452.2769	452.2769	0.0167	5.5300e-003	454.3420
Mobile	0.2486	1.0747	2.7194	7.8100e-003	0.6238	8.7700e-003	0.6326	0.1674	8.2500e-003	0.1757	0.0000	713.1563	713.1563	0.0300	0.0000	713.9064
Waste						0.0000	0.0000		0.0000	0.0000	12.8392	0.0000	12.8392	0.7588	0.0000	31.8085
Water						0.0000	0.0000		0.0000	0.0000	4.5475	33.3629	37.9104	0.4686	0.0113	53.0044
Total	1.5948	1.2330	4.8286	8.7800e-003	0.6238	0.0309	0.6547	0.1674	0.0304	0.1978	17.3867	1,213.1173	1,230.5040	1.2775	0.0171	1,267.5297

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	28.88	8.83	18.67	24.18	10.45	80.63	23.52	10.45	80.89	42.81	60.39	14.67	16.04	41.40	23.07	16.98

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2019	8/16/2019	5	164	
2	Paving	Paving	8/17/2019	8/23/2019	5	5	
3	Building Construction	Building Construction	8/24/2019	12/31/2019	5	92	
4	Architectural Coating	Architectural Coating	9/1/2019	12/31/2019	5	87	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 19

Acres of Paving: 0

Residential Indoor: 556,875; Residential Outdoor: 185,625; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40

Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	20.00	0.00	20,000.00	10.80	7.30	0.10	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	198.00	29.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	40.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2019

Unmitigated Construction On-Site

Off-Road	0.3012	3.4117	2.0759	3.8400e-003		0.1539	0.1539		0.1416	0.1416	0.0000	345.1805	345.1805	0.1092	0.0000	347.9108
Total	0.3012	3.4117	2.0759	3.8400e-003	0.2193	0.1539	0.3732	0.1171	0.1416	0.2587	0.0000	345.1805	345.1805	0.1092	0.0000	347.9108

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0213	0.9877	0.1480	1.0300e-003	1.0600e-003	9.0000e-004	1.9600e-003	3.1000e-004	8.7000e-004	1.1700e-003	0.0000	99.3337	99.3337	0.0173	0.0000	99.7659
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0400e-003	4.5100e-003	0.0461	1.3000e-004	0.0130	9.0000e-005	0.0131	3.4600e-003	8.0000e-005	3.5400e-003	0.0000	11.7858	11.7858	3.2000e-004	0.0000	11.7938
Total	0.0273	0.9922	0.1941	1.1600e-003	0.0141	9.9000e-004	0.0151	3.7700e-003	9.5000e-004	4.7100e-003	0.0000	111.1195	111.1195	0.0176	0.0000	111.5598

3.3 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.6400e-003	0.0381	0.0367	6.0000e-005		2.0600e-003	2.0600e-003		1.9000e-003	1.9000e-003	0.0000	5.1188	5.1188	1.6200e-003	0.0000	5.1593
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.6400e-003	0.0381	0.0367	6.0000e-005		2.0600e-003	2.0600e-003		1.9000e-003	1.9000e-003	0.0000	5.1188	5.1188	1.6200e-003	0.0000	5.1593

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.0000e-004	1.0500e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2695	0.2695	1.0000e-005	0.0000	0.2697
Total	1.4000e-004	1.0000e-004	1.0500e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2695	0.2695	1.0000e-005	0.0000	0.2697

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.6400e-003	0.0381	0.0367	6.0000e-005		2.0600e-003	2.0600e-003		1.9000e-003	1.9000e-003	0.0000	5.1188	5.1188	1.6200e-003	0.0000	5.1593
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.6400e-003	0.0381	0.0367	6.0000e-005		2.0600e-003	2.0600e-003		1.9000e-003	1.9000e-003	0.0000	5.1188	5.1188	1.6200e-003	0.0000	5.1593

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.0000e-004	1.0500e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2695	0.2695	1.0000e-005	0.0000	0.2697
Total	1.4000e-004	1.0000e-004	1.0500e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2695	0.2695	1.0000e-005	0.0000	0.2697

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1086	0.9696	0.7895	1.2400e-003		0.0593	0.0593		0.0558	0.0558	0.0000	108.1479	108.1479	0.0264	0.0000	108.8066
Total	0.1086	0.9696	0.7895	1.2400e-003		0.0593	0.0593		0.0558	0.0558	0.0000	108.1479	108.1479	0.0264	0.0000	108.8066

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6200e-003	0.1697	0.0442	3.7000e-004	8.7700e-003	1.2500e-003	0.0100	2.5400e-003	1.2000e-003	3.7300e-003	0.0000	34.9989	34.9989	1.8600e-003	0.0000	35.0455

Worker	0.0335	0.0251	0.2560	7.2000e-004	0.0722	4.9000e-004	0.0727	0.0192	4.5000e-004	0.0197	0.0000	65.4542	65.4542	1.7900e-003	0.0000	65.4989
Total	0.0401	0.1947	0.3002	1.0900e-003	0.0810	1.7400e-003	0.0828	0.0218	1.6500e-003	0.0234	0.0000	100.4531	100.4531	3.6500e-003	0.0000	100.5444

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1086	0.9696	0.7895	1.2400e-003		0.0593	0.0593		0.0558	0.0558	0.0000	108.1478	108.1478	0.0264	0.0000	108.8065
Total	0.1086	0.9696	0.7895	1.2400e-003		0.0593	0.0593		0.0558	0.0558	0.0000	108.1478	108.1478	0.0264	0.0000	108.8065

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6200e-003	0.1697	0.0442	3.7000e-004	8.7700e-003	1.2500e-003	0.0100	2.5400e-003	1.2000e-003	3.7300e-003	0.0000	34.9989	34.9989	1.8600e-003	0.0000	35.0455
Worker	0.0335	0.0251	0.2560	7.2000e-004	0.0722	4.9000e-004	0.0727	0.0192	4.5000e-004	0.0197	0.0000	65.4542	65.4542	1.7900e-003	0.0000	65.4989
Total	0.0401	0.1947	0.3002	1.0900e-003	0.0810	1.7400e-003	0.0828	0.0218	1.6500e-003	0.0234	0.0000	100.4531	100.4531	3.6500e-003	0.0000	100.5444

3.5 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.9358					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0116	0.0798	0.0801	1.3000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	11.1067	11.1067	9.4000e-004	0.0000	11.1301
Total	1.9474	0.0798	0.0801	1.3000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	11.1067	11.1067	9.4000e-004	0.0000	11.1301

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-003	4.7900e-003	0.0489	1.4000e-004	0.0138	9.0000e-005	0.0139	3.6700e-003	9.0000e-005	3.7600e-003	0.0000	12.5044	12.5044	3.4000e-004	0.0000	12.5130
Total	6.4000e-003	4.7900e-003	0.0489	1.4000e-004	0.0138	9.0000e-005	0.0139	3.6700e-003	9.0000e-005	3.7600e-003	0.0000	12.5044	12.5044	3.4000e-004	0.0000	12.5130

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr									MT/yr					
Archit. Coating	1.9358				0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0116	0.0798	0.0801	1.3000e-004	5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	11.1066	11.1066	9.4000e-004	0.0000	11.1301
Total	1.9474	0.0798	0.0801	1.3000e-004	5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	11.1066	11.1066	9.4000e-004	0.0000	11.1301

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-003	4.7900e-003	0.0489	1.4000e-004	0.0138	9.0000e-005	0.0139	3.6700e-003	9.0000e-005	3.7600e-003	0.0000	12.5044	12.5044	3.4000e-004	0.0000	12.5130
Total	6.4000e-003	4.7900e-003	0.0489	1.4000e-004	0.0138	9.0000e-005	0.0139	3.6700e-003	9.0000e-005	3.7600e-003	0.0000	12.5044	12.5044	3.4000e-004	0.0000	12.5130

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Implement NEV Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2486	1.0747	2.7194	7.8100e-003	0.6238	8.7700e-003	0.6326	0.1674	8.2500e-003	0.1757	0.0000	713.1563	713.1563	0.0300	0.0000	713.9064
Unmitigated	0.2578	1.1453	2.9395	8.6500e-003	0.6966	9.6700e-003	0.7062	0.1870	9.0900e-003	0.1961	0.0000	790.0492	790.0492	0.0323	0.0000	790.8555

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Retirement Community	860.75	673.75	673.75	1,864,595	1,669,745
Total	860.75	673.75	673.75	1,864,595	1,669,745

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Retirement Community	0.571348	0.041302	0.187452	0.129481	0.019048	0.005152	0.010609	0.022861	0.001566	0.001884	0.005572	0.002772	0.000953

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	307.5305	307.5305	0.0139	2.8800e-003	308.7355
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	388.0576	388.0576	0.0176	3.6300e-003	389.5781
NaturalGas Mitigated	0.0146	0.1250	0.0532	8.0000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	144.7463	144.7463	2.7700e-003	2.6500e-003	145.6065
NaturalGas Unmitigated	0.0198	0.1688	0.0718	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	195.4612	195.4612	3.7500e-003	3.5800e-003	196.6227

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Retirement Community	3.6628e+006	0.0198	0.1688	0.0718	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	195.4612	195.4612	3.7500e-003	3.5800e-003	196.6227
Total		0.0198	0.1688	0.0718	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	195.4612	195.4612	3.7500e-003	3.5800e-003	196.6227

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Land Use	kBTU/yr	tons/yr										MT/yr					
Retirement Community	2.71244e+006	0.0146	0.1250	0.0532	8.0000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	144.7463	144.7463	2.7700e-003	2.6500e-003	145.6065
Total		0.0146	0.1250	0.0532	8.0000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	144.7463	144.7463	2.7700e-003	2.6500e-003	145.6065

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Retirement Community	1.33394e+006	388.0576	0.0176	3.6300e-003	389.5781
Total		388.0576	0.0176	3.6300e-003	389.5781

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Retirement Community	1.05713e+006	307.5305	0.0139	2.8800e-003	308.7355
Total		307.5305	0.0139	2.8800e-003	308.7355

Hearth	0.6345	0.0146	0.8737	1.7400e-003		0.1249	0.1249		0.1249	0.1249	12.5372	5.1496	17.6868	0.0202	8.2000e-004	18.4355
Landscaping	0.0628	0.0238	2.0520	1.1000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	3.3354	3.3354	3.2700e-003	0.0000	3.4173
Total	1.9649	0.0384	2.9258	1.8500e-003		0.1362	0.1362		0.1362	0.1362	12.5372	8.4850	21.0222	0.0234	8.2000e-004	21.8528

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1936					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0740					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1100e-003	9.4900e-003	4.0400e-003	6.0000e-005		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	10.9859	10.9859	2.1000e-004	2.0000e-004	11.0511
Landscaping	0.0628	0.0238	2.0520	1.1000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	3.3354	3.3354	3.2700e-003	0.0000	3.4173
Total	1.3315	0.0333	2.0561	1.7000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	14.3213	14.3213	3.4800e-003	2.0000e-004	14.4684

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	37.9104	0.4686	0.0113	53.0044
Unmitigated	45.3897	0.5856	0.0142	64.2493

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Retirement	17.9174	45.3897	0.5856	0.0142	64.2493
Community	11.2957				
Total		45.3897	0.5856	0.0142	64.2493

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
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Land Use	Mgal	MT/yr			
Retirement	14.3339	37.9104	0.4686	0.0113	53.0044
Community	10.6067				
Total		37.9104	0.4686	0.0113	53.0044

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.8392	0.7588	0.0000	31.8085
Unmitigated	25.6784	1.5176	0.0000	63.6170

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Retirement Community	126.5	25.6784	1.5176	0.0000	63.6170
Total		25.6784	1.5176	0.0000	63.6170

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Retirement Community	63.25	12.8392	0.7588	0.0000	31.8085
Total		12.8392	0.7588	0.0000	31.8085

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Brentwood - Deer Ridge - Village 2 - Contra Costa County, Summer

Brentwood - Deer Ridge - Village 2
Contra Costa County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Retirement Community	275.00	Dwelling Unit	19.00	275,000.00	787

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - .
- Land Use - site is approximately 19 acres
- Construction Phase - Per construction schedule
- Off-road Equipment - equipment
- Trips and VMT - cut/fill balanced, no import/export
- Grading - balanced cut/fill conservative estimates from engineer
- Vehicle Trips - Per traffic study
- Construction Off-road Equipment Mitigation - Tier 4 equipment applied
- Mobile Land Use Mitigation -
- Area Mitigation -

Energy Mitigation - exceed title 24 2013 standards with 2016 standards+RPS

Water Mitigation -

Waste Mitigation -

Energy Use -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	87.00
tblConstructionPhase	NumDays	300.00	92.00
tblConstructionPhase	NumDays	30.00	164.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	PhaseEndDate	5/31/2019	12/31/2019
tblConstructionPhase	PhaseEndDate	12/14/2018	12/31/2019
tblConstructionPhase	PhaseEndDate	8/2/2018	8/16/2019
tblConstructionPhase	PhaseEndDate	12/31/2018	8/23/2019
tblConstructionPhase	PhaseStartDate	1/1/2019	9/1/2019
tblConstructionPhase	PhaseStartDate	8/3/2018	8/24/2019
tblConstructionPhase	PhaseStartDate	1/1/2018	1/1/2019
tblConstructionPhase	PhaseStartDate	12/15/2018	8/17/2019
tblGrading	AcresOfGrading	246.00	19.00
tblGrading	MaterialImported	0.00	160,000.00
tblLandUse	LotAcreage	55.00	19.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblVehicleTrips	ST_TR	2.03	2.45
tblVehicleTrips	SU_TR	1.95	2.45

2.2 Overall Operational Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	120.7402	2.7643	172.2231	0.2891		21.3377	21.3377		21.3377	21.3377	2,301.9827	1,059.9695	3,361.9523	3.1902	0.1627	3,490.1960
Energy	0.1082	0.9248	0.3935	5.9000e-003		0.0748	0.0748		0.0748	0.0748		1,180.5978	1,180.5978	0.0226	0.0216	1,187.6135
Mobile	1.7852	6.4786	18.1541	0.0543	4.2240	0.0565	4.2805	1.1304	0.0531	1.1835		5,469.2562	5,469.2562	0.2114		5,474.5405
Total	122.6337	10.1678	190.7708	0.3493	4.2240	21.4689	25.6930	1.1304	21.4656	22.5960	2,301.9827	7,709.8236	10,011.8063	3.4242	0.1844	10,152.3501

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.8430	1.9672	23.5249	0.0121		0.2626	0.2626		0.2626	0.2626	0.0000	2,214.9695	2,214.9695	0.0818	0.0399	2,228.8917
Energy	0.0801	0.6849	0.2914	4.3700e-003		0.0554	0.0554		0.0554	0.0554		874.2768	874.2768	0.0168	0.0160	879.4722
Mobile	1.7296	6.0889	16.6565	0.0490	3.7826	0.0512	3.8338	1.0123	0.0482	1.0605		4,935.6530	4,935.6530	0.1958		4,940.5480
Total	9.6527	8.7409	40.4729	0.0655	3.7826	0.3692	4.1518	1.0123	0.3661	1.3784	0.0000	8,024.8993	8,024.8993	0.2943	0.0559	8,048.9119

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	92.13	14.03	78.78	81.26	10.45	98.28	83.84	10.45	98.29	93.90	100.00	-4.09	19.85	91.40	69.68	20.72

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2019	8/16/2019	5	164	
2	Paving	Paving	8/17/2019	8/23/2019	5	5	
3	Building Construction	Building Construction	8/24/2019	12/31/2019	5	92	
4	Architectural Coating	Architectural Coating	9/1/2019	12/31/2019	5	87	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 19

Acres of Paving: 0

Residential Indoor: 556,875; Residential Outdoor: 185,625; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Architectural Coating	Air Compressors	1	6.00	78	0.48
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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	20.00	0.00	20,000.00	10.80	7.30	0.10	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	198.00	29.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	40.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2553	0.0000	6.2553	3.3402	0.0000	3.3402			0.0000			0.0000
Off-Road	3.6737	41.6063	25.3153	0.0469		1.8767	1.8767		1.7265	1.7265			4,640.2050	1.4681		4,676.9078
Total	3.6737	41.6063	25.3153	0.0469	6.2553	1.8767	8.1319	3.3402	1.7265	5.0667			4,640.2050	1.4681		4,676.9078

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2454	12.2333	1.5090	0.0133	0.0132	9.7600e-003	0.0230	3.8500e-003	9.3400e-003	0.0132		1,408.1273	1,408.1273	0.2189		1,413.5992
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0798	0.0492	0.6265	1.7300e-003	0.1643	1.0800e-003	0.1654	0.0436	1.0000e-003	0.0446		172.7015	172.7015	4.6800e-003		172.8185
Total	0.3252	12.2825	2.1355	0.0150	0.1775	0.0108	0.1884	0.0474	0.0103	0.0578		1,580.8288	1,580.8288	0.2236		1,586.4177

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6741	0.0000	2.6741	1.4279	0.0000	1.4279			0.0000			0.0000
Off-Road	3.6737	41.6063	25.3153	0.0469		1.8767	1.8767		1.7265	1.7265	0.0000	4,640.2050	4,640.2050	1.4681		4,676.9078
Total	3.6737	41.6063	25.3153	0.0469	2.6741	1.8767	4.5508	1.4279	1.7265	3.1545	0.0000	4,640.2050	4,640.2050	1.4681		4,676.9078

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.2454	12.2333	1.5090	0.0133	0.0132	9.7600e-003	0.0230	3.8500e-003	9.3400e-003	0.0132		1,408.1273	1,408.1273	0.2189		1,413.5992
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0798	0.0492	0.6265	1.7300e-003	0.1643	1.0800e-003	0.1654	0.0436	1.0000e-003	0.0446		172.7015	172.7015	4.6800e-003		172.8185
Total	0.3252	12.2825	2.1355	0.0150	0.1775	0.0108	0.1884	0.0474	0.0103	0.0578		1,580.8288	1,580.8288	0.2236		1,586.4177

3.3 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0599	0.0369	0.4699	1.3000e-003	0.1232	8.1000e-004	0.1240	0.0327	7.5000e-004	0.0334		129.5261	129.5261	3.5100e-003		129.6139

Total	0.0599	0.0369	0.4699	1.3000e-003	0.1232	8.1000e-004	0.1240	0.0327	7.5000e-004	0.0334		129.5261	129.5261	3.5100e-003		129.6139
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0599	0.0369	0.4699	1.3000e-003	0.1232	8.1000e-004	0.1240	0.0327	7.5000e-004	0.0334		129.5261	129.5261	3.5100e-003		129.6139
Total	0.0599	0.0369	0.4699	1.3000e-003	0.1232	8.1000e-004	0.1240	0.0327	7.5000e-004	0.0334		129.5261	129.5261	3.5100e-003		129.6139

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1414	3.6379	0.9025	8.0400e-003	0.1963	0.0270	0.2233	0.0565	0.0258	0.0823		847.6221	847.6221	0.0430		848.6963
Worker	0.7901	0.4874	6.2022	0.0172	1.6265	0.0107	1.6373	0.4314	9.8800e-003	0.4413		1,709.7450	1,709.7450	0.0463		1,710.9035
Total	0.9315	4.1253	7.1047	0.0252	1.8228	0.0377	1.8605	0.4879	0.0357	0.5236		2,557.3672	2,557.3672	0.0893		2,559.5997

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1414	3.6379	0.9025	8.0400e-003	0.1963	0.0270	0.2233	0.0565	0.0258	0.0823		847.6221	847.6221	0.0430		848.6963
Worker	0.7901	0.4874	6.2022	0.0172	1.6265	0.0107	1.6373	0.4314	9.8800e-003	0.4413		1,709.7450	1,709.7450	0.0463		1,710.9035
Total	0.9315	4.1253	7.1047	0.0252	1.8228	0.0377	1.8605	0.4879	0.0357	0.5236		2,557.3672	2,557.3672	0.0893		2,559.5997

3.5 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	44.5020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	44.7684	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1596	0.0985	1.2530	3.4700e-003	0.3286	2.1700e-003	0.3308	0.0872	2.0000e-003	0.0892		345.4030	345.4030	9.3600e-003		345.6371
Total	0.1596	0.0985	1.2530	3.4700e-003	0.3286	2.1700e-003	0.3308	0.0872	2.0000e-003	0.0892		345.4030	345.4030	9.3600e-003		345.6371

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	44.5020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	44.7684	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1596	0.0985	1.2530	3.4700e-003	0.3286	2.1700e-003	0.3308	0.0872	2.0000e-003	0.0892		345.4030	345.4030	9.3600e-003		345.6371
Total	0.1596	0.0985	1.2530	3.4700e-003	0.3286	2.1700e-003	0.3308	0.0872	2.0000e-003	0.0892		345.4030	345.4030	9.3600e-003		345.6371

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Implement NEV Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7296	6.0889	16.6565	0.0490	3.7826	0.0512	3.8338	1.0123	0.0482	1.0605		4,935.6530	4,935.6530	0.1958		4,940.5480
Unmitigated	1.7852	6.4786	18.1541	0.0543	4.2240	0.0565	4.2805	1.1304	0.0531	1.1835		5,469.2562	5,469.2562	0.2114		5,474.5405

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Retirement Community	860.75	673.75	673.75	1,864,595	1,669,745
Total	860.75	673.75	673.75	1,864,595	1,669,745

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Retirement Community	0.571348	0.041302	0.187452	0.129481	0.019048	0.005152	0.010609	0.022861	0.001566	0.001884	0.005572	0.002772	0.000953

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0801	0.6849	0.2914	4.3700e-003		0.0554	0.0554		0.0554	0.0554		874.2768	874.2768	0.0168	0.0160	879.4722
NaturalGas Unmitigated	0.1082	0.9248	0.3935	5.9000e-003		0.0748	0.0748		0.0748	0.0748		1,180.5978	1,180.5978	0.0226	0.0216	1,187.6135

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	10035.1	0.1082	0.9248	0.3935	5.9000e-003		0.0748	0.0748		0.0748	0.0748		1,180.5978	1,180.5978	0.0226	0.0216	1,187.6135
Total		0.1082	0.9248	0.3935	5.9000e-003		0.0748	0.0748		0.0748	0.0748		1,180.5978	1,180.5978	0.0226	0.0216	1,187.6135

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	7.43135	0.0801	0.6849	0.2914	4.3700e-003		0.0554	0.0554		0.0554	0.0554		874.2768	874.2768	0.0168	0.0160	879.4722
Total		0.0801	0.6849	0.2914	4.3700e-003		0.0554	0.0554		0.0554	0.0554		874.2768	874.2768	0.0168	0.0160	879.4722

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.8430	1.9672	23.5249	0.0121		0.2626	0.2626		0.2626	0.2626	0.0000	2,214.9695	2,214.9695	0.0818	0.0399	2,228.8917
Unmitigated	120.7402	2.7643	172.2231	0.2891		21.3377	21.3377		21.3377	21.3377	2,301.9827	1,059.9695	3,361.9523	3.1902	0.1627	3,490.1960

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0607					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	113.0965	2.5003	149.4229	0.2879		21.2128	21.2128		21.2128	21.2128	2,301.9827	1,019.1177	3,321.1004	3.1501	0.1627	3,448.3417
Landscaping	0.6979	0.2641	22.8002	1.2000e-003		0.1249	0.1249		0.1249	0.1249		40.8519	40.8519	0.0401		41.8544
Total	120.7402	2.7643	172.2231	0.2891		21.3377	21.3377		21.3377	21.3377	2,301.9827	1,059.9695	3,361.9523	3.1902	0.1627	3,490.1960

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0607					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1993	1.7031	0.7247	0.0109		0.1377	0.1377		0.1377	0.1377	0.0000	2,174.1177	2,174.1177	0.0417	0.0399	2,187.0373
Landscaping	0.6979	0.2641	22.8002	1.2000e-003		0.1249	0.1249		0.1249	0.1249		40.8519	40.8519	0.0401		41.8544
Total	7.8430	1.9672	23.5249	0.0121		0.2626	0.2626		0.2626	0.2626	0.0000	2,214.9695	2,214.9695	0.0818	0.0399	2,228.8917

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Brentwood - Deer Ridge - Village 2 - Contra Costa County, Winter

Brentwood - Deer Ridge - Village 2
Contra Costa County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Retirement Community	275.00	Dwelling Unit	19.00	275,000.00	787

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - .
- Land Use - site is approximately 19 acres
- Construction Phase - Per construction schedule
- Off-road Equipment - equipment
- Trips and VMT - cut/fill balanced, no import/export
- Grading - balanced cut/fill conservative estimates from engineer
- Vehicle Trips - Per traffic study
- Construction Off-road Equipment Mitigation - Tier 4 equipment applied
- Mobile Land Use Mitigation -
- Area Mitigation -

Energy Mitigation - exceed title 24 2013 standards with 2016 standards+RPS

Water Mitigation -

Waste Mitigation -

Energy Use -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	87.00
tblConstructionPhase	NumDays	300.00	92.00
tblConstructionPhase	NumDays	30.00	164.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	PhaseEndDate	5/31/2019	12/31/2019
tblConstructionPhase	PhaseEndDate	12/14/2018	12/31/2019
tblConstructionPhase	PhaseEndDate	8/2/2018	8/16/2019
tblConstructionPhase	PhaseEndDate	12/31/2018	8/23/2019
tblConstructionPhase	PhaseStartDate	1/1/2019	9/1/2019
tblConstructionPhase	PhaseStartDate	8/3/2018	8/24/2019
tblConstructionPhase	PhaseStartDate	1/1/2018	1/1/2019
tblConstructionPhase	PhaseStartDate	12/15/2018	8/17/2019
tblGrading	AcresOfGrading	246.00	19.00
tblGrading	MaterialImported	0.00	160,000.00
tblLandUse	LotAcreage	55.00	19.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripLength	20.00	0.10
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblVehicleTrips	ST_TR	2.03	2.45
tblVehicleTrips	SU_TR	1.95	2.45

2.2 Overall Operational Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	120.7402	2.7643	172.2231	0.2891		21.3377	21.3377		21.3377	21.3377	2,301.9827	1,059.9695	3,361.9523	3.1902	0.1627	3,490.1960
Energy	0.1082	0.9248	0.3935	5.9000e-003		0.0748	0.0748		0.0748	0.0748		1,180.5978	1,180.5978	0.0226	0.0216	1,187.6135
Mobile	1.4882	6.8734	18.1552	0.0501	4.2240	0.0570	4.2811	1.1304	0.0537	1.1841		5,042.8841	5,042.8841	0.2144		5,048.2439
Total	122.3366	10.5625	190.7718	0.3451	4.2240	21.4695	25.6935	1.1304	21.4661	22.5965	2,301.9827	7,283.4515	9,585.4342	3.4273	0.1844	9,726.0534

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.8430	1.9672	23.5249	0.0121		0.2626	0.2626		0.2626	0.2626	0.0000	2,214.9695	2,214.9695	0.0818	0.0399	2,228.8917
Energy	0.0801	0.6849	0.2914	4.3700e-003		0.0554	0.0554		0.0554	0.0554		874.2768	874.2768	0.0168	0.0160	879.4722
Mobile	1.4340	6.4419	16.8617	0.0452	3.7826	0.0518	3.8344	1.0123	0.0487	1.0610		4,550.7561	4,550.7561	0.1999		4,555.7546
Total	9.3571	9.0939	40.6781	0.0617	3.7826	0.3697	4.1524	1.0123	0.3667	1.3790	0.0000	7,640.0024	7,640.0024	0.2985	0.0559	7,664.1184

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	92.35	13.90	78.68	82.13	10.45	98.28	83.84	10.45	98.29	93.90	100.00	-4.90	20.30	91.29	69.68	21.20

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2019	8/16/2019	5	164	
2	Paving	Paving	8/17/2019	8/23/2019	5	5	
3	Building Construction	Building Construction	8/24/2019	12/31/2019	5	92	
4	Architectural Coating	Architectural Coating	9/1/2019	12/31/2019	5	87	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 19

Acres of Paving: 0

Residential Indoor: 556,875; Residential Outdoor: 185,625; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Architectural Coating	Air Compressors	1	6.00	78	0.48
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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	20.00	0.00	20,000.00	10.80	7.30	0.10	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	198.00	29.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	40.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2553	0.0000	6.2553	3.3402	0.0000	3.3402			0.0000			0.0000
Off-Road	3.6737	41.6063	25.3153	0.0469		1.8767	1.8767		1.7265	1.7265		4,640.2050	4,640.2050	1.4681		4,676.9078
Total	3.6737	41.6063	25.3153	0.0469	6.2553	1.8767	8.1319	3.3402	1.7265	5.0667		4,640.2050	4,640.2050	1.4681		4,676.9078

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2786	11.7720	2.1897	0.0117	0.0132	0.0128	0.0260	3.8500e-003	0.0122	0.0161		1,234.7886	1,234.7886	0.2499		1,241.0355
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0809	0.0608	0.5776	1.5700e-003	0.1643	1.0800e-003	0.1654	0.0436	1.0000e-003	0.0446		156.4794	156.4794	4.3400e-003		156.5877
Total	0.3595	11.8328	2.7673	0.0132	0.1775	0.0139	0.1914	0.0474	0.0132	0.0607		1,391.2679	1,391.2679	0.2542		1,397.6232

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6741	0.0000	2.6741	1.4279	0.0000	1.4279			0.0000			0.0000
Off-Road	3.6737	41.6063	25.3153	0.0469		1.8767	1.8767		1.7265	1.7265	0.0000	4,640.2050	4,640.2050	1.4681		4,676.9078
Total	3.6737	41.6063	25.3153	0.0469	2.6741	1.8767	4.5508	1.4279	1.7265	3.1545	0.0000	4,640.2050	4,640.2050	1.4681		4,676.9078

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.2786	11.7720	2.1897	0.0117	0.0132	0.0128	0.0260	3.8500e-003	0.0122	0.0161		1,234.7886	1,234.7886	0.2499		1,241.0355
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0809	0.0608	0.5776	1.5700e-003	0.1643	1.0800e-003	0.1654	0.0436	1.0000e-003	0.0446		156.4794	156.4794	4.3400e-003		156.5877
Total	0.3595	11.8328	2.7673	0.0132	0.1775	0.0139	0.1914	0.0474	0.0132	0.0607		1,391.2679	1,391.2679	0.2542		1,397.6232

3.3 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0607	0.0456	0.4332	1.1800e-003	0.1232	8.1000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.3595	117.3595	3.2500e-003		117.4408

Total	0.0607	0.0456	0.4332	1.1800e-003	0.1232	8.1000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.3595	117.3595	3.2500e-003		117.4408
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0607	0.0456	0.4332	1.1800e-003	0.1232	8.1000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.3595	117.3595	3.2500e-003		117.4408
Total	0.0607	0.0456	0.4332	1.1800e-003	0.1232	8.1000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.3595	117.3595	3.2500e-003		117.4408

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1481	3.6880	1.0333	7.8500e-003	0.1963	0.0274	0.2237	0.0565	0.0262	0.0827		826.3628	826.3628	0.0469		827.5348
Worker	0.8011	0.6015	5.7187	0.0156	1.6265	0.0107	1.6373	0.4314	9.8800e-003	0.4413		1,549.1455	1,549.1455	0.0429		1,550.2185
Total	0.9492	4.2895	6.7520	0.0234	1.8228	0.0381	1.8609	0.4879	0.0361	0.5240		2,375.5083	2,375.5083	0.0898		2,377.7533

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1481	3.6880	1.0333	7.8500e-003	0.1963	0.0274	0.2237	0.0565	0.0262	0.0827		826.3628	826.3628	0.0469		827.5348
Worker	0.8011	0.6015	5.7187	0.0156	1.6265	0.0107	1.6373	0.4314	9.8800e-003	0.4413		1,549.1455	1,549.1455	0.0429		1,550.2185
Total	0.9492	4.2895	6.7520	0.0234	1.8228	0.0381	1.8609	0.4879	0.0361	0.5240		2,375.5083	2,375.5083	0.0898		2,377.7533

3.5 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	44.5020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	44.7684	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1618	0.1215	1.1553	3.1400e-003	0.3286	2.1700e-003	0.3308	0.0872	2.0000e-003	0.0892		312.9587	312.9587	8.6700e-003		313.1755
Total	0.1618	0.1215	1.1553	3.1400e-003	0.3286	2.1700e-003	0.3308	0.0872	2.0000e-003	0.0892		312.9587	312.9587	8.6700e-003		313.1755

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	44.5020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	44.7684	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1618	0.1215	1.1553	3.1400e-003	0.3286	2.1700e-003	0.3308	0.0872	2.0000e-003	0.0892		312.9587	312.9587	8.6700e-003		313.1755
Total	0.1618	0.1215	1.1553	3.1400e-003	0.3286	2.1700e-003	0.3308	0.0872	2.0000e-003	0.0892		312.9587	312.9587	8.6700e-003		313.1755

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Implement NEV Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4340	6.4419	16.8617	0.0452	3.7826	0.0518	3.8344	1.0123	0.0487	1.0610		4,550.7561	4,550.7561	0.1999		4,555.7546
Unmitigated	1.4882	6.8734	18.1552	0.0501	4.2240	0.0570	4.2811	1.1304	0.0537	1.1841		5,042.8841	5,042.8841	0.2144		5,048.2439

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Retirement Community	860.75	673.75	673.75	1,864,595	1,669,745
Total	860.75	673.75	673.75	1,864,595	1,669,745

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Retirement Community	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Retirement Community	0.571348	0.041302	0.187452	0.129481	0.019048	0.005152	0.010609	0.022861	0.001566	0.001884	0.005572	0.002772	0.000953

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0801	0.6849	0.2914	4.3700e-003		0.0554	0.0554		0.0554	0.0554		874.2768	874.2768	0.0168	0.0160	879.4722
NaturalGas Unmitigated	0.1082	0.9248	0.3935	5.9000e-003		0.0748	0.0748		0.0748	0.0748		1,180.5978	1,180.5978	0.0226	0.0216	1,187.6135

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	10035.1	0.1082	0.9248	0.3935	5.9000e-003		0.0748	0.0748		0.0748	0.0748		1,180.5978	1,180.5978	0.0226	0.0216	1,187.6135
Total		0.1082	0.9248	0.3935	5.9000e-003		0.0748	0.0748		0.0748	0.0748		1,180.5978	1,180.5978	0.0226	0.0216	1,187.6135

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Retirement Community	7.43135	0.0801	0.6849	0.2914	4.3700e-003		0.0554	0.0554		0.0554	0.0554		874.2768	874.2768	0.0168	0.0160	879.4722
Total		0.0801	0.6849	0.2914	4.3700e-003		0.0554	0.0554		0.0554	0.0554		874.2768	874.2768	0.0168	0.0160	879.4722

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.8430	1.9672	23.5249	0.0121		0.2626	0.2626		0.2626	0.2626	0.0000	2,214.9695	2,214.9695	0.0818	0.0399	2,228.8917
Unmitigated	120.7402	2.7643	172.2231	0.2891		21.3377	21.3377		21.3377	21.3377	2,301.9827	1,059.9695	3,361.9523	3.1902	0.1627	3,490.1960

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0607					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	113.0965	2.5003	149.4229	0.2879		21.2128	21.2128		21.2128	21.2128	2,301.9827	1,019.1177	3,321.1004	3.1501	0.1627	3,448.3417
Landscaping	0.6979	0.2641	22.8002	1.2000e-003		0.1249	0.1249		0.1249	0.1249		40.8519	40.8519	0.0401		41.8544
Total	120.7402	2.7643	172.2231	0.2891		21.3377	21.3377		21.3377	21.3377	2,301.9827	1,059.9695	3,361.9523	3.1902	0.1627	3,490.1960

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0607					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1993	1.7031	0.7247	0.0109		0.1377	0.1377		0.1377	0.1377	0.0000	2,174.1177	2,174.1177	0.0417	0.0399	2,187.0373
Landscaping	0.6979	0.2641	22.8002	1.2000e-003		0.1249	0.1249		0.1249	0.1249		40.8519	40.8519	0.0401		41.8544
Total	7.8430	1.9672	23.5249	0.0121		0.2626	0.2626		0.2626	0.2626	0.0000	2,214.9695	2,214.9695	0.0818	0.0399	2,228.8917

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation
